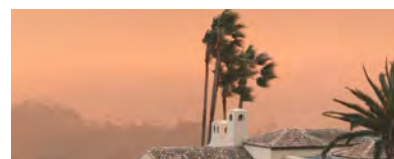


Ventura County

Multi-Jurisdictional Hazard Mitigation Plan

Update 2022

Volume 2—Jurisdictional Annexes



June 2022



Ventura County Multi-Jurisdictional Hazard Mitigation Plan

Update 2022

June 2022

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Appendices

- Appendix A. Planning Partner Expectations
- Appendix B. Annex Instructions and Templates

ACRONYMS

The following acronyms are used throughout the annexes in this volume:

- AASHTO—American Association of State Highway and Transportation Officials
- AB—Assembly Bill
- APCD—air pollution control district
- BEACON—Beach Erosion Authority for Clean Oceans and Nourishment
- BOS—Board of Supervisors
- BRIC—Building Resilient Infrastructure and Communities
- CAAP—Climate Action and Adaptation Plan
- CAL FIRE—California Department of Forestry and Fire Protection
- Cal OES—California Office of Emergency Services
- CalARP—California Accidental Release Prevention Program
- CAMUTCD—California Manual on Uniform Traffic Control Devices
- CDAA—California Disaster Assistance Act
- CDBG—Community Development Block Grant
- CDFW—California Department of Fish and Wildlife
- CEQA—California Environmental Quality Act
- CERT—Community Emergency Response Team
- CFR—Code of Federal Regulations
- CIBCSD—Channel Islands Beach Community Services District
- CIP—capital improvement program
- COS—Conservation and Open Space Element
- COSCA—Conejo Open Space Conservancy Agency
- COSP—City of Santa Paula
- CRPD—Conejo Recreation and Park District
- CRS—Community Rating System
- CSU—California State University
- CSUCI—California State University, Channel Islands
- CTM—Circulation, Transportation, and Mobility Element
- DAC—disadvantaged community
- DFIRM—digital flood insurance rate map
- DHS—Department of Homeland Security
- DSOD—Division of Safety of Dams
- DUNS—Dun and Bradstreet Number
- DWR—Department of Water Resources
- EAP—emergency action plan
- EIR—Environmental Impact Report
- EMPG—Emergency Management Performance Grant
- EOC—emergency operations center
- EOP—emergency operations plan
- EPA—Environmental Protection Agency
- ERP—emergency response plan
- ESRM—Environmental Science and Resource Management
- FB—finance and budgeting

- FEMA—Federal Emergency Management Agency
- FHRP—fire hazard reduction program
- FIPS—Federal Information Processing System
- FIRM—flood insurance rate map
- FMA—Flood Mitigation Assistance Grant Program
- FMAP—Fire Management Assistance Program
- FWS—flood warning system
- GHG—greenhouse gas
- GIS—geographic information system
- GSA—Ventura County General Services Agency
- HHPD—Rehabilitation of High Hazard Potential Dams
- HMA—Hazard Mitigation Assistance
- HMGP—Hazard Mitigation Grant Program
- HMP—hazard mitigation plan
- HPS—City of Santa Paula Hazards and Public Safety Element
- IDF—Inflow Design Flood
- IGC—intergovernmental coordination
- IRWM—Integrated Regional Water Management
- IRWMP—Integrated Regional Water Management Plan
- JP—joint partnership
- LARWQCB—Los Angeles Regional Water Quality Control Board
- LCP—Local Coastal Program
- LLAP—Local Levee Assistance Program
- MDERP—Matilija Dam Ecosystem Restoration Project
- MPSP—master plans, strategies, and programs
- MS4—municipal separate storm sewer system
- MWD—municipal water district
- NFIP—National Flood Insurance Program
- NFWF—National Fish and Wildlife Foundation
- NGO—non-governmental organization
- NOAA—National Oceanic and Atmospheric Administration
- NRCS—Natural Resources Conservation Service
- NWS—National Weather Service
- OBRAP—Ormond Beach Restoration and Access Plan
- OCC—Oxnard City Code
- OES—office of emergency services
- OMC—Ojai Municipal Code
- OVLC—Ojai Valley Land Conservancy
- OVSD—Ojai Valley Sanitary District
- PDM—Pre-Disaster Mitigation Grant Program
- PFS—Public Facilities, Services, and Infrastructure
- PMF—probable maximum flood
- POC—point of contact
- PSPS—public safety power shutoff
- PSR—planning, studies and reports
- PTP—Pumping Trough Pipeline
- PVRPD—Pleasant Valley Recreation & Park District
- RDR—regulation and development review
- RHNA—Regional Housing Needs Allocation

- SB—Senate Bill
- SCADA—supervisory control and data acquisition
- SCAG—Southern California Association of Governments
- SCC—California State Coastal Conservancy
- SCRC—Santa Clara River Conservancy
- SFD—Santa Felicia Dam
- SFHA—special flood hazard area
- SGMA—Sustainable Groundwater Management Act
- SLR—sea-level rise
- SMP—Salinity Management Pipeline
- SO—services and operations
- SVMC—Simi Valley Municipal Code
- SVOES—Simi Valley Office of Emergency Services
- SVPD—Simi Valley Police Department
- SWRCB—California State Water Resources Control Board
- THIRA—Threat & Hazard Identification & Risk Assessment
- TNC—The Nature Conservancy
- TOMC—Thousand Oaks Municipal Code
- USACE—U.S. Army Corps of Engineers
- USBR—U.S. Bureau of Reclamation
- USDA—U.S. Department of Agriculture
- UWCD—United Water Conservation District
- UWMP—urban water management plan
- VCFPD—Ventura County Fire Protection District
- VCOE—Ventura County Office of Education
- VCPWA-RT—Ventura County Public Works Agency—Roads and Transportation Department
- VCPWA-WP—Ventura County Public Works Agency—Watershed Protection
- VCSOES—Ventura County Sheriff's Office of Emergency Services
- VCSSFA—Ventura County Schools Self-Funding Authority
- VCTC—Ventura County Transportation Commission
- VMT—vehicle miles traveled
- VOAD—Voluntary Organizations Active in Disaster
- VRSD—Ventura Regional Sanitation District
- WCB—Wildlife Conservation Board
- WCVC—Watershed Coalition of Ventura County
- WEA—Wireless Emergency Alerts
- WSD—Water and Sanitation District

INTRODUCTION

BACKGROUND

Ventura County's hazard mitigation plan was developed and adopted in 2005 as a multi-jurisdictional process. Subsequent updates conducted in both 2010 and 2015 were also multi-jurisdictional efforts. Multi-jurisdictional hazard mitigation planning can be an effective process to build partnerships between communities that face common hazard risks, leading to shared solutions. It can also help build a foundation to shift priorities as risks and vulnerabilities change. Multi-jurisdictional planning processes are encouraged by the Federal Emergency Management Agency (FEMA), and offer the following advantages:

- Improves communication and coordination among jurisdictions and other regional entities
- Enables comprehensive mitigation approaches to reduce risks that affect multiple jurisdictions
- Maximizes economies of scale by leveraging individual capabilities and sharing costs and resources
- Avoids duplication of efforts, and
Provides an organizational structure that local jurisdictions may find supportive.

For the *Ventura County Multi-Jurisdictional Hazard Mitigation Plan 2022* update, a planning partnership was formed that expanded the partnership established during the 2015 hazard mitigation plan update, leveraging resources and meeting requirements of the federal Disaster Mitigation Act for as many eligible local governments as possible. The Disaster Mitigation Act defines a local government as follows:

“Any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.”

In addition to the County, the jurisdictions participating in the *Multi-Jurisdictional Hazard Mitigation Plan 2022* update include:

- 10 incorporated municipalities
- 14 special districts

All participating jurisdictions in a multi-jurisdictional plan must meet the requirements of Chapter 44 of the Code of Federal Regulations (44 CFR):

“Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan.” (Section 201.6(a)(4)).

Each participating planning partner prepared a jurisdiction-specific annex to this plan. These annexes, as well as information on the process by which they were created, are contained in this volume.

THE PLANNING PARTNERSHIP

Initial Solicitation and Letters of Commitment

A planning team made up of Ventura County staff solicited the participation of eligible municipalities and special districts in June 2019, at the outset of this update effort. Emails were sent to the applicable points of contact for the 18 members of the 2015 plan and to additional interested parties. Local governments wishing to join the planning effort were asked to provide the California Office of Emergency Services and County with a “letter of commitment” as a participating jurisdiction in the County’s plan update process. In all, the planning team received formal commitment from 24 planning partners in addition to the County.

Municipalities/County

- Ventura County
- City of Camarillo
- City of Fillmore
- City of Moorpark
- City of Ojai
- City of Oxnard
- City of Port Hueneme
- City of Santa Paula
- City of Simi Valley
- City of Thousand Oaks
- City of Ventura

Special-Purpose Districts

- California State University, Channel Islands
- Calleguas Municipal Water District
- Casitas Municipal Water District
- Channel Islands Beach Community Services District
- Conejo Recreation & Park District
- Ojai Valley Sanitary District
- Pleasant Valley Recreation & Park District
- Saticoy Sanitary District
- Triunfo Water & Sanitation District
- United Water Conservation District
- Ventura County Fire Protection District
- Ventura County Office of Education
- Ventura County Public Works Agency—Watershed Protection
- Ventura Regional Sanitation District

A map showing the location of participating special-purpose districts is provided at the end of this introduction. Risk assessment maps for all planning areas (countywide) are provided in Volume 1 of this hazard mitigation plan while maps showing the risk assessment results for each of the participating municipalities are provided in the individual annexes for each city.

Planning Partner Expectations

The planning team and consultant, Tetra Tech, developed the following list of planning partner expectations, which were provided and discussed at a formal kickoff meeting held in May 2021 (see Appendix A for details):

- Re-confirm lead and primary points of contact for the update effort.
- Support and participate in the Steering Committee meetings.
- Provide support required to implement the public involvement strategy.
- Participate in the planning process through:
 - Steering Committee meetings
 - Public meetings and outreach efforts
 - Workshops and planning partner-specific training sessions
 - Public review and comment periods prior to adoption.
- Perform a “consistency review” of all technical studies, plans and ordinances specific to hazards.
- Review the risk assessment and identify hazards and vulnerabilities specific to the jurisdiction.
- Attend the mandatory Phase 3 jurisdictional annex workshop.
- Review and determine if the mitigation recommendations chosen in Volume 1 will meet the needs of the jurisdiction.
- Create an action plan that identifies each project, who will oversee the task, how it will be financed, and when it is estimated to occur.
- Formally adopt the hazard mitigation plan.

By adopting the hazard mitigation plan, each planning partner also agrees to the plan implementation and maintenance protocol established in Volume 1. Failure to meet these criteria would result in a partner being dropped from the partnership by the Steering Committee, and thus losing eligibility under the scope of the plan. All planning partners met the planning partner expectations, including attendance at mandatory workshops.

Final Coverage

All of the above jurisdictions submitted letters of commitment to participate, completed an annex template, fully met the participation requirements for this update, and will be covered by the updated hazard mitigation plan upon FEMA’s approval of the plan and adoption of the plan by their individual governing bodies.

ANNEX DEVELOPMENT

Capability Assessment

A capability assessment creates an inventory of a jurisdiction’s mission, programs, and policies, and evaluates its capacity to carry them out. All participating jurisdictions compiled a capability assessment which helped to identify potential gaps in the jurisdictions’ capabilities. Specifically, if the capability

assessment identified an opportunity to add a missing core capability or expand an existing one, then doing so has been selected as an action in the jurisdiction's action plan. The sections below describe specific capabilities evaluated under the assessment.

Planning and Regulatory Capabilities

Jurisdictions can develop policies and programs and implement rules and regulations to protect and serve residents. Local policies are typically identified in planning documents, implemented via a local ordinance, and enforced by a governmental body. Because the planning and regulatory authority of counties and municipalities is generally broader than that of special-purpose districts, the assessment of these capabilities is more detailed for those partners.

Development and Permitting Capability

The County and its municipalities regulate land use through the adoption and enforcement of zoning, subdivision, and land development ordinances, building codes, building permit ordinances, floodplain, and stormwater management ordinances. When effectively prepared and administered, these regulations can mitigate hazards. As special-purpose districts typically do not have the ability to regulate land use, this capability was assessed only for the County and municipalities.

Fiscal Capability

Assessing a jurisdiction's fiscal capability provides an understanding of the ability to fulfill the financial needs associated with hazard mitigation projects. This assessment identifies both outside resources, such as grant-funding eligibility, and local jurisdictional authority to generate internal financial capability, such as through impact fees (fees charged to a development project).

Administrative and Technical Capability

Without appropriate personnel, the mitigation strategy may not be implemented. Administrative and technical capabilities focus on the availability of personnel resources responsible for implementing all the facets of hazard mitigation. These resources include technical experts, such as engineers, scientists, and grant writers.

Education and Outreach Capability

Regular engagement with the public on hazard mitigation provides opportunities to open a two-way dialogue that can result in a more resilient community. Use of a jurisdictional website, social media outlets, and other outreach resources to communicate mitigation information are assessed for each planning partner. Assessing outreach and education capability illustrates the connection between the government and community members.

Compliance with National Flood Insurance Program Requirements

Flooding is the costliest natural hazard in the United States and homeowners face increasingly high flood insurance premiums. Community participation in the National Flood Insurance Program (NFIP) opens up opportunities for additional grant funding associated specifically with flooding issues. Assessment of a jurisdiction's current NFIP status and compliance provides a greater understanding of

the local flood management program, opportunities for improvement, and available grant funding opportunities. The NFIP is not available to special-purpose districts, so this set of capabilities was assessed only for municipalities and the County.

Participation in Voluntary Programs

Participation in voluntary programs, such as FEMA’s Community Rating System (CRS), the National Weather Service’s StormReady and TsunamiReady programs, and the National Fire Protection Association’s Firewise USA, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs complement each other by focusing on communication, mitigation, and community preparedness to save lives and minimize the impact of natural hazards on a community. Participation in these programs demonstrates a jurisdiction’s commitment to go beyond the minimum requirements set forth by local, state, and federal regulations in order to create a more resilient community. The programs reviewed here are only applicable to municipalities and the County, so were not included in the capability assessments for the special-purpose districts.

Adaptive Capacity

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts that may occur in the future. By looking at public support, technical adaptive capacity, and other factors, jurisdictions can identify their core capability for resilience against issues such as sea level rise and climate change. The assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their adaptive capacity as high, medium, or low.

Mitigation Action Plan Development

Risk Ranking

The risk-ranking methodology for partner annexes was the same as that used for the countywide risk ranking described in Volume 1. Each planning partner was asked to review the ranked risk for its jurisdiction, based on the impact on its population and/or facilities. Municipalities and the County based this ranking on the probability of occurrence of each hazard, and its potential impact on people, property, and the economy. Special-purpose districts based this ranking on probability of occurrence and the potential impact on their constituency, vital facilities, and the facilities’ functionality after a hazard event.

The objectives of this exercise were to familiarize the planning partnership with how to use the risk ranking, part of the assessment results, as a tool to support other planning and hazard mitigation processes and to help prioritize types of mitigation actions that should be considered. Hazards that were ranked as “high” and “medium” for each jurisdiction were considered to be priorities for identifying mitigation actions, although jurisdictions also identified actions to mitigate hazards ranked “low”, as appropriate.

Information Reviewed to Develop the Action Plan

In September 2021, each planning partner was provided with a tool kit of relevant documents to assist in developing their jurisdiction’s action plan and was required to attend a workshop that provided

guidance to develop their action plans. The tool kits were used during the mandatory Phase 3 workshops and in follow-up work conducted by the planning partners. Planning partners reviewed the following information included in the tool kit to assist in the identification of proposed mitigation actions:

- **Capability assessment**—Reviewed to identify capabilities that the jurisdiction does not currently have but should consider pursuing, or capabilities that should be revisited and updated to include best available information; also reviewed to determine how existing capabilities can be leveraged to increase or improve hazard mitigation in the jurisdiction.
- **National Flood Insurance Program compliance table**—Reviewed to identify opportunities to increase floodplain management capabilities.
- **Adaptive capacity**—Reviewed to identify ways to leverage or continue to improve existing capacities and to improve understanding of other capacities.
- **Future integration opportunities**—Reviewed to identify specific integration actions to be included in the mitigation strategy.
- **Jurisdiction-specific vulnerabilities**—Reviewed to identify actions that could reduce known vulnerabilities.
- **Mitigation best practices catalog**—Reviewed to identify actions that the jurisdiction should consider including in its action plan.
- **Public input**—Reviewed to identify potential actions and community priorities.

Action Plan Prioritization

The mitigation actions recommended in each jurisdiction’s action plan were prioritized based on the following factors:

- Cost and availability of funding
- Benefit, based on likely risk reduction to be achieved
- Number of plan objectives achieved
- Timeframe for project implementation
- Eligibility for grant funding programs

Two priorities were assigned for each action:

- A high, medium, or low priority for implementing the action
- A high, medium, or low priority for pursuing grant funding for the action.

The sections below describe the benefit-cost analysis and the assignment of the two priority ratings.

Benefit/Cost Review

Pursuant to 44 CFR, Section 201.6(c)(3)(iii), the action plan must be prioritized according to a benefit-cost analysis (BCA) of the proposed actions. BCA is a method that determines the future risk reduction benefits of a hazard mitigation project and compares those benefits to its costs. For this hazard mitigation plan, a qualitative review was performed for each mitigation action by assigning ratings for benefit and cost as follows:

- Cost:
 - **High**—Existing funding will not cover the cost of the action; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
 - **Medium**—The action could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the action would have to be spread over multiple years.
 - **Low**—The action could be funded under the existing budget. The action is part of, or can be part of, an ongoing, existing program.
- Benefit:
 - **High**—Action will provide an immediate reduction of risk exposure for life and property.
 - **Medium**—Action will have a long-term impact on the reduction of risk exposure for life and property, or action will provide an immediate reduction in the risk exposure for property.
 - **Low**—Long-term benefits of the action are difficult to quantify in the short term.

To assign priorities, each action with a benefit rating equal to or higher than its cost rating (such as high benefit/medium cost, medium benefit/medium cost, medium benefit/low cost, etc.) was considered to be cost-beneficial. It is important to note that this qualitative review is not intended to substitute for the more detailed level of benefit-cost analysis required for some FEMA hazard-related grant programs. More specific analysis would be performed at the time a given action is submitted for grant funding approval.

Implementation Priority

Implementation priority ratings were assigned as follows:

- **High Priority**—An action that meets multiple objectives, has benefits that exceed costs, and has a secured source of funding. Action can be completed in the short term (1 to 5 years).
- **Medium Priority**—An action that meets multiple objectives, has benefits that exceed costs, and is eligible for funding though no funding has yet been secured for it. Action can be completed in the short term (1 to 5 years) once funding is secured. Medium-priority actions become high-priority actions once funding is secured.
- **Low Priority**—An action that will mitigate the risk of a hazard, but has benefits that do not exceed the costs or are difficult to quantify, has no secured source of funding, and is not eligible for any known grant funding. Action can be completed in the long term (1 to 10 years). Low-priority actions may be eligible for grant funding from programs that have not yet been identified.

Grant Pursuit Priority

Grant pursuit priority ratings were assigned as follows:

- **High Priority**—An action that meets identified grant eligibility requirements, has high benefits, and is listed as high or medium implementation priority; local funding options are unavailable or available local funds could be used instead for actions that are not eligible for grant funding.
- **Medium Priority**—An action that meets identified grant eligibility requirements, has medium or low benefits, and is listed as medium or low implementation priority; local funding options are unavailable.

- **Low Priority**—An action that has not been identified as meeting any grant eligibility requirements.

Classification of Actions

Each recommended action was also classified based on the hazard it addresses and the type of mitigation it involves. Mitigation types used for this classification are as follows:

- **Prevention**—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- **Public Education and Awareness**—Actions to inform residents and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, wetland restoration and preservation, and green infrastructure.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.
- **Climate Resiliency**—Actions that incorporate methods to mitigate and/or adapt to the impacts of climate change. Includes aquifer storage and recovery activities, incorporating future conditions projections in project design or planning, or actions that specifically address jurisdiction-specific climate change risks, such as sea-level rise or urban heat island effects.
- **Community Capacity Building**—Actions that increase or enhance local capabilities to adjust to potential damage, to take advantage of opportunities to build capacity, or to respond to consequences of insufficient capacity. Includes staff training, memorandums of understanding, development of plans and studies, and monitoring programs.

Annex-Preparation Process

Templates

Templates were created for the two types of jurisdictions (municipalities and special districts) participating in this plan to help the planning partners prepare their jurisdiction-specific annexes. The templates were designed so that all criteria of Section 201.6 of 44 CFR for local governments would be met based on the partners' capabilities and mode of operation. The templates were deployed in three phases during the course of the plan update process as follows:

- **Phase 1**—Profile, Trends, Previous Plan Status
 - Deployed: May 10, 2021
 - Due: June 21, 2021
- **Phase 2**—Capability Assessment and Information Sources
 - Deployed: July 6, 2021
 - Due: August 20, 2021
- **Phase 3**—Risk Ranking, Action Plan, and Information Sources
 - Deployed: September 9, 2021
 - Workshops: September 22-23, 2021
 - Due: October 25, 2021

The templates were designed to lead all partners through the necessary steps to generate the Disaster Mitigation Act-required elements specific to their jurisdictions. The templates and their instructions are included in Appendix B of this volume.

Tool Kit

Each planning partner was provided with a tool kit to assist in completing the annex template and developing their jurisdiction's action plan. The tool kits contained the following:

- A copy of the *2015 Ventura County Multi-Hazard Mitigation Plan*
- The vision statement, goals and objectives developed for the plan update
- Information on past hazard events that have impacted the planning area
- The risk assessment results developed for the plan update
- A list of jurisdiction-specific issues noted during the risk assessment
- Information on climate change and expected impacts in the planning area
- Jurisdiction-specific annex templates, with instructions for completing them
- A catalog of mitigation best practices and suggested actions to enhance adaptive capacity
- Information on the FEMA Hazard Mitigation Assistance grant program
- FEMA guidance on plan integration
- AB 2140 compliance guidance
- The results of the public survey on community awareness of hazards conducted as part of the public involvement strategy
- The public service announcement (PSA) hazard mitigation video produced by the Ventura County Sheriff's Office of Emergency Services and the Ventura County Public Works Agency.

Workshop









All partners were required to attend and participate in a virtual technical assistance workshop held the week of September 20, 2021, where key elements of the annex template were discussed. The workshops focused on how the tool kit could be used to facilitate completion of the template and develop each jurisdiction's mitigation action plan. The templates were subsequently completed by a designated point of contact for each partner and a member of the planning team. The workshop addressed the following topics:



- The jurisdictional annex templates and the tool kit
- Natural events history
- Jurisdiction-specific issues
- Risk ranking
- Status of prior actions
- Developing the action plan
- Benefit-cost review
- Prioritization protocol
- Next steps

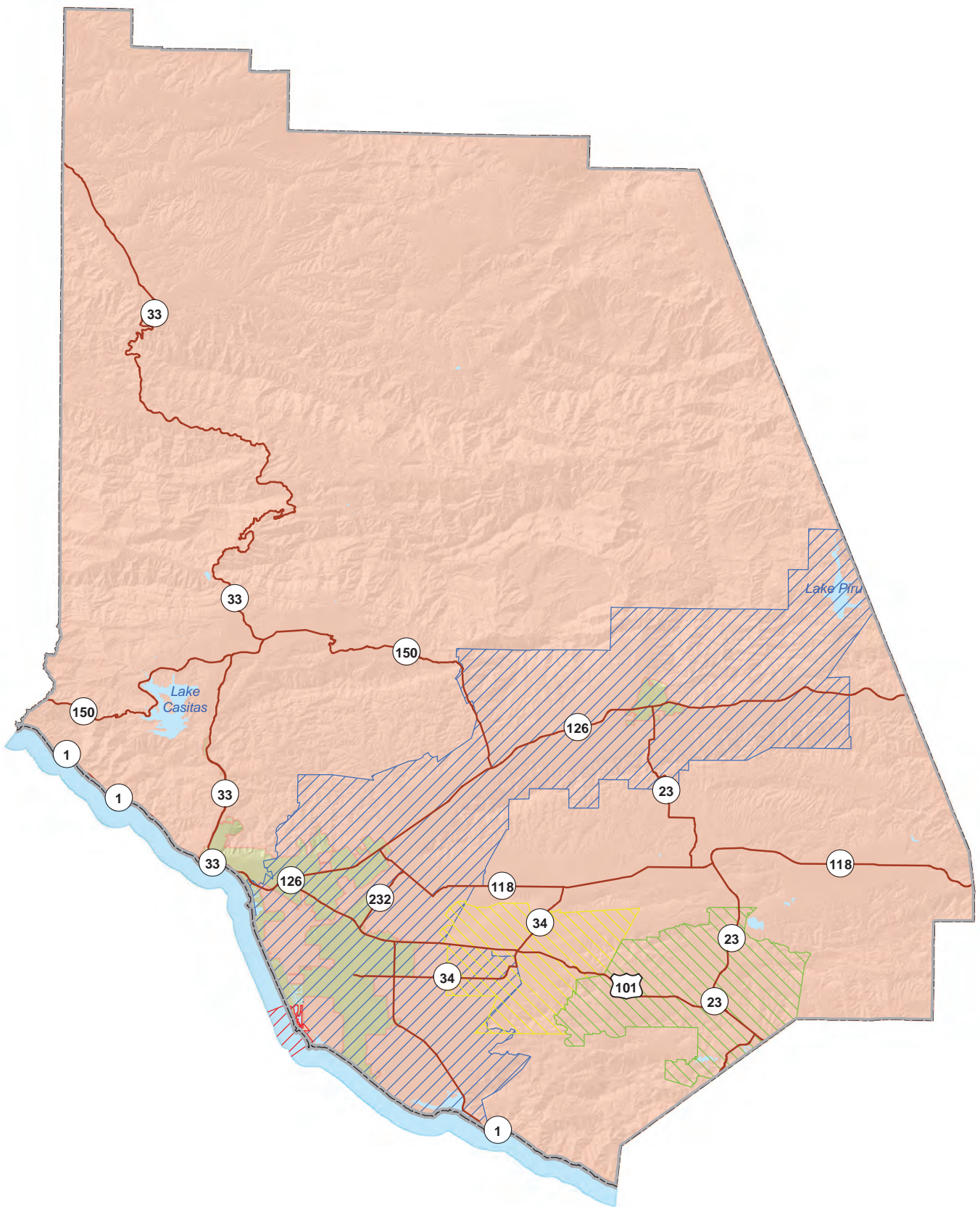
Following conclusion of the workshop, a copy of the presentation given at the workshop session was added to the tool kit provided to each of the planning partners.










Special Purpose Districts (1 of 2)

- | | | | |
|---|--------------------------------------|---|------------------------------------|
|  | Ojai Valley Sanitary District |  | Calleguas Municipal Water District |
|  | Saticoy Sanitary District |  | Casitas Municipal Water District |
|  | Ventura Regional Sanitation District |  | County Boundary |
|  | Triunfo Water & Sanitation District |  | Major Roads |

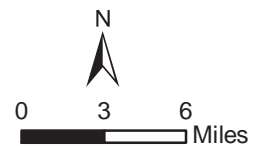
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Data Sources: Ventura Co., Esri



Special Purpose Districts (2 of 2)

-  Channel Islands Beach Community Services District
-  Conejo Recreation & Park District
-  Pleasant Valley Recreation & Parks District
-  United Water Conservation District
-  Ventura County Fire Protection District
-  County Boundary
-  Major Roads

Ventura County Office of Education, Ventura County Public Works Agency - Watershed Protection, and California State University - Channel Islands provide services countywide.



Data Sources: Ventura Co., Esri

1. VENTURA COUNTY (UNINCORPORATED AREA)

1.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Bonnie Luke, Senior Program Administrator
800 South Victoria Avenue
Ventura, CA 93009
Telephone: 805-765-7007
e-mail Address: BonnieK.Luke@ventura.org

Alternate Point of Contact

Kathy Gibson, Program Administrator II
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Ventura, CA 93009
Telephone: 805-765-0326
e-mail Address:
Kathy.Gibson@ventura.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 1-1.

Table 1-1. Local Mitigation Planning Team Members

Name	Title
Patrick Maynard	Director of Emergency Services, Sheriff's Office of Emergency Services
Bonnie Luke	Senior Program Administrator, Sheriff's Office of Emergency Services
Kathy Gibson	Program Administrator II, Sheriff's Office of Emergency Services
Gerard Kapuscik	Manager, Strategic Resiliency Group, Ventura County Public Works Agency-Watershed Protection
Glenn Shephard	Director, Ventura County Public Works Agency-Watershed Protection
Ashley Bautista	Public Information Officer, County Executive Office
Jackie Nuñez	Assistant Public Information Officer, County Executive Office
Aaron Engstrom	Long Range Planning Manager, Ventura County Planning Division
Dave Ward	Director, Ventura County Planning Division
Matt Wyatt	District Manager West County Office, Ventura County Building & Safety Division
Clay Downing	Program Administrator, Sustainability Division, County Executive Office
Mark Lorenzen	Fire Chief, Ventura County Fire Protection District
Jeff Shea	Division Chief, Ventura County Fire Protection District
Debbie Conner	Management Assistant, Ventura County Fire Protection District

1.2 JURISDICTION PROFILE

1.2.1 Location and Features

Ventura County is located on southern California's Pacific coast, approximately 60 miles northwest of Los Angeles. The County is bordered to the north by Kern County; to the northwest and southwest by

Santa Barbara County and the Pacific Ocean, respectively; and to the east and southeast by Los Angeles County.

Ventura County stretches across 2,208 square miles, of which 1,845 square miles is land and 363 square miles is water. The northern half of the county, comprising approximately 53 percent of the county's total area is located within the Los Padres National Forest, and is mostly uninhabited. Two offshore islands, Anacapa and San Nicolas, are also included within the jurisdictional boundary for Ventura County. Anacapa Island is located approximately 11 miles offshore and is one of five islands that make up Channel Islands National Park. San Nicolas Island is located approximately 61 miles offshore and is operated by the United States Navy as a weapons testing and training facility. For the purposes of statistical analyses, the county is divided into 15 distinct planning areas. Within the County there are 10 cities and 18 unincorporated communities that are recognized census designated places (CDPs).

1.2.2 History

Ventura County was historically inhabited by the Chumash people, who also settled throughout much of Santa Barbara and San Luis Obispo Counties. The Chumash were originally hunters and gatherers, fisherman, traders, and are known for their rock paintings and basketry.

Spanish explorers began arriving in the area in the mid-1500s, although active occupation did not effectively occur until more than 200 years later. The Spanish encouraged settlement of the area with large land grants called ranchos, while the Catholic church established the Mission San Buenaventura in 1782 in what is now the City of Ventura.

On January 1, 1873, just 23 years after California's statehood was attained in 1850, Ventura County was formally established. At this time, however, the area remained largely rural, consisting of a population of less than 5,000 individuals that engaged predominately in ranching and the cultivation of grain crops.

During the early 1900s, increased demand from new markets in the burgeoning Los Angeles area led to a significant expansion and diversification of agriculture in Ventura. Together with the discovery of vast oil reserves in the area, this resulted in an influx of immigrants, wealth, and substantial improvements to transportation infrastructure in the region.

A second, intense population boom (>5% annually) occurred beginning in the 1940s with the construction of Port Hueneme and the establishment of a military base at Point Mugu which brought numerous professionals and ancillary industries to the region. Ventura County, and the Oxnard area in particular, benefitted from the hiring of more than 10,000 civilian workers and 21,000 military personnel, thus providing jobs for local residents and reviving the economy following the Depression of the 1930s. By 1950, the population of the county had increased to over 114,000 individuals, more than double its population in 1930.

The population continued to grow rapidly through the 1970s, assisted further by the completion of highway 101 in the mid-1964, which helped make the commute to Los Angeles easier. Although much of this growth was centered in incorporated communities, development also expanded in the unincorporated areas, particularly on the east side of the County.

1.2.3 Governing Body Format

Ventura County is administered by five elected supervisors who each serve four-year terms. The supervisors appoint department administrators who manage county functions.

The Board of Supervisors assumes responsibility for the adoption of this plan; Ventura County Sheriff's Office of Emergency Services will oversee its implementation.

1.3 CURRENT TRENDS

1.3.1 Population

According to the California Department of Finance, as of January 2020 the unincorporated areas of the County had a population of 95,001. This represents a negligible increase from the 2010 census data (94,937 individuals).

Table 1-2 lists unincorporated communities in Ventura County that are recognized by the United States Census Bureau as census-designated places for the 2020 census:

Table 1-2. Ventura County Unincorporated Communities

Census Designated Place	Population 2020	Population 2010	Population Change Since 2010
Bell Canyon	1,946	2,049	-103
Casa Conejo	3,267	3,249	+18
Channel Islands Beach (e.g. Hollywood Beach and Silver Strand)	2,870	3,103	-233
El Rio	7,037	7,198	-161
Lake Sherwood	1,759	1,527	+180
Meiners Oaks	3,911	3,571	+340
Mira Monte	6,618	6,854	-227
Oak Park	13,898	13,811	+87
Oak View	6,215	4,066	+2,149
Piru	2,587	2,063	+524
Santa Rosa Valley	3,312	3,334	-22
Santa Susana	1,160	1,037	+123
Saticoy	1,133	1,029	+104

Source: United States Census Bureau. <https://www.census.gov/>.

The bulk of the population within the unincorporated county area is concentrated within four of these communities. Approximately 17,000 people reside in the adjoining communities of Oak View, Meiners Oaks and Mira Monte on the west end of the county. Meanwhile, nearly 14,000 people reside in the community of Oak Park on the east end of the county.

1.3.2 Development

Unincorporated Ventura County is a slow-growth, mostly rural land use jurisdiction with policies and initiatives that seek to focus growth and development in more urbanized areas. Developed areas include about 18 existing census-designated places listed in the previous section, most of which are

governed by one of nine specific area plans. For the period between 2016-2020, single-family residences made up approximately half of the development activity in the unincorporated areas, while accessory dwelling units comprised an additional 35 percent of the development activity. Agricultural worker housing projects represented approximately 1 percent of development activity, while other multi-family projects and subdivisions were uncommon, representing less than 7 percent of the development in the unincorporated areas. Permits for commercial development constituted 9 percent of the development activity. For a more detailed description of development trends, see the 2020 Annual Progress Report available here:

https://vcrma.org/docs/images/pdf/planning/plans/2020_Ventura_County_Annual_Progress_Report.pdf

Table 1-3 summarizes development trends in the unincorporated County in the period since the preparation of the previous (2015) Hazard Mitigation Plan update, as well as expected future development trends.

Table 1-3. Recent and Expected Future Development Trends	
Criterion	Response
<p>Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?</p> <ul style="list-style-type: none"> • If yes, give the estimated area annexed and estimated number of parcels or structures. 	No
<p>Is your jurisdiction expected to annex any areas during the performance period of this plan?</p> <ul style="list-style-type: none"> • If yes, describe land areas and dominant uses. • If yes, who currently has permitting authority over these areas? 	No
<p>Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.</p>	<p>Permitting activity in 2020 was concentrated in the areas around Piru, Oak View, and Meiners Oaks. In particular, within the Piru area, the buildout of the Piru Gateway development (Tract Map 5553, recorded in 2017) has been under construction for the past several years. This development consists of 53 single-family homes, 4 duplex units, and 10 triplex units, for a total of 91 new residential units. Conversely, in the Oak View and Meiners Oaks areas, most new development consisted of legalization of existing, unpermitted accessory units, and construction of new accessory dwelling units. Much of this development is being driven by state-level regulation changes that went into effect on January 1, 2020 which limit local agency authority to regulate accessory dwelling units. Much of the development is located in high fire hazard severity zones, including Piru, the Oak View and Meiners Oaks areas near Ojai, the hills north of Camarillo, and southeast of Simi Valley in Bell Canyon.</p> <p>A small number of single-family permits have also been issued in coastal areas that are primarily for redevelopment of existing structures. Most of these coastal structures are vulnerable to tsunami and other coastal hazards.</p> <p>For a more detailed description of development trends, see the 2020 Annual Progress Report available here: https://vcrma.org/docs/images/pdf/planning/plans/2020_Ventura_County_Annual_Progress_Report.pdf</p>

Criterion	Response					
<p>Are any areas targeted for development or major redevelopment in the next five years?</p> <ul style="list-style-type: none"> If yes, briefly describe, including whether any of the areas are in known hazard risk areas 	<p style="text-align: center;">Yes</p> <p>In February 2021, the County approved a 360-unit farmworker housing project north of the city of Camarillo called "Somis Ranch", which will be constructed in three phases over the next few years. Five hundred, ninety-eight additional units are also planned to be constructed over the next four years as part of the continued development (Phase II) of the University Glenn area located adjacent to California State University Channel Islands. This master-planned, mixed-use residential community is proposed to be located on 32 acres south of the City of Camarillo, along the western edge of the Santa Monica Mountains, within a high-fire hazard area. Additional housing is also anticipated to be constructed south of Camarillo as part of the Rancho Sierra Senior Supportive Housing (50 units) on Lewis Road.</p> <p>Finally, there are a total of 224 dwelling units anticipated to be constructed adjacent to Hwy 126 in the Piru Expansion Area as part of the development of two recorded tract maps: the Reider subdivision, comprising 49 townhomes, and the Finch subdivision, comprising 175 new dwelling units. The Piru Expansion area is partially located within FEMA's A99 flood zone.</p> <p>In addition to the new housing outlined above, there are a number of redevelopment projects related to fire rebuilds. Between 2017 and 2018, 337 residential dwelling units were destroyed by the Thomas and the Woolsey Fires, which together burned more than 377,000 acres, most of which were located within Ventura County. As of 2020, rebuilding efforts have included issuance of 122 Planning Permits, 87 Building Permits, and the rebuild of 40 residential units. Many of these units were located in high-fire hazard areas.</p> <p>Efforts by the County Planning Division are ongoing to implement programs outlined for the disadvantaged communities within the El Rio/ Del Norte Area Plan and Saticoy Area Plan that would accommodate additional development in these areas through roadway, sewer, and water infrastructure improvements.</p> <p>The County also continues to improve regulatory pathways that support the development of additional affordable housing and agricultural worker housing throughout the County via an update to the General Plan Housing Element, as well as zoning amendments for agricultural worker housing regulations and accessory dwelling units.</p>					
<p>How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?</p>		2016	2017	2018	2019	2020
	Single Family	40	46	46	65	47
	Multi-Family	0	0	14	3	21
	Other (mobile homes, accessory dwellings, mixed use, etc.)	23	35	52	40	50
	Commercial	11	4	14	9	7
	Total	74	85	126	117	125
<p>Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.</p>	<p>The 2040 Ventura County General Plan Background Report included an inventory of both residential holding capacity and residential development potential. The unincorporated residential development potential was estimated to be 1,361 units (Section 3.7, Table 3-19). The residential development potential accounted for parcels on vacant and underutilized land, as well as other constraints such as steep slopes and floodways. If second dwellings, farmworker housing, Channel Islands University housing, and vacant OS, AE, and RA zone parcels with single-family potential are included, the remaining residential development potential is 28,228 units (Section 3.7, Table 3-22).</p> <p>The County of Ventura's General Plan Annual Report details that Unincorporated Ventura County's Regional Housing Needs Allocation (RHNA) for the period from 2014 to 2021 was 1,015 units. As of 2019 the County has authorized permits for 590 of the 1,015 RHNA units (Exhibit 1, page 7). The Ventura County 2040 General Plan, Chapter 3 Housing Element includes the final RHNA allocation for the period of 2021-2029 which is 1,262 units (Section 3.2, Table 3-1).</p>					

1.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 1-4.
- Development and permitting capabilities are presented in Table 1-5.
- An assessment of fiscal capabilities is presented in Table 1-6.
- An assessment of administrative and technical capabilities is presented in Table 1-7.
- An assessment of education and outreach capabilities is presented in Table 1-8.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 1-9.
- Classifications under various community mitigation programs are presented in Table 1-10.
- The community’s adaptive capacity for responding to the impacts of climate change is presented in Table 1-11.

Table 1-4. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: 2019 Ventura County Building Code, Ord. #4548</i>	Yes	No	Yes	Yes
Zoning Code <i>Comment: Non-Coastal Zoning Ordinance, last amended 4/13/21 Coastal Zoning Ordinance, last certification 6/11/21</i>	Yes	No	Yes	Yes
Subdivisions <i>Comment: Ventura County Subdivision Ordinance, last amended 6/16/20</i>	Yes	No	Yes	Yes
Stormwater Management <i>Comment: Ventura County Ordinance Code Relating to Stormwater Quality Management for Unincorporated Areas, Ordinance #4450, last amended 7/17/12</i>	Yes	No	Yes	Yes

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Post-Disaster Recovery	Yes	Yes	No	Yes
<p><i>Comment:</i> See https://www.venturacountyrecovers.org/ (click on "Hill and Woolsey Fires" in upper right) Board of Supervisors Ordinance No. 4515, Approved 12/26/17: An Emergency Ordinance establishing local standards and procedures for cleanup of debris generated by the Thomas Fire. Board of Supervisors Resolution No. 17-148, Approved 12/26/17: Resolution waiving certain Planning, Building and Safety, and Environmental Health Division fees related to Temporary Dwellings during rebuilding of residential structures damaged or destroyed in the Thomas Fire. Board of Supervisors Ordinance No. 4532, Approved 10/30/18: Ordinance amending Division 8, Chapter 1, Article 5, Sections 8105-1.1, 8105-4 and 8105-5, Article 6, section 8106-5.12, article 7, Sections 8107-14.2 and 8107-14.3, and Article 13, Section 8113-6.1.1 of the Ventura County Ordinance code, Non-Coastal Zoning Ordinance pertaining to the permitted uses matrix, temporary dwelling during construction and reconstruction, and destruction of non-conforming structures and structures containing nonconforming uses.</p>				
Real Estate Disclosure	No	No	No	No
<i>Comment:</i> None currently				
Growth Management	Yes	No	Yes	No
<i>Comment:</i> Measure C, Save Open Space and Agricultural Resources Extension to year 2050, 11/3/16				
Site Plan Review	Yes	Yes	Yes	Yes
<p><i>Comment:</i> Non-Coastal Zoning Ordinance, last amended 4/13/21 Coastal Zoning Ordinance, last certification 6/11/21 2019 Ventura County Building Code, Ord. #4548</p>				
Environmental Protection	Yes	No	Yes	Yes
<i>Comment:</i> Initial Study Assessment Guidelines, last amended 4/26/11				
Flood Damage Prevention	Yes	No	Yes	Yes
<i>Comment:</i> Ventura County Floodplain Management Ordinance, Ordinance. #4521, Enacted 3/27/18				
Emergency Management	Yes	No	No	Yes
<p><i>Comment:</i> Code of Ordinances, Div 5 (Safety), Section 3 (Public Emergency) (5300) https://library.municode.com/ca/ventura_county/codes/code_of_ordinances?nodeId=DIV5SA_CH3PUEM Created the Emergency Planning Council</p>				
Climate Change	Yes	No	Yes	Yes
<p><i>Comment:</i> 2040 General Plan, Climate Action Plan in Appendix B, September 15, 2020 General Services Agency, Energy Action Plan, April 2010 Climate Protection Plan for Government Operations, April 2012 Saticoy Area Plan, Mobility Element Coastal Zoning Ordinance, Section 8178-8—Water Efficient Landscaping Requirements (2018) Non-Coastal Zoning Ordinance, Section 8107-25 (last amended 2008) and Coastal Zoning Ordinance, Section 8178-7 Tree Protection Regulations (last amended 2018) and Tree Protection Guidelines Non-Coastal Zoning Ordinance, Section 8106-8.2—General Landscaping and Water Conservation Requirements (last amended 2021), which requires compliance with the State's Model Water Efficient Landscaping Ordinance.</p>				
Planning Documents				
General Plan	Yes	No	Yes	Yes
<p><i>Is the County's General Plan compliant with Assembly Bill 2140?</i> ^a <i>Comment:</i> 2040 General Plan, Appendix B, September 15, 2020.</p>				
Capital Improvement Plan	Yes	No	No	Yes
<p><i>How often is the plan updated?</i> Annually <i>Comment:</i> Capital Improvement Plan Project Sheet Submittals are revised and updated annually in support of a rolling 5-year planning horizon.</p>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Disaster Debris Management Plan <i>Comment: Emergency Ordinance No. 4534, Dec. 4, 2018 An emergency ordinance establishing local standards and procedures for cleanup of debris generated by the Hill and Woolsey Fires.</i>	Yes	Yes	No	No
Floodplain or Watershed Plan <i>Comment: Flood Safety Plan for Ventura County, March 2017</i>	Yes	No	Yes	Yes
Stormwater Plan <i>Comment: County Stormwater Program Compliance Strategy in the Unincorporated Area, approved by the Board of Supervisors on Feb. 5, 2019</i>	Yes	No	No	Yes
Urban Water Management Plan <i>Comment: 2020 Urban Water Management Plan (UWMP) for County Waterworks District #1, June 22, 2021</i>	Yes	No	Yes	Yes
Habitat Conservation Plan <i>Comment: Habitat Connectivity and Wildlife Corridors Ordinance, Non-Coastal Zoning Ordinance, 2019, Ord #'s 4537 and 4539</i>	Yes	No	No	Yes
Economic Development Plan <i>Comment: 2040 General Plan, Economic Vitality Element, September 15, 2020 County of Ventura Economic Vitality Strategic Plan, November 13, 2017</i>	Yes	No	No	Yes
Shoreline Management Plan <i>Comment: Beach Erosion Authority for Clean Oceans and Nourishment (BEACON) Coastal Regional Sediment Management Plan and Programmatic EIR, 2009 and 2011</i>	No	Yes	No	No
Community Wildfire Protection Plan <i>Comment: Ventura County Community Wildfire Protection Plan, 2010. Plan update scheduled for completion in 2022.</i>	Yes	No	No	Yes
Forest Management Plan <i>Comment: Los Padres National Forest Land Management Plan, 2005</i>	No	Yes	No	Yes
Climate Action Plan <i>Comment: 2040 General Plan, Climate Action Plan in Appendix B, September 15, 2020 General Services Agency, Energy Action Plan, April 2010 Climate Protection Plan for Government Operations, April 2012</i>	Yes	No	Yes	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: NA</i>	No	No	No	No
Post-Disaster Recovery Plan <i>Comment: Ventura County Disaster Recovery Plan, Adopted by BOS in April 2019</i>	Yes	No	No	Yes
Continuity of Operations Plan <i>Comment: Ventura County Continuity of Operations Plan was first adopted by BOS in 2008 and is maintained by the County Executive Office. The plan is included by reference within the 2021 EOP draft update (which is currently pending approval).</i>	Yes	N/A	No	Yes
Public Health Plan <i>Comment: Ventura County Public Health Strategic Plan, 2015-2020</i>	Yes	No	Yes	Yes
Other <i>Comment:</i> <ul style="list-style-type: none"> • Sea Level Rise Vulnerability Assessment and Adaptation Report, 2018 and 2019 • Farmworker Housing Ordinance, underway • Tree Mitigation Fund and County Tree Planting Program, • Ventura County Land Conservation Act Program, • Ventura County Surface Mining and Reclamation Act Program, • Naval Base Ventura County Joint Land Use Study, 2015 	Yes	Yes	No	Yes

a. AB 2140 compliance tracks with each plan update. The County will re-link the two plans once this update is approved.

Table 1-5. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i>	Yes Planning Division, Public Works Agency
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	Yes

Table 1-6. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding <i>Comment:</i> Check with Public Works and General Services Agency	Yes
Authority to Levy Taxes for Specific Purposes <i>Comment:</i> new taxes require 2/3rds Board of Supervisors approval	Yes
User Fees for Water, Sewer, Gas or Electric Service <i>If yes, specify:</i> Check with Special Districts, typically require fee study	Yes
Incur Debt through General Obligation Bonds <i>Comment:</i> Requires Board of Supervisors Approval	Yes
Incur Debt through Special Tax Bonds <i>Comment:</i> Requires Board of Supervisors Approval or voter approval	Yes
Incur Debt through Private Activity Bonds <i>Comment:</i> Recovery Zone Economic Development Bonds, 2010 http://bosagenda.countyofventura.org/sirepub/cache/2/qdv0sgxbtll0epc0ihgn2r24/551690082020210412476.PDF	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs <i>Comment:</i> Requires Board of Supervisors Approval to Receive Grants	Yes
Development Impact Fees for Homebuyers or Developers <i>Comment:</i> Requires Board of Supervisors Approval	Yes

Table 1-7. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Yes, various positions throughout Planning Division and Public Works Agency	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Yes, Building and Safety Department various positions, Public Works Agency—Transportation Department and Watershed Protection, all positions.	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Building & Safety manager has CFM and Emergency response, Public Works Agency—Watershed Protection, Planning Division, Area Plans and Resources Manager, General Plan Manager	Yes
Staff with training in benefit-cost analysis <i>If Yes, Department /Position:</i> Building & Safety management team, Public Works Agency Directors and General Services Agency Parks Department Director	Yes
Surveyors <i>If Yes, Department /Position:</i> Public Works Agency, Surveyor's office.	Yes
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Building & Safety counter staff, plan review engineers and management team, Resource Management Agency GIS Supervisor	Yes
Scientist familiar with natural hazards in local area <i>If Yes, Department /Position:</i> PWA Engineering Managers and Hydrologists. For scientists, the Planning Division and Public Works agency also contract with consultants as needed.	Yes
Emergency manager <i>If Yes, Department /Position:</i> Sheriff's Office of Emergency Services (OES Director, and 6 additional full-time EMs), Building & Safety district managers	Yes
Grant writers <i>If Yes, Department /Position:</i> Planning Division Long Range Planning Managers, County Executive Office, Office of Sustainability Manager, various Public Works Agency departments.	Yes

Table 1-8. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> ReadyVenturaCounty.org contains pages dedicated to the Hazard Mitigation Plan Update, including information on hazard mitigation and links to the existing Hazard Mitigation Plan.	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> Twitter, Nixle	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i> Emergency Planning Council, CERT, Disaster Assistance Response Team, Ventura Regional Fire Safe Council, Ojai Valley Fire Safe Council, Ventu Park Fire Safe Council, and Bell Canyon Fire Safe Council	Yes
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> VCEmergency.com ; ReadyVenturaCounty.org , VC Alert ,	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> VC Alert , Wireless Emergency Alerts (WEA); VCEmergency.com ; Hi-Lo Sirens	Yes

Table 1-9. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Ventura County Public Works Agency-Engineering Services Department, Development Services Section.
Who is your floodplain administrator? (department/position)	Director, Ventura County Public Works Agency
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your flood damage prevention ordinance was last amended?	3/27/2018
Does your floodplain management program meet or exceed minimum requirements?	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	9/21/2018
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Are any RiskMAP projects currently underway in your jurisdiction?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<i>If so, what type of assistance/training is needed?</i>	Additional training on benefit-cost analysis for the BRIC grant program, and green-flood plain management project solutions eligible for FEMA funding.
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
<i>If yes, is your jurisdiction interested in improving its CRS Classification?</i>	No
How many flood insurance policies are in force in your jurisdiction? ^a	1,346
<i>What is the insurance in force?</i>	\$395,320,600
<i>What is the premium in force?</i>	\$1,327,849
How many total loss claims have been filed in your jurisdiction? ^a	724
<i>What were the total payments for losses?</i>	\$10,126,504

a. According to FEMA statistics as of March 31, 2021

Table 1-10. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	06111	N/A
DUNS #	Yes	066691122	N/A
Community Rating System	Yes	5	5/1/2016
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	Yes	03/3X	12/21/2018
Storm Ready	Yes	N/A	N/A
Firewise	Yes	N/A	Unknown
Tsunami Ready	Yes	N/A	N/A

Table 1-11. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: High level of understanding of anticipated exacerbation of drought and wildfire risks, and sea -level rise-related impacts. Moderate understanding of secondary impacts to agricultural/biological risks, and severe weather/severe storm impacts.</i>	High
Jurisdiction-level monitoring of climate change impacts <i>Comment: 2040 General Plan has emission reduction and climate adaptation programs adopted and monitoring programs are being implemented.</i>	Medium
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: The Planning Division has access to technical resources in other County Agencies, coordination with outside agencies with resources is frequent, and the County also has the capacity to hire consultants when needed. Additional resources in adaptation pathway planning would be helpful.</i>	Medium
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: A GHG inventory was completed for the 2040 General Plan Update with baseline data for 2015. There is also an operational emissions inventory, and monitoring is planned for the future as part of General Plan implementation.</i>	High
Capital planning and land use decisions informed by potential climate impacts <i>Comment: The 2040 General Plan includes policies related to climate adaptation to guide development due to climate change impacts. The 2040 General Plan also includes implementation programs that function as climate adaptation strategies.</i>	High
Participation in regional groups addressing climate change risks <i>Comment: Some members of the Board of Supervisors are on committees for sea level rise and beach sediment management. The County's Office of Sustainability, the Long Range sections of the Planning Division, and the Public Works Agency regularly participate with regional groups to address climate change risks. The County Executive Office's Ventura County Climate Emergency Council is a citizen advisory committee focused on GHG reductions. The County's Sustainability Committee is an interagency work group focused on integrating sustainable practices into agency activities including Climate Action Plan implementation.</i>	High
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: Included in 2040 General Plan policies and programs, see Appendix B.</i>	High
Identified strategies for greenhouse gas mitigation efforts <i>Comment: Included in 2040 General Plan policies and programs. The County Executive Office's Sustainability Division manages the Ventura County Climate Emergency Council to advise the County's Board of Supervisors on climate action planning and Climate Action Plan implementation. https://www.ventura.org/vccec/</i>	High
Identified strategies for adaptation to impacts <i>Comment: The County's 2019 Sea level Rise Adaptation Report includes adaptation strategies that have yet to be adopted in policy form.</i>	Medium
Champions for climate action in local government departments <i>Comment: Action ultimately requires Board authorization for policies and programs. The County Executive Office's Sustainability Division acts as lead for Climate Action Plan implementation including time invested by a full-time Sustainability Officer and supporting staff. The Sustainability Officer is the Chair of the County's the Sustainability Committee, an interagency work group focused on integrating sustainable practices into agency activities including Climate Action Plan implementation.</i>	Medium
Political support for implementing climate change adaptation strategies <i>Comment: In June 2020, the County's Board of Supervisors allocated an additional full-time, fixed-term employee to focus on supporting Climate Action Plan implementation efforts as part of its budget hearing process.</i>	High

Criterion	Jurisdiction Rating
Financial resources devoted to climate change adaptation <i>Comment: The County funded the 2020 Climate Action Plan, which is a component of the 2040 General Plan, and has provided matching funds for sea level rise planning grants. The County Executive Office's Sustainability Division has staff devoted to climate action and adaptation programs, including an additional fixed-term position focused on supporting Climate Action Plan implementation that was approved in June 2020. The County also contributes membership funds to BEACON.</i>	High
Local authority over sectors likely to be negative impacted <i>Comment: The County exercises land use authority in the unincorporated County.</i>	High
Public Capacity	
Local residents' knowledge of and understanding of climate change risk <i>Comment: Many residents have a general understanding of climate change risks, but ongoing outreach and education is needed for the broader community.</i>	Medium
Local residents' support of adaptation efforts <i>Comment: While most residents support adaptation efforts, they may be resistant if new requirements impact them financially.</i>	Medium
Local residents' capacity to adapt to climate impacts <i>Comment: Applications for new development and redevelopment have rarely included voluntary climate adaptation features, but some features are required to be included according to 2040 General Plan policies. The County has allowed redevelopment in areas impacted by wildfires.</i>	Low
Local economy's current capacity to adapt to climate change impacts <i>Comment: The agricultural industry is a substantial contributor to the local economy, with an estimated gross value in 2020 of over 1.9 billion dollars, and employing over 40,000 individuals. The County (~8,000 employees) and Naval Base Ventura County (>16,000 employees) are the two largest local employers and both are planning for climate change impacts. Additionally, the City of Port Hueneme is conducting a General Plan update that will include a vulnerability assessment and planning for sea level rise impacts at the Port of Hueneme. Adaptive capacity is highly dependent on the scope and severity of climate impacts. Rebuilding levees, managed retreat, and rebuilding/relocating buildings and infrastructure in the face of extreme flooding and sea level rise are costly adaptation measures and, in many cases, would require substantial public funding and a multi-jurisdictional approach to implement.</i>	Medium
Local ecosystems' capacity to adapt to climate change impacts <i>Comment: A 2019 report by the Western Regional Climate Center indicated that, as a result of climate change Ventura County will experience air temperature increases, a greater number of extreme heat days annually, and an increased number of annual dry days leading to fewer but more intense rainfall events. Based on these findings, it is anticipated that such changes will lead to challenges in evapotranspiration and crop cultivation, increased potential for flash flooding and/or debris flows, increased susceptibility to drought, and longer wildfire seasons. More work needs to be done to evaluate how ecosystems that often straddle jurisdictional boundaries can migrate and adapt. More community education and benefit-cost analysis is needed to demonstrate how ecosystem services can minimize or abate climate change impacts.</i> https://wrcc.dri.edu/Climate/reports.php https://wrcc.dri.edu/Docs/VenturaClimate2019_bookmarked.pdf .	Low

High = Capacity exists and is in use

Medium = Capacity may exist, but is not used or could use some improvement

Low = Capacity does not exist or could use substantial improvement

Unsure = Not enough information is known to assign a rating.

1.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

1.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- The **Ventura County 2040 General Plan**, Hazards and Safety Element was updated in September, 2020. The update also included a Water Resources Element and a Climate Action Plan.
- The **Non-Coastal Zoning Ordinance (NCZO)** includes standards for hazard mitigation and abatement relative to high fire hazard areas, earthquakes, geology and floods. Recent updates to the NCZO added water efficient landscaping standards and a wildlife corridor overlay zone that includes new standards in fencing and lighting to promote the movement of wildlife.
- The **County's Local Coastal Program (LCP)** is comprised of the **Coastal Area Plan** and **Coastal Zoning Ordinance (CZO)**. The CZO includes standards for hazard mitigation and abatement related to beach erosion, geology, earthquakes, and floods.
- The **Ventura County Subdivision Ordinance** requires consideration of both geologic and flood hazards during the siting and design of proposed lots. Additionally, it requires consideration of wildfire hazards when a proposed subdivision is located in a "state responsibility area" or a "very high fire hazard severity zone".
- **Ventura County Emergency Operations Plan** addresses the County's planned response to hazard events.
- **Ventura County Building Code** is the local adoption of the State codes Title 24

1.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that offer opportunities for future integration or expanded integration with this mitigation plan:

- The **Ventura County 2040 General Plan** includes policies and programs for hazard mitigation and abatement relative to high-fire hazard areas, earthquakes, geology and floods, as well as climate change adaptation related to droughts, sea level rise and coastal erosion. The County will re-link the General Plan with this HMP once this HMP update is approved. This will enable compliance with AB 2140.
- The County's **Initial Study Assessment Guidelines (ISAGs)** are in the process of being updated and this may be an integration opportunity.
- The County's **NCZO** is periodically amended per Board of Supervisors directive or as required by state law. Updates per new fire codes related to brush clearance and fire prevention may be needed.
- The **County's LCP** includes standards for hazard mitigation and abatement relative to beach erosion, geology, earthquakes, and floods. The policies and standards related to environmentally sensitive habitat, coastal hazards, and sea level rise are being consolidated and updated, and this effort could present an opportunity for future integration.

- **Wetland Project Permitting Guide, 2006**—this document could be updated with support from the County's Public Works Agency to include hazard integration.

The following projects are currently underway or are planned to be updated. There could be integration opportunities to include hazards in siting and design standards.

- Sea Level Rise Vulnerability Assessment and Adaptation Report, 2019
- Farmworker Housing Ordinance, underway
- Tree Mitigation Fund and County Tree Planting Program
- Land Conservation Act Program
- Initial Study Assessment Guidelines (ISAGs)

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

1.6 RISK ASSESSMENT

1.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 1-12 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 1-12. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
2019 Easy Fire	FM5298	10/30/2019 to 11/2/2019	1,806 acres burned; 6,500 homes threatened; 30,000 residents evacuated.
2019 Maria Fire	FM5302	10/31/2019 to 11/4/2019	9,412 acres burned including a substantial portion of prime ag lands; 4 structures destroyed; >1,800 homes / 7,500 residents evacuated; triggered temporary shut-down of local oil and natural gas field facilities and pipelines; damage to communications and oil and gas field facilities occurred. 160 acres of avocado orchards and 25 acres of lemon orchards were moderately to severely damaged or destroyed. Damage to avocado and lemon crops was estimated at ~\$5.2 million, according to Korinne Bell, Ventura County Chief Deputy Agricultural Commissioner.
2018 Hill Fire	DR4407	11/8/2018 to 11/16/2018	4,531 acres burned; 4 structures destroyed; 4 structures damaged; 5,000 structures threatened.
2018 Woolsey Fire	DR4407/FM5280	11/8/2018 to 11/21/2018	96,949 acres burned; \$6 billion in property damage; \$10 million in firefighting costs; 1643 structures destroyed, 3 deaths, 295,000 residents (in Ventura and L.A. County) evacuated.
2018 Heat Event (July)		7/4/2018 to 7/6/2018	Extreme 2-day heat event broke records across the county, and resulted in damage to crops. For crops such as avocados and citrus, heat can damage both the current crop and also the fruit set for the coming season, packing a two-year punch. The California Avocado Board estimated a 2019 crop of 210 million pounds, down from 372 million pounds a year earlier, and the smallest crop in over a decade. Citrus officials say it knocked down up to 15 percent of the region's lemon crop at the tail end of the harvest. Lemons dropped by 14% in value in the County's 2019 ag report.

Type of Event	FEMA Disaster #	Date	Damage Assessment
2018 Montecito Debris Flows	DR4353	1/9/2018 – 1/22/2018	A 30-mile section of U.S. Route 101 (US 101) from Santa Barbara to Ventura was shut down for two weeks as sections filled with two feet (60 cm) of mud and debris, some of which also reached beaches 2.25 miles (3.6 km) from the mountains. Following the closure, access to Santa Barbara from the Los Angeles area was limited to a 260-mile (420 km) detour around the Los Padres National Forest or through the use of private ferries to Ventura. This closure severely impacted commerce throughout the county. Based on commuter surveys conducted by the U.S. Census Bureau (2013) and Department of Transportation estimates, in 2017 an average of 2,300 vehicles (2,400 workers) commuted daily from Santa Barbara to Ventura County, and approximately 10,000 vehicles (11,500 workers) commuted from Ventura, in addition to approximately 3,700 commercial trucks. The loss to Ventura County cities from commuter earnings for each week of the closure has been approximated at \$12,235,774.
2017 Thomas Fire	FM5224	12/4/2017 to 1/12/2018	Over 280,000 acres burned. Cost of \$2.2 billion; \$171,296,703 in agricultural losses (crop losses and farm equipment) alone; 1,063 structures destroyed; 280 damaged; 2 deaths; and 104,607 residents evacuated; Businesses, including Ag also experienced loss of perishable goods from the nearly two-week closure of U.S. 101 that shut down commerce and prevented workers from accessing fields.
2017 Winter Storms	NA	2/17/2017 to 2/18/2017	Rainfall amounts from 2 to 6 inches across coastal areas with up to around 10 inches in the local mountains produced numerous reports of flash flooding as well as mud and debris flows. Strong southerly winds with gusts up to 70 mph reported in some areas. Highway 101 was closed in both directions north of Ventura due to mud and debris flows near the Solimar burn area. Flash flooding near the community of Thousand Oaks; three men rescued when Wildwood Creek flooded. Near the community of Camarillo, Conejo Creek to overflow its banks, flooding acres of agricultural land. State disaster declaration No. CA77 and CA77.1
2015 Coastal Erosion and Flooding Event	NA	12/11/2015	Strong waves (up to 15 ft.) from a large westerly swell event resulted in evacuation and closure of the Ventura and Port Hueneme piers. Heavy surf caused approximately 15 pylons to break off the sides of the Ventura pier—triggering an extended (four month) closure while repairs were made. Pier repairs cost \$1.4 million. Localized flooding of beachfront homes in the Pierpont neighborhood and nearby streets also occurred Harbor Boulevard between Sanjon Road and California Street in the city of Ventura had to be closed due to flooding. Erosion from this event substantially altered the beach profile along Ventura State Beach near the pier, including impacts to Surfer's Point as well as other exposed coastline areas. At Naval Base Ventura County, officials temporarily closed Family Beach and a nearby campground because of high surf. Farther east along Pacific Coast Highway, State Parks relocated campers inland from the beachside Thornhill Broome State Beach Campground after the combination of high tide and the swell flooded the east and west ends of the campground.
2014 Pacific Coast Highway (Hwy 1) Landslide		11/20/2014 to 3/15/2015	Rocks, boulders, and 4-6 feet of mud slumped onto Hwy 1 near the May 2013 Springs Fire burn area. The substantial slope stabilization and highway repairs required resulted in a months-long closure of 9 miles of Hwy 1 (November through mid-March) between the Mugu and Malibu areas, isolating unincorporated south coast communities, impacting commuter traffic, and limiting access to coastal recreational resources.
2014 Coastal Erosion and Flooding Event (Hurricane Marie)	NA	8/26/2014	Large southeast swells from Hurricane Marie generated high surf conditions along local beaches and resulted in numerous rescues by local lifeguards, beach and campground closures, and flooding of some coastal roads. Local piers experienced some damage including the pier at Port Hueneme. Extensive damage also occurred to the road infrastructure of Hwy 1 near Sycamore Canyon campground in Point Mugu State Park. At postmile (PM) 4.0, the existing revetment was damaged and at PM 4.2, the vegetated slope between the road and beach was severely eroded.
2013 Springs Fire	FM5024	5/2/2013	24,251 acres burned; 15 homes destroyed; 4,000 homes threatened as well as key communications infrastructure (including \$1 billion dollar Naval satellite operations station on Laguna Peak). More than \$10 million in firefighting costs incurred.

Type of Event	FEMA Disaster #	Date	Damage Assessment
2009 Guiberson Fire	FM2839	9/22/2009 to 9/29/2009	17,500 acres burned; 1 structure destroyed; estimated firefighting costs of more than \$6.9 million
2007 Ranch Fire	FM1731	10/21/2007	58,401 acres burned in both L.A. and eastern Ventura County near Piru; over \$9 million in firefighting costs
2007 Freeze Event	DR-1689	1/11/2007 to 1/17/2007	4 nights of below freezing temperatures caused losses of over \$1.3 billion statewide and \$281 million in crop damage locally. Damage was mainly to citrus and avocado groves, and the winter strawberry crop that was just going to harvest.
2006 Shekell Complex Fire	FM2681	12/3/2006 to 12/6/2006	13,600 acres burned; 5 homes, 2 comm. Buildings; 11 structures destroyed; \$12.8-13 million in damage; 9.2 million in structural damage; 25 million in ag damage
2006 Day Fire	FM2677	9/4/2006 to 10/9/2006	162,702 acres burned, including substantial wilderness and national forest areas; \$78 million in fire suppression costs; 11 structures burned, residences threatened in Lockwood Valley and Upper Ojai over course of several weeks.
2005 La Conchita Landslide	DR1577	1/10/2005	The landslide resulted in the deaths of 10 people, destroyed 13 homes and resulted in red-tagging of 23 others. It occurred following a two-week period from Dec 27-Jan 10 in which 430 mm of rainfall fell (a record 15-day rainfall). Estimated costs of ~\$1.75 million in county agencies' response to the event.
2005 Winter Storms (January)	DR1577	1/7/2005 to 1/11/2005	Damage totaled more than \$200 million. High water flows, scouring, and washouts in the Ventura River damaged several water wells and exposed water lines owned by the Ojai Valley Sanitary District. Severe erosion occurred along both embankments of the Ventura River. The Calleguas Creek topped its banks near the state hospital in Camarillo and flooded nearby ag fields. Homes in Moorpark, Casitas Springs and Ojai were flooded, major roads including Highways 101, 126, 33 and 150 were closed for more than a week, and the Santa Paula Airport was closed for several months due to flood damage to the runway.
2003 Simi Fire	DR1498/ FM2504	10/24/2003	108,204 acres burned; crop losses of nearly \$8 million.
1999 Ranch Fire	NA	12/27/1999	4,372 acres burned, including a large proportion of national forest lands in Los Padres National Forest. Reported losses include thousands of dollars in outdoor equipment and numerous small structures at The Ojai Foundation. The fire also threatened numerous homes in Ojai Valley area. Fire officials estimated the cost of fighting the fire at nearly \$5 million, and noted that firefighters constructed more than 20 miles of fire lines.
1998 Freeze Event	DR1267	12/20/1998	This severe freeze impacted citrus/avocado/strawberry crops across Ventura County; 1,139 services received; \$71,541,000 in damages to agriculture industry. Other sources estimated losses as high as \$74.3 million for Ventura County farmers.
1928 St. Francis Dam Failure	NA	3/12/1928	>530 people died; bridges, orchards, farms, and homes were all eradicated in flood's path down the Santa Clara river valley to the Pacific Ocean. Considered to be one of the worst engineering disasters of the 20 th century.

1.6.2 Hazard Risk Ranking

Table 1-13 presents a ranking of all hazards of concern for which this hazard mitigation plan provides quantitative risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions target hazards with high and medium rankings.

Table 1-13. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Landslides	51	High
2	Wildfire	36	High
3	Earthquake	32	High
4	Severe Storms	24	High ^a
5	Severe Weather	24	High ^a
6	Dam Failure	24	High ^a
7	Flooding	18	High ^a
8	Sea Level Rise	12	Low
9	Tsunami	10	Low
10	Drought	9	Low

a. The risk category was increased to High, based on jurisdiction-specific vulnerabilities.

1.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 63
- Number of FEMA-identified Severe-Repetitive-Loss Properties: N/A
- Number of Repetitive-Loss or Severe-Repetitive-Loss Properties that have been mitigated: N/A

Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- **Prioritization of Open Space / Natural Resource Areas**—In 2015, the U.S. Department of Agriculture named Ventura County the most desirable place to live in America. Ventura’s mild climate, varied topography, bountiful open space and natural resources, and proximity to additional natural resource areas are a large part of its draw for residents and visitors. Vast tracts of the unincorporated County lie adjacent to, or within, the Los Padres National Forest, Santa Monica Mountains National Recreation Area, and the Pacific Ocean. Valuation of these resources, and of our interface with these open space areas is outside the scope of FEMA’s traditional risk analysis tools (e.g., property/structural damage estimates, loss of life, and critical infrastructure inventories, insurance claims), which can result in radical underestimation of disaster impacts to recreation, tourism, and the overall desirability of living and working here.
- **Santa Ana Winds and Planned/Unplanned Utility Outages**—Warm, dry northeasterly winds are a local weather phenomenon in Southern California that can result in downed trees and power lines, blowing dust and air quality concerns. Although the winds themselves do not cause wildfires and rarely rise to the level of an area-wide disaster on their own, they exacerbate

critical fire weather conditions in our area and substantially complicate wildfire response and containment. These winds may occur throughout the year, but are typically most common from October to March. Nearly all of the region's significant wildfires have occurred in conjunction with strong Santa Ana wind conditions. Local power outages have been enacted with increasing frequency by utility companies in response to high wind/low humidity conditions, both within Ventura County and adjacent counties. Supporting adaptation of local businesses and individual residents to sporadic utility outages triggered by potential wind events, as well as critical facilities (e.g., communications towers and other energy infrastructure) should be prioritized.

- **Localized Flooding**—Many communities within the unincorporated County are located adjacent to rivers (e.g., Santa Clara River, Ventura River, Sespe Creek, Piru Creek, Lockwood Creek) that are prone to flood to varying degrees during periods of heavy rainfall. The effects of this flooding range from localized road closures to damage to property (e.g., flooded croplands), vehicles, and buildings.
- **Ventura County Public Works Agency – Watershed Protection's (VCPWA-WP's) Critical Facilities in the Unincorporated Areas**—Based on the fact that virtually all of VCPWA-WP's critical facility assets were constructed to provide flood protection and/or are geospatially located proximate to and/or in flood plains, and as documented in Table 1.8 Past Natural Hazard Events above, during the aforementioned 56-year period, VCPWA-WP's critical facility flood protection assets experienced \$81 Million in damage from flooding, severe storms and severe weather events, VCPWA-WP has ranked Flood risks as "High" in Table 1.9 above.
- **Matilija Dam Seismic Risk Vulnerability**—Matilija Dam in the Ventura River watershed is vulnerable to seismic failure. Many communities are at risk of inundation. Implementation of the Matilija Dam Ecosystem Restoration Project (MDERP) would address this risk while also opening 17 miles of habitat for endangered steelhead trout. MDERP comprises several downstream flood protection and water supply reliability components that must precede removal of the dam, some of which have been completed or are at various stages of completion (alternatives analysis, design, or construction).
- **Levee Rehabilitation and Certification Projects in Unincorporated Areas**—Ventura County Watershed Protection is engaged in preliminary design and CEQA work for levee retrofit and/or flood-protection enhancement projects required to certify all its levees in compliance with federal levee certification requirements. Major levee rehabilitation and ultimate certification projects in the unincorporated areas include: the Ventura River Levee (VR-2) located in the unincorporated community of Casitas Springs, and the Live Oak Acres Levee located in the near the unincorporated community of Oak View. VCPWA-WP is working with FEMA, the U.S. Army Corps of Engineers (USACE), as well as affected cities, residents, and property owners throughout Ventura County to marshal scarce Federal, State, and local funding resources necessary to complete five very important levee retrofit public safety and flood protection projects. Once all VCPWA-WP's levee retrofit projects are completed, VCPWA-WP's levees will fully comply with applicable Federal Levee Certification requirements found in 44 CFR 65.10. At best, full completion of VCPWA-WP's five levee rehab projects will require a minimum of five to ten years, and could take longer, depending on final engineering design plan results, environmental considerations, and availability of project funding required to construct the rehab projects.
- **Unincorporated Area Pump Stations Vulnerable to Sea-Level Rise**—San Nicholas, Santa Monica, and Santa Paula Pump Stations lift stormwater from low elevation coastal neighborhoods and discharge directly to the Pacific Ocean. The Santa Monica and Santa Paula Pump Station outlets are frequently clogged during high tide and heavy surf events, causing the

pumps to shut off and requiring manual removal of sand to ensure the coastal communities do not flood. With sea level rise, the risk increases. While not currently afflicted with the propensity for sand to clog its outlet, San Nicholas Pump Station is vulnerable to failure as sea level rises. The pumps in each facility are over 40 years old and do not have on site backup generators, making them vulnerable to power failures, which cause alarms to sound signaling the need for immediate emergency response. All three facilities need constant repair due to corrosive salt air and water. Upgrades are needed, but more land is required for truly effective solutions, and adjacent land is occupied by high value coastal residences.

- **Ormond Lagoon Coastal Estuary Vulnerable to Sea Level Rise**—Ormond Lagoon is a coastal estuary open to the ocean only during rain events and for a variable period thereafter depending on time between rain events, tides, etc. Sea level rise may reduce the ability of storm runoff from Ormond Lagoon Waterway and Tšumaš Creek to breach the lagoon and flow into the Pacific Ocean. Without a Beach Elevation Management Plan, the following are vulnerable to flooding from storm water backed up in the lagoon: the adjacent Oxnard Wastewater Treatment Plant and Advanced Water Purification Facility, the New-Indy recycled containerboard mill, the Halaco Superfund Site, local residences and roads. Restoration of the Ormond Wetlands complex may help reduce flood potential.
- **Homeless Population**—The size and distribution of the homeless population in the unincorporated area is not easily quantified, but has been increasing in recent years and exacerbates hazard risks and mitigation costs. During a January 2020 point-in-time survey coordinated by the County Executive Office, 128 homeless individuals were counted as residing within the unincorporated County area. Many homeless individuals within the unincorporated area inhabit encampments within the Ventura and Santa Clara river bottoms, where both wildfires and flooding risks are regular concerns. Unsheltered living locations have negative impacts on watershed viability and resilience in addition to posing risks to the broader community. The presence of unauthorized habitation within the watersheds increases wildfire risks (e.g., accidental starts from cooking/warmth fires and arson) as well as the cost of hazard mitigation actions (e.g., brush clearance for wildfire hazard abatement and trash and debris removal efforts prior to winter storm season). Communication barriers, fear of government officials and law enforcement, substance abuse issues, and mental health issues can complicate public outreach and hazard awareness efforts to homeless individuals, and confound accurate assessments of hazard risk and disaster damage.
- **Importance of Agriculture and Potential for Undervaluation of Drought and Ag/Biological Risks**—Agriculture, in the forms of ranching and farming, has been a keystone of Ventura County's economy since its inception. With fertile soils and a mild climate, Ventura remains one of the leading counties for agricultural production in the state. In addition to a variety of row crops and nursery products, the county is one of the top producers of citrus, avocados, and strawberries in the nation. Much of the cultivated land lies within the unincorporated County areas of the Oxnard Plain and Santa Clara River Valley. In addition to generating direct on-farm employment and revenue, agricultural production supports a wide range of other businesses, including packinghouses, equipment dealers, chemical applicators, pest-control firms, labor contractors, fertilizer and other supply dealers, trucking firms, fuel distributors, and repair and manufacturing facilities. Altogether, farming and farm-dependent businesses provide an estimated 43,000 jobs in Ventura County, more than any other sector of the economy except services. Agriculture and agriculture-related businesses account for about 4.4 percent of overall economic activity in Ventura County, generating \$2.1 billion in revenue and \$76 million in indirect business taxes annually. One in 10 county residents relies to some degree on income derived from farming. However, drought and agricultural/biological hazards (e.g., invasive crop

pests and disease) do not lend themselves to evaluation using FEMA’s traditional risk analysis tools (e.g. property, structural damage estimates, loss of life, critical infrastructure inventories), which results in underestimation of the disaster impacts/costs that these hazards can have on the local environment, economy, and area communities.

- **Unauthorized Immigrants**—Ventura County’s farm bureau estimates there are about 36,000 immigrant workers in the county, many of them undocumented. Unauthorized immigrants may be disproportionately affected by disasters (e.g., wildfires, flooding, pandemics), particularly those that impact agricultural operations in the unincorporated county areas where many work as farm laborers. Language/ communication barriers and fear of government and law enforcement personnel can complicate public outreach and education efforts to these individuals.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

1.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 1-14 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 1-14. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
OA 11—Develop and implement plans to increase the building owner’s general knowledge of and appreciation for the value of seismic upgrading of the building’s structural and nonstructural elements. <i>Comment: This is an ongoing effort to be developed over the next year.</i>			✓	VUC-8
OA 19—Maintain vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes. <i>Comment: This is an ongoing program and will be carried over to the plan update.</i>			✓	VUC-9
OA 21—Maintain hazards fuel treatment program for areas that have been identified with overgrown/dead brush/trees to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program. <i>Comment: This is an ongoing program and will be carried over to the plan update.</i>			✓	VUC-10
UVC 1—Continue to participate in the National Weather Service’s (NWS) StormReady Program. <i>Comment: Ventura County continues to participate in TsunamiReady and StormReady. NWS confirmed that Ventura County was last renewed for both SR and TR on 2/25/2019. The next renewal will be due on 3/19/2022.</i>			✓	VUC-11
UVC 2—Develop a plan to identify funding to replace/relocate the Operational Area Emergency Operations Center (EOC). <i>Comment: This item was not completed/pursued during the last update cycle (Thomas & Woolsey fire events, OES staffing changes, and COVID impacted planning and development of many items over the last several years) but continues to be a project of interest that will be carried over to the plan update.</i>			✓	VUC-12

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
UVC 3—Update Seismic Standards for Communications (Cell Towers) Facilities (Building Code). <i>Comment: This will be done through the Ventura County Building Code VCBC 2019</i>			✓	VUC-13
UVC 4—Reinforce and maintain County roads, bridges, ditches and culverts from flooding through various flood proofing measures. <i>Comment: Ventura County Public Works Agency—Roads and Transportation Department (VCPWA-RT) is responsible for the operation and maintenance of County roads, bridges, ditches, and culverts in the unincorporated areas of Ventura County. VCPWA-RT conducts annual ditch cleaning and culvert cleaning before winter storm season to maintain the capacity of ditches and proper drainage flow to mitigate roadway flooding in rural areas of the county. In addition to the annual cleaning of ditches and culverts, the VCPWA-RT is actively working to rehabilitate Bridge Road Bridge (#442) which is currently in design and environmental permitting phase and is expected to be completed in 2023. Replacement of Catalina Drive Bridge (#384) was completed in May 2020 and replacement of Casitas Vista Road Bridge (#327) was completed in September 2020. Mupu Road Bridge and the Wheeler Canyon Road Bridge improvements projects were completed in 2016-2017. The VCPWA-RT is developing a Bridge Management Program to maintain County bridges. The program will identify and prioritize VCPWA-RT's 158 bridge structures which include 81 bridges on the National Bridge Inventory and 77 other structures. This program will identify budget needs, and schedules for preventive maintenance as well as budget for required rehabilitation or replacement of VCPWA-RT maintained bridges for short and long-term planning needs. The Bridge Management Program is expected to be completed in calendar year 2021. In 2020-2021, VCPWA-WP continued to clean flood control channels and catch basins to prepare for winter storm seasons. VCPWA-WP also secured Proposition 1 grant funding for the Santa Ana Bridge and Camino Cielo Bridge replacement projects which are managed by VCPWA-RT (both are components of the MDERP). The design of Camino Cielo Bridge is progressing towards 30% millstone. For the Santa Ana Bridge project, a construction contract was awarded in March 2021 with an estimated completion date of December 2022.</i>			✓	VUC-17

1.8 HAZARD MITIGATION ACTION PLAN

Table 1-15 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 1-16 identifies the priority for each action. Table 1-17 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 1-15. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action VUC-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas. <i>Hazards Mitigated:</i> Landslide, Earthquake, Severe Storm, Severe Weather, Flooding, Wildfire, Dam Failure, Sea Level Rise, Tsunami						
New & Existing	1, 4, 6, 9, 10, 11, 16	Ventura County	NA	High	HMGP, PDM, FMA	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action VUC-2 —Integrate the Hazard Mitigation Plan into other plans, ordinances and programs that dictate land use decisions in the community, including the 2040 General Plan, Non-Coastal Zoning Ordinance, and Local Coastal Program.						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storm, Severe Weather, Flooding, Wildfire, Dam Failure, Sea Level Rise, Tsunami, Drought, Agricultural/Biological						
New & Existing	1, 2, 4, 6, 9, 10, 11, 12, 15, 17, 18, 19	Ventura County Resource Management Agency, Ventura County Sheriff's OES, Ventura County Public Works Agency	NA	Low	Staff Time, General Funds	Ongoing
Action VUC-3 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storm, Severe Weather, Flooding, Wildfire, Dam Failure, Sea Level Rise, Tsunami, Drought, Agricultural/Biological						
New & Existing	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	Ventura County Agencies	NA	Low	Staff Time, General Funds	Short-term
Action VUC-4 —Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements to:						
<ul style="list-style-type: none"> • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts. 						
<u>Hazards Mitigated:</u> Flooding, Severe Storms, Sea Level Rise, Dam Failure						
New & Existing	1, 2, 4, 6, 9, 10, 11, 13, 14, 15, 17, 19	County Public Works	Building and Safety	Low	Staff Time, General Funds	Ongoing
Action VUC-5 —Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:						
<ul style="list-style-type: none"> • Implementation of 2040 General Plan programs including a Cool Roof Ordinance and Cool Pavement Standards, Performance-Based Building Code for Green Building, Groundwater Basins Resilience Program, Sea Level Impacts Monitoring Program, and Wildfire Vulnerability Assessment and Mapping Program. • Develop programs to increase energy efficiency of new buildings above state-required design requirements 						
<u>Hazards Mitigated:</u> Sea Level Rise, Flooding, Drought, Wildfire, Severe Weather, Severe Storms, Agricultural/Biological						
New & Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	Ventura County	NA	Low	Staff Time, General Funds	Ongoing and Short-term
Action VUC-6 —Purchase and install permanent generators for critical facilities and infrastructure that lack adequate backup power.						
<u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flooding, Severe Weather, Severe Storms, Tsunami, Wildfire						
Existing	2, 6	Ventura County	NA	High	FEMA HMA (BRIC and HMGP), Staff Time & General Funds	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action VUC-7 —Purchase and install mobile generators for critical facilities and infrastructure that lack adequate backup power.						
<u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flooding, Severe Weather, Severe Storms, Tsunami, Wildfire						
Existing	2, 6	Ventura County	NA	High	FEMA HMA (BRIC and HMGP), Staff Time & General Funds	Short-term
Action VUC-8 —Develop and implement plans to increase building owner’s general knowledge of and appreciation for the value of seismic upgrading of their building’s structural and nonstructural elements. (formerly 2015 Action OA-11)						
<u>Hazards Mitigated:</u> Earthquake						
Existing	1, 2, 4, 6, 9, 16, 17	Ventura County Building and Safety	NA	Medium	Staff Time, General Funds	Ongoing and Short-term
Action VUC-9 —Maintain new vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes. (formerly 2015 Action OA-19) (Coordinates with Ventura County Fire Protection District Action VFP-12)						
<u>Hazards Mitigated:</u> Wildfire						
New & Existing	2, 4, 5, 8, 10, 13, 14, 15, 19	VCFPD	Ventura County	Medium	FEMA HMA (BRIC, FMAP and HMGP), Staff Time, General Funds	Ongoing
Action VUC-10 —Maintain wildfire hazard fuel reduction program for areas that have been identified with overgrown or dead brush, trees and weeds to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program. (formerly 2015 Action OA-21) (Coordinates with Ventura County Fire Protection District Action VFP-6)						
<u>Hazards Mitigated:</u> Wildfire						
New & Existing	2, 4, 5, 6, 8, 10, 11, 13, 14, 15, 18, 19	VCFPD	CAL FIRE & USDA	Medium	FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing
Action VUC-11 —Continue to participate in the National Weather Service’s (NWS) StormReady and TsunamiReady Programs. (formerly 2015 Action UVC-1) (Coordinates with Action VCPWA-WP-16)						
<u>Hazards Mitigated:</u> Severe Storms, Severe Weather, Tsunami, Flooding, Dam Failure, Landslide, Sea Level Rise						
New & Existing	1, 2, 7, 8, 17	Ventura County Public Works	Ventura County Sheriff’s OES	Low	Staff Time, General Funds	Ongoing
Action VUC-12 —Develop a plan to identify funding to replace/relocate the Operational Area Emergency Operations Center (EOC). (formerly 2015 Action UVC-2)						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storm, Severe Weather, Flooding, Wildfire, Dam Failure, Sea Level Rise, Tsunami						
New & Existing	6, 7, 8	Ventura County Sheriff’s OES	NA	High	Staff Time, General Funds	Long-term
Action VUC-13 —Update Seismic Standards for Communications (Cell Towers) Facilities (Building Code).						
<u>Hazards Mitigated:</u> Earthquake						
New & Existing	1, 2, 4, 6, 11	Ventura County Building and Safety	NA	High	HMGP, PDM, FMA	Short-term
Action VUC-14 —Develop a countywide Evacuation Route Plan to identify and evaluate evacuation routes for wildfires and other hazards.						
<u>Hazards Mitigated:</u> Wildfire, Dam Failure, Flooding, Landslide						
New & Existing	7, 8, 17, 19	Ventura County OES	VCFPD	High	Staff Time, General Funds, Fire Safe Council Grant	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action VUC-15—Implement a Post Disaster Critical Facilities Risk Impact Assessment Program designed to capture and geo-reference perishable data after significant events (e.g., preliminary damage estimates, damage photos, event mapping, etc.) in support of future hazard mitigation efforts including the implementation and maintenance of the HMP. Leverage applications (Maintstar v15, ArcGIS Online) to capture information related to VCPWA-RT, W&S, and WP critical facility asset impacts, and establish a centralized location to document and archive critical facilities geospatial data related to disaster events which will facilitate the development and optimize the pursuit of grant funding for future hazard mitigation projects. (Coordinates with Action VCPWA-WP-3)</p> <p><u>Hazards Mitigated:</u> Dam Failure, Drought, Earthquake, Flooding, Landslide, Sea Level Rise, Severe Storms, Severe Weather, Tsunami, Wildfire</p>						
New & Existing	1, 2, 4, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19	VCPWA-WP	Ventura County Departments, Cities, Special-Purpose Districts, and NGOs.	Low	WP Structural Revenues augmented by FEMA Grants (BRIC) and County General Funds, as required	Short Term
<p>Action VUC-16—Improve public awareness and community response to flood event emergencies by upgrading and modernizing the Flood Warning System (FWS) optimized to leverage multi-social media venues. Expand the public outreach of the FWS through targeted marketing based on web-site analytics and develop multiple language interfaces to better reflect the linguistic and cultural diversity found in Ventura County communities. (Coordinates with Action VCPWA-WP-4)</p> <p><u>Hazards Mitigated:</u> Flooding, Landslide, Sea Level Rise, Severe Storms, Severe Weather, Tsunami</p>						
New & Existing	1, 2, 6, 7, 12, 17, 18, 19	VCPWA-WP	DWR, NOAA, VCSOES, Ventura County Departments, Cities, Special-Purpose Districts, community and tribal leaders, community councils, and NGOs	Medium	WP Structural Revenues augmented by DWR and FEMA Grants (BRIC and HMGP) and County General Funds, as required	Short Term
<p>Action VUC-17—Prioritize efforts to upgrade County bridges, culverts, dams, debris and detention basins, flood conveyance channel and pipeline infrastructure, pump stations, roads, water and wastewater community infrastructure, and other critical facilities required to provide adequate flood-proofing protection and enhance the resiliency of vital community lifelines in Ventura County. (Coordinates with Action VCPWA-WP-5)</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flooding, Landslide, Sea Level Rise, Severe Storms, Severe Weather, Tsunami, Wildfire</p>						
New & Existing	1, 2, 5, 6, 8, 9, 10, 11, 13, 16, 18, 19	VCPWA Departments	Ventura County Departments, Cities, Special-Purpose Districts	High	WP Structural Revenues augmented by FEMA Grants (BRIC, HMGP) DWR, VCTC, Caltrans and County General Funds, as required	Long-term
<p>Action VUC-18—Complete project feasibility analyses, design engineering and CEQA work for the Ventura River Levee (VR-2) in the unincorporated community of Casitas Springs, and the Live Oak Acres Levee near the unincorporated community of Oak View required to evidence local compliance with Federal Levee Certification Regulations (44 CFR 65.10) (Coordinates with Action VCPWA-WP-6)</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flooding, Landslide, Sea Level Rise, Severe Storms, Severe Weather, Tsunami</p>						
New & Existing	1, 2, 5, 6, 8, 9, 10, 11, 13, 16, 18, 19	VCPWA-WP	Ventura County Departments and Cities of Camarillo, Oxnard, and San Buenaventura	High	WP Structural Revenues augmented by FEMA Grants (BRIC and HMGP) DWR-LLAP Grants USACE, and County General Funds, as required	Long Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action VUC-19—Strengthen the unincorporated area’s participation in the NFIP by maintaining a CRS Class 5 Rating; and pursue a renewed emphasis on the planning and implementation of flood mitigation projects for repetitive loss properties eligible for grant funding under FEMA’s Building Resilient Infrastructure and Communities (BRIC) program with the goal of reducing the number of repetitive loss properties in Ventura County. (Coordinates with Action VCPWA-WP-7)</p> <p><u>Hazards Mitigated:</u> Flooding, Landslide, Sea Level Rise, Severe Storms, Severe Weather, Tsunami</p>						
New & Existing	1, 2, 4, 6, 9, 10, 11, 12, 13, 16, 18, 19	VCPWA-WP	Ventura County Departments, DWR, FEMA	High	WP Structural Revenues augmented by Grants (FMA, BRIC, HMGP) and County General Funds, as required	Ongoing
<p>Action VUC-20—Partner with the Nature Conservancy, Santa Clara River Conservancy, Ojai Valley Land Conservancy, and other NGOs in cooperative efforts to acquire floodplain properties, carry out restoration projects, and enhance resiliency to natural disasters with green design elements included in hazard mitigation projects where feasible. (Coordinates with Action VCPWA-WP-8)</p> <p><u>Hazards Mitigated:</u> Dam Failure, Drought, Flooding, Landslide, Sea Level Rise, Severe Storms, Severe Weather, Tsunami, and Wildfire</p>						
New & Existing	1, 2, 5, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	VCPWA-WP	Ventura County Departments, TNC, SCRC, OVLC, DWR, CDFW, State Coastal Conservancy	High	WP Structural Revenues augmented by Grants (FMA, BRIC, HMGP, DWR, SCC, etc.) and County General Funds, as required	Ongoing
<p>Action VUC-21—Advance planning, feasibility analyses, preliminary design, and ultimate construction of multi-benefit stormwater capture projects through a regionally collaborative approach; as well as pursue strategies to maximize stormwater as a resource (enhance recycled water, stormwater capture and sanitary system diversion, and groundwater recharge) where possible in infrastructure planning and implementation of WP stormwater capital projects. (Coordinates with Action VCPWA-WP-9)</p> <p><u>Hazards Mitigated:</u> Drought, Flooding, Sea Level Rise, Severe Storms, Severe Weather</p>						
New	1, 2, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19	VCPWA-WP	Ventura County Departments, SWRCB, LARWQCB, DWR, SGMAs, NGOs and Private Landowners	High	WP Structural Revenues augmented by FEMA Grants (BRIC & HMGP) DWR, IRWM, LARWQB, SWRCB) and County General Funds, as required	Ongoing
<p>Action VUC-22—Coordinate with FEMA Region IX to proactively address flood plain management and flood risk mapping issues that could adversely impact local hazard mitigation project planning and implementation efforts which may arise from updates to the Countywide DFIRMs, Community Assistance Visits, and/or other risk mapping initiatives. (Coordinates with Action VCPWA-WP-10)</p> <p><u>Hazards Mitigated:</u> Flooding, Sea Level Rise, Severe Storms, Severe Weather</p>						
New & Existing	1, 2, 4, 6, 8, 9, 10, 11, 12, 16, 17, 18, 19	VCPWA-WP	Ventura County Departments, DWR, FEMA, Cities, NGOs, and Private Landowners	Medium	WP Structural Revenues augmented by FEMA Grants (BRIC & HMGP) DWR, and County General Funds, as required	Ongoing
<p>Action VUC-23—Work closely with CA Division of Safety of Dams (DSOD), County Sheriff Office of Emergency Services (OES), and other Federal, State, and local agencies to update and refine the Emergency Action Plans (EAPs) for the state size dams owned by the County. (Coordinates with Action VCPWA-WP-11)</p> <p><u>Hazards Mitigated:</u> Dam Failure, Flooding, Earthquake, Severe Storms, Severe Weather</p>						
New & Existing	1, 2, 4, 7, 8, 12, 17, 18	VCPWA-WP	Ventura County Departments, FEMA, DWR, Cities, NGOs, and Private Landowners	Medium	WP Structural Revenues augmented by FEMA Grants (BRIC), DWR, and County General Funds, as required	Short-Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action VUC-24—Complete project feasibility analyses, design engineering, CEQA, and implementation of the removal of Matilija Dam, reconstruction of the Camino Cielo Bridge crossing, and work with the Casitas Municipal Water District to reconstruct the Robles Diversion, as well as complete the construction of flood protection projects in the unincorporated community of Meiners Oaks in compliance with DSOD requirements. (Coordinates with Action VCPWA-WP-12)</p> <p><u>Hazards Mitigated:</u> Dam Failure, Drought, Earthquake, Flooding, Severe Storms, Severe Weather</p>						
New & Existing	1, 2, 4, 6, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19	VCPWA-WP	Ventura County Departments, Casitas Municipal Water District, Bureau of Reclamation, Caltrans, CDFW, DSOD, DWR, FEMA, USACE, NGOs	High	WP Structural Revenues augmented by FEMA Grants (BRIC & HMGP) CDFW, DWR, NFWF, NRCS, SCC, WCB, and NGO's and County and Casitas General Funds, as required	Long-Term
<p>Action VUC-25—Collaborate with the City of Oxnard, Nature Conservancy, and State Coastal Conservancy to advance planning, design, and implementation of the Ormond Beach Restoration and Access Plan (OBRAP), particularly those components alleviating flooding along the Ormond Lagoon Waterway and creating public access along <i>tšumaš</i> Creek. (Coordinates with Action VCPWA-WP-13 and supports the City of Oxnard Action OXN-12)</p> <p><u>Hazards Mitigated:</u> Drought, Flooding, Severe Weather, Severe Storms, Sea Level Rise, Tsunami</p>						
New & Existing	1, 2, 3, 9, 12, 13, 14, 15, 17, 18, 19	City of Oxnard	VCPWA-WP	High	City Structural Revenues augmented by FEMA Grants (BRIC), CDFG	Ongoing
<p>Action VUC-26—Coordinate efforts to plan, develop, and ultimately construct multi-benefit, flood resiliency and other risk hazard mitigation projects with the Watershed Coalition of Ventura County (OBRAP) 3-Watershed Councils, its Disadvantaged Community Committee, and nonprofit partners by increasing outreach and engagement with disadvantaged and socially vulnerable communities and tribal groups to better understand their unique community-lifeline vulnerabilities, facilitate the development of flood hazard mitigation multi-benefit projects, and align and leverage advocacy efforts to optimize grant funding opportunities. (Coordinates with Action VCPWA-WP-14)</p> <p><u>Hazards Mitigated:</u> Flooding, Severe Weather, Severe Storms, Severe Weather, Sea Level Rise, Tsunami</p>						
New & Existing	1, 2, 4, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, & 19	VCPWA-WP	County of Ventura Departments, Cities, Special-Purpose Districts, community and tribal leaders, community councils, WCVC, and NGOs	Medium	WP Structural Revenues augmented by FEMA Grants (BRIC & HMGP) DWR, IRWM, and City and County General Funds as required	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date
 Acronyms used here are defined at the beginning of this volume.

Table 1-16. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
VUC-1	7	High	High	Yes	Yes	No	Medium	High
VUC-2	12	Medium	Low	Yes	No	Yes	High	Low
VUC-3	17	Low	Low	Yes	No	Yes	High	Low
VUC-4	12	Medium	Low	Yes	No	Yes	High	Low
VUC-5	19	Medium	Low	Yes	No	Yes	High	Medium
VUC-6	3	High	High	Yes	Yes	No	Medium	High
VUC-7	2	High	High	Yes	Yes	No	Medium	High
VUC-8	7	Low	Medium	No	No	Yes	Low	Low
VUC-9	9	High	Medium	Yes	Yes	Yes	High	High
VUC-10	12	High	Medium	Yes	Yes	Yes	High	High
VUC-11	5	Medium	Low	Yes	No	Yes	High	Low
VUC-12	3	Medium	High	No	No	No	Low	Low
VUC-13	5	Medium	High	No	Yes	No	Low	Medium
VUC-14	4	Medium	High	No	Yes	No	Low	Medium
VUC-15	14	Medium	Low	Yes	Yes	Yes-only at a level that is "Minimally Necessary to Comply"	Medium	Medium
VUC-16	8	Medium	Medium	Yes	Yes	Yes-only at a level that is "Minimally Necessary to Comply"	Medium	Medium
VUC-17	12	High	High	Yes	Yes	No	Medium	High
VUC-18	12	Medium	High	Yes	Yes	No	High	High
VUC-19	12	Medium	High	Yes	Yes	Maintaining Class 5-CRS Rating: Yes. Reducing Severe Repetitive Loss Property Exposure: No	Low	Medium
VUC-20	13	High	High	Yes	Yes	Establishing Partnerships with NGOs: Yes Acquiring flood plain properties, carrying out restoration projects, and including green design elements: No	Low	Medium
VUC-21	12	High	High	Yes	Yes	Advance planning and feasibility analysis: Yes Perform Final Design and Construction: No	Medium	High
VUC-22	13	Medium	Medium	Yes	Yes	Coordination with FEMA: Yes New Hazard Mitigation Project Planning and Execution: No	Medium	Medium
VUC-23	8	High	Medium	Yes	Yes	Coordination with FEMA, DWR, and DSOD: Yes Emergency Action Plan Refinements: No	Medium	High
VUC-24	15	High	High	Yes	Yes	No	Medium	High
VUC-25	11	High	High	Yes	Yes	Collaboration with City of Oxnard: Yes OBRAP Flood Mitigation Project Design and Implementation Actions: No	Medium	High

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
VUC-26	14	High	Medium	Yes	Yes	Coordination efforts with WCVC, its DAC, and NGOs: Yes Flood Mitigation Project Design and Implementation Actions: No	Medium	High

a. See the introduction to this volume for explanation of priorities.

Table 1-17. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Landslides	VUC-2	VUC-1	VUC-3, 16	VUC-20	VUC-11, 14	VUC-17, 18		VUC-3, 11, 12, 14, 15
Wildfire	VUC-2, 9, 10	VUC-1, 9, 10	VUC-3, 9, 10	VUC-9, 10, 20	VUC-6, 7, 9, 10, 14		VUC-5, 9, 10	VUC-3, 5, 9, 10, 12, 14, 15
Earthquake	VUC-2, 13, 23	VUC-1	VUC-3, 8		VUC-6, 7, 23	VUC-17, 18		VUC-3, 8, 12, 13, 15
Severe Storms	VUC-2, 4, 22, 23	VUC-1, 19	VUC-3, 4, 16	VUC-20, 21	VUC-6, 7, 16, 23	VUC-17, 18, 24	VUC-5, 17, 18, 20	VUC-3, 4, 5, 11, 12, 15, 22
Severe Weather	VUC-2, 22, 23	VUC-1, 19	VUC-3, 16	VUC-20, 21	VUC-6, 7, 16, 23	VUC-17, 18, 24	VUC-5, 17, 18, 20	VUC-3, 5, 11, 12, 15, 22
Dam Failure	VUC-2, 4, 23	VUC-1, 19	VUC-3, 4	VUC-20	VUC-6, 7, 14, 16, 23	VUC-17, 18, 24	VUC-17, 18, 20	VUC-3, 4, 11, 12, 14, 15
Flooding	VUC-2, 4, 22, 23	VUC-1, 19	VUC-3, 4, 16	VUC-20, 21	VUC-6, 7, 14, 23	VUC-17, 18, 24	VUC-5, 17, 18, 20	VUC-3, 4, 5, 11, 12, 14, 15, 22
Low-Risk Hazards								
Sea Level Rise	VUC-2, 4, 22	VUC-1, 19	VUC-3, 4, 16	VUC-20, 21		VUC-17, 18	VUC-5, 20	VUC-3, 4, 5, 11, 12, 15, 22
Tsunami	VUC-2	VUC-1, 19	VUC-3, 16	VUC-20	VUC-6, 7	VUC-17, 18		VUC-3, 11, 12, 15
Drought	VUC-2		VUC-3	VUC-20, 21		VUC-24	VUC-5, 20	VUC-3, 5, 15

a. See the introduction to this volume for explanation of mitigation types.

1.9 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **Ventura County Ordinance**—The ordinance code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **2040 General Plan**—This document was reviewed to identify opportunities for hazard plan integration.

- **Coastal and Noncoastal Zoning Ordinances**—These documents were reviewed to identify opportunities for hazard plan integration.
- **Ventura County Subdivision Ordinance, 2020**—This document was reviewed to identify opportunities for hazard plan integration.
- **Initial Study Assessment Guidelines, 2011**
- **Sea Level Rise Vulnerability Assessment, 2018**
- **Sea Level Rise Adaptation Report, 2019**
- **VCPWA-WP’s Integrated Watershed Protection Plan Project Prioritization Process**—Explored possible opportunities to better integrate the development of multi-benefit flood protection project partnerships with public and private sector agencies and organizations aimed at improving community resiliency to flood hazard risk, flood plain management, groundwater conservation, stormwater capture, environmental protection, and helping to secure a sustainable water supply for agricultural and urban users.
- **VCPWA-WP 5 Year Capital Improvement Projects Plan, Annual Update**—Confirmed inclusion of flood protection projects in WP’s current 5-year portfolio which address a mix of high, medium, and low hazard risks found in WP’s current Jurisdiction Annex, keying-up those projects as entries in WP’s new 5-year Action Plan portfolio, including seven levee rehabilitation projects which when completed will ultimately result in local compliance with Federal Levee Certification regulations found in 44CFR65.10.
- **Ventura County Flood Mitigation and Safety Plans**—Consulted current plan documents to identify opportunities of alignment and optimization of WP’s new 5-Year Action Plan submittal with the baseline framework found in these historical County flood mitigation and safety plan documents.
- **VCPWA-WP’s Preparation of Annual Recertifications and Cycle Verification of Class V Rating for Unincorporated Ventura County under FEMA’s Community Rating System Program**—Consulted the current Class 5 Rating program performance and reporting requirements to ensure continuation of this rating, as well as identified opportunities for renewed emphasis on the planning and implementation of flood mitigation projects for repetitive loss properties eligible for grant funding under FEMA’s Building Resilient Infrastructure and Communities (BRIC) program with the goal of reducing the number of repetitive loss properties in Ventura County.
- **Ventura County Emergency Services Planning Documents**—Reviewed emergency services planning documents prepared by the Ventura County Sheriff’s Office of Emergency Services to gain a better understanding of how best to facilitate appropriate development of WP’s new 5-year Action Plan submittal by complementing and supplementing countywide risk hazard emergency planning rubric defined by County’s Emergency Action Plan, as well as refine Emergency Action Plans for the state-sized dams owned by the County.
- **Ventura County Integrated Regional Water Management Plan (IRWMP) Updates and DAC Public Outreach Engagement Initiative**—Explored framing potential opportunities to better coordinate joint efforts to plan, develop, and ultimately construct multi-benefit, flood resiliency and other risk hazard mitigation projects contained in WP’s new 5-Year Action Plan submittal by increasing outreach and engagement with disadvantaged and socially vulnerable communities and tribal groups to better understand their unique community-lifeline vulnerabilities, facilitate

the development of flood hazard mitigation multi-benefit projects, and align and leverage advocacy efforts to optimize grant funding opportunities.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- **BEACON Regional Sediment Management Plan**
- **General Services Agency, Energy Action Plan, April 2010**
- **Climate Protection Plan for Government Operations, April 2012**
- **Los Padres National Forest Land Management Plan, 2005**

The following website resources were used to document natural hazard event damage assessment:

- <https://www.vcstar.com/story/news/2019/11/12/ventura-county-avocado-lemon-growers-blame-losses-power-shut-offs/4171383002/>
- <https://gro-intelligence.com/insights/articles/volatile-california-avocado-crop-keeps-market-on-edge>
- <https://www.vcstar.com/story/news/2019/08/03/ventura-county-california-agriculture/1859539001/>
- http://www.coastalview.com/news/2019-avocado-market-rundown-volumes-down-and-prices-up/article_1a24b732-da67-11e9-9fdf-43ac94face0a.html
- <https://goldrushcam.com/sierrasuntimes/index.php/news/local-news/18925-2018-heat-reduces-volume-of-2019-avocado-crop-california-farm-bureau-federation-reports>
- <https://www.cnbc.com/2018/07/23/heatwave-hits-california-lemons-sending-prices-soaring.html>
- <https://grist.org/article/so-howd-those-avocados-handle-the-searing-heatwave/>
- https://www.rdniehaus.com/app/uploads/2019/08/RDN_Montecito_Mudslides_Impacts-1.pdf
- <https://www.kclu.org/local-news/2016-04-27/battered-south-coast-pier-set-to-reopen-after-1-4-million-in-repairs>
- <http://archive.vcstar.com/news/local/ventura/much-of-the-ventura-pier-remains-closed-this-week-26f4a712-45e6-0d4b-e053-0100007ffddb-362537201.html>
- <http://archive.vcstar.com/news/local/ventura/ventura-pier-closed-due-to-high-surf-26a2626c-d797-40f2-e053-0100007f22a3-361574741.html>
- <https://archive.vcstar.com/news/waves-generated-by-hurricane-marie-threaten-pier-close-campground-beaches-ep-579996262-351261691.html/>
- https://migration.ucdavis.edu/rmn/more.php?id=1194_0_2_0
- https://tdn.com/business/freeze-destroys-70-percent-of-california-orange-crop/article_de49ab3e-0d14-5b06-b53e-ea2dbcd115ce.html
- <https://www.dailynews.com/2007/02/04/despite-freeze-hopes-are-high-for-spring-harvest/>
- <https://www.montereyherald.com/2007/09/13/not-all-is-lost-for-state-farmers-caught-in-freeze/>

The following website resources were used to document other noted vulnerabilities:

- <https://www.vcnewschannel.com/news/480-county-homeless-encampments-efforts-update>
- <https://www.conejo Guardian.org/2021/09/23/county-fails-for-years-to-clear-illegal-riverbed-encampment/>
- <https://housefarmworkers.org/wp-content/uploads/2017/01/FAQs-about-ag.pdf>
- <https://www.vcstar.com/story/news/2020/11/15/california-coronavirus-covid-19-ventura-county-financial-assistance-farmworkers/6265780002/>
- <https://housefarmworkers.org/wp-content/uploads/2017/01/FAQs-about-ag.pdf>
- <https://www.kqed.org/news/11363886/deportation-threats-worry-farmworkers-and-owners>

2. CITY OF CAMARILLO

2.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Carmen Nichols, Assistant City Manager
 601 Carmen Drive
 Camarillo, CA 93010
 805-388-5312
cvnichols@cityofcamarillo.org

Alternate Point of Contact

Roger Pichardo, Sr. Management Analyst
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 805-388-5392
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Table 2-1 lists the members of the local hazard mitigation planning team that developed this annex.

Table 2-1. Local Mitigation Planning Team Members			
Name	Title	Name	Title
Tali Tucker	Assistant Director of Public Works/City Engineer	Kristen Madary	Finance/Accounting Manager
David Moe	Assistant Comm. Development Director	Roger Pichardo	Senior Management Analyst
Jaclyn Lee	Principal Planner	Carmen Nichols	Assistant City Manager
Tom Magdaleno	GIS Specialist	Michelle D’Anna	Community Relations Officer
Tom Juzwiak	Deputy Building Official	Wendy Milligan	Terra Firma Enterprises (Consultant)

2.2 JURISDICTION PROFILE

2.2.1 Location and Features

Camarillo encompasses 19.86 square miles in west Ventura County at the base of the Conejo Grade, within the Oxnard Plain. The City is some eight miles from the ocean and the Pt. Mugu entrance to Naval Base Ventura County. Homes along the City’s northern border are nestled among rolling hills and citrus groves; the northernmost boundary traverses the Las Posas Country Club. Pleasant Valley Road designates much of Camarillo’s southern border, though the southernmost point is on Howard Road, near the southeast corner of the City. The eastern edge of Camarillo is situated partially up the Conejo Grade, along the Ventura Freeway (Hwy 101). Camarillo’s furthest point west is at the end (cul-de-sac) of Del Norte Road, just north of Hwy 101.

2.2.2 History

The City of Camarillo was incorporated in 1964. In 1837, a large expanse of what would be the Conejo and Pleasant Valleys was established through a Mexican land grant, which Juan Camarillo purchased in 1875. Juan's sons, Adolfo and Juan, Jr., would govern the 10,000-acre Rancho Calleguas for many years. Adolfo oversaw the development of the Camarillo House and Ranch in 1892, and his brother would have a prominent role in the construction of the St. Mary Magdalen Chapel in 1913.

In 1899, a line of the Southern Pacific Railroad was extended from Somis to Oxnard. At the time, a businessman named John Sebastian relocated a store and post office that were displaced from an area called Springville by the new rail line. When asked to provide a name for the new location of the store and post office, Sebastian suggested Calleguas, though the post office representative felt that name was confusing. Sebastian then proposed calling the area Camarillo, and by 1901 it was the official name for the settlement.

For years, from horse-drawn wagons to early automobiles, the route from Thousand Oaks north down the Conejo Grade involved 24 switchbacks. The journey was quite a trek, especially during warmer days. As travelers looked down the grade toward present day Camarillo, they often commented on it being such a pleasant valley.

Eventually, the region from Somis south to Pt. Mugu became known as Pleasant Valley and would be an integral part of the larger farming industry in Ventura County.

In 1942, with America involved in World War II, Naval Base Ventura County was commissioned, and a military airfield was built near Camarillo. In 1945, the airfield was officially known as Oxnard Air Force Base. The County of Ventura purchased the site in 1976 and began the transformation of the base to what is now Camarillo Airport.

In the early 1960s, a movement by the City of Oxnard to annex Camarillo galvanized community leaders, who organized a push for cityhood. In September 1964, cityhood was approved by voters and the following month Camarillo was officially recognized as an incorporated city. At the time, the City had approximately 12,000 residents, and an area of 5.5 square miles.

2.2.3 Governing Body

Camarillo is a general law city. The five-member City Council is the governing body with the responsibility of adopting the HMP. The responsibility for implementing the plan is shared by the Office of the City Manager, and the Community Development and Public Works Departments.

2.3 CURRENT TRENDS

2.3.1 Population

Camarillo has an estimated population of 70,261 (California Department of Finance estimate 2020). Camarillo is currently growing at a rate of 1.42% annually (<https://worldpopulationreview.com>).

2.3.2 Development

Table 2-2 summarizes development trends in the period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 2-2. Recent and Expected Future Development Trends

Criterion	Response																														
<p>Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?</p> <ul style="list-style-type: none"> If yes, give the estimated area annexed and estimated number of parcels or structures. 	<p>Yes</p> <p>Annexations since the County's last HMP update included a 3-acre parcel, initiated by the City, for the Camarillo LDS Church (n/e corner of Las Posas Road and Camino Alvarez); also, properties near the n/w corner of Lewis (Hwy 34) and Las Posas Roads were annexed for the development of the City's new desalter plant. Construction is underway, and the desalter could be operational by early 2022. The City annexed 7.81-acres for the project from the Ventura Co. Resource Conservation District, 4.5-acres of which is under the purview of the Camarillo Sanitary District.</p>																														
<p>Is your jurisdiction expected to annex any areas during the performance period of this plan?</p>	No																														
<p>Are any areas targeted for development or major redevelopment in the next five years?</p> <ul style="list-style-type: none"> If yes, briefly describe, including whether any of the areas are in known hazard risk areas 	<p>Yes. Over the past five years Camarillo has had significant residential construction activity, which is expected to continue for several years. A prominent commercial development is also underway just south of the 101 Freeway, and a steady progression of reuse and new industrial projects is anticipated.</p> <p>The primary natural hazard concerns for Camarillo include earthquakes and liquefaction, and wildland fires. Ongoing drought and dry vegetation continue to pose an elevated risk for fires, though the main areas of concern are in existing hillside communities in the northern portions of the City. The main faults in/near Camarillo include the Bailey, Simi-Santa Rosa, and Wright Faults. While these faults have limited intersection with properties proposed for development, major ruptures along the state's larger fault lines could generate substantial ground movement -- though to what extent is difficult to forecast. As is the case in much of Ventura County, liquefaction is a potential threat connected to earthquakes. Approximately 25% of Camarillo's soil is identified as being in liquefaction zones, primarily in the southeast and southwest sections of the City.</p>																														
<p>Permits for new construction issued since the preparation of the previous hazard mitigation plan. (For single-family, each residence equals one permit; for multi-fam., the numbers are total units. Multi-fam. refers to apartments, townhomes, and duplexes. A permit for one apartment building may include 20 units.)</p>	<table border="1"> <thead> <tr> <th></th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td>90</td> <td>78</td> <td>37</td> <td>2</td> <td>11</td> </tr> <tr> <td>Multi-Family</td> <td>67</td> <td>821</td> <td>619</td> <td>199</td> <td>53</td> </tr> <tr> <td>Other (commercial, mixed use, etc.)</td> <td>4</td> <td>9</td> <td>8</td> <td>6</td> <td>2</td> </tr> <tr> <td>Total</td> <td>161</td> <td>908</td> <td>664</td> <td>207</td> <td>66</td> </tr> </tbody> </table>		2016	2017	2018	2019	2020	Single Family	90	78	37	2	11	Multi-Family	67	821	619	199	53	Other (commercial, mixed use, etc.)	4	9	8	6	2	Total	161	908	664	207	66
	2016	2017	2018	2019	2020																										
Single Family	90	78	37	2	11																										
Multi-Family	67	821	619	199	53																										
Other (commercial, mixed use, etc.)	4	9	8	6	2																										
Total	161	908	664	207	66																										

Criterion	Response
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> • Special Flood Hazard Areas: 0 • Landslide: 0 • High Liquefaction Areas: 0 • Tsunami Inundation Area: 0 • Wildfire Risk Areas: Please see clarification below. <p>Of the considerable residential development in Camarillo over the past 5+ years, no units have been built, or are currently under construction within a 100-year flood zone. During this period, approximately 350 residences (low-medium-high density) have been built in 500-yr. areas, and another high-density project (385 units) is pending approval. There is a low-income project (75 units) proposed for a 2.5-acre site that is owned by the City; if these apartments are ultimately constructed, the project would likely require flood mitigation measures (100-yr.).</p> <p>As noted, areas of greatest concern for wildland fire, and those most involved in PSPS events, are in the northwest section of Camarillo, and parts outside (north of) the City. A large project with 281 homes (single-family and duplexes) is under construction approximately 0.8-miles west of a high fire risk zone, with a very-high zone just beyond. This development, for persons 55 years and older, is located east of Hwy 34, on the north side of Upland Road. Another project that is currently under review would result in 248 low-medium density homes in a section of the Camarillo Springs Golf Course, which lies in a very-high fire risk zone.</p>
Describe the level of buildout in the jurisdiction, based on your jurisdiction’s buildable lands inventory. If no such inventory exists, provide a qualitative description.	Under current zoning, and considering sites under construction or entitled for building, about 60-acres of land is under review for potential housing projects. Over 150-acres are proposed for changes in zoning for industrial projects. There are also 46-acres of commercially-zoned land just off (south of) the 101 Freeway, at Las Posas Road. This site has the potential for 325,000 sq. ft. of retail, though internet sales have changed the brick/mortar outlook for many retailers. Additionally, another 25-acres of vacant land could be considered for recreational uses (ice rinks, bowling, etc.) in the future.

2.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 2-3.
- Development and permitting capabilities are presented in Table 2-4.
- An assessment of fiscal capabilities is presented in Table 2-5.
- An assessment of administrative and technical capabilities is presented in Table 2-6.
- An assessment of education and outreach capabilities is presented in Table 2-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 2-8.
- Classifications under various community mitigation programs are presented in Table 2-9.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 2-10.

Table 2-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: 2019 CA Building Code, as amended by the City of Camarillo (Ord. 1167), adopted Oct. 23, 2019</i>	Yes	No	Yes	Yes
Zoning Code <i>Comment: Title 19 of the Camarillo Municipal Code, as amended by the City of Camarillo (Ordinance 9), adopted February 10, 1965, including subsequent amendments.</i>	Yes	No	No	Yes
Subdivisions <i>Comment: Camarillo Municipal Code Title 18, Subdivisions (Ord. 570), adopted May 23, 1984 including subsequent additions and amendments</i>	Yes	Yes	Yes	No
Stormwater Management <i>Comment: Camarillo Municipal Code Chapter 9.32, Stormwater Quality (Ord. 1074), adopted December 12, 2012 including subsequent additions and amendments</i>	Yes	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment:</i>	No	No	No	No
Real Estate Disclosure <i>Comment: California Civil Code §1102</i>	No	Yes	Yes	No
Growth Management <i>Comment: Title 20 of the Camarillo Municipal Code, as amended by the City of Camarillo (Ordinance 497), effective July 2, 1981, including subsequent amendments and extensions. The City reviews all residential projects of five or more dwelling units through the Residential Development Evaluation Board process in which the City Council may award up to 400 residential units per year to projects that meet the evaluation criteria with exemptions allowed for low-income units. SB 330 became effective January 1, 2020 and prevents the City from enforcing Title 20 until January 1, 2025. SB 8 was signed into law and extends the term of SB 330 five years from January 1, 2025, to January 1, 2030.</i>	Yes	No	No	Yes
Site Plan Review <i>Comment: Title 19 of the Camarillo Municipal Code, as amended by the City of Camarillo (Ordinance 9), adopted February 10, 1965, including subsequent amendments.</i>	Yes	No	No	Yes
Environmental Protection <i>Comment: California Environmental Quality Act, signed into law by the State of California in 1970.</i>	No	No	Yes	Yes
Flood Damage Prevention <i>Comment: Camarillo Municipal Code Chapter 16.34, Flood Damage Protection (Ord 616), adopted August 27, 1986 including subsequent additions and amendments</i>	Yes	Yes	No	Yes
Emergency Management <i>Comment: Camarillo Municipal Code, Chapter 2.32—Emergency Management Systems, 2004</i>	Yes	Yes	Yes	Yes
Climate Change <i>Comment: The City currently does not have any adopted ordinance related to Climate Change, however the City is planning on developing a Climate Action Plan in the near future.</i>	Yes	No	No	Yes
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? No</i> <i>Comment: The City is currently updating its Safety Element, in compliance with AB 2140.</i>	Yes	No	Yes	Yes
Capital Improvement Plan <i>How often is the plan updated? Every 5 years</i> <i>Comment: City of Camarillo FY 2021-2026 Capital Improvement Programs, adopted 6/23/21</i>	Yes	No	No	Yes
Disaster Debris Management Plan <i>Comment:</i>	No	No	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Floodplain or Watershed Plan <i>Comment: FEMA Flood Insurance Rate Maps, first Effective September 29, 1986 including subsequent additions and amendments</i>	Yes	Yes	No	Yes
Stormwater Plan <i>Comment: Ventura County Technical Guidance Manual, approved July 13, 2011 by LARWQCB. The manual provides guidance on the Planning and Land Development requirements in the Ventura County MS4 Permit, adopted July 8, 2010 by LA Regional Water Quality Control Board. City catch basin program prioritizes maintenance of catch basins as required by the VC MS4 Permit, adopted July 8, 2010.</i>	Yes	Yes	Yes	Yes
Urban Water Management Plan <i>Comment: City of Camarillo 2020 Urban Water Management Plan, adopted June 23, 2021.</i>	Yes	Yes	Yes	Yes
Habitat Conservation Plan <i>Comment: A habitat conservation plan is required as part of an application for an incidental take permit under the Endangered Species Act, however the City does not currently have any habitat conservation plans.</i>	Yes	Yes/ Federal	No	Yes
Economic Development Plan <i>Comment: City of Camarillo Economic Development Strategic Plan, September 5, 2018</i>	Yes	No	No	No
Shoreline Management Plan <i>Comment: No shoreline</i>	No	No	No	No
Community Wildfire Protection Plan <i>Comment: Ventura County Community Wildfire Protection Plan, 2010</i>	No	Yes	No	Yes
Forest Management Plan <i>Comment: City of Camarillo does have a Comprehensive Tree Plan and Approved Street List.</i>	No	Yes	No	No
Climate Action Plan <i>Comment: The City currently does not have a Climate Action Plan, however the City is planning on developing one in the near future.</i>	Yes	No	No	Yes
Comprehensive Emergency Management Plan <i>Comment: The City Manager's Office oversees emergency management and our EOC. We are currently updating the emergency operations plan (EOP). Section Eight-Hazard Summary for City of Camarillo presents a summary of all the hazards the City is subject to and references the Ventura County Multi-Hazard Mitigation Plan for more specific information. This Plan was approved October 13, 2021.</i>	Yes	Yes	Yes	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment:</i>	No	No	No	Yes
Post-Disaster Recovery Plan <i>Comment:</i>	No	No	No	Yes
Continuity of Operations Plan <i>Comment:</i>	No	No	No	No
Public Health Plan <i>Comment: Ventura County Public Health Emergency Response Plan, 2019</i>	No	Yes	Yes	No
Other <i>Comment:</i>				

Table 2-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i>	Yes Planning, and the Building/Safety Divisions.
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	Yes

Table 2-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
<i>If yes, specify: Public Works user fees pertain to sewer and water connection.</i>	
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

Table 2-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Community Development Department (Planning + Building and Safety), and Public Works (engineers in land development).	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Building and Safety Division, and Public Works for infrastructure projects (streets, sewer, water, storm drains).	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Community Development and Public Works, though consultants are also hired for certain projects.	Yes
Staff with training in benefit-cost analysis <i>If Yes, Department /Position:</i> Building and Safety, and Public Works for infrastructure projects (streets, sewer, water, storm drains). Again, consultants are hired for certain projects.	Yes
Surveyors	No
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Administrative Services, GIS Specialist	Yes
Scientist familiar with natural hazards in local area	No
Emergency manager <i>If Yes, Department /Position:</i> The Sr. Management Analyst in the City Manager's Office serves as the EOC Coordinator.	Yes
Grant writers <i>If Yes, Department /Position:</i> Sr. Management Analyst, City Manager's Office.	Yes
Other <i>If Yes, Department /Position:</i> Civil Engineer, Public Works Dept.	Yes

Table 2-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> Links to several emergency preparedness websites are available on the City's website (https://www.ci.camarillo.ca.us/departments/fire/emergencies.php).	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> City of Camarillo Government Facebook, Instagram, Twitter, LinkedIn.	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i> The City has an active Community Emergency Response Team.	Yes
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> VC Alert, City "Notify Me!" Emergency Email Distribution, City website (www.cityofcamarillo.org)	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> VC Alert	Yes

Table 2-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	City Engineer (Public Works)
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your flood damage prevention ordinance was last amended?	1993
Does your floodplain management program meet or exceed minimum requirements?	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	September 2018
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Are any RiskMAP projects currently underway in your jurisdiction?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If no, is your jurisdiction interested in joining the CRS program?</i> Yes	No
How many flood insurance policies are in force in your jurisdiction? ^a <i>What is the insurance in force?</i> \$203,471,400 <i>What is the premium in force?</i> \$534,728	664
How many total loss claims have been filed in your jurisdiction? ^a <i>What were the total payments for losses?</i> \$1,135,612	21

a. According to FEMA statistics as of March 31, 2021

Table 2-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	111-10046	
DUNS #	Yes	070207006	
Community Rating System	No		
Building Code Effectiveness Grading Schedule	Yes	Grading Class-2	
Public Protection	Yes	03/3X	12/21/2018
Storm Ready	No		
Firewise	No		
Tsunami Ready	No		

Table 2-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Capital planning and land use decisions informed by potential climate impacts <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Participation in regional groups addressing climate risks <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Identified strategies for greenhouse gas mitigation efforts <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Identified strategies for adaptation to impacts <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Champions for climate action in local government departments <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Political support for implementing climate change adaptation strategies <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Financial resources devoted to climate change adaptation <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Local residents' support of adaptation efforts <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium

Criterion	Jurisdiction Rating ^a
Local residents' capacity to adapt to climate impacts <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Local economy current capacity to adapt to climate impacts <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium
Local ecosystems capacity to adapt to climate impacts <i>Comment: To be further evaluated in the Climate Action Plan that the City is planning on developing in the near future.</i>	Medium

a. High = Capacity exists and is in use; Medium = Capacity may exist but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

2.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

2.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **City of Camarillo General Plan, Safety Plan, Policy SAF-1.1a**– Incorporate new and updated hazards information relevant to the City of Camarillo into the Safety Element, Emergency Operations Plan, and/or Local Hazard Mitigation Plan, as appropriate.
- **City of Camarillo, Emergency Operations Plan (EOP), 2021 (pending approval)**—Section Eight-Hazard Summary for City of Camarillo presents a summary of all the hazards the City is subject to and references the Ventura County Multi-Hazard Mitigation Plan for more specific information.
- **Capital Improvement Plan**—The capital improvement plan includes projects that can help mitigate potential hazards. The City will act to ensure consistency between the hazard mitigation plan and the current and future capital improvement plans. The hazard mitigation plan may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment.
- **Building Code, Title 16, Chapter 16.34.340, Hazard Mitigation Plan**—Identifies that the planning commission shall consider whether proposed development is in or affects a known floodplain, practical alternatives to the proposed development if in a floodplain, impacts of the project on the floodplain and plans to mitigate the impact of the development on the floodplain.

2.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Climate Action Plan**—The Climate Action Plan is a comprehensive roadmap that outlines the specific activities that an agency will undertake to reduce greenhouse gas emissions. Currently, the City does not have a Climate Action Plan but is planning to develop one in the near future.
- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization.
- **Post-Disaster Recovery Plan**—The City does not have a recovery plan but may consider developing one as a mitigation planning action if funds become available. The plan will build on the goals and objectives identified in the hazard mitigation plan.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

2.6 RISK ASSESSMENT

2.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 2-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 2-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4482	January 20, 2020 and continuing	City did not experience any property damages from COVID19 just emergency protective measures response related costs total approximately \$30,176.
Maria Fire	FM-5302	November 1, 2019	City was not directly impacted by this fire, however, The Arc of Ventura County opened a community shelter at the Camarillo Community Center.
Wildfires, Flooding, Mudflows, and Debris Flows (Thomas Fire)	DR-4353	December 4, 2017- January 31, 2018	Although this fire burned 281,893 acres in both Ventura County and Santa Barbara County, the City was only indirectly impacted by smoke.
Camarillo Springs Mudflow		November 1 and December 12, 2014	Nov. 1 -Twenty homes were evacuated, including two homes that were severely damaged. Dec. 12. Sixteen homes were damaged, including 10 homes that were red-tagged
Springs Fire	FM-5024	May 2 – 11, 2013	24,251 acres burned; 10 outbuildings destroyed; 6 commercial properties and 6 outbuildings damaged.

Type of Event	FEMA Disaster #	Date	Damage Assessment
Wildfires, Flooding, Mudflows, and Debris Flows	DR-1731	October 21 – March 31, 2008	Although Ventura County was impacted by the Ranch Fire, the City of Camarillo was not directly impacted except for heavy smoke.
Severe Freeze	DR-1689	January 11 – 17, 2007	This disaster impacted mainly the citrus and avocado crops throughout Ventura County, but no crops in the City were impacted.
Shekell Fire	FM-2681	December 3 – 6, 2006	This fire burned in Fillmore and Moorpark. Camarillo had no direct impacts from the fire only indirectly from smoke.
Day Fire	FM-2677	September 25 – 30, 2006	City of Camarillo was not directly impacted except for heavy smoke.
Topanga Fire	FM-2583	September 28 – October 10, 2005	City of Camarillo was not directly impacted except for smoke.
Severe Storms, Flooding, Landslides, and Mud and Debris Flows	DR-1585	February 16 – 23, 2005	City experienced localized flooding. No significant losses were documented.
Severe Storms, Flooding, Debris Flows, and Mudslides	DR-1577	December 27, 2004 – January 11, 2005	Water and mudslides damaged at least two homes after debris jammed a city storm drain.
Wildfires, Flooding, Mudflow and Debris Flow	DR-1498	October 21, 2003 – March 31, 2004	City of Camarillo was not directly impacted from the fires in Piru and Fillmore except for heavy smoke. Flooding caused downed trees and blocked roads.
Severe Winter Storms and Flooding	DR-1203	February 2 – April 30, 1998	Channel at Las Posas Rd. and Ventura Blvd. damaged (\$500,000), clogged storm drains. Camarillo Springs Golf course was damaged. It took 31 men about 10 full days of work to bring the course back to playability. Backed up storm drains impacted several homes. City Hall flooded.
Severe Winter Storms, Flooding, Landslides, Mud Flows	DR-1046	February 13 – April 19, 1995	Large agricultural losses. Localized flooding and clogged storm drains. No major impact to the City of Camarillo.
Severe Winter Storms, Flooding, Landslides, Mud Flows	DR-1044	January 3 – February, 1995	Localized flooding and clogged storm drains. No major impact to the City of Camarillo.
Northridge Earthquake	DR-1008	January 17 – November 30, 1994	Drywall sustained large cracks; exterior concrete block walls sustained hairline cracks; a few chimneys were cracked; a few windows cracked; several small objects overturned and fell; light furniture overturned; heavy furniture was displaced; hanging objects and doors swung violently; many items were thrown from store shelves; masonry fences or retaining walls were partially fallen; underground pipes were broken.
Fires, Mud & Landslides, Soil Erosion, Flooding	DR-1005	October 26 – April 22, 1994	Multiple fires around Ventura County and subsequent flooding. Camarillo was not directly impacted except for smoke from the surrounding fires and backed up storm drains.
Severe Storm, Winter Storm, Mud & Landslides, Flooding	DR-979	January 5 – March 20, 1993	Camarillo trailer park flooded (Casa del Norte). Localized street flooding.
Snow Storm, Heavy Rain, High Winds, Flooding, Mudslide	DR-935	February 10 – 19, 1992	Countywide agricultural damages. City experienced localized street flooding.

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Freeze	DR-894	December 19, 1990 – January 3, 1991	Countywide agricultural damages. Agricultural crops within the City suffered losses to their crops. More than \$100 million worth of avocados, oranges, strawberries and other fruits were destroyed.
Grass, Wildlands, Forest Fires	DR-739	June 26 – July 19, 1985	City of Camarillo was not directly impacted except for heavy smoke.
Coastal Storms, Floods, Slides, Tornadoes	DR-677	January 21 – March 30, 1983	Countywide crop damage. Flood flows broke through the leveed banks of Calleguas Creek in the lower reach below U.S. 101 and caused an estimated \$21.5 million in damage to agricultural properties. The City estimate of damages was \$160,000.
Severe Storms, Mudslides, Flooding	DR-615	January 8, 1980	Flooding countywide. No significant damage in the City of Camarillo
Coastal Storms, Mudslides, Flooding	DR-547	February 15, 1978	Evacuation of Leisure Village (150 homes) due to weakened earthen catch basin. Fallen trees (65-75) throughout the City totalling \$500,000 loss.
Severe Storms, High Tides, Flooding	DR-364	February 8, 1973	Countywide rain and flooding. Minor damages in the City of Camarillo
Forest, Brush Fires	DR-295	September 29, 1970	5 dwellings destroyed in the Camarillo Hills area, historic structure Rancho Lomita mansion destroyed and 10-15 outbuildings.
Severe Storms, Flooding	DR-253	January 26, 1969	Downed trees. Flooded streets, bridge damage (Calleguas Road Bridge) curb and gutter damage. Flood Control damages estimated at \$2,150, roads, streets and bridges damage is estimated at \$110,979.
Heavy Rains, Flooding	DR-211	December 7, 1965	Countywide flooding, Minimal damage to City of Camarillo.

2.6.2 Hazard Risk Ranking

Table 2-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions primarily target hazards with high and medium rankings.

Table 2-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Earthquake	32	Medium
2	Severe Storms	24	Medium
3	Severe Weather	24	Medium
4	Dam Failure	22	Medium
5	Flooding	18	Medium
6	Landslide ^a	18	Medium
7	Wildfire	12	Medium
8	Drought	9	Low
9	Tsunami	0	Low
10	Sea Level Rise	0	Low

a. Landslide ranking is based only on the Very High susceptibility category.

2.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources: N/A

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

2.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 2-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 2-13. Status of Previous Plan Actions

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>OA 7—Develop a water conservation public outreach program to increase awareness about the drought, fines and penalties for overuse and solutions for conserving water.</p> <p>Comment: Ongoing. Water conservation information is on the City's website regarding the City's Stage 1 measures: Including a rebate program to retrofit indoor plumbing fixtures with water-efficient versions.</p> <ul style="list-style-type: none"> • Rebates for landscaping controllers and replacement of hose nozzles. • Daily inspections throughout the City's water service area to ensure compliance with Stage 1 measures. • Best management tools for water conservation. 			✓	CAM-1
<p>OA 11—Develop and implement plans to increase the building owner's general knowledge of and appreciation for the value of seismic upgrading of the building's structural and nonstructural elements.</p> <p>Comment: Ongoing. For several years, the City has been contacting the owners of apartment complexes (and one hotel) regarding the importance of retrofitting their soft-story carports. In March 2021, the City applied to Cal OES to retrofit the carports at four of these properties. Unfortunately, the grant did not get funded, but staff has continued to reach out to the owners about future grant applications and financing options.</p>			✓	CAM-2

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
OA 13 —Reinforce roads/bridges from flooding through protection activities, including elevating the roads/bridges and installing/widening culverts beneath the roads/bridges or upgrading storm drains. Comment: While no projects are currently planned, this may change in the near future.			✓	CAM-3
CA 1 —Broaden outreach efforts to get as many residents as possible registered with the VC Alert system. Comment: Ongoing. The City continues to disseminate information on the VC Alert and Pulse-Point programs through our CityScene and CERT-Scene newsletters, on our government TV channel programming, via social media, and on our website.			✓	CAM-4
CA 2 —Develop a vegetation restoration/enhancement program for areas that have shown to be susceptible to landslides. Comment: A vegetation restoration program was implemented for the hillsides above the Camarillo Springs communities. These efforts were in response to extensive damage caused first by the Springs Fire, and later by landslides that occurred in Camarillo Springs. No programs are currently planned for other sites in Camarillo.	✓			

2.8 HAZARD MITIGATION ACTION PLAN

Table 2-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 2-15 identifies the priority for each action. Table 2-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 2-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action CAM-1 —Develop a water conservation public outreach program to increase awareness about the drought, fines and penalties for overuse and solutions for conserving water. <u>Hazards Mitigated:</u> Drought						
New & Existing	1, 17	Public Works	None	Medium	Staff time and General Funds HMGP, BRIC	Ongoing
Action CAM-2 —Develop and implement plans to increase the building owner's general knowledge of and appreciation for the value of seismic upgrading of the building's structural and nonstructural elements. <u>Hazards Mitigated:</u> Earthquake						
New & Existing	1, 9, 12, 16, 17	Community Development/ Building & Safety	None	Medium	Staff time and General Funds	Ongoing
Action CAM-3 —Reinforce roads/bridges from flooding through protection activities, including elevating the roads/bridges and installing/widening culverts beneath the roads/bridges or upgrading storm drains. <u>Hazards Mitigated:</u> Flooding						
Existing	2, 6, 9	Public Works	None	High	Staff Time, General Funds, HMGP, BRIC, FMA	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action CAM-4 —Broaden outreach efforts to get as many residents as possible registered with the VC Alert system.						
<i>Hazards Mitigated:</i> Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Landslide, Wildfire, Tsunami, Drought, Sea Level Rise						
New & Existing	1, 7, 17	Community Relations Officer	None	Low	Staff Time, General Funds	Ongoing
Action CAM-5 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community.						
<i>Hazards Mitigated:</i> Earthquake, Flood, Wildfire, Landslide						
New	19	City Manager's Office	Community Development / Building and Safety, Public Works	Low	Staff Time, General Funds	Ongoing
Action CAM-6 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Landslide, Wildfire, Tsunami, Drought, Sea Level Rise						
New & Existing	17, 19	City Manager's Office	Public Works/Community Development/ Building & Safety	Low	Staff Time, General Funds	Short-term
Action CAM-7 —Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:						
<ul style="list-style-type: none"> • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts. 						
<i>Hazards Mitigated:</i> Flood						
New & Existing	1, 4, 17, 18	Public Works	FEMA	Low	Staff Time, General Funds	Ongoing
Action CAM-8 —Identify and pursue strategies to increase adaptive capacity to climate change including developing a Climate Action Plan.						
<i>Hazards Mitigated:</i> Drought, Sea Level Rise, Severe Storms, Severe Weather, Flooding						
New & Existing	1, 2, 6, 12, 15, 17, 19	Community Development	Public Works	Medium	Staff Time, General Funds, HMGP, BRIC	Short-term
Action CAM-9 —Purchase generators for critical facilities and infrastructure that lack adequate backup power, including City Hall, Library, Corporation Yard, Sanitation Plant.						
<i>Hazards Mitigated:</i> Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Landslide, Wildfire, Tsunami						
Existing	2, 6	Public Works	None	Medium	Staff Time, General Funds, HMGP, BRIC	Short-term
Action CAM-10 —Analyze the feasibility of developing a Post-Disaster Recovery Plan and develop Plan should funds become available.						
<i>Hazards Mitigated:</i> Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Landslide, Wildfire, Tsunami						
New & Existing	2, 6, 8, 19	City Manager's Office		Low	HMGP, PDM, FMA	Short-term
Action CAM-11 —Analyze the feasibility of developing a Debris Management Plan and develop Plan should funds become available.						
<i>Hazards Mitigated:</i> Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Landslide, Wildfire, Tsunami						
New & Existing	2, 8, 18	Public Works	None	Low	Staff Time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action CAM-12 —Analyze the feasibility of developing a Continuity of Operations Plan and develop Plan should funds become available.						
<u>Hazards Mitigated:</u> Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Landslide, Wildfire, Tsunami						
New & Existing	8, 18	City Manager's Office		Low	Staff Time, General Funds	Short-term
Action CAM-13 —Continue analyzing the cost/benefit of joining the Community Rating System program						
<u>Hazards Mitigated:</u> Flooding						
New & Existing	1, 2, 4, 9, 10, 16, 17	Public Works	FEMA	Low	Staff Time, General Funds	Ongoing
Action CAM-14 —Continue to participate in updating the County's Community Wildfire Protection Plan.						
<u>Hazards Mitigated:</u> Wildfire						
New & Existing	2, 5, 8, 12, 17, 18	Ventura County Fire Protection District	Community Development	Low	Staff Time, General Funds	Ongoing
Action CAM-15 —Update Building Code to reference better the HMP for building in all hazard areas.						
<u>Hazards Mitigated:</u> Earthquake, Dam Failure, Flooding, Landslide, Wildfire, Tsunami						
New & Existing	4	Community Development/ Building & Safety	None	Low	Staff Time, General Funds	Short-term
Action CAM-16 —Develop a Threat and Hazard Identification and Risk Assessment specific to the City should funds become available.						
<u>Hazards Mitigated:</u> Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Landslide, Wildfire, Tsunami, Drought and Sea Level Rise						
New & Existing	1, 17	City Manager's Office	Community Development	Low/Medium	Staff Time, General Funds, HMGP, BRIC	Short-term
Action CAM-17 —Analyze the feasibility of developing a City-specific Stormwater Management Plan.						
<u>Hazards Mitigated:</u> Flooding, Severe Storms						
New & Existing	1, 2, 4, 6, 9, 15, 17, 18	Public Works	Ventura County Watershed Protection	Low	Staff Time, General Funds	Short-term
Action CAM-18 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<u>Hazards Mitigated:</u> Earthquake, Flood, Wildfire, Landslide, Dam Failure						
Existing	9, 11	City Manager's Office	Community Development	High	HMGP, PDM, FMA	Short-term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 2-15. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	2	Low	Medium	No	Yes	No	Low	Medium
2	5	Medium	Medium	Yes	No	No	Medium	Low
3	3	High	High	Yes	Yes	No	Medium	High
4	3	Medium	Low	Yes	No	Yes	High	Low

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
5	1	Medium	Low	Yes	No	No	Low	Low
6	2	Low	Low	Yes	No	Yes	Medium	Low
7	4	Low	Low	Yes	No	Yes	High	Low
8	7	Low	Medium	No	Yes	Yes	Low	Medium
9	2	High	Medium	Yes	Yes	No	Medium	High
10	4	Low	Low	Yes	Yes	No	Medium	Medium
11	3	Low	Low	Yes	No	No	Low	Low
12	2	Low	Low	Yes	No	No	Low	Low
13	7	Medium	Low	Yes	No	Yes	High	Low
14	6	Medium	Low	Yes	No	No	Low	Low
15	1	High	Low	Yes	No	Yes	High	Low
16	2	Low	Low	Yes	Yes	No	Medium	Medium
17	8	Low	Low	Yes	No	No	Low	Low
18	2	High	High	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

Table 2-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building ^b
High-Risk Hazards								
None								
Medium-Risk Hazards								
Earthquake	CAM-2, 5, 15	CAM-18	CAM-2, 4, 6		CAM-3, 4, 9			CAM-2, 6, 10, 11, 12, 16
Severe Storms	CAM-8	CAM-3	CAM-4, 6		CAM-4, 17, 9	CAM-3	CAM-8, 16	CAM-6, 8, 10, 11, 12, 16, 17
Severe Weather	CAM-8		CAM-4, 6	CAM-17	CAM-4, 9		CAM-8, 16	CAM-6, 8, 10, 11, 12, 16
Dam Failure	CAM-15	CAM-18	CAM-4, 6		CAM-4, 10, 9			CAM-6, 10, 11, 12, 16
Flooding	CAM-5, 7, 8, 13, 15	CAM-3, 18	CAM-4, 6, 7, 13	CAM-17	CAM-3, 4, 10, 9	CAM-3	CAM-8, 16	CAM-6, 7, 8, 10, 11, 12, 16, 17
Landslide	CAM-5, 15	CAM-18	CAM-4, 6		CAM-4, 10, 9			CAM-6, 10, 11, 12, 16
Wildfire	CAM-5, 14, 15	CAM-14, 18	CAM-4, 6, 14		CAM-4, 10, 9		CAM-8, 16	CAM-6, 10, 11, 12, 14, 16
Low-Risk Hazards								
Drought	CAM-1, 8		CAM-1, 4, 6				CAM-8, 16	CAM-6, 8, 16
Tsunami	CAM-15		CAM-4, 6		CAM-4, 9, 10			CAM-6, 10, 11, 12, 16
Sea Level Rise	CAM-8		CAM-4, 6				CAM-8, 16	CAM-6, 8, 16

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

2.9 PUBLIC OUTREACH

Table 2-17 lists public outreach activities for this jurisdiction.

Local Outreach Activity	Date	Number of People Involved
CityScene newsletter (Hard-copy Print)	Quarterly	22,000 Households
CityScene newsletter (Email)	Quarterly	1,005
CERTScene Newsletter (Email)	Four issues per year	989
Cable TV channel	Ongoing	Unknown
Official City of Camarillo Government Website	Ongoing	Unknown
Social Media: Facebook	Ongoing/ As Needed	3,813 Followers
Social Media: Instagram	Ongoing/ As Needed	480 Followers
Social Media: LinkedIn	Ongoing/ As Needed	256 Followers
Social Media: Twitter	Ongoing/ As Needed	50 Followers
Marquee Sign (Carmen Drive/Paseo Camarillo)	Ongoing	Visible to Passersby

2.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **City of Camarillo Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for HMP integration.
- **City of Camarillo General Plan, Safety Plan, Policy SAF-1.1a**— The Safety Plan was reviewed for identifying risk assessment information and for identifying opportunities for HMP integration.
- **City of Camarillo, Emergency Operations Plan (EOP)**—The EOP was used to gather risk assessment information and to assess the City’s capabilities associated with response in addition to identifying opportunities for HMP integration.
- **City of Camarillo 2020 Urban Water Management Plan**—The Urban Water Management Plan was reviewed for the full capability assessment and for identifying opportunities for HMP integration.
- **City of Camarillo Economic Development Strategic Plan**—The Economic Development Strategic Plan was reviewed for the full capability assessment.
- **Capital Improvement Plan**—The Capital Improvement Plan was used to identify possible hazard mitigation actions to add to the HMP and to identify opportunities for HMP integration.
- https://www.cityofcamarillo.org/departments/administrative_services/gis_maps.php, accessed October 4, 2021—Used to document location and features for the Jurisdictional Profile.
- **City of Camarillo, Resolution to Accompany Application for State Aid Under the Emergency Flood Relief Law, Resolution 585, May 28, 1969** -- Used to document natural hazard event damage assessment.

- **City of Camarillo, Resolution to Accompany Application for State Aid Under the Emergency Flood Relief Law, Resolution 586, May 28, 1969**—Used to document natural hazard event damage assessment.

The following outside resources and references were reviewed:

- **Ventura County Fire Protection District, Unit Strategic Fire Plan, May 2020, page 6**—Used to document natural hazard event damage assessment.
- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- Levin, Charles, “Storm’s fury: flooding”, **Ventura County Star**, January 10, 2005, Main News, pg.1-- Used to document natural hazard event damage assessment.
- Dodge, Dani and Levin, Charles, “County gets a wet Christmas”, **Ventura County Star**, December 26, 2003, Main News, pg. 1-- Used to document natural hazard event damage assessment.
- Mansfield, Gregg, “Airport can see light at ditch’s end—Repairs on flood-damaged channel near completion EL NINO’S WAKE: Camarillo, county wrangle over who must come up with \$500,000 to pay for work”, **Ventura County Star**, March 19, 1998, News, A3-- Used to document natural hazard event damage assessment.
- Zintel, Ed, “Out of bounds on the fairway—RAIN: Pre-planning helps courses survive deluge”, **Ventura County Star**, March 18, 1998, Sports, B4-- Used to document natural hazard event damage assessment.
- Mansfield, Ed, “Camarillans say city lagged in dealing with severe flooding—Neighborhood angry: Residents complain to council, but city defends its handling of job, says it couldn’t be everywhere at once during last Friday’s downpour”, **Ventura County Star**, February 13, 1998, New, A3-- Used to document natural hazard event damage assessment.
- Dewey, James, et.al., **U.S. Department of the Interior U.S.Geological Survey, “Intensity Distribution and Iseismal Maps for the Northridge, California, Earthquake Of January 17,1994”**, 1995- Used to document natural hazard event damage assessment.
- Lozano, Carlos, “Storm Floods Camarillo Trailer Park : Weather: Rising water surrounds mobile home residents. Sheriff’s deputies airlift farm workers stranded in a field. More rain is expected”, **Los Angeles Times**, February 19, 1993, accessed digitally on October 18, 2021- Used to document natural hazard event damage assessment.
- Gorman, Gary, “1990 in Ventura County: Year in Review: Slow Economy: Freeze Ruins Crops”, **Los Angeles Times**, December 31, 1990, LA Times Archives- Used to document natural hazard event damage assessment.
- **Federal Emergency Management Agency, Flood Insurance Study, Volume 1 of 3**, Ventura County, California, January 20, 2010- Used to document natural hazard event damage assessment.
- Bevol, Steve. “Weary county cleans up”, **Camarillo Daily News**, February 12, 1978, p.A1- Used to document natural hazard event damage assessment.
- “Worst Fire in History Hits City”, **Camarillo Daily News** September 28, 1970, p.A1- Used to document natural hazard event damage assessment.

- Sacramento Associated Press, "President Johnson Declares County Disaster Area", **Camarillo Daily News**, December 9, 1965, p.A2- Used to document natural hazard event damage assessment.

Camarillo

Critical Facilities (1 of 2)

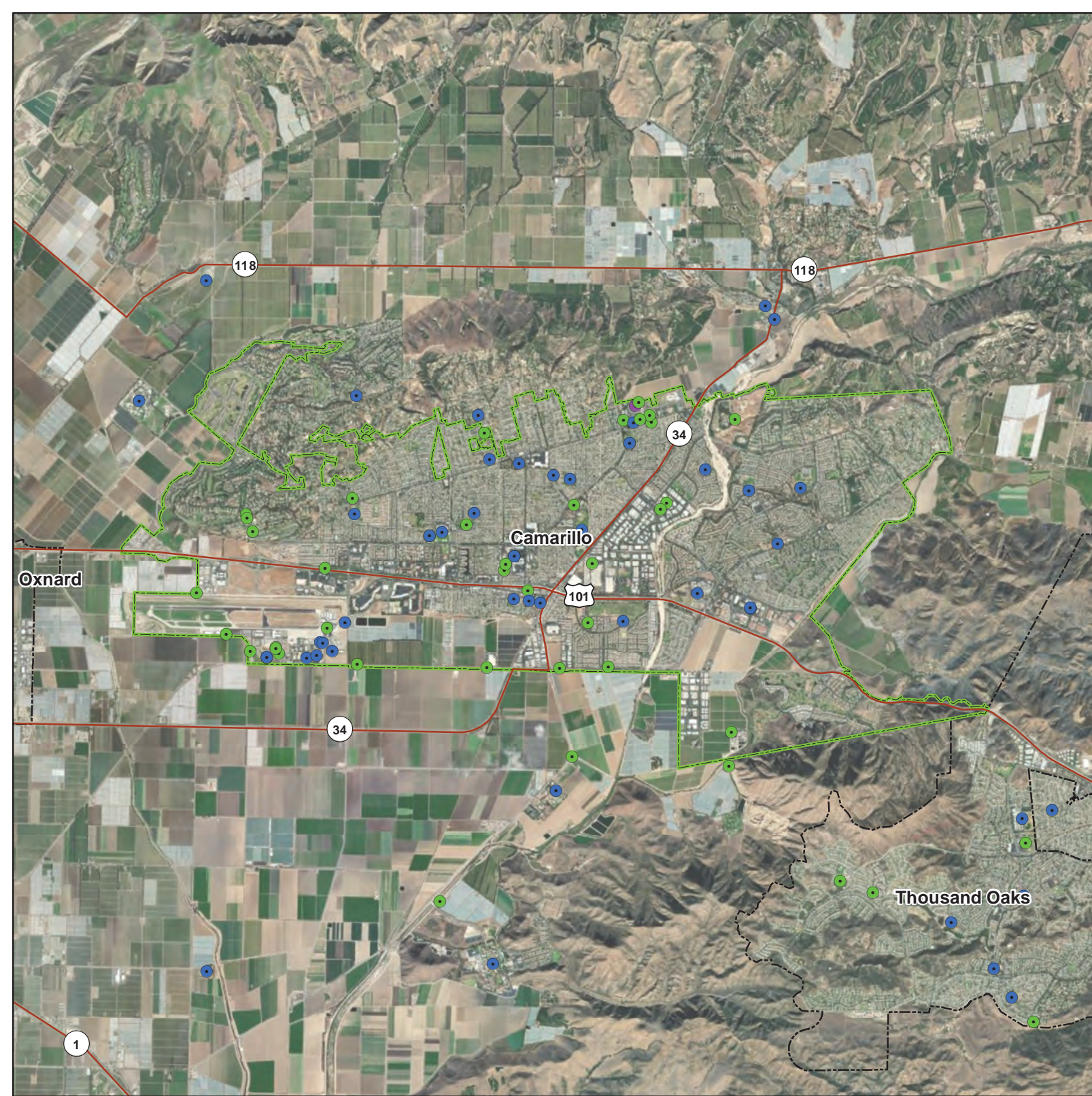
- Food, Water, Shelter
- Health and Medical
- Safety and Security

- Major Roads
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri











0 0.5 1 2 Miles



Camarillo

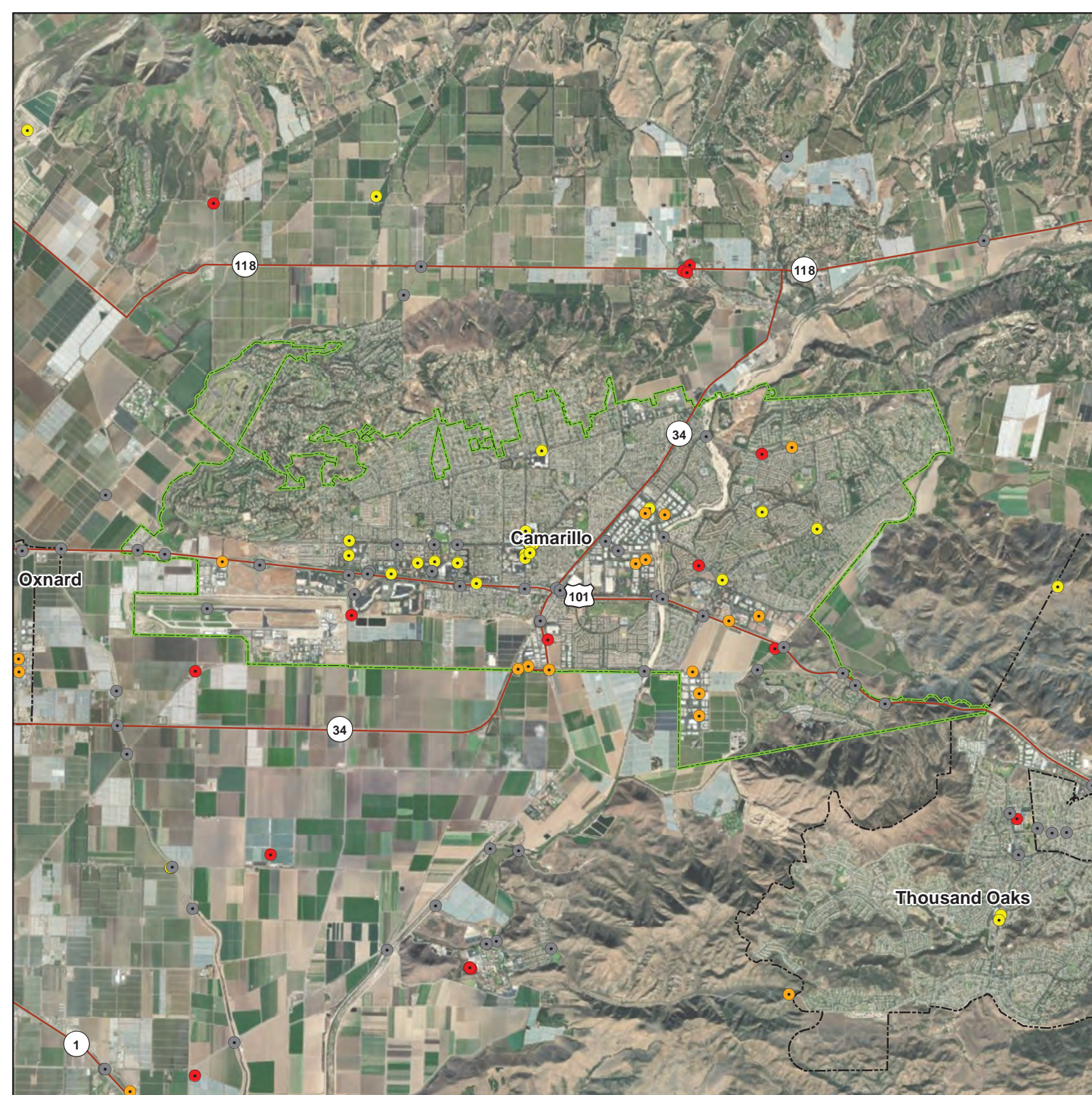
Critical Facilities (1 of 2)

-  Communications
-  Energy
-  Hazardous Material
-  Transportation
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri








0 0.5 1 2 Miles



Camarillo

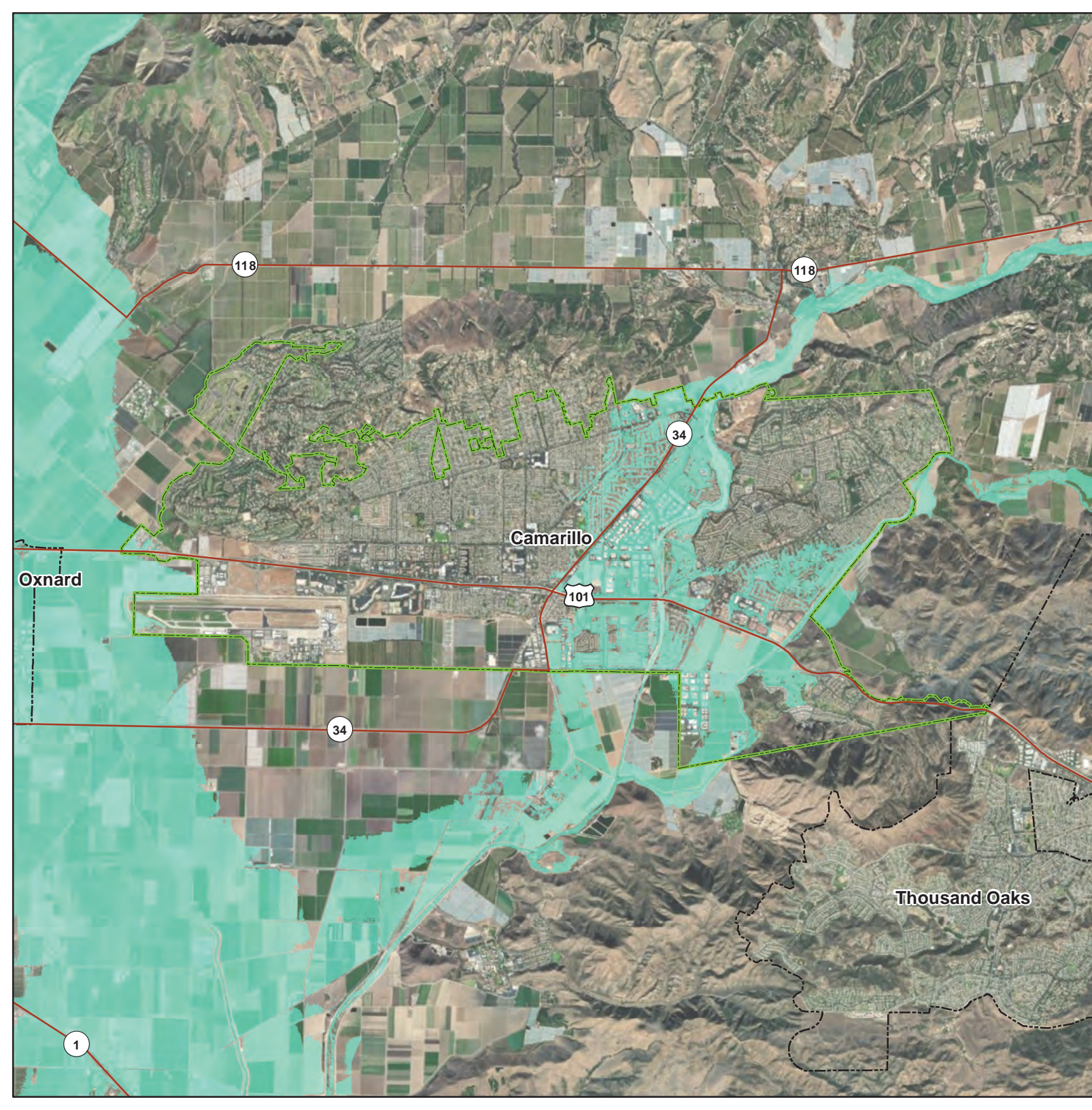
Dam Failure Inundation Areas

-  Combined Inundation Areas
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CA DWR, Esri









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Camarillo

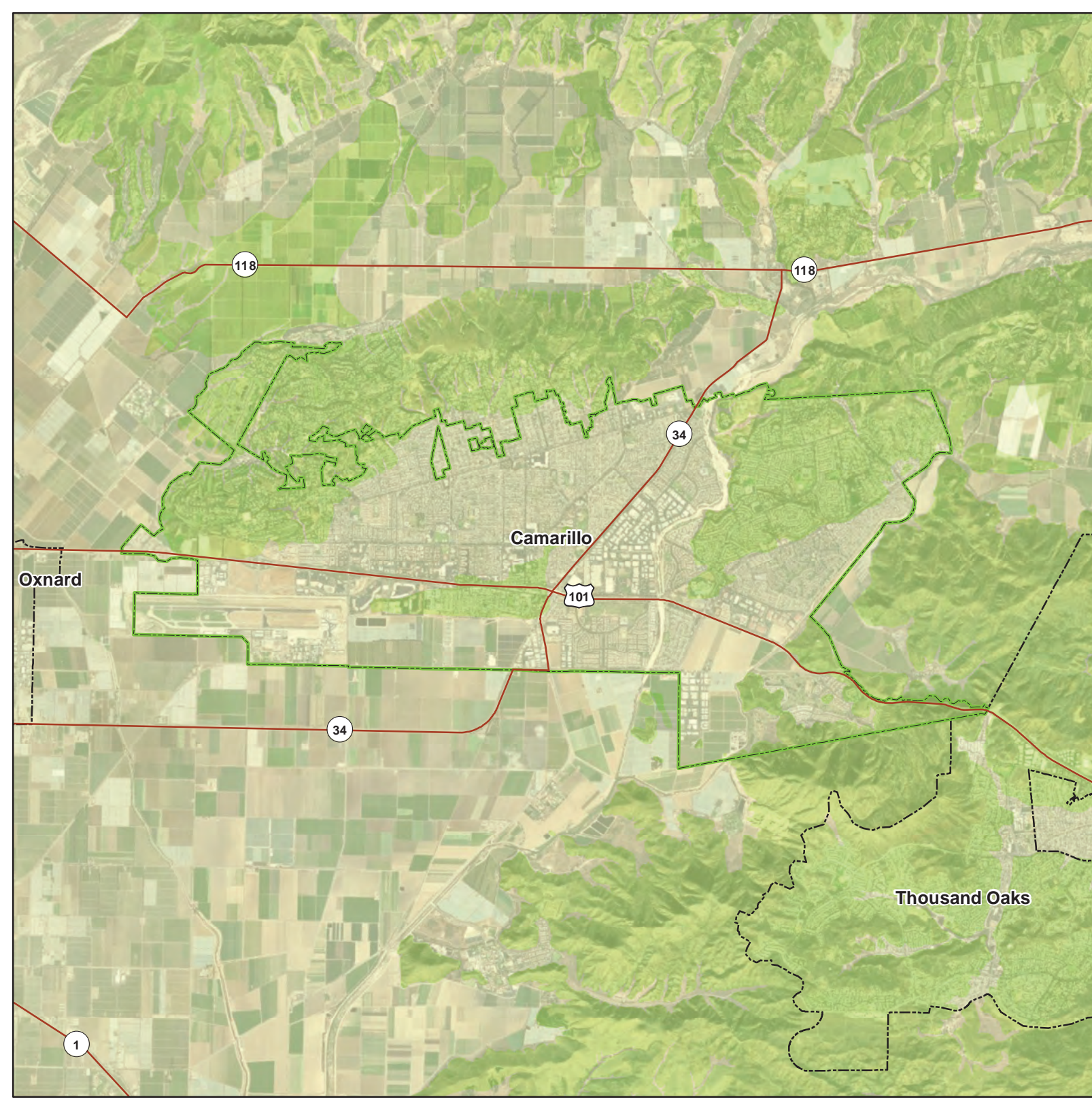
NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri








0 0.5 1 2 Miles



Camarillo

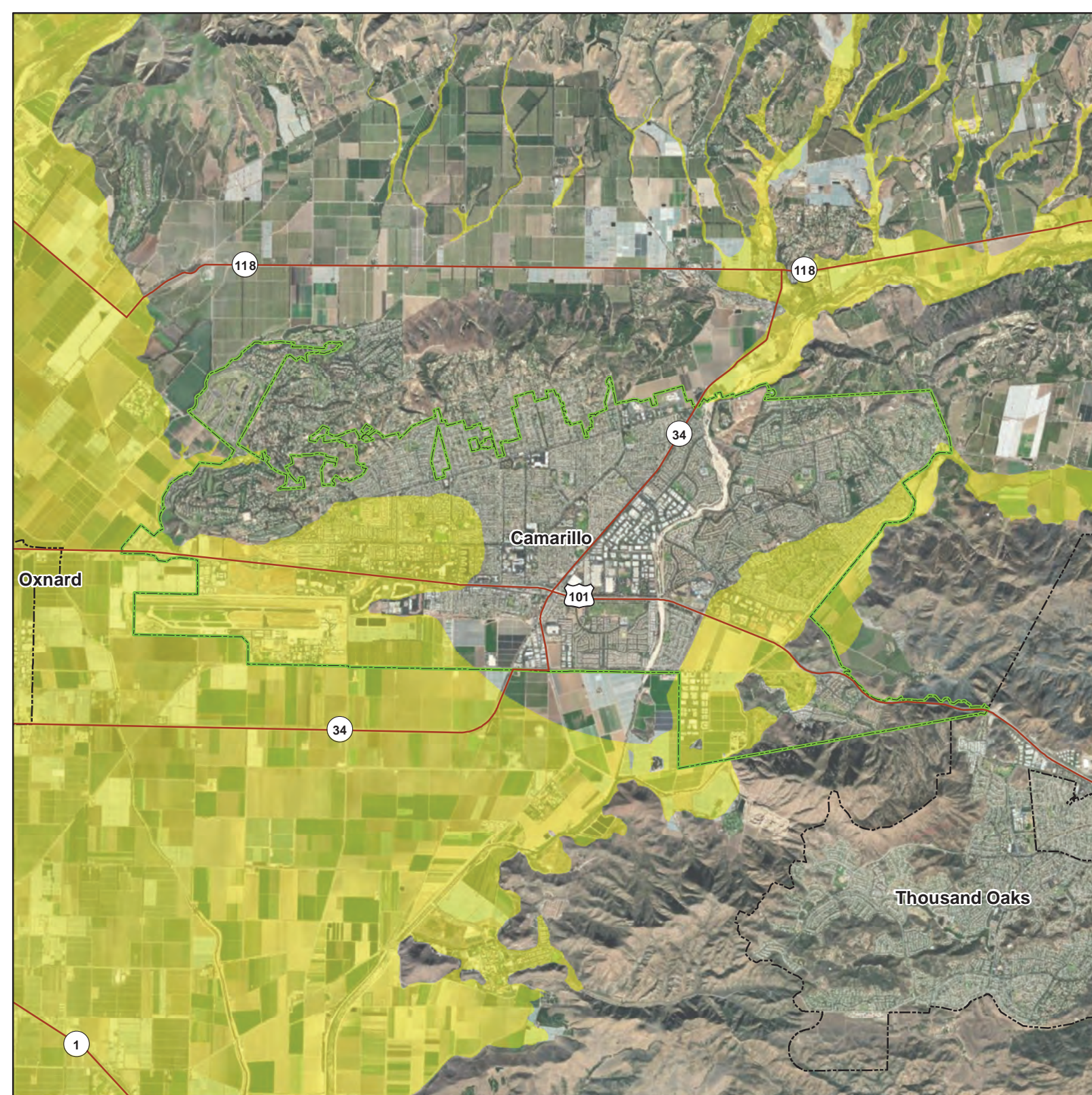
Liquefaction Susceptibility

-  Liquefaction zone
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
Esri




0 0.5 1 2 Miles



Camarillo


100-Year Probabilistic Earthquake Scenario


Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Major Roads

 Selected City

 Incorporated Cities

 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.5 1 2 Miles



Camarillo

Oak Ridge M7.16 Earthquake Scenario

Mercalli Intensity Scale

- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)

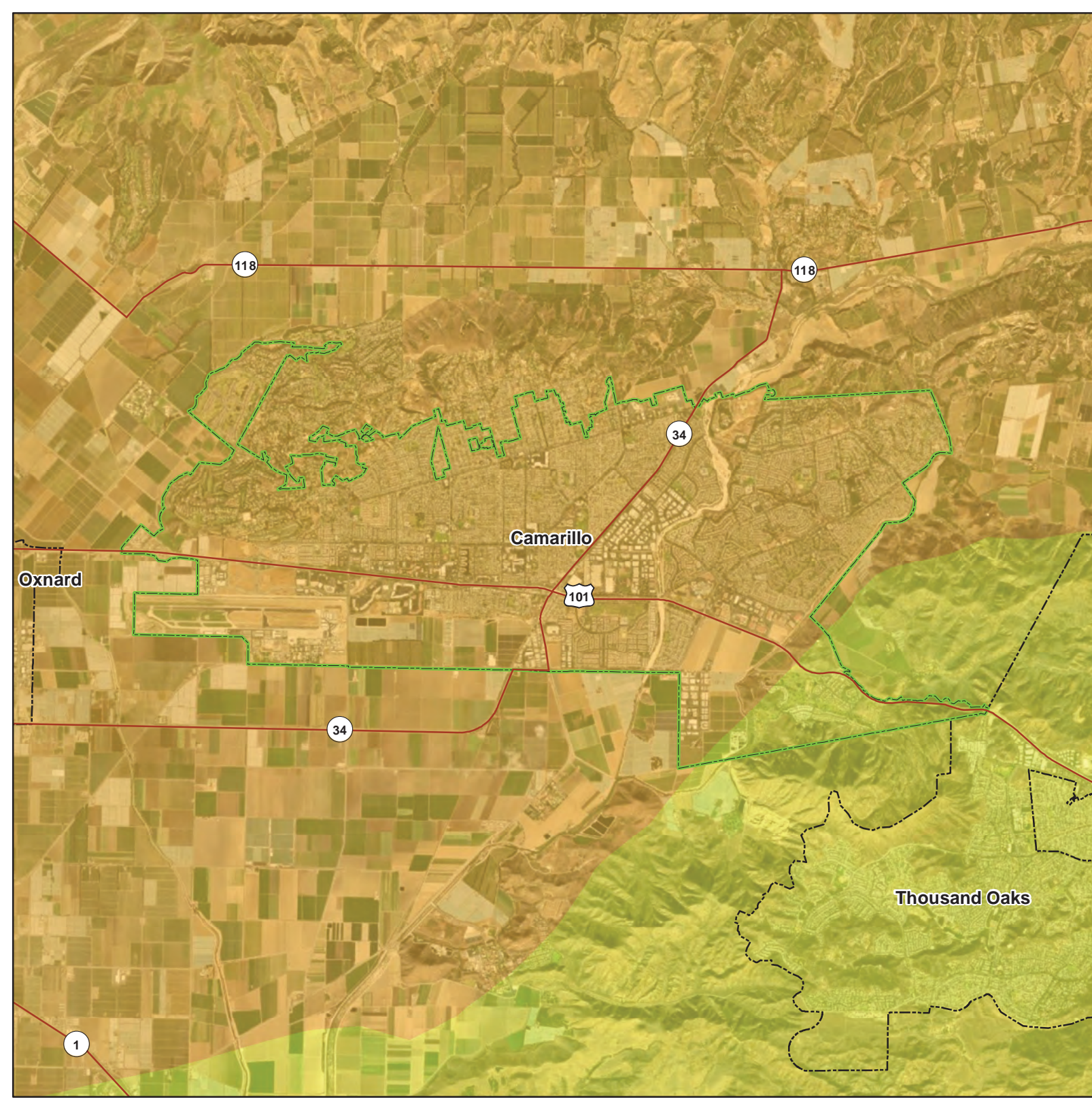
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.5 1 2 Miles



Camarillo

Pitas Point M7.12 Earthquake Scenario

Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)

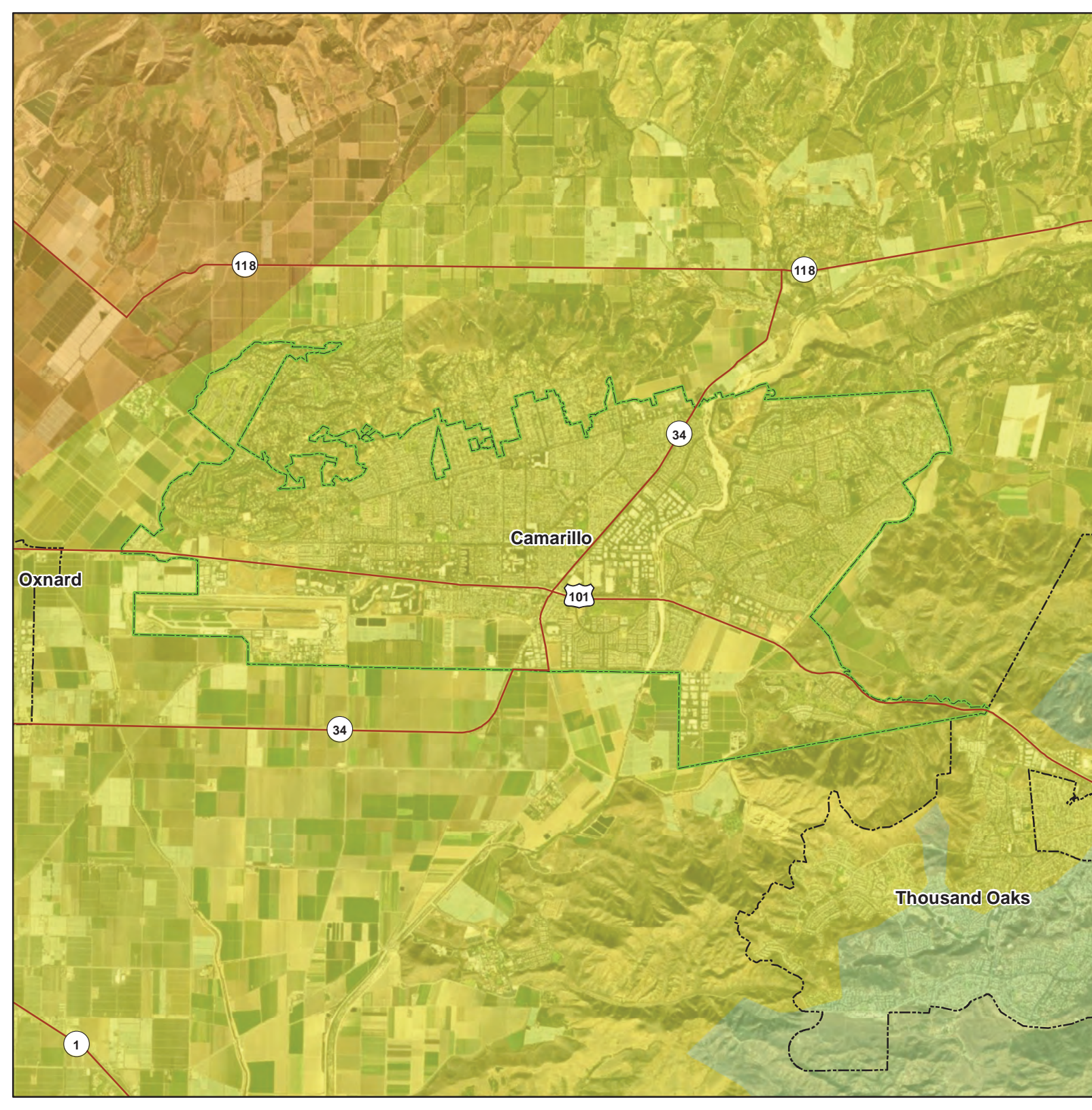
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.5 1 2 Miles



Camarillo

San Cayetano M7.16 Earthquake Scenario

Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)

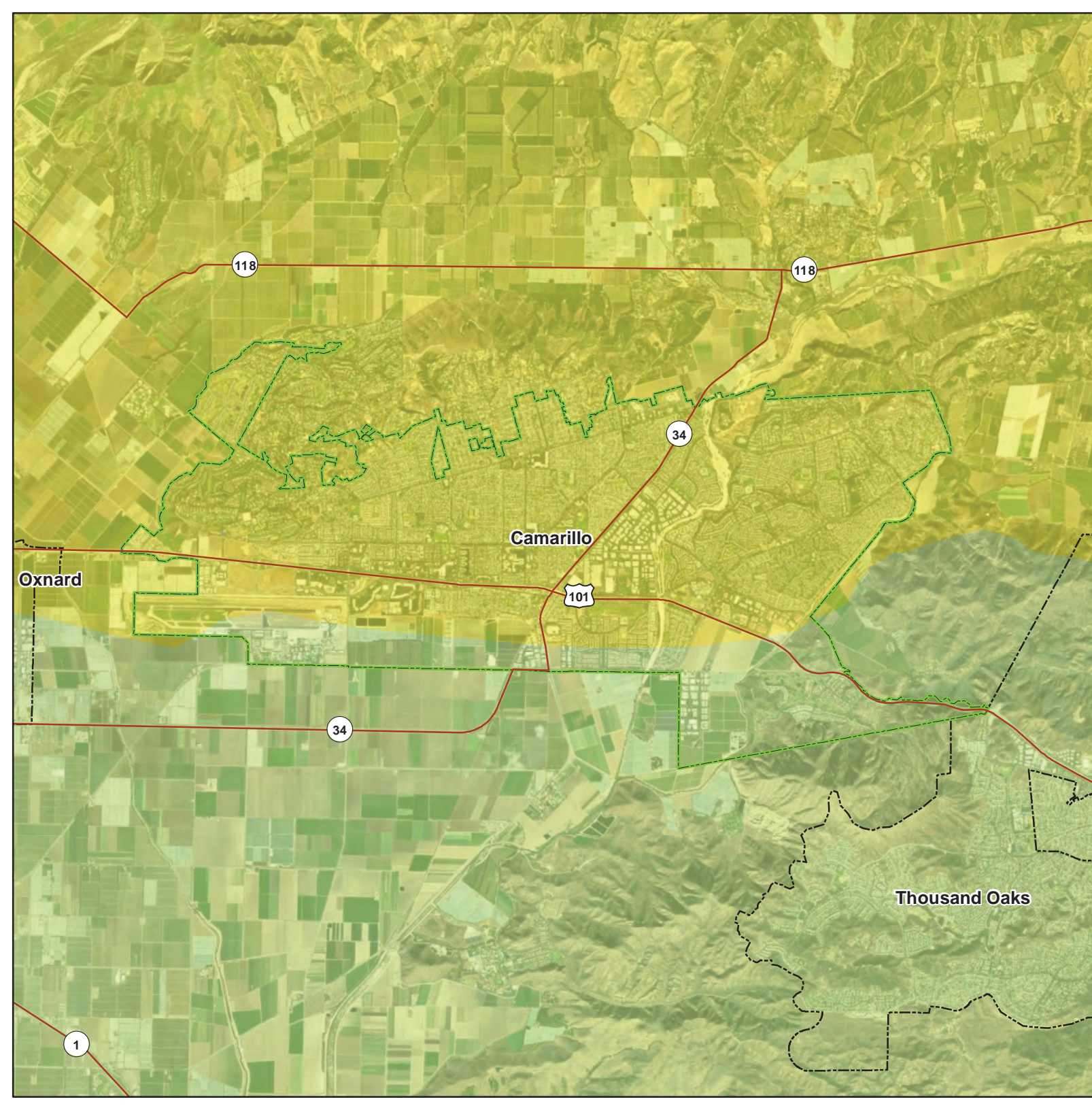
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.5 1 2 Miles



Camarillo

S. San Andreas M8.03 Earthquake Scenario

Mercalli Intensity Scale

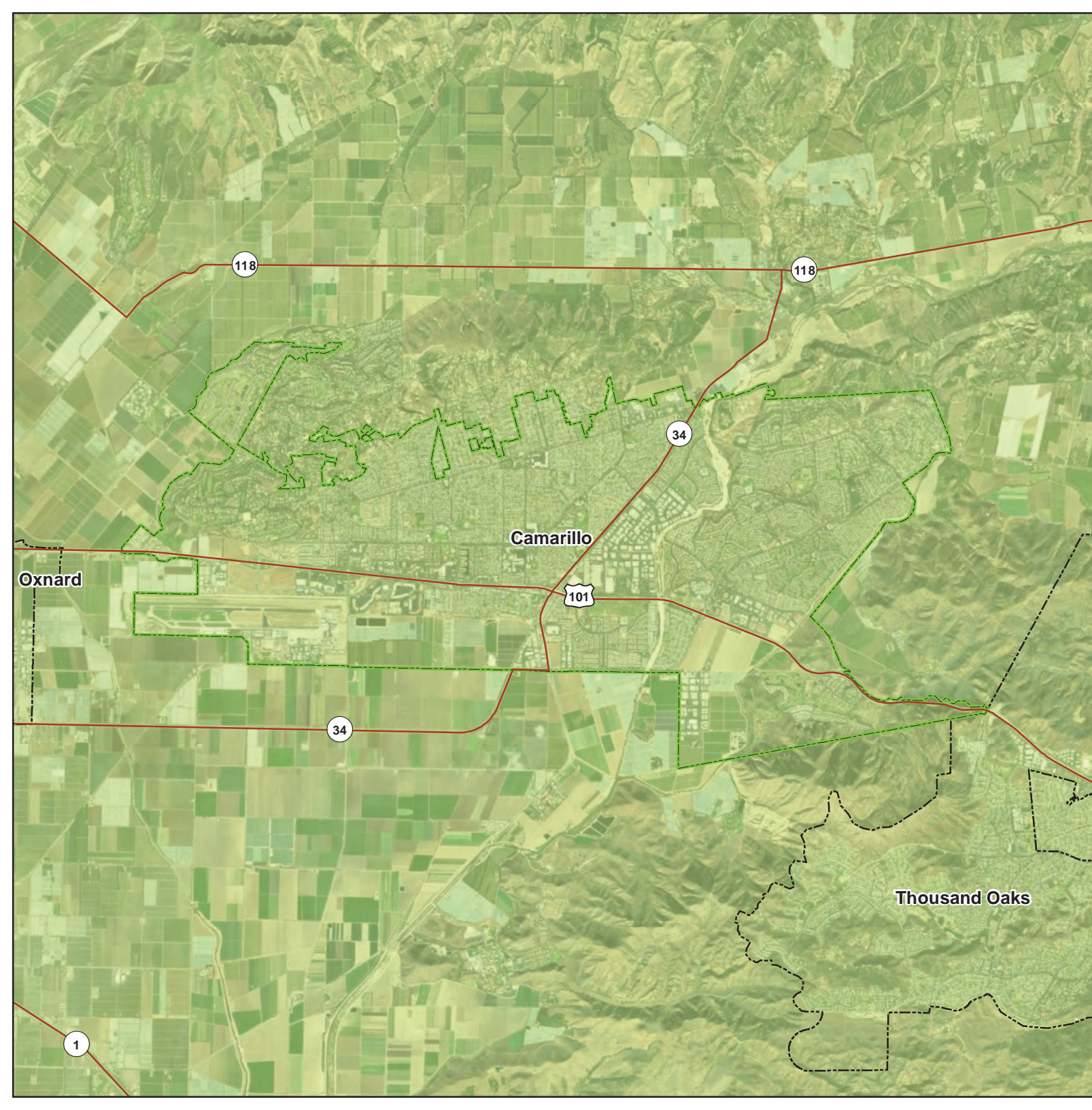
- VI (Strong/Light)
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri









0 0.5 1 2 Miles



Camarillo

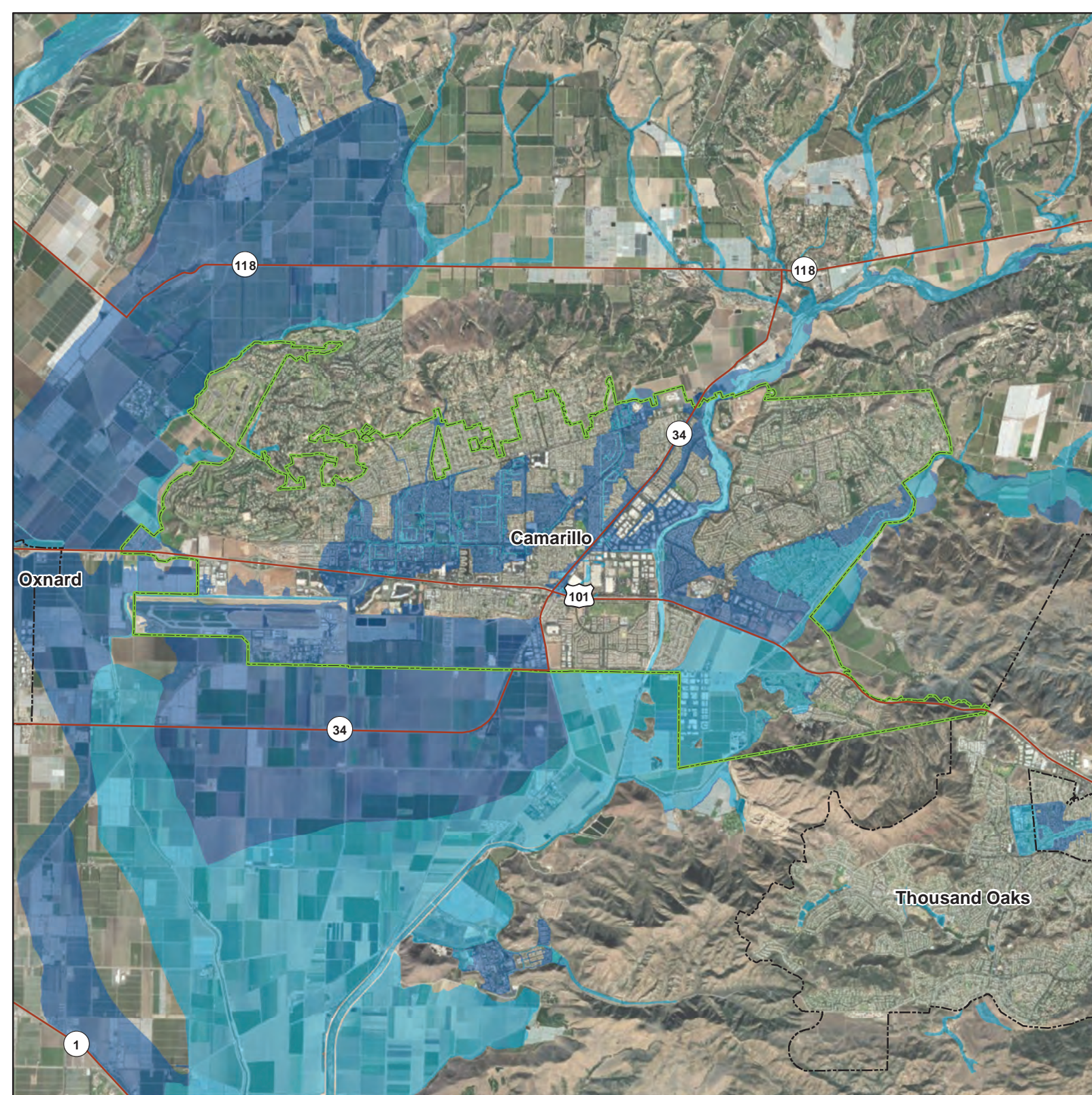
FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
FEMA, Esri



0 0.5 1 2 Miles

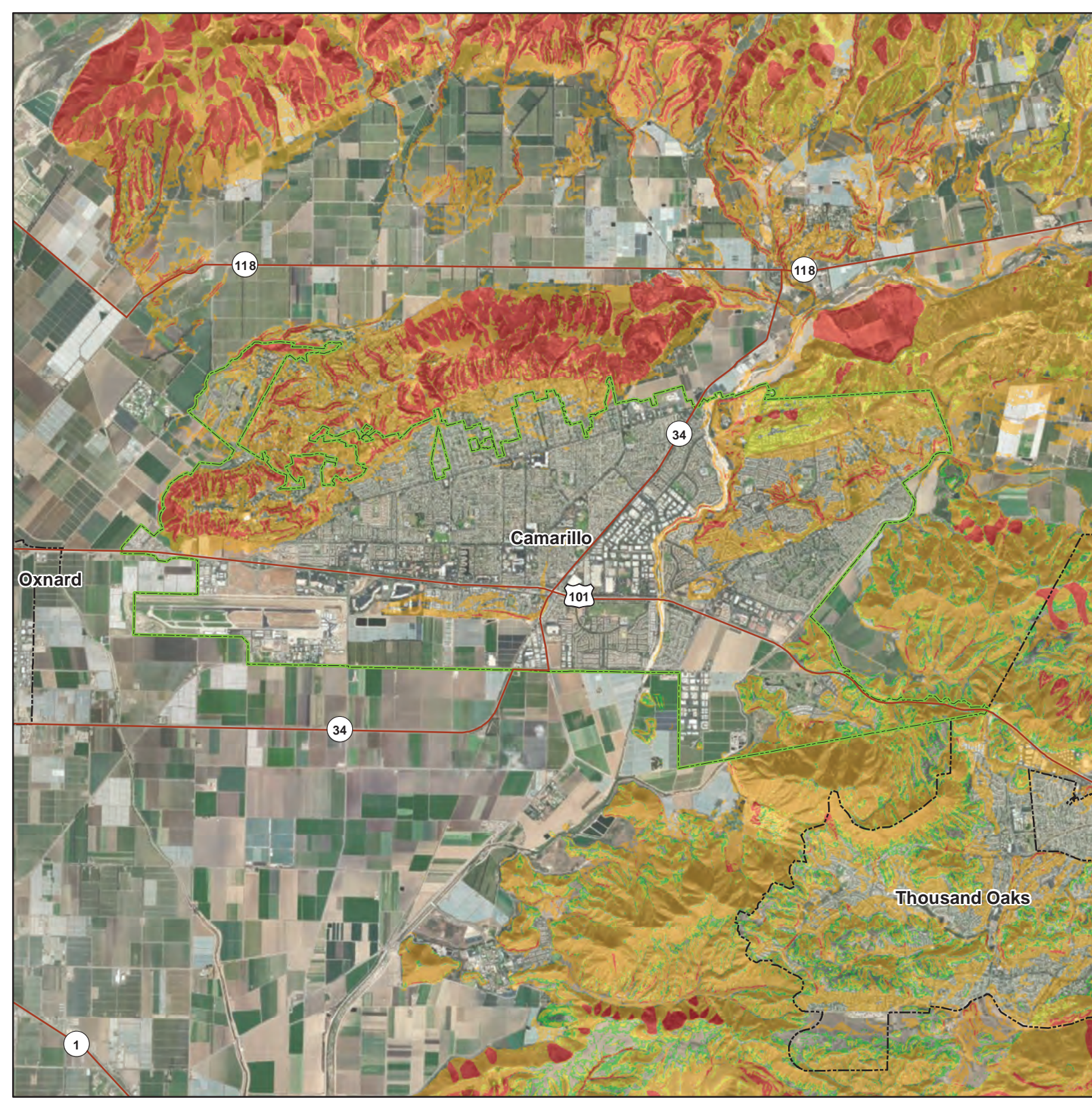


Camarillo

Susceptibility to Deep-Seated Landslides

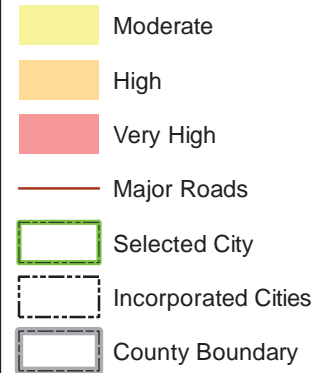
- Low
- Moderate
- High
- Very High
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Data Sources: Ventura Co., CGS, Esri

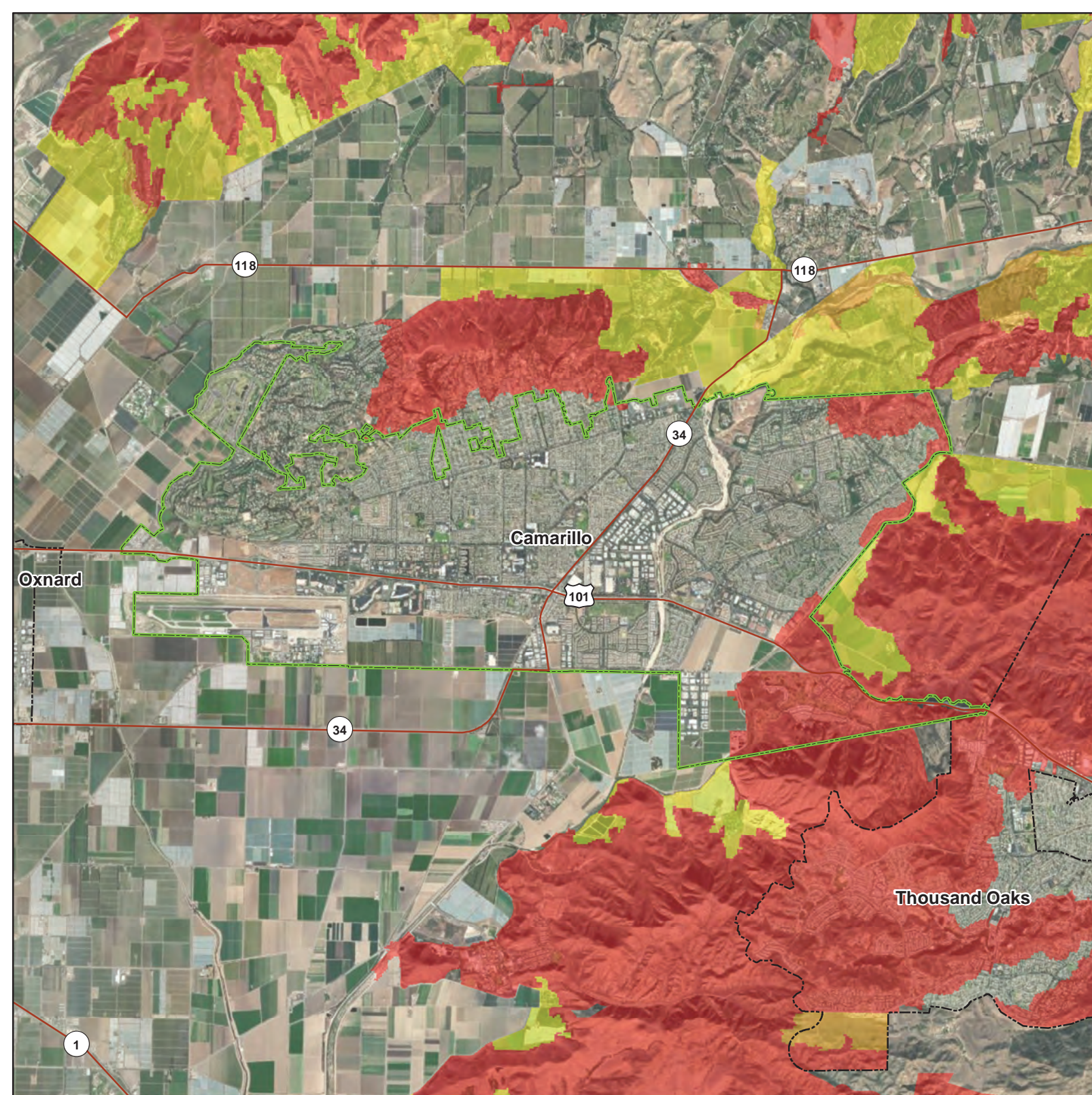


Camarillo

Wildfire Hazard Severity Zones



Data Sources: Ventura Co., CAL FIRE, Esri



3. CITY OF FILLMORE

3.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

D. Keith Gurrola, Fire Chief
250 Central Ave
Fillmore, CA 93015
805-524-1500
keithg@fillmoreca.gov

Alternate Point of Contact

David Rowlands, City Manager
250 Central Ave
Fillmore, CA 93015
805-524-1500
drowlands@fillmoreca.gov

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 3-1.

Table 3-1. Local Mitigation Planning Team Members

Name	Title
D. Keith Gurrola	Fire Chief
David Rowlands	City Manager
Kevin McSweeney	City Planning Director
Ines Ebell	Planning Department Admin Assistant

3.2 JURISDICTION PROFILE

3.2.1 Location and Features

The City of Fillmore is in the western portion of the County of Ventura, California.

The current boundaries generally extend from the Santa Clara River going north, the Sespe Creek going east, slightly east of Pole Creek going west and the northern city boundary is the start of the foothills to the Los Padres National Forest. Fillmore is bordered on three sides by waterways, encompassing an area of 4.3 square miles.

Fillmore is located in the historic Santa Clara River Valley which is primarily all agricultural land, used to grow a wide variety of fair weather crops. As mentioned, the City is bordered by three separate waterways and open wildlands to the north.

3.2.2 History

The City of Fillmore was incorporated in 1914. The town was established in the late 1800s and was known primarily as a railroad stop for travelers. With its fertile soils, the town quickly became an agricultural community. Oil was discovered years later in the hills that surround the Community and Fillmore started supporting businesses associated with oil production and support services. With the decline of the oil industry, Fillmore was able to diversify with light industry. The agricultural image of Fillmore has never gone away and is still quite robust. Fillmore is now known as a “bedroom community” where the majority of its working class residents commute to other nearby cities to work.

3.2.3 Governing Body Format

The City of Fillmore is governed by a Council–Manager form of government.

The Fillmore City Council assumes responsibility for the adoption of this plan; the Fillmore City Manager will oversee its implementation through the oversight of the various City Departments.

3.3 CURRENT TRENDS

3.3.1 Population

According to the California Department of Finance, the population of the City of Fillmore as of January 2020 was 15,566. Since 2010, the population has grown at an average annual rate of 0.37 percent.

3.3.2 Development

General development, overall has been primarily single family dwellings with an occasional multi-family unit. An industrial business park has had only one project developed. Currently there are several plans for in-fill of multi-family structures.

Table 3-2 summarizes development trends in the period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

3.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions.

Table 3-2. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? <ul style="list-style-type: none"> If yes, give the estimated area annexed and estimated number of parcels or structures. 	Yes 3 acres, 0 structures					
Is your jurisdiction expected to annex any areas during the performance period of this plan?	No					
Are any areas targeted for development or major redevelopment in the next five years? <ul style="list-style-type: none"> If yes, briefly describe, including whether any of the areas are in known hazard risk areas 	Yes Industrial Park, no known hazard areas					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		2016	2017	2018	2019	2020
	Single Family	30	73	19	124	133
	Multi-Family	0	0	0	0	0
	Other (commercial, mixed use, etc.)	0	1	0	0	0
	Total	30	74	19	124	133
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	All of the permits issued were in the flood hazard area. There was no new development in the wildland-urban interface zone.					
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	85%					

The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 3-3.
- Development and permitting capabilities are presented in Table 3-4.
- An assessment of fiscal capabilities is presented in Table 3-5.
- An assessment of administrative and technical capabilities is presented in Table 3-6.
- An assessment of education and outreach capabilities is presented in Table 3-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 3-8.
- Classifications under various community mitigation programs are presented in Table 3-9.
- The community's adaptive capacity for the impacts of climate change is presented in Table 3-10.

Table 3-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: 2019 CA Building Code, (Ord. No. 20-925, § 2, 1-28-2020)</i>	Yes	Yes	Yes	Yes
Zoning Code <i>Comment: Chapter 6.04, (Ord. No. 19-904, § 1, 3-26-2019)</i>	Yes	No	Yes	Yes
Subdivisions <i>Comment: Chapter 6.08, (Ord 467 § 1 (part), 1975)</i>	Yes	No	Yes	No
Stormwater Management <i>Comment: Chapter 8.06, (Ord. No. 14-845, §§ 2, 3, 2-25-2014)</i>	Yes	No	Yes	Yes
Post-Disaster Recovery <i>Comment: 1994 City of Fillmore Zoning Code, County of Ventura Disaster Management Plan</i>	Yes	No	Yes	Yes
Real Estate Disclosure <i>Comment: California State Civil Code 1102 requires full disclosure on natural hazard exposure of the sale/re-sale of any and all real property. 1994 City of Fillmore Zoning Code</i>	No	Yes	Yes	Yes
Growth Management <i>Comment: Chapter 6.09 (Ord. 509 § 1 (part), 1980), County Green Belt Agreement Ventura County Ordinance No. 4512 (Adopted November 7, 2017)</i>	Yes	Yes	No	Yes
Site Plan Review <i>Comment: Chapter 6.08, Title IV (Ord. 467 § 1 (part), 1975)</i>	Yes	No	Yes	Yes
Environmental Protection <i>Comment: Chapter 6.08.070 (Ord. 467 § 1 (part), 1975)</i>	Yes	No	Yes	Yes
Flood Damage Prevention <i>Comment: Chapter 6.16 (Ord. 602 § 1 (part), 1988)</i>	Yes	No	Yes	Yes
Emergency Management <i>Comment: Chapter 15.04.050 (Ord. 401 § 5, 1971)</i>	Yes	No	Yes	Yes
Climate Change <i>Comment: None</i>	No	No	No	No
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? No</i> <i>Comment: 2003 Plan Needs Updating</i>	Yes	No	Yes	Yes
Capital Improvement Plan <i>How often is the plan updated? Every 5 Years</i> <i>Comment: City of Fillmore</i>	Yes	No	Yes	Yes
Disaster Debris Management Plan <i>Comment: Ventura County Disaster Recovery Plan, Adopted by BOS in April 2019</i>	No	Yes	Yes	Yes
Floodplain or Watershed Plan <i>Comment: City of Fillmore participates in the National Flood Insurance Program (NFIP)</i>	Yes	No	Yes	Yes
Stormwater Plan <i>Comment: None</i>	No	No	No	No
Urban Water Management Plan <i>Comment: City of Fillmore 2015 Urban Water Management Plan</i>	Yes	No	Yes	Yes
Habitat Conservation Plan <i>Comment: None</i>	No	No	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Economic Development Plan <i>Comment: Economic Development Collaborative of Ventura County Partnership</i>	Yes	No	No	No
Shoreline Management Plan <i>Comment: N/A</i>	No	No	No	No
Community Wildfire Protection Plan <i>Comment: None</i>	No	No	No	No
Forest Management Plan <i>Comment: N/A</i>	No	No	No	No
Climate Action Plan <i>Comment: None</i>	No	No	No	No
Emergency Operations Plan <i>Comment: City of Fillmore Emergency Operations Plan (EOP)</i>	Yes	Yes	Yes	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: None</i>	No	No	No	No
Post-Disaster Recovery Plan <i>Comment: Covered in the EOP</i>	Yes	No	Yes	Yes
Continuity of Operations Plan <i>Comment: Covered in the EOP</i>	Yes	No	No	Yes
Public Health Plan <i>Comment: County of Ventura Health Care Agency Public Health Emergency Response Plan (ERP)</i>	No	Yes	Yes	Yes

Table 3-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i>	Yes Planning, Building, Fire
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	Yes

Table 3-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service <i>If yes, specify: All utilities</i>	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes (Maintenance Assessment Districts)

Table 3-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Planning, Engineering	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Planning, Engineering	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Planning, Engineering	Yes
Staff with training in benefit-cost analysis <i>If Yes, Department /Position:</i> Planning, Engineering, Finance	Yes
Surveyors <i>If Yes, Department /Position:</i> Engineering	Yes
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Engineering	Yes
Scientist familiar with natural hazards in local area	No
Emergency manager <i>If Yes, Department /Position:</i> Fire	Yes
Grant writers <i>If Yes, Department /Position:</i> Finance, Fire	Yes

Table 3-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> Both the Police and Fire Department websites contain information.	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> Yes, the major providers are all used for information sharing	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> The City participates with County OES to disseminate emergency information	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> Yes, we utilize County OES along with neighborhood notification via Police/Fire	Yes

Table 3-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Engineering
Who is your floodplain administrator? (department/position)	Engineering
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	1998
Does your floodplain management program meet or exceed minimum requirements?	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	unknown

Criterion	Response
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If so, state what they are.</i>	No
Are any RiskMAP projects currently underway in your jurisdiction?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If no, is your jurisdiction interested in joining the CRS program?</i>	No Unknown, would have to learn more
How many flood insurance policies are in force in your jurisdiction? ^a <i>What is the insurance in force?</i> \$22,517,800 <i>What is the premium in force?</i> \$34,315	74
How many total loss claims have been filed in your jurisdiction? ^a <i>What were the total payments for losses?</i> \$226,509	37

a. According to FEMA statistics as of March 31, 2021

Table 3-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	0611124092	N/A
DUNS #	Yes	363056201	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	Yes	04/4X	2018
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 3-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Members of City Staff participate in local, regional, state and national committees</i>	High
Jurisdiction-level monitoring of climate change impacts <i>Comment: Members of City Staff participate in local, regional, state and national committees</i>	High
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: Through committee contacts, unlimited to access via internet</i>	High
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: Fillmore is a small geographical city with specifically known sources of emission</i>	High
Capital planning and land use decisions informed by potential climate impacts <i>Comment: Fillmore implements an extensive review process, the total number of projects are manageable</i>	High
Participation in regional groups addressing climate risks <i>Comment: City Staff participates at many levels</i>	High

Criterion	Jurisdiction Rating ^a
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: Planning Commission and City Council advocate</i>	High
Identified strategies for greenhouse gas mitigation efforts <i>Comment: Currently addressing vehicle exhaust emissions</i>	Low
Identified strategies for adaptation to impacts <i>Comment: Costs effectiveness</i>	Medium
Champions for climate action in local government departments <i>Comment: Looking at opportunities for all new vehicles and equipment</i>	Medium
Political support for implementing climate change adaptation strategies <i>Comment: All levels of decision making are to embrace</i>	Medium
Financial resources devoted to climate change adaptation <i>Comment: Looking for grants, new purchases</i>	Medium
Local authority over sectors likely to be negative impacted <i>Comment: The City has full authority over all Departments</i>	High
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment:</i>	Low
Local residents' support of adaptation efforts <i>Comment: General support, no negative reports</i>	Medium
Local residents' capacity to adapt to climate impacts <i>Comment: General support, no negative reports</i>	Medium
Local economy current capacity to adapt to climate impacts <i>Comment: Limited impact in short term</i>	Medium
Local ecosystems capacity to adapt to climate impacts <i>Comment: Limited impact in short term, some impact from agriculture</i>	Medium

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

3.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

3.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- Fillmore Municipal Code

- Developer Impact Fees
- 1994 City of Fillmore Zoning Code
- 2015 County of Ventura Disaster Management Plan
- General Plan Land Use Element 2005

3.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Central Ventura County Regional Fire Safe Council Wildland Fire Mitigation Plan**—In future updates, the Wildfire Mitigation Plan may use or reference applicable wildfire hazard maps and risk data presented in this hazard mitigation plan.
- **City of Fillmore Capital Improvement Plan 2021**—Capital improvement project proposals may take into consideration hazard mitigation potential to evaluate project prioritization.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

3.6 RISK ASSESSMENT

3.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 3-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

3.6.2 Hazard Risk Ranking

Table 3-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions primarily target hazards with high and medium rankings.

3.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Table 3-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4482	Jan 20, 2020-current	N/A
Thomas Fire	FM-5302	Dec 4, 2017-Jan 2018	No structural damage, but air quality issues and provided mutual aid. Opened evacuation centers at the high school and the recreation facility.
Guiberson Fire	FM-2839	Sept 2009	No structural damage, but air quality issues and provided mutual aid.
Day Fire	FM-2677	Sept 2006	No structural damage, but air quality issues and provided mutual aid.
Wildfires	DR-1498	Oct 2003	No structural damage, but air quality issues and provided mutual aid.
Severe Fires	EM-3120	Oct 1996	No structural damage, but air quality issues and provided mutual aid.
Winter Storm	DR-1046	Feb 1995	Economic impacts affecting agricultural packinghouses
Northridge Earthquake	DR-1008	Jan 1994	\$50 million in damage and building inspectors red-tagged about 200 buildings and homes as too dangerous to inhabit.
Severe Storm	DR-935	Feb, 1992	N/A
Severe Storm	DR-615	Jan 1980	N/A
Flooding	DR-547	Feb 1978	Evacuations
Sylmar Earthquake	N/A	Feb 9, 1971	N/A
Brush Fires	DR-295	Sept 1970	Packing house within the city limits burned, but may have been an arson of opportunity.
Flooding	DR-253	Jan 1969	Evacuations
Flooding	N/A	Numerous pre 1964	N/A
St Francis Dam Disaster		March 12, 1928	\$7 Million (1928)—Inundation of nearly the entire city, flooding, debris flows, destruction of infrastructure, high loss of life

Table 3-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Dam Failure	36	High
2	Earthquake	32	Medium
3	Severe Storm	24	Medium
4	Severe Weather	24	Medium
5	Wildfire	18	Medium
6	Flooding	18	Medium
7	Landslide	18	Medium
8	Drought	9	Low

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources: N/A

- Two large-scale evacuations due to hazardous material fires. Both events triggered evacuations of 25 percent of the city's population.
- City recreation facility is used as an evacuation center but lacks showers.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

3.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 3-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 3-13. Status of Previous Plan Actions

Action Item	Completed	Removed;	Carried Over to	
		No Longer Feasible	Check if Yes	Action # in Update
<p>F 1—Construction of Pole Creek Debris Basin. The basin is awaiting Ventura County Watershed District approval for improvements to Final and to accept construction. The Basin will accept mud and debris flow from the Pole Creek watershed in a 100 year rain event and protect all future homes in the Heritage Valley Parks Specific Plan consisting of 750 residential units. The debris basin project includes levees, basin maintenance roads and water flow to the Santa Clara River. The Basin is proposed to be owned and operated by Ventura County Water Shed Protection District.</p> <p>Comment: The Basin was completed in 2009, it is maintained by the Developer until Ventura County Watershed accepts</p>	✓			
<p>F 2—Completion of the Heritage Valley Parks Levees. Over 1.5 miles of soil cement levee was constructed for protection of a 100 year storm and water flow from the Santa Clara River. Parks and streets about the levee in order to avoid any emergency conflict with proposed residential units. The Levee system protects the 750 proposed residential units in the Heritage Valley Parks Specific Plan and a proposed 110 condominium project proposed by KB Homes.</p> <p>Comment: The levee was completed in 2006 but not yet certified, awaiting final construction of the last few remaining residential units</p>	✓			
<p>F 3—Completion of the Lower Sespe Creek Levee. A ½ mile in length soil cement levee was constructed south of Hwy 23 to protect the newly constructed Water Recycling Plant and protect the future Business Park Master Plan.</p> <p>Comment: This levee was completed in 2008 from Hy 126 south to the City limits</p>	✓			
<p>F 4—Completion of the Central Avenue Storm Drain. A large storm drain was installed in Central Ave to protect the Central Business District from floods that historically threatened downtown.</p> <p>Comment: This storm drain project was completed in 2008 and drains into the Santa Clara River, improvements will be made on last 100 yards</p>	✓			
<p>F 5—Continue to monitor the need to demolish abandoned and dilapidated buildings.</p> <p>Comment: This is an ongoing project, numerous buildings have been demolished, looking for opportunities as they present themselves for additional structures</p>	✓			

3.8 HAZARD MITIGATION ACTION PLAN

Table 3-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 3-15 identifies the priority for each action. Table 3-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 3-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action FIL-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Severe Storm, Severe Weather, Wildfire, Flooding, Landslide</p>						
Existing	2, 6, 9, 10, 11	Public Works.	Community Development	High	Grant Funding-FEMA HMA (BRIC, FMA, HMGP)	Short-term
<p>Action FIL-2—Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Severe Storm, Severe Weather, Wildfire, Flooding, Landslide, Drought</p>						
New & Existing	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19	Community Development	Public Works	Low	Staff Time, General Funds	Ongoing
<p>Action FIL-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Severe Storm, Severe Weather, Wildfire, Flooding, Landslide, Drought</p>						
New & Existing	1, 2, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15	Public Works	Community Development	Low	Staff Time, General Funds	Short-term
<p>Action FIL-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:</p> <ul style="list-style-type: none"> • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts. <p><u>Hazards Mitigated:</u> Flooding</p>						
New & Existing	1, 2, 6, 7, 17	Public Works	Community Development	Low	Staff Time, General Funds	Ongoing
<p>Action FIL-5—Identify and pursue strategies to increase adaptive capacity to climate change.</p> <p><u>Hazards Mitigated:</u> Severe Storm, Severe Weather, Wildfire, Flooding, Drought</p>						
New & Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 19	Community Development	Public Works	Low	Staff Time, General Funds, Grant Funding-FEMA HMA (BRIC, FMA, HMGP)	Short-term
<p>Action FIL-6—Purchase generators for critical facilities and infrastructure that lack adequate backup power.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Severe Storm, Severe Weather, Wildfire, Flooding, Landslide</p>						
Existing	2, 19	Public Works	Community Development	High	Grant Funding-FEMA HMA (BRIC and HMGP)	Short-term
<p>Action FIL-7—Study feasibility of developing a resilience hub in the city to provide the resources residents need to enhance their own individual capacity while also supporting and strengthening the community before and during a disaster event.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Severe Storm, Severe Weather, Wildfire, Flooding, Landslide</p>						
New	2, 3, 7, 8, 12, 17	Community Development		High	Staff Time, General Funds, Grant Funding-FEMA HMA (BRIC, FMA, HMGP)	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action FIL-8 —Study feasibility of developing an alternative Emergency Operations Center (EOC) location to use during a disaster.						
<u>Hazards Mitigated:</u> Earthquake, Severe Storm, Severe Weather, Wildfire, Flooding, Terrorism						
New	2, 3, 7, 8, 12, 17	Community Development		High	Staff Time, Grant Funding-FEMA HMA (BRIC, FMA, HMGP)	Long-term
Action FIL-9 —Hardening of the City Water Delivery System and computerized upgrade.						
<u>Hazards Mitigated:</u> Dam Failure, Severe Storm, Severe Weather, Drought, Wildfire, Flooding, Terrorism						
New	2, 6, 9, 10, 11	Public Works		High	Staff Time, Grant Funding-FEMA HMA (BRIC, FMA, HMGP)	Short-term
Action FIL-10 —Continue and enhance the public outreach program for wildfire education and prevention among school children and the general community.						
<u>Hazards Mitigated:</u> Wildfire						
New & Existing	2, 5, 7, 8, 10, 11, 12, 13, 14, 15, 17	Fillmore Fire Department	Fire Safe Council	Low	Staff Time, Fillmore Volunteer Firefighter Foundation, Grant Funding—Edison International Utility Grant	Ongoing
Action FIL-11 —Maintain wildfire hazard fuel reduction program for areas that have been identified with overgrown or dead brush, trees and weeds to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program. (Coordinates with VCFPD Action VFP-6)						
<u>Hazards Mitigated:</u> Wildfire						
New & Existing	2, 4, 5, 6, 8, 10, 11, 13, 14, 15, 18, 19	Fillmore Fire Department	CAL FIRE, Ventura County Fire Protection District, Fire Safe Council	Low	FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 3-15. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	5	High	High	Yes	Yes	No	Medium	High
2	16	Medium	Low	Yes	No	Yes	High	Low
3	12	Low	Low	Yes	No	Yes	High	Low
4	5	Medium	Low	Yes	No	Yes	High	Low
5	17	Medium	Low	Yes	No	Yes	High	Medium
6	2	High	Medium	Yes	Yes	No	Medium	High
7	6	Medium	High	No	Yes	No	Low	Medium
8	6	Medium	High	No	Yes	No	Low	Medium
9	5	Medium	High	No	Yes	No	Low	Medium
10	11	Medium	Low	Yes	Yes	Yes	High	High
11	12	High	Low	Yes	Yes	Yes	High	High

a. See the introduction to this volume for explanation of priorities.

Table 3-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building ^b
High-Risk Hazards								
Dam Failure	FIL-2	FIL-1, 9	FIL-3		FIL-6			FIL-2, 3, 7
Medium-Risk Hazards								
Earthquake	FIL-2	FIL-1	FIL-3		FIL-6			FIL-2, 3, 7, 8
Severe Storm	FIL-2	FIL-1, 9	FIL-3		FIL-6		FIL-5	FIL-2, 3, 7, 8
Severe Weather	FIL-2	FIL-1, 9	FIL-3		FIL-6		FIL-5	FIL-2, 3, 7, 8
Wildfire	FIL-2	FIL-1, 9	FIL-3, 10	FIL-10, 11	FIL-6		FIL-5	FIL-2, 3, 7, 8
Flooding	FIL-2, 4	FIL-1, 9	FIL-3, 4		FIL-6		FIL-5	FIL-2, 3, 4, 7, 8
Landslide	FIL-2	FIL-1	FIL-3		FIL-6			FIL-2, 3, 7
Low-Risk Hazards								
Drought	FIL-2	FIL-9	FIL-3				FIL-5	FIL-2, 3

- a. See the introduction to this volume for explanation of mitigation types.
- b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

3.9 PUBLIC OUTREACH

Table 3-17 lists public outreach activities for this jurisdiction.

Table 3-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Disaster preparedness	Every September	500
Earth Day	Every April	500
Hazardous vegetation chipping days	May & September	100
Fire department children education	10 times a year	10,000

3.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **City of Fillmore Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Fillmore Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **City of Fillmore General Plan**—The GP was reviewed for the capability assessment.
- **City of Fillmore Capital Improvement Program**—The CIP was reviewed for identifying opportunities for action plan integration.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

Fillmore

Critical Facilities (1 of 2)

● Food, Water, Shelter

● Safety and Security

— Major Roads

▭ Selected City

▭ Incorporated Cities

▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri



0 0.175 0.35 0.7 Miles



Fillmore

Critical Facilities (1 of 2)

- Communications
- Energy
- Hazardous Material
- Transportation

- Major Roads
- ▭ Selected City
- - - Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri








0 0.175 0.35 0.7 Miles



Fillmore

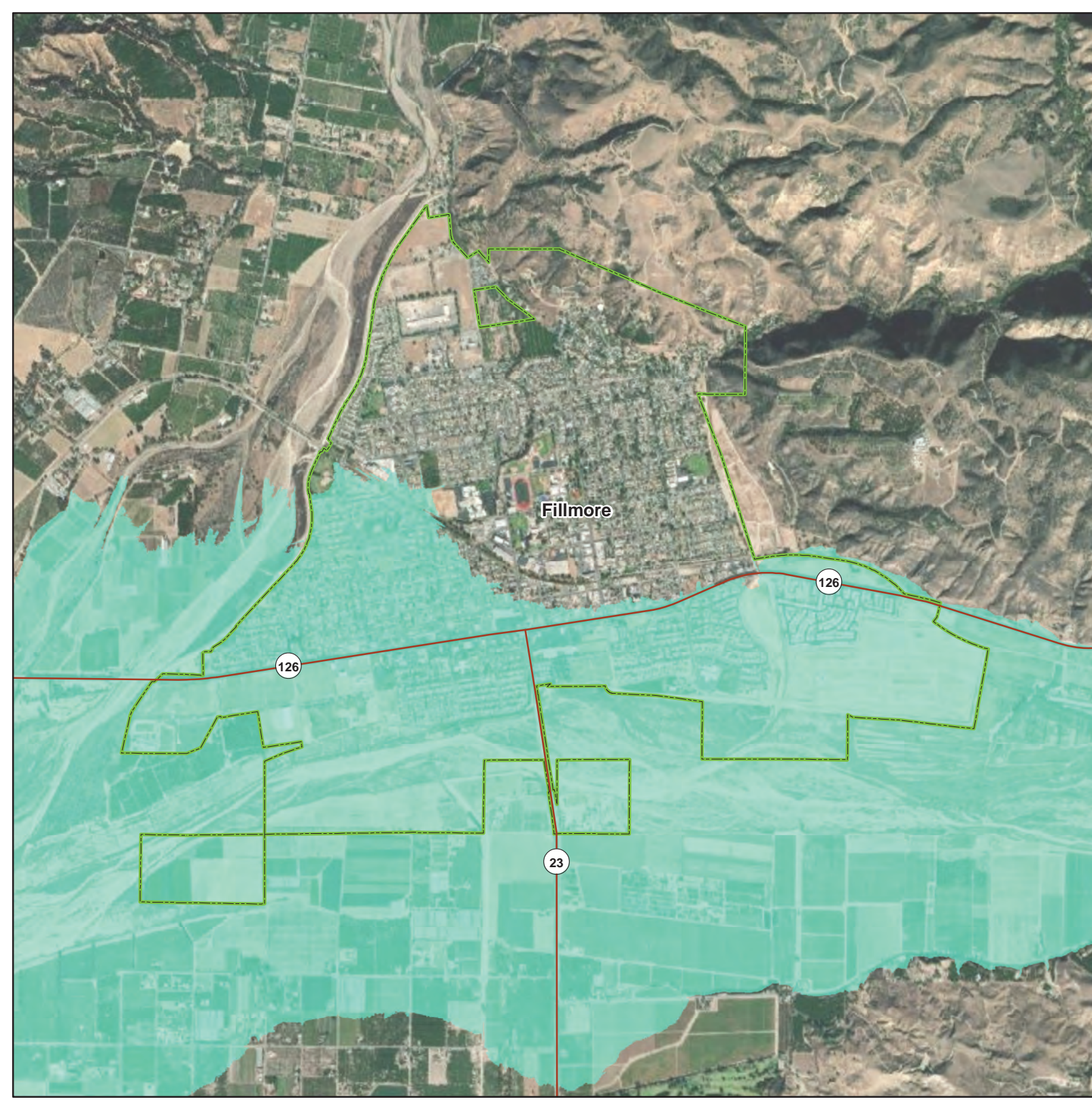
Dam Failure Inundation Areas

-  Combined Inundation Areas
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CA DWR, Esri









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Miles



Fillmore

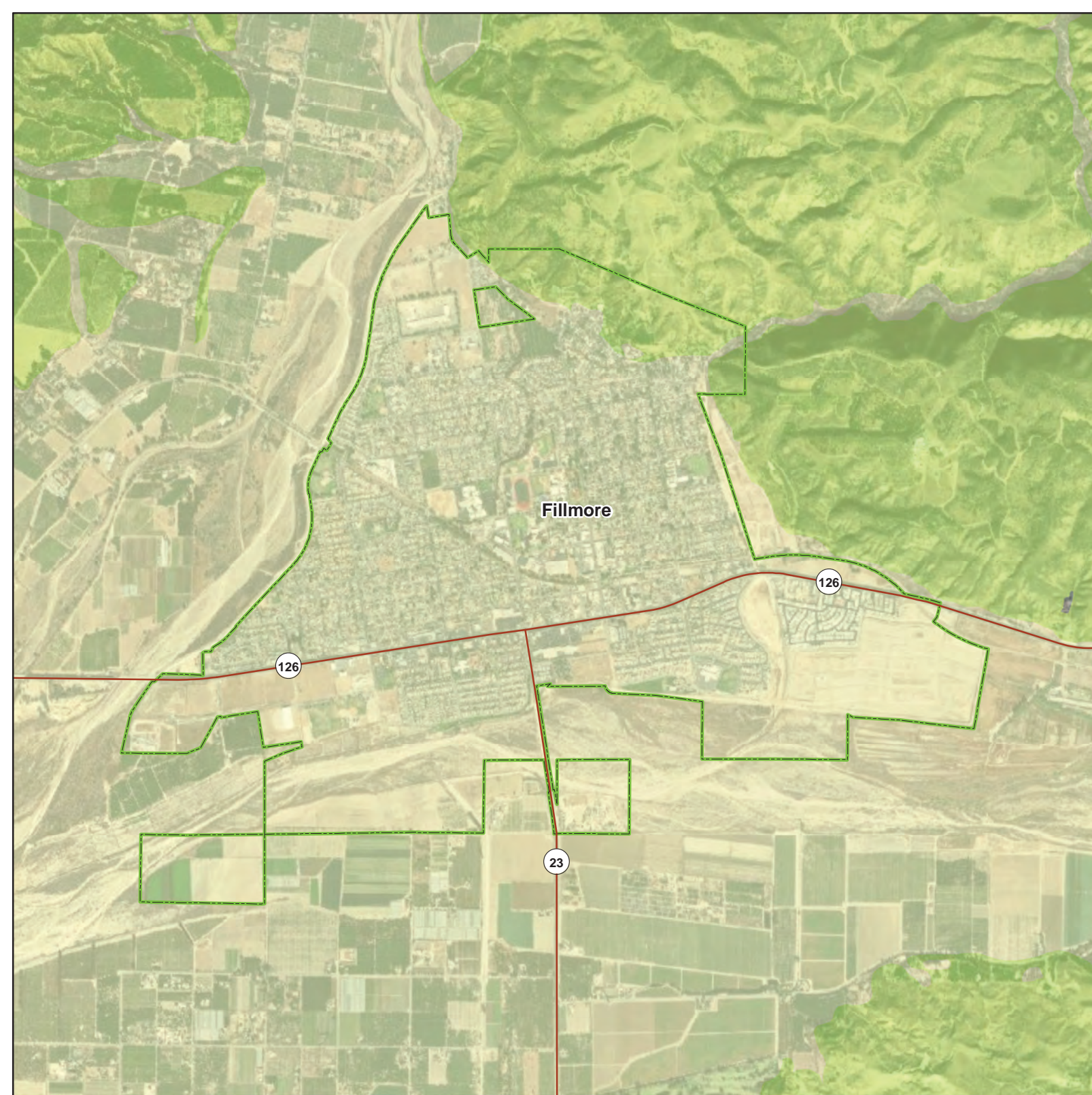
NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri








0 0.175 0.35 0.7
Miles



Fillmore

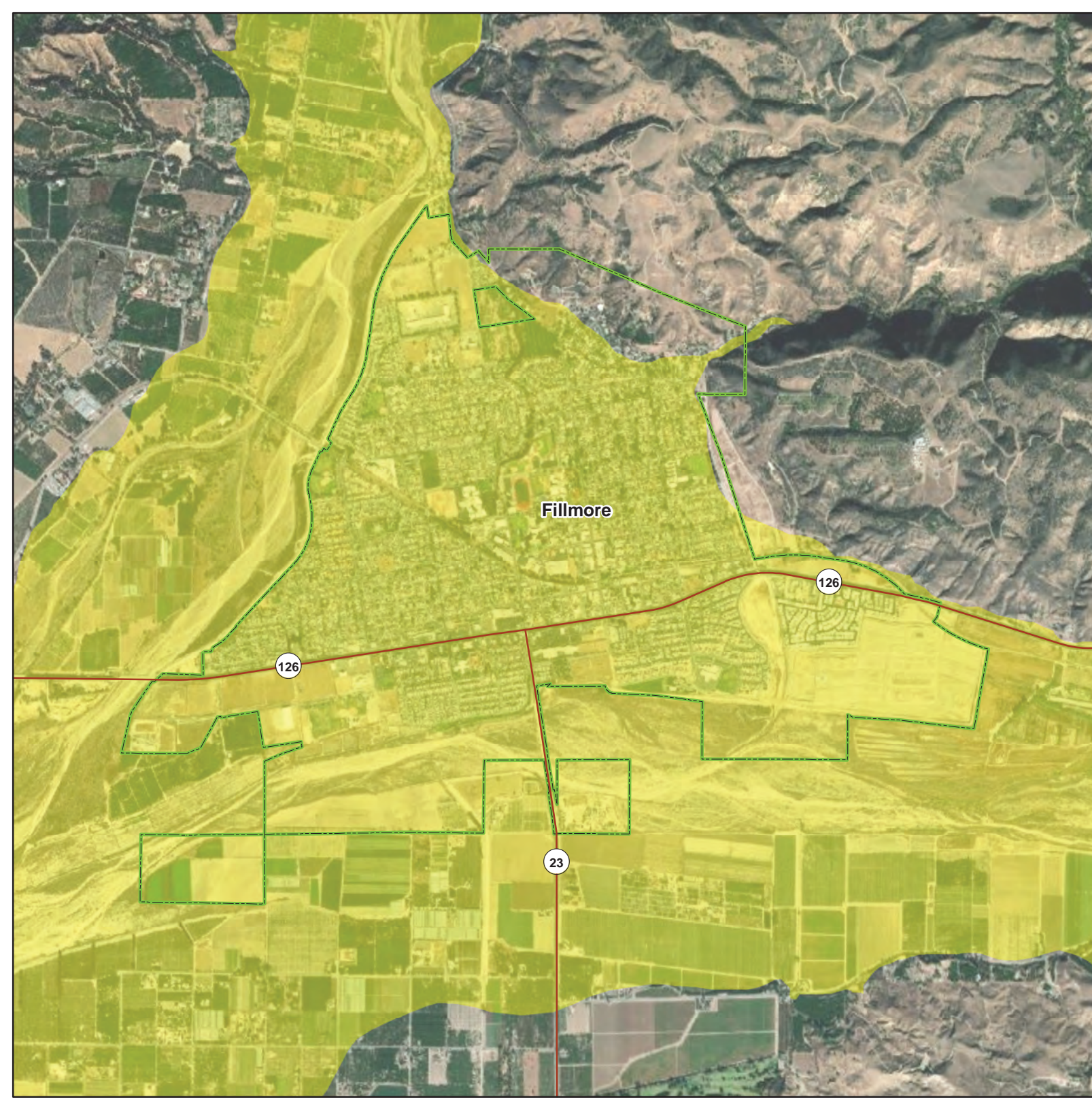
Liquefaction Susceptibility

-  Liquefaction zone
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
Esri




0 0.175 0.35 0.7
Miles



Fillmore


100-Year Probabilistic Earthquake Scenario


Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Major Roads

 Selected City

 Incorporated Cities

 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.175 0.35 0.7
 Miles



Fillmore


Oak Ridge M7.16 Earthquake Scenario


Mercalli Intensity Scale

 VIII (Severe/Moderate-Heavy)

 Major Roads

 Selected City

 Incorporated Cities

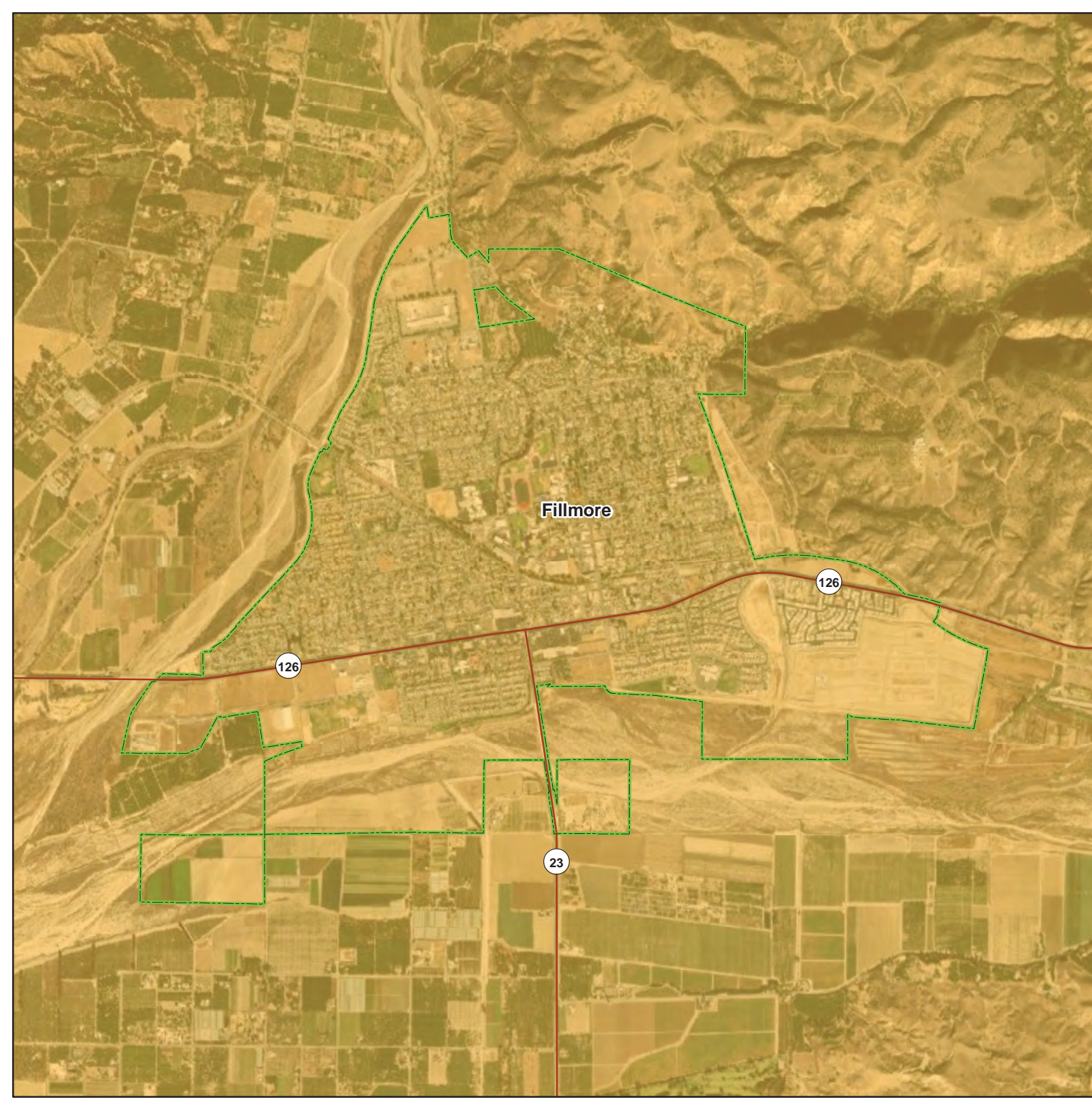
 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri







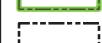

0 0.175 0.35 0.7
 Miles



Fillmore

Pitas Point M7.12 Earthquake Scenario

Mercalli Intensity Scale

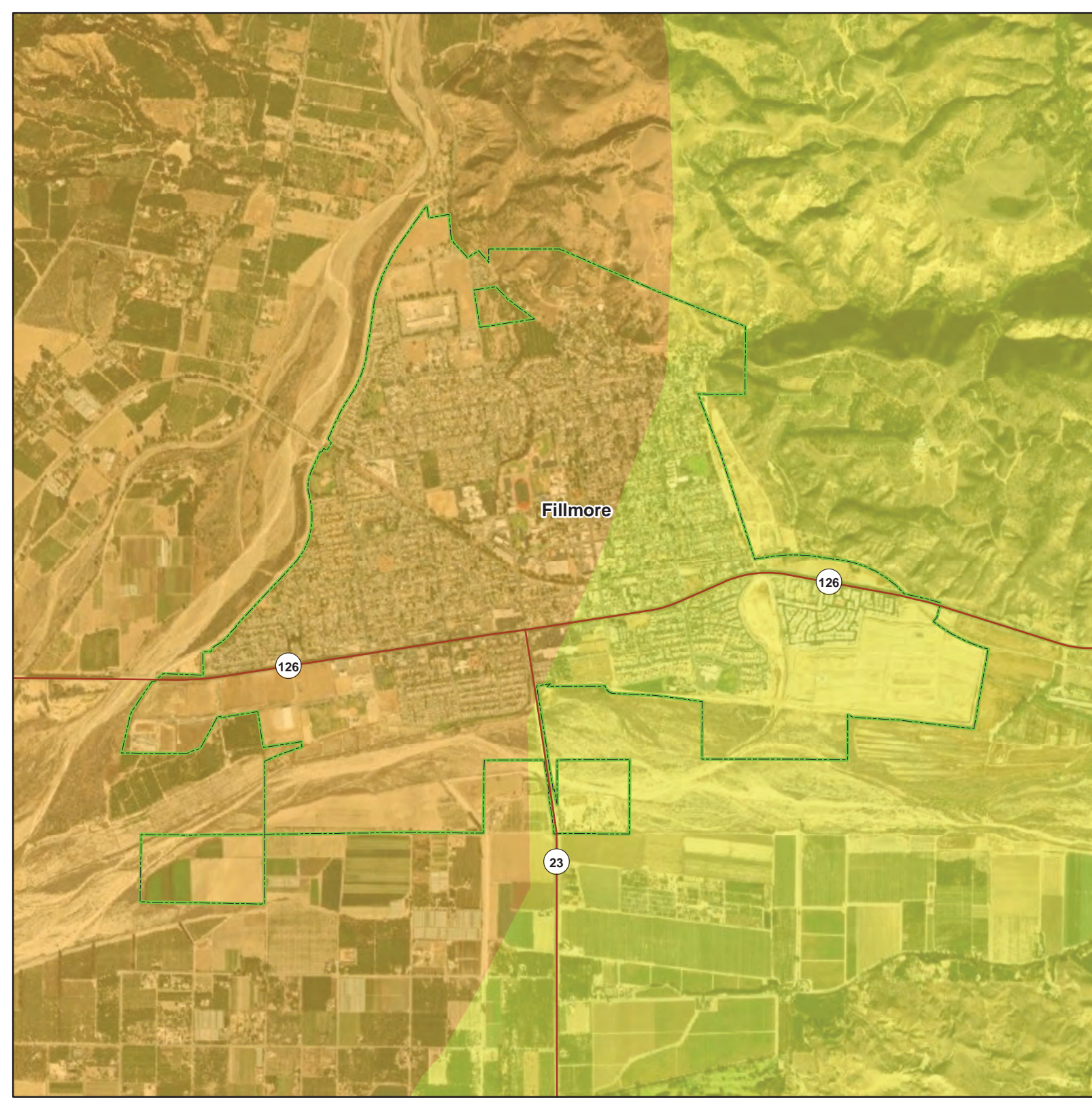
-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.175 0.35 0.7
 Miles



Fillmore

San Cayetano M7.16 Earthquake Scenario

Mercalli Intensity Scale

 VIII (Severe/Moderate-Heavy)

 Major Roads

 Selected City

 Incorporated Cities

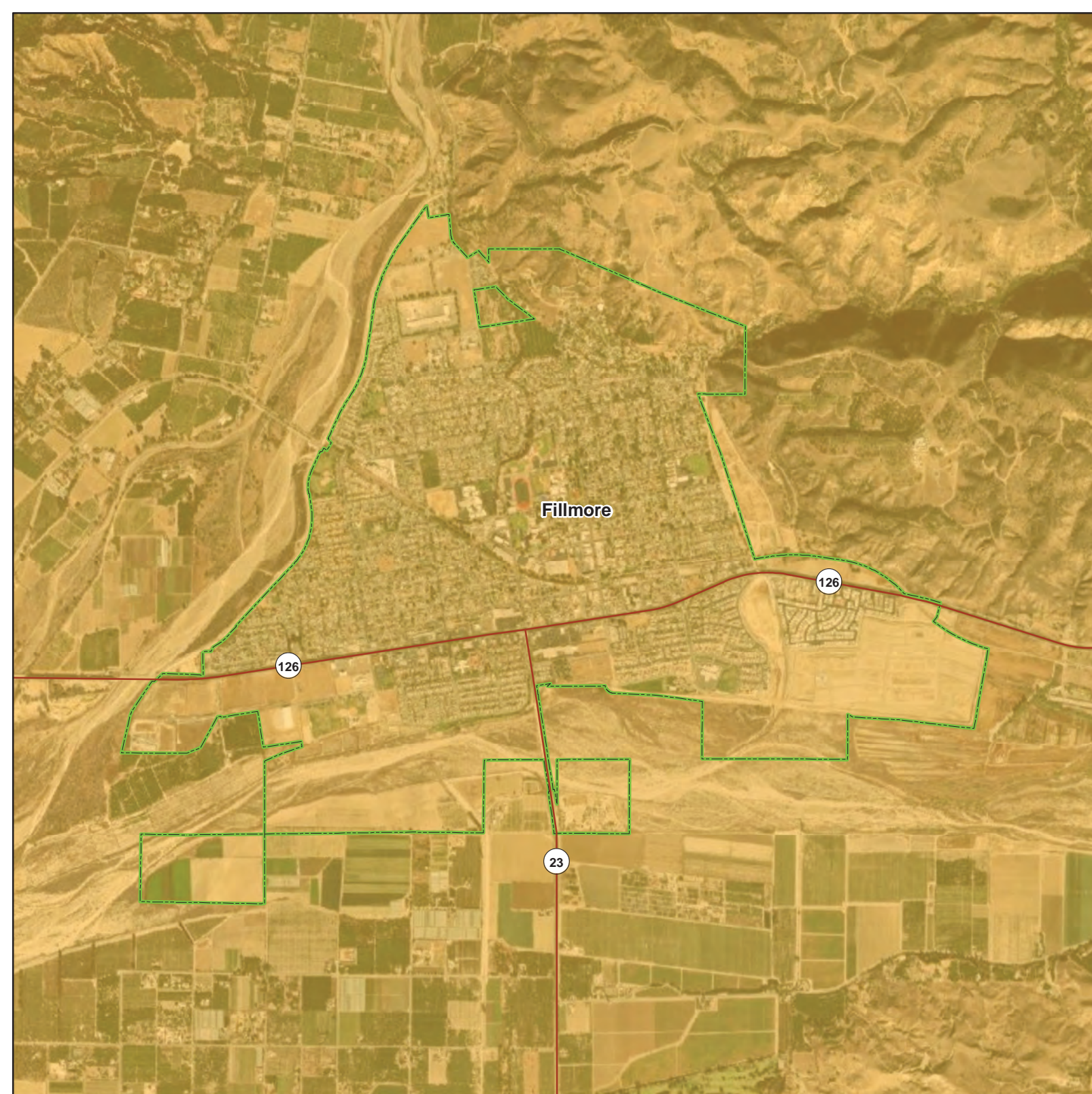
 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.175 0.35 0.7
 Miles



Fillmore

S. San Andreas M8.03 Earthquake Scenario

Mercalli Intensity Scale

- VI (Strong/Light)
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri









0 0.175 0.35 0.7
Miles



Fillmore

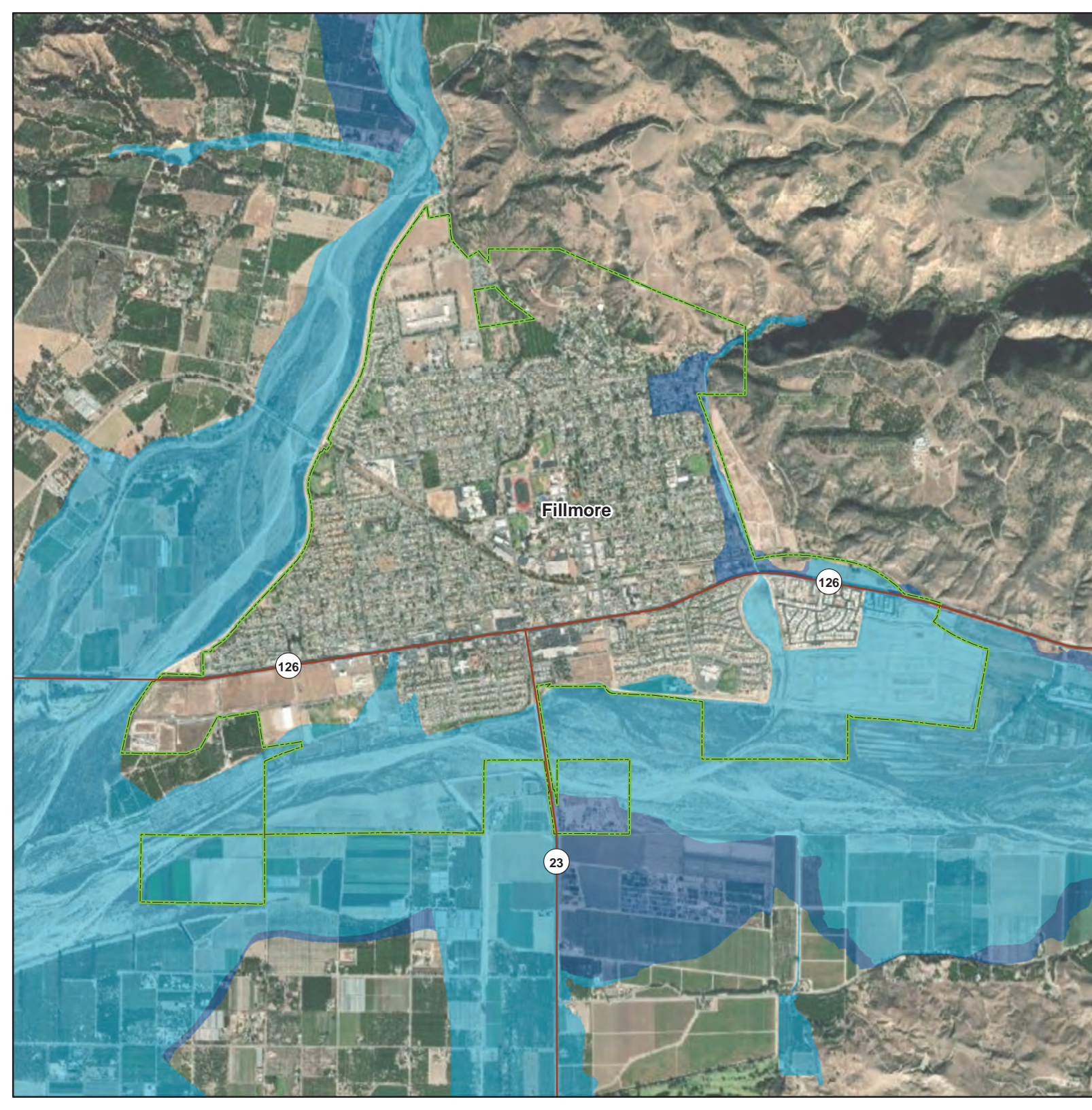
FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
FEMA, Esri









0 0.175 0.35 0.7
Miles



Fillmore

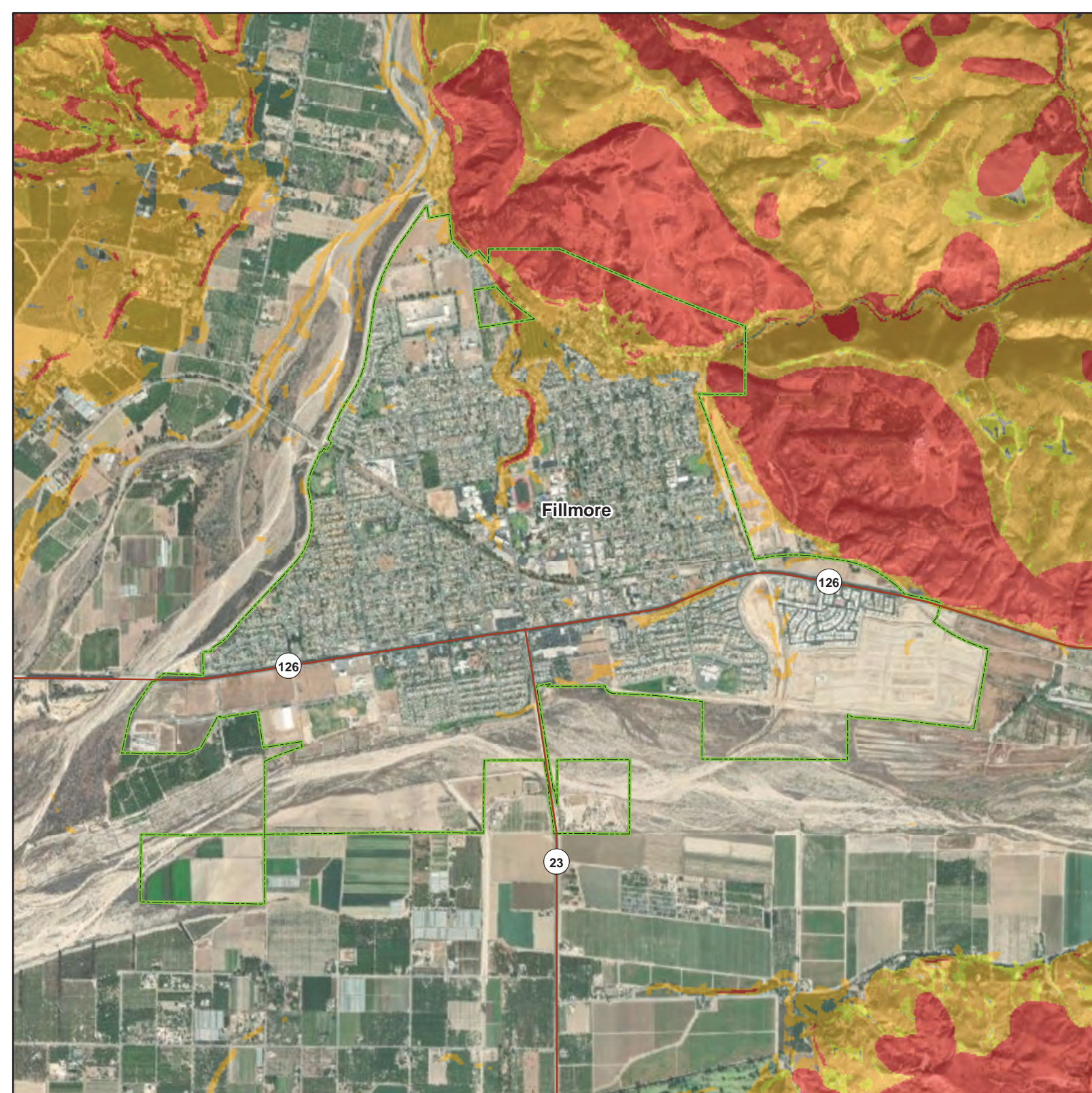
Susceptibility to Deep-Seated Landslides

-  Low
-  Moderate
-  High
-  Very High
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri

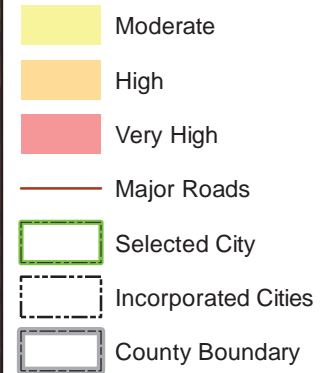


0 0.175 0.35 0.7
Miles

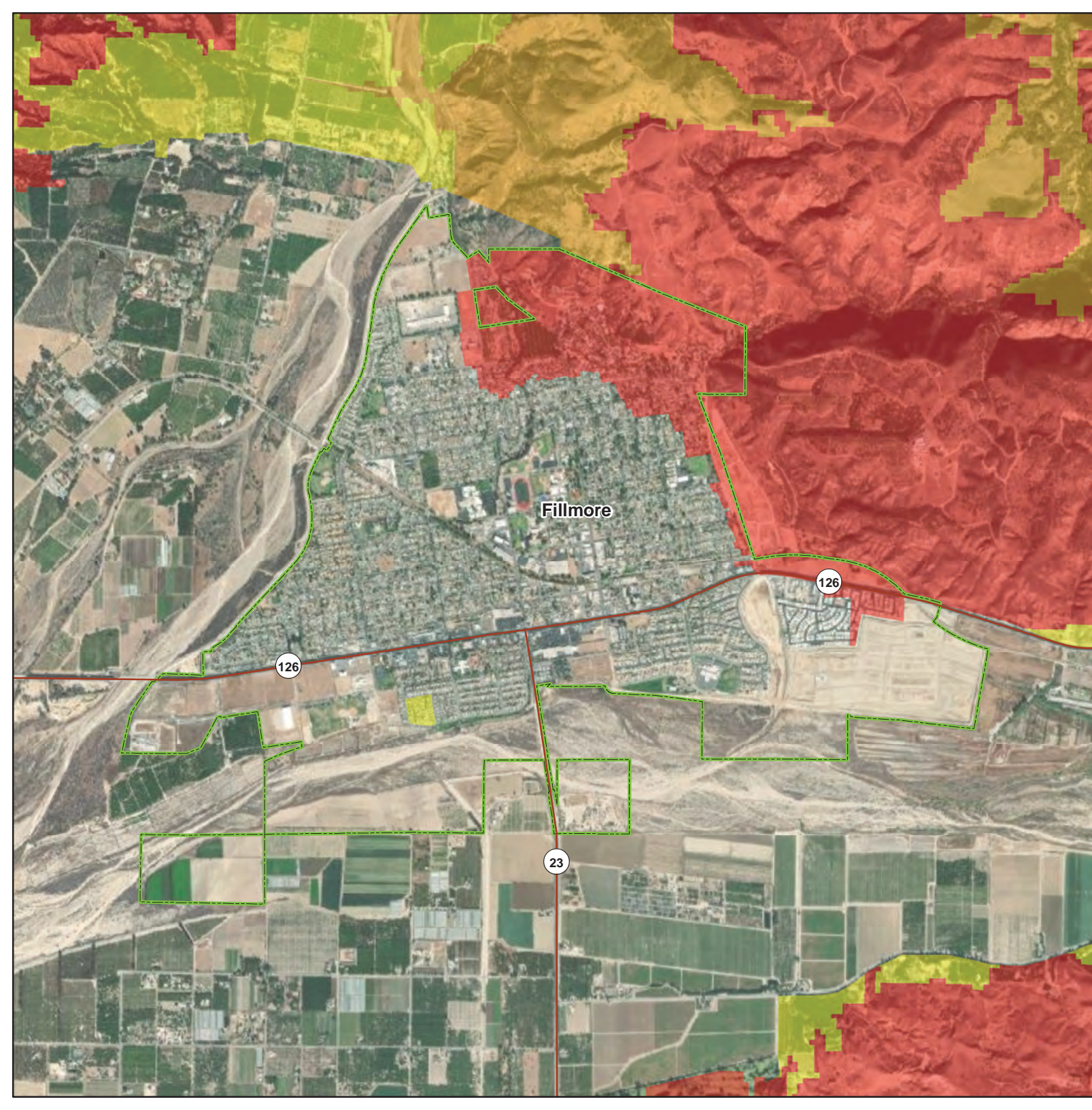


Fillmore

Wildfire Hazard Severity Zones



Data Sources: Ventura Co., CAL FIRE, Esri



4. CITY OF MOORPARK

4.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

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This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 4-1.

Table 4-1. Local Mitigation Planning Team Members

Name	Title
Mack Douglass	Program Manager, Emergency Management
Robert Valery	Parks and Facilities Supervisor
Leonard Mendez	Public Works Supervisor
PJ Gagajena	Assistant City Manager
Douglas Spondello	Interim Community Development Director

4.2 JURISDICTION PROFILE

4.2.1 Location and Features

Founded by Robert Poindexter in 1900 and incorporated in July 1983, the City of Moorpark is one of ten incorporated cities of Ventura County and is located in the eastern portion of the County. The City encompasses approximately 12.4 square miles and a population of 36,278 as of 2020. It is generally bounded by the City of Simi Valley to the east, the Tierra Rejada Valley and City of Thousand Oaks to the south, and unincorporated lands to the west and north. Lands west of the city are largely agricultural and protected from development by the Save Open Space and Agricultural Resources voter approved initiatives requiring the public's vote before any agricultural or open space lands are rezoned for development. Lands to the north of City's boundary are largely mountainous. It is connected to the region by two freeways, SR-118 to the east and SR-23 to the south, and Los Angeles Avenue (SR-118) to the west. Moorpark is home to Moorpark Community College, and is served by the Moorpark Unified School District for grades K-12.

Significant geographical features include the Arroyo Simi, which runs from east to west through central Moorpark. The City is also bisected by State Routes 118 and 23.

4.2.2 History

What is known about the settled history of Moorpark begins with the Chumash tribe of Native Americans, who lived and traded in the area prior to the arrival of Spanish explorers in the 16th century and missionaries in the centuries that followed. The Chumash village of Quimisac was located northeast of present-day Moorpark in the vicinity of what is now known as Happy Camp Canyon Park. Permanent settlement of the area can be traced back to successive eras of land ownership, starting with the gifting of the Rancho San Jose de Nuestra Señora de Altagarcia y Simi (Rancho Simi) to Francisco Javier Pico and his brothers by Governor Diego de Borica in 1795. When Moorpark was founded, the small farming communities of Fremontville and Epworth were already established in the area. In 1900, Robert W. and Madeleine Poindexter established a town site in anticipation of the arrival of the Southern Pacific Railroad and named it Moorpark, after the apricot variety that grew in the region. A depot was constructed that year, and several buildings originally constructed in Fremontville and Epworth were relocated to the burgeoning town. Growth began in earnest after 1904, when the railroad tunnels through the Santa Susana Mountains were completed to the east, connecting the area to the Los Angeles basin. Early development in Moorpark was concentrated in the downtown area along High Street, with the area south of the railroad tracks remaining largely farmland for many years.

The railroad and its connection to faraway markets facilitated the growth of the agriculture industry, the economic lifeblood of Moorpark. In the City's early years, dry land crops such as apricots, black-eyed beans, hay, and lima beans were the primary farming staples. Though agriculture remained an economic engine after World War II, the growth of turkey, chicken, and egg ranches fed the development of the poultry industry and a diversifying economy.

Moorpark became one of the first cities in the world to run off commercial nuclear power in 1957. Moorpark Community College opened on September 11, 1967.

Moorpark was incorporated as a city on July 1, 1983, marking the most dramatic period of growth of new homes and businesses in the City's history. This period saw a substantial shift in the Moorpark's center of activity, with large-scale development occurring in many areas that had heretofore been used for agriculture. High Street and the surrounding area remained the social and retail center of Moorpark through the 1980s until commercial activity began to shift to the south and suburban-style, multitenant retail centers grew along Los Angeles Avenue. Significant growth in home construction began in the late 1970s and accelerated through the 1980s as subdivisions such as Mountain Meadows and Peach Hill expanded the city's built footprint from the flatlands into the surrounding hillsides. Despite this growth, vestiges of the City's history still remain. Moorpark contains three locally significant resources, nine Points of Historic Interest, and one built environment resource listed in the California Register of Historical Resources (CRHR). Locally significant resources include the Taylor House, the First Southern Baptist Church and High Street's Pepper Trees. The highest level of significance conferred on a historical resource in the City is applied to Tanner's Corner, which is listed in the CRHR as an individual property.

4.2.3 Governing Body Format

The City of Moorpark operates under a council-manager form of government. The City Council assumes responsibility for the adoption of this plan; the City of Moorpark will oversee its implementation.

4.3 CURRENT TRENDS

4.3.1 Population

According to the California Department of Finance, the population of the City of Moorpark as of January 2020 was 36,278. Since 2010, the population has grown at an average annual rate of 0.54 percent. Moorpark's median age of 37.6 is close to the County median of 37.9, but younger than the neighboring cities. The percentage of the population under 18 years old is 23.1 percent, close to the state and County and higher than its three neighbors. Its percentage of population 65 years and above is lower than the state and County and substantially lower than the neighboring cities.

4.3.2 Development

Table 4-2 summarizes development trends in the period since the preparation of the previous hazard mitigation plan, as well as expected future development trends. Figure 4-1 describes the existing land uses and development characteristics within the City of Moorpark.

Table 4-2. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?	No					
Is your jurisdiction expected to annex any areas during the performance period of this plan?	No					
Are any areas targeted for development or major redevelopment in the next five years? • If yes, briefly describe, including whether any of the areas are in known hazard risk areas	Yes There are several major development projects that have been entitled in various locations within Moorpark, including approximately 1,200 housing units, commercial and industrial projects. There are also several significant applications that are pending entitlement. Each site is unique but generally potential risks that have been assessed and mitigated with each project include areas of known liquefaction, potential flooding, and designated Very High Fire Hazard Severity Zones. The Moorpark Community Development Department maintains a list of pending development projects on the City's website.					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		2016	2017	2018	2019	2020
	Single Family	87	66	27	4	21
	Multi-Family	0	0	0	0	185
	Other (commercial, mixed use, etc.)	16	10	7	6	10
	Total	103	76	34	10	216

Criterion	Response
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	The majority of the City is within a designated Very High Fire Hazard Severity Zone. Many properties near the Arroyo Simi are also within a FEMA Special Flood Hazard Area. Large areas of the City are also vulnerable to liquefaction, primarily along the Arroyo Simi and tributary streams.
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	Moorpark is approaching build out, with infill and redevelopment projects comprising the bulk of our construction activity. Limited numbers of development projects located around the periphery of the City, such as Hitch Ranch are moving through the entitlement process, but may not break ground in the near future.

LAND USES BY ACREAGE		
Land Use	Acres	Percent
Residential	2,274	28%
• Single-Family	1,744	22%
• Multifamily	202	3%
• Mobile Home	41	.5%
• Rural Residential	287	4%
Right of Way	1,155	14%
Office	37	0.5%
Commercial and Services	152	2%
Public Facilities and Quasi-Public	101	1%
Education	296	4%
Industrial	280	4%
Transportation, Communications, and Utilities	217	3%
Open Space and Recreation	2,240	28%
Agriculture	29	.5%
Vacant	1,069	13%
Water	141	2%
TOTAL	7,991	100%
RESIDENTIAL BUILDOUT*		
Type	Dwelling Units	Percent
Single-Family Residential	9,859	86%
Multifamily Residential	1,412	12%
Mobile Homes	144	1%
TOTAL	11,415	100%

Source: SCAG and PlaceWorks 2020
 *California Department of Finance, E-5 2020.

Figure 4-1. Moorpark Land Use and Development Characteristics

4.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 4-3.
- Development and permitting capabilities are presented in Table 4-4.
- An assessment of fiscal capabilities is presented in Table 4-5.
- An assessment of administrative and technical capabilities is presented in Table 4-6.
- An assessment of education and outreach capabilities is presented in Table 4-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 4-8.
- Classifications under various community mitigation programs are presented in Table 4-9.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 4-10.

Table 4-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: California Building Code, 2019 Edition, adopted in Moorpark Municipal Code, Chapter 15.08 Building Code (Ord. 474 § 3, 2019)</i>	Yes	Yes	Yes	Yes
Zoning Code <i>Comment: Moorpark Municipal Code Title 17, (Ord. 189 § 3 (8101-0), 1994)</i>	Yes	No	Yes	Yes
Subdivisions <i>Comment: Moorpark Municipal Code Title 16, (Ord. 334 § 1 Exh. A, 2006)</i>	Yes	No	Yes	Yes
Stormwater Management <i>Comment: Moorpark Municipal Code Title 8, (Ord. 240 § 2, 1997)</i>	Yes	No	No	Yes
Post-Disaster Recovery <i>Comment: City of Moorpark Emergency Operations Plan. Last updated 2015, update currently underway</i>	Yes	No	No	Yes
Real Estate Disclosure <i>Comment: California State Civil Code 1102 requires full disclosure on natural hazard exposure of the sale/re-sale of any and all real property.</i>	No	Yes	Yes	Yes
Growth Management <i>Comment: City of Moorpark General Plan. Last updated in 1992, comprehensive update is currently underway</i>	Yes	No	No	No
Site Plan Review <i>Comment: Moorpark Municipal Code Chapter 17.44 Application Review Procedures. (Ord. 297 Exh. A, 2003)</i>	Yes	No	No	Yes

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Environmental Protection	Yes	Yes	Yes	No
<i>Comment: CEQA (California Code of Regulations Title 14, Division 6, Chapter 3) is implemented by the City for all land use impacts. On July 21, 2004, the City Council adopted Resolution Number 2004-2224 and on September 15, 2004, the Moorpark Redevelopment Agency adopted Resolution Number 2004-142, establishing Procedures of the City of Moorpark and Moorpark Redevelopment Agency to Implement the California Environmental Quality Act (CEQA). The ongoing Comprehensive General Plan Update will include a program EIR.</i>				
Flood Damage Prevention	Yes	Yes	Yes	Yes
<i>Comment: Moorpark Municipal Code Section 15.24 Floodplain Management (Ord. 279 § 1, 2002)</i>				
Emergency Management	Yes	Yes	Yes	Yes
<i>Comment: Moorpark Municipal Code Chapter 2.48 (Ord. 89-106 § 1, 1989)</i>				
Climate Change	Yes	Yes	Yes	Yes
<i>Comment: Comprehensive General Plan update will contain a climate change element.</i>				
Planning Documents				
General Plan	Yes	Yes	Yes	Yes
<i>Is the plan compliant with Assembly Bill 2140? Yes</i>				
<i>Comment: Comprehensive General Plan update is currently underway</i>				
Capital Improvement Plan	Yes	Yes	Yes	Yes
<i>How often is the plan updated? CIP is approved by City Council every seven years and updated by staff annually</i>				
<i>Comment: City of Moorpark Capital Improvement Program FY 2016/17-2022/23</i>				
Disaster Debris Management Plan	No	Yes	No	No
<i>Comment: Ventura County Disaster Recovery Plan, Adopted by BOS in April 2019</i>				
Floodplain or Watershed Plan	Yes	No	Yes	Yes
<i>Comment: Moorpark Municipal Code Section 15.24. This code is current through Ordinance 20-488 and the March 2021 code supplement. The City participates in the National Flood Insurance Program (NFIP)</i>				
Stormwater Plan	Yes	No	Yes	Yes
<i>Comment: Moorpark Municipal Code Section 8.52 This code is current through Ordinance 20-488 and the March 2021 code supplement.</i>				
Urban Water Management Plan	N/A	N/A	N/A	N/A
<i>Comment: City of Moorpark is not a water purveyor</i>				
Habitat Conservation Plan	No	No	No	No
<i>Comment:</i>				
Economic Development Plan	Yes	No	Yes	No
<i>Comment: Comprehensive General Plan update will contain an economic development chapter.</i>				
Shoreline Management Plan	N/A	N/A	N/A	N/A
<i>Comment: N/A</i>				
Community Wildfire Protection Plan	No	No	No	No
<i>Comment: The city does not have this plan</i>				
Forest Management Plan	N/A	N/A	N/A	N/A
<i>Comment: N/A</i>				
Climate Action Plan	Yes	No	Yes	Yes
<i>Comment: Climate Action Plan Element will be part of the ongoing General Plan Update</i>				
Emergency Operations Plan	Yes	No	Yes	Yes
<i>Comment: 2014 Moorpark Emergency Operations Plan. Comprehensive EOP Update currently underway.</i>				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	Yes	No	No
<i>Comment: The city does not have this assessment</i>				
Post-Disaster Recovery Plan	Yes	No	No	Yes
<i>Comment: This is part of the City of Moorpark Emergency Operations Plan (EOP) 2014</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Continuity of Operations Plan	Yes	No	Yes	Yes
<i>Comment: 2014 Moorpark Emergency Operations Plan. Comprehensive EOP Update currently underway.</i>				
Public Health Plan	No	Yes	Yes	No
<i>Comment: The General Plan Update will include an Element regarding Public Health however the City does not currently have a Public Health Plan. County of Ventura Health Care Agency Public Health Emergency Response Plan (ERP)</i>				

Table 4-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i> Community Development	Yes
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	Yes

Table 4-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

Table 4-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Community Development and Public Works	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Public Works	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Community Development and Public Works	Yes
Staff with training in benefit-cost analysis <i>If Yes, Department /Position:</i> Finance	Yes
Surveyors	No
Personnel skilled or trained in GIS applications	No
Scientist familiar with natural hazards in local area	No
Emergency manager <i>If Yes, Department /Position:</i> Program Manager, Finance Department	Yes
Grant writers	No

Table 4-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	No
Do you use social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs in place that could be used to communicate hazard-related information?	Yes
<i>If yes, briefly describe:</i> Community Emergency Response Team	
Do you have any established warning systems for hazard events?	No
<i>If yes, briefly describe:</i>	

Table 4-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Public Works Director
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	2002
Does your floodplain management program meet or exceed minimum requirements?	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Are any RiskMAP projects currently underway in your jurisdiction?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<i>If no, is your jurisdiction interested in joining the CRS program?</i> No	
How many flood insurance policies are in force in your jurisdiction? ^a	117
<i>What is the insurance in force?</i> \$39,692,000	
<i>What is the premium in force?</i> \$114,239	
How many total loss claims have been filed in your jurisdiction? ^a	2
<i>What were the total payments for losses?</i> \$33,576	

a. According to FEMA statistics as of March 31, 2021

Table 4-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	0611149138	N/A
DUNS #	Yes	628053464	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 4-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Staff and elected officials understand potential climate change impacts.</i>	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment:</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment:</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment: General Plan Update will include a climate action plan element.</i>	High
Participation in regional groups addressing climate risks <i>Comment:</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: City Council and the City Manager have the authority to consider and direct action to address potential climate change impacts</i>	High
Identified strategies for greenhouse gas mitigation efforts <i>Comment: City Council recently enacted an SB 1383 compliant ordinance, which will reduce GHG emissions from organic waste</i>	High
Identified strategies for adaptation to impacts <i>Comment:</i>	Low
Champions for climate action in local government departments <i>Comment:</i>	Unsure
Political support for implementing climate change adaptation strategies <i>Comment:</i>	Unsure
Financial resources devoted to climate change adaptation <i>Comment:</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment:</i>	Low
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: Evidence of climate change is obvious in Moorpark and directly affects the lives of residents through sustained droughts, frequent wildfires, high wind events and Public Safety Power Shutoffs.</i>	Medium
Local residents' support of adaptation efforts <i>Comment:</i>	Unsure
Local residents' capacity to adapt to climate impacts <i>Comment:</i>	Unsure
Local economy current capacity to adapt to climate impacts <i>Comment:</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Unsure

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

4.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

4.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **County of Ventura Hazard Mitigation Plan**
- **City of Moorpark Emergency Operations Plan**
- **City of Moorpark General Plan, Safety Element (2001)**

4.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **City of Moorpark General Plan**—The City of Moorpark is engaged in a comprehensive update to the General Plan and zoning ordinance that will include a full evaluation of potential hazards, climate issues, and Program Environmental Impact Report.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

4.6 RISK ASSESSMENT

4.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 4-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 4-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4482	January 20, 2020 and continuing	COVID-19 Pandemic
Maria Fire	FM-5302-CA	11/1/2019	\$6,199,112.56
Easy Fire	FM-5298-CA	10/30/2019	\$2,833,870.64
Heat Event	N/A	7/4/2018 to 7/6/2018	Extreme 2-day heat event broke records across the county.
Thomas Fire	FM-5224	December 4, 2017	Unknown
Winter Storms	N/A	2/17/2017 to 2/18/2017	Rainfall amounts from 2 to 6 inches across coastal areas with up to around 10 inches in the local mountains produced numerous reports of flash flooding as well as mud and debris flows. Strong southerly winds with gusts up to 70 mph reported in some areas.
Guiberson Fire	FM-2839-CA	9/22/2009	\$8,033,270.01
Flash Flood	N/A	January 25, 2008	California Highway Patrol reported heavy rain and flash flooding near the community of Moorpark. Reports indicated flash flooding along Tierra Rejada Drive at Hillside Drive.
Severe Freeze Event	DR-1689	1/11/2007 to 1/17/2007	4 nights of below freezing temperatures.
Shekell Fire	FM-2681-CA	12/3/2006	\$1,153,198.47
Winter Storms	DR1577	1/7/2005 to 1/11/2005	Major roads including Highways 101, 126, 33 and 150 were closed for more than a week due to severe flooding
Wildfires, Flooding, Mudflow and Debris Flow	DR-1498	October 21, 2003 – March 31, 2003	Unknown
1928 St. Francis Dam Failure	N/A	3/12/1928	>530 people died; bridges, orchards, farms, homes all eradicated in flood's path down the Santa Clara river valley to the Pacific Ocean.

4.6.2 Hazard Risk Ranking

Table 4-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions primarily target hazards with high and medium rankings.

Table 4-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Wildfire	36	High
1	Landslide	36	High
3	Earthquake	32	Medium
4	Dam Failure	26	Medium
5	Severe Weather	24	Medium
5	Severe Storms	24	Medium
7	Flooding	18	Medium
8	Drought	9	Low

4.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Loss of power due to human action (PSPS).
 - At least 10 PSPS events affected the city during 2020, including several events that lasted for multiple days.
 - Traffic signals were affected.
 - City Hall itself was left on backup power for several days.
 - Police Service Facility has a lack of reliable power due to a faulty power switchover device.
 - City was unable to provide a cooling center to residents due to a lack of power.
 - A charity using a City Facility to conduct food bank operations is susceptible to loss of perishable items due to power outages.
- Frequent urban flooding at the intersection of Millard St. and Sherman Ave.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

4.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 4-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 4-13. Status of Previous Plan Actions

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>OA 1—Integrate the hazard analysis and mitigation strategy with the General Plan’s Safety Element.</p> <p>Comment: General Plan update including safety element is underway.</p>			✓	MPK-2
<p>OA 6—Develop a public outreach program that informs property owners located in the dam and levee failure inundation areas about voluntary flood insurance.</p> <p>Comment: Public Works requires additional staff resources to complete this Action.</p>			✓	MPK-7
<p>OA 7—Develop a water conservation public outreach program to increase awareness about the drought, fines and penalties for overuse and solutions for conserving water.</p> <p>Comment: Done in concert with Calleguas MWD. Most recently implemented a drought impact plan on 7/01/15.</p>	✓			
<p>OA 8—Adopt emergency water conservation measures and/or water conservation ordinance to limit irrigation.</p> <p>Comment: MMC 15.23.010 was amended most recently on 12/18/19.</p>	✓			
<p>OA 10—Seismically retrofit or upgrade seismically deficient government facilities and pre-identified shelter facilities.</p> <p>Comment: City Hall will likely be changing location to a seismically suitable facility in the near future</p>			✓	MPK-1
<p>OA 19—Maintain vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes.</p> <p>Comment: City requires additional staff resources to complete this action item.</p>			✓	MPK-8
<p>MP 1—Generators: Purchase and install back-up generators for 3 facilities, one of which is often used by Ventura County Fire and Sheriff as an Incident Command Center and serves as an alternate Emergency Operation Center (EOC) for the City (Capital Improvement Project 7710)</p> <p>Comment: Completed in 2009.</p>	✓			
<p>MP 2—Hazardous Mitigation Planning: Modify current Neighborhood and Business Watch Programs with focus on electronic format including real-time information exchange between law enforcement and the community</p> <p>Comment: Completed in 2016.</p>	✓			
<p>MP 3—Wildfire Mitigation: Work with Ventura County Fire to consider siting/planning for a new fire station by Moorpark College (east end of City)</p> <p>Comment: Placement of new fire station under consideration by City and VCFPD.</p>	✓			
<p>MP 4—Mitigation Reconstruction: Reconstruct fire sprinkler system for the Community Center facility</p> <p>Comment: Use of Community Center Facility may be modified or discontinued when City Hall changes location so this action is no longer feasible.</p>		✓		

4.8 HAZARD MITIGATION ACTION PLAN

Table 4-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 4-15 identifies the priority for each action. Table 4-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 4-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action MPK-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.</p> <p><u>Hazards Mitigated:</u> Wildfire, Landslide, Earthquake, Dam Failure, Severe Weather, Severe Storms, Flooding</p>						
Existing	2, 6, 9, 10, 11	City of Moorpark	N/A	High	Grant Funding-FEMA HMA (BRIC, FMA, HMGP)	Short-term
<p>Action MPK-2—Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including the City’s Emergency Operations Plan and General Plan.</p> <p><u>Hazards Mitigated:</u> Wildfire, Landslide, Flooding</p>						
New & Existing	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19	City of Moorpark	N/A	Low	Staff Time, General Funds	Ongoing
<p>Action MPK-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.</p> <p><u>Hazards Mitigated:</u> Wildfire, Landslide, Earthquake, Dam Failure, Severe Weather, Severe Storms, Flooding, Drought</p>						
New & Existing	1, 2, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15	City of Moorpark	N/A	Low	Staff Time, General Funds	Short-term
<p>Action MPK-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:</p> <ul style="list-style-type: none"> • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts. <p><u>Hazards Mitigated:</u> Flooding, Dam Failure</p>						
New & Existing	1, 2, 6, 7, 17	City of Moorpark	N/A	Low	Staff Time, General Funds	Ongoing
<p>Action MPK-5—Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:</p> <ul style="list-style-type: none"> • Climate Action Element of General Plan Update. • Consider a goal or policy to establish Reach Building Codes with the General Plan Update • Consider inclusion of a Climate Action Plan following the General Plan Update <p><u>Hazards Mitigated:</u> Severe Weather, Severe Storms, Wildfire, Flooding, Drought</p>						
New & Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 19	City of Moorpark	N/A	Low	Staff Time, General Funds	Short-term
<p>Action MPK-6—Purchase generators for critical facilities and infrastructure that lack adequate backup power.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire, Severe Storms</p>						
Existing	2, 6, 19	City of Moorpark	N/A	Medium	Grant Funding-FEMA HMA (BRIC, HMGP), Staff Time, General Funds	Short-term
<p>Action MPK-7—Provide reliable back up power for the Police Service Facility.</p> <p><u>Hazards Mitigated:</u> Wildfire, Landslide, Earthquake, Dam Failure, Severe Weather, Severe Storms, Flooding</p>						
Existing	2, 6, 19	City of Moorpark	N/A	Medium	Grant Funding-FEMA HMA (BRIC, HMGP), Staff Time, General Funds	Short-term
<p>Action MPK-8—Develop a public outreach program that informs property owners located in the dam and levee failure inundation areas about voluntary flood insurance.</p> <p><u>Hazards Mitigated:</u> Flooding</p>						
New & Existing	7, 17	City of Moorpark	N/A	Low	Staff Time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action MPK-9 —Maintain vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes.						
<u>Hazards Mitigated:</u> Wildfire						
New & Existing	5, 10, 13, 17	City of Moorpark	VCFPD	Medium	Staff Time, General Funds	Ongoing
Action MPK-10 —Proceed with construction of a storm drain to address flooding issues at Millard St. and Sherman Ave (CIP #504)						
<u>Hazards Mitigated:</u> Flooding						
Existing	2, 6, 8	City of Moorpark	Caltrans	Medium	Grant Funding-FEMA HMA (BRIC, FMA, HMGP), Staff Time, General Funds	Long-term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 4-15. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	5	High	High	Yes	Yes	No	Medium	High
2	16	Medium	Low	Yes	No	Yes	High	Low
3	12	Low	Low	Yes	No	Yes	High	Low
4	5	Medium	Low	Yes	No	Yes	High	Low
5	17	Medium	Low	Yes	No	Yes	High	Medium
6	3	High	Medium	Yes	Yes	No	Medium	High
7	3	High	Medium	Yes	Yes	No	Medium	High
8	2	Low	Low	Yes	No	Yes	High	Low
9	4	Medium	Medium	Yes	No	Yes	High	Low
10	3	Medium	Medium	Yes	Yes	Yes	High	Medium

a. See the introduction to this volume for explanation of priorities.

Table 4-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building ^b
High-Risk Hazards								
Wildfire	MPK-2	MPK-1	MPK-2, 3	MPK-9	MPK-6, 7		MPK-5	MPK-2, 3, 5, 9
Landslide	MPK-2	MPK-1	MPK-2, 3		MPK-6, 7			MPK-2, 3
Medium-Risk Hazards								
Earthquake		MPK-1	MPK-3		MPK-6, 7			MPK-3
Dam Failure	MPK-4	MPK-1	MPK-3		MPK-6, 7			MPK-3, 4
Severe Weather		MPK-1	MPK-3		MPK-6, 7		MPK-5	MPK-3, 5
Severe Storms		MPK-1	MPK-3		MPK-6, 7		MPK-5	MPK-3, 5
Flooding	MPK-2, 4	MPK-1	MPK-2, 3, 8		MPK-6, 7	MPK-10	MPK-5	MPK-2, 3, 4, 5
Low-Risk Hazards								
Drought			MPK-3				MPK-5	MPK-3, 5

- a. See the introduction to this volume for explanation of mitigation types.
- b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

4.9 PUBLIC OUTREACH

Table 4-17 lists public outreach activities for this jurisdiction.

Table 4-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Community Emergency Response Team	Ongoing	10-20

4.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **Moorpark Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Moorpark Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Moorpark Emergency Operations Plan**—the Emergency Operations plan was examined for consistency with the County EOP and this Hazard Mitigation Plan.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

Moorpark

Critical Facilities (1 of 2)

● Food, Water, Shelter

● Safety and Security

— Major Roads

▭ Selected City

▭ Incorporated Cities

▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri



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Moorpark

Critical Facilities (1 of 2)

- Communications
- Energy
- Hazardous Material
- Transportation

- Major Roads
- ▭ Selected City
- - - Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri








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Moorpark

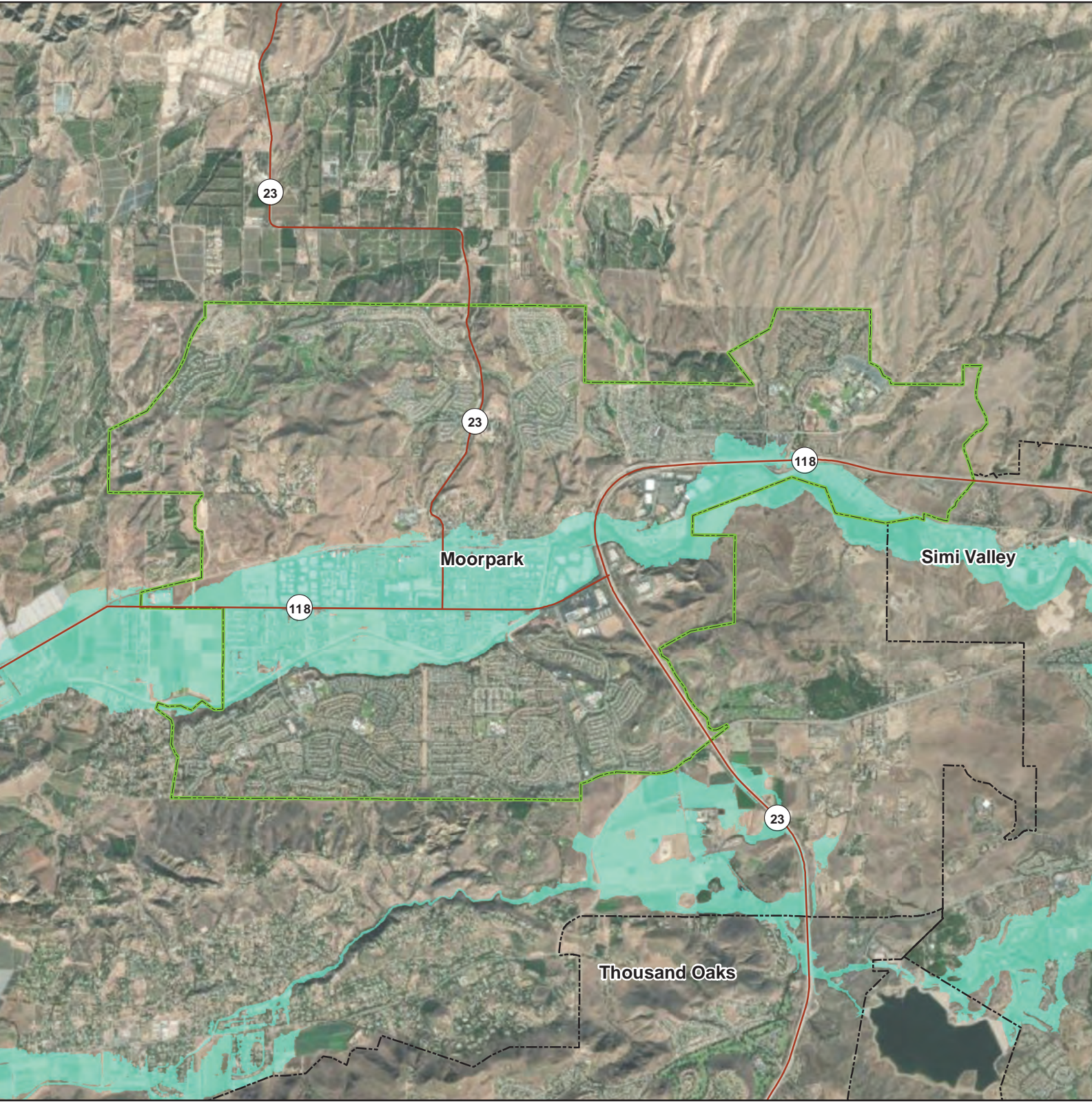
Dam Failure Inundation Areas

-  Combined Inundation Areas
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CA DWR, Esri









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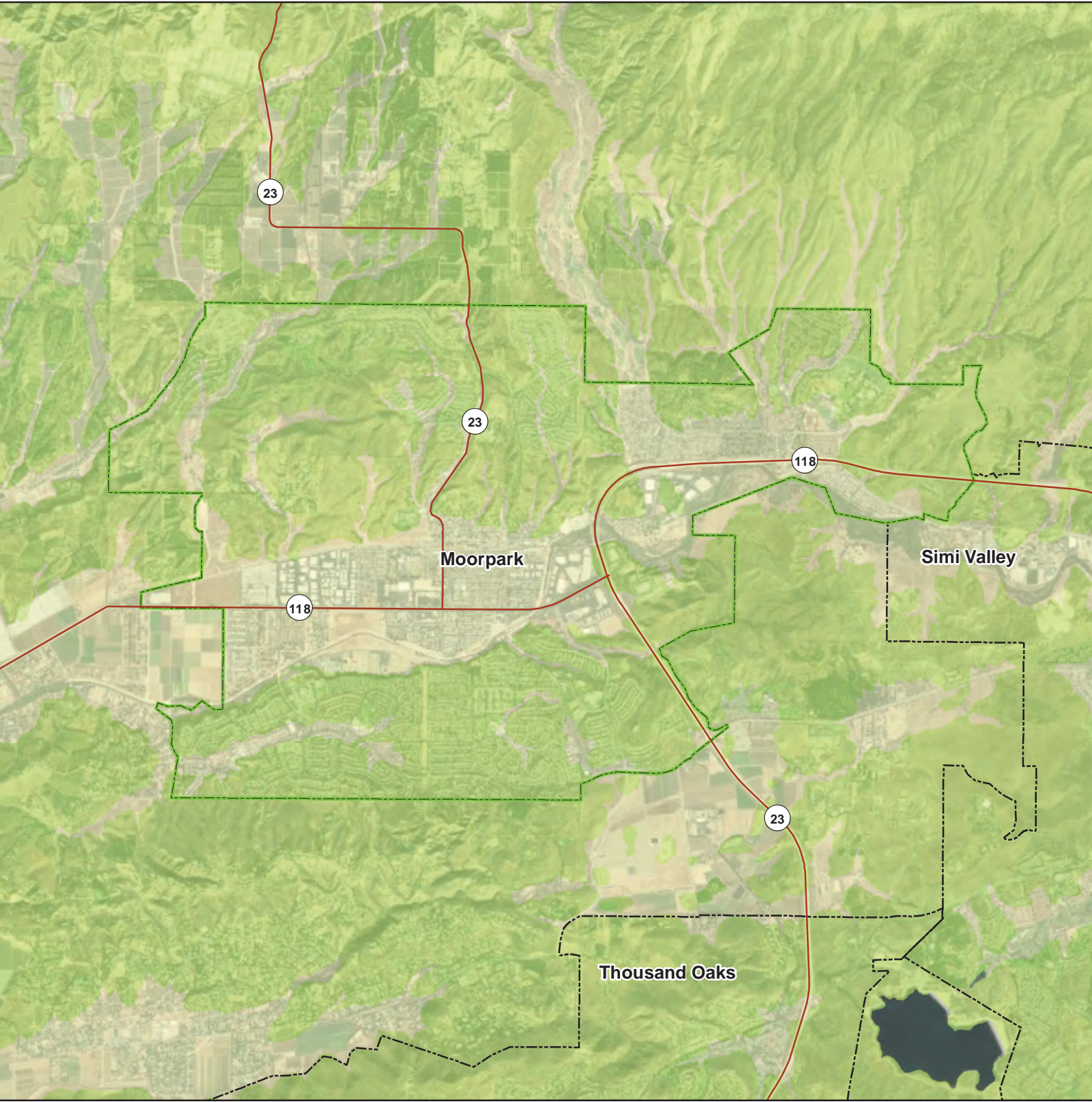
NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri








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Moorpark

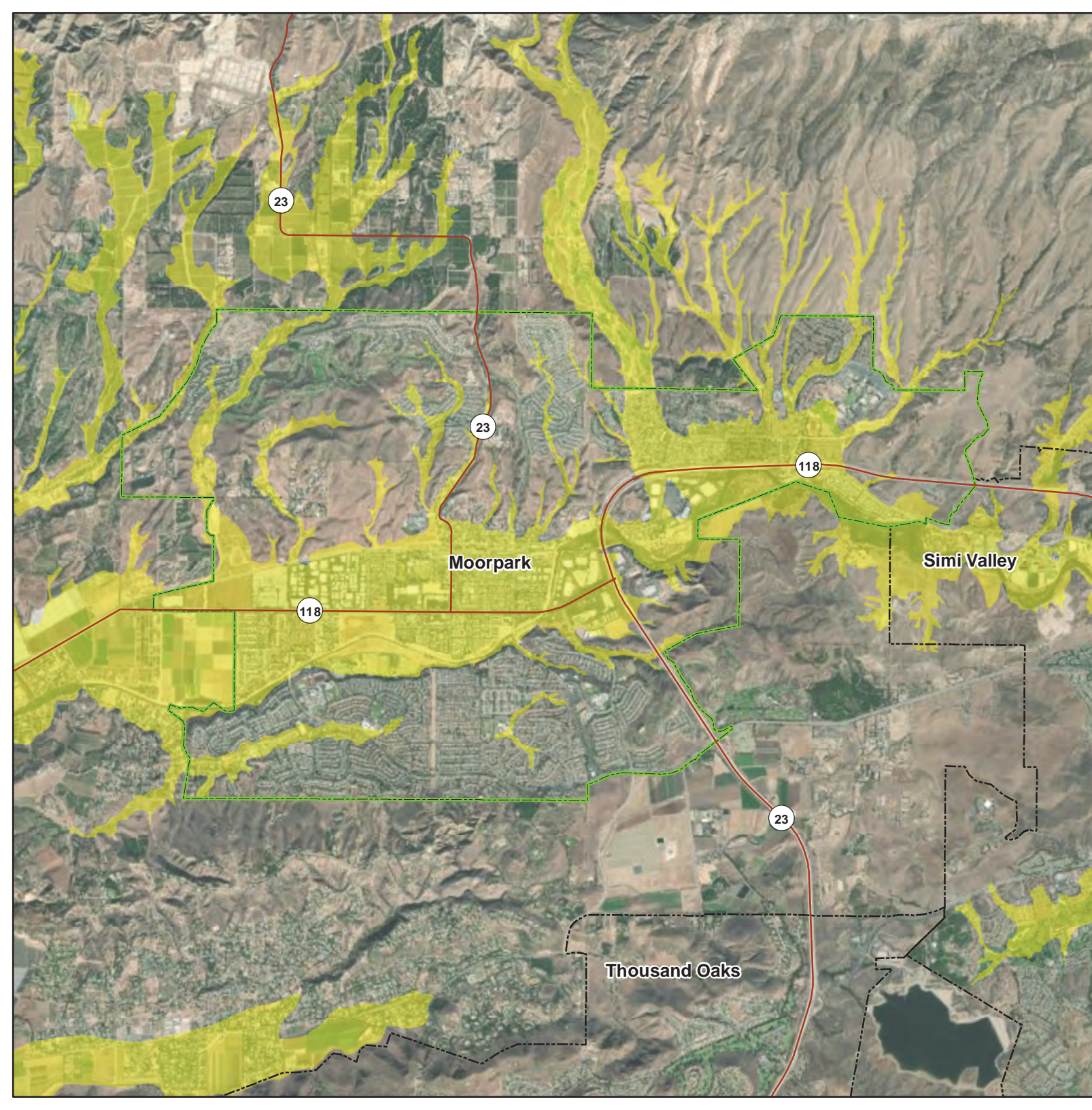
Liquefaction Susceptibility

-  Liquefaction zone
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
Esri




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Moorpark

100-Year Probabilistic Earthquake Scenario


Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Major Roads

 Selected City

 Incorporated Cities

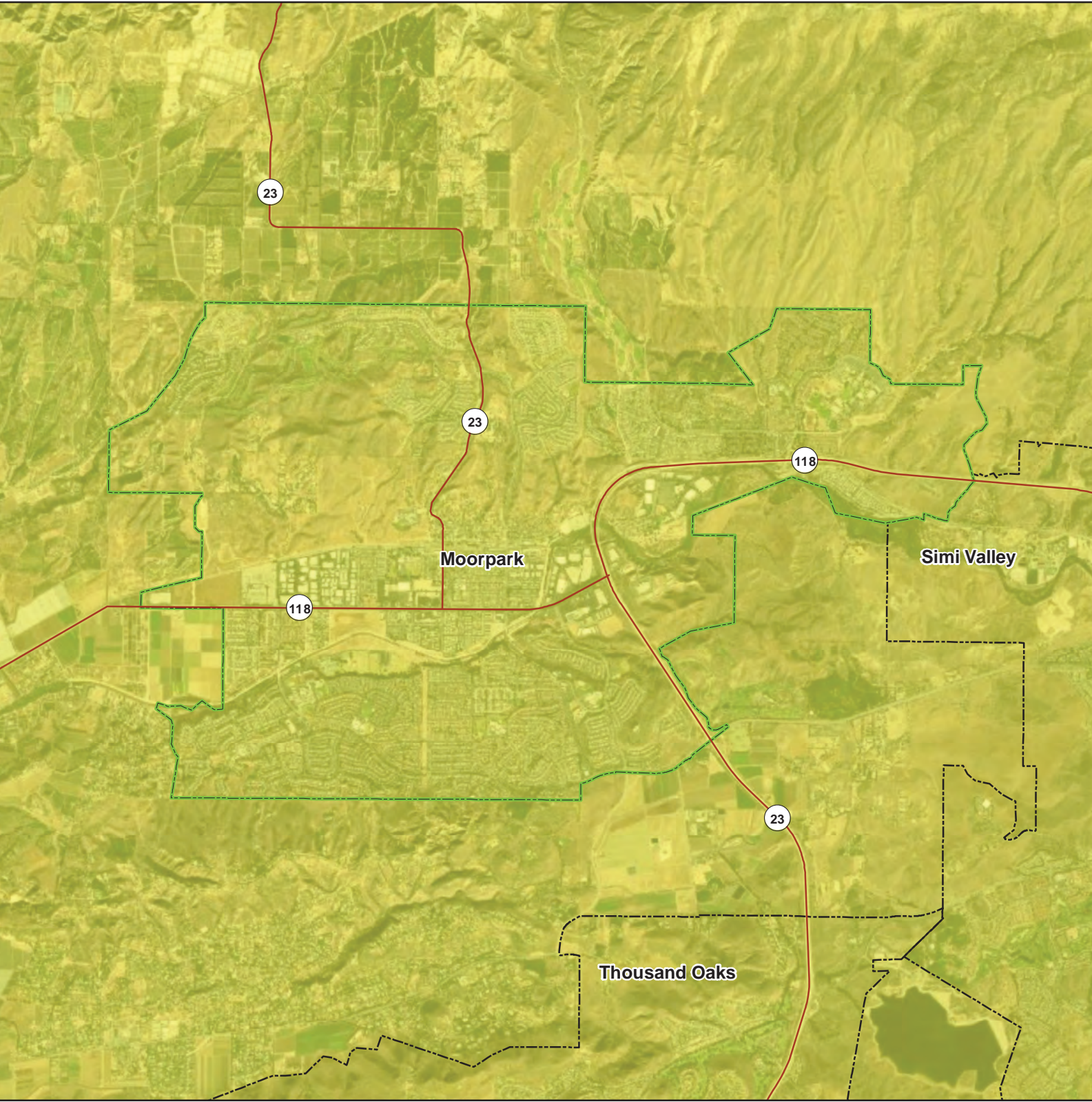
 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri









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 Miles



Moorpark

Oak Ridge M7.16 Earthquake Scenario

Mercalli Intensity Scale

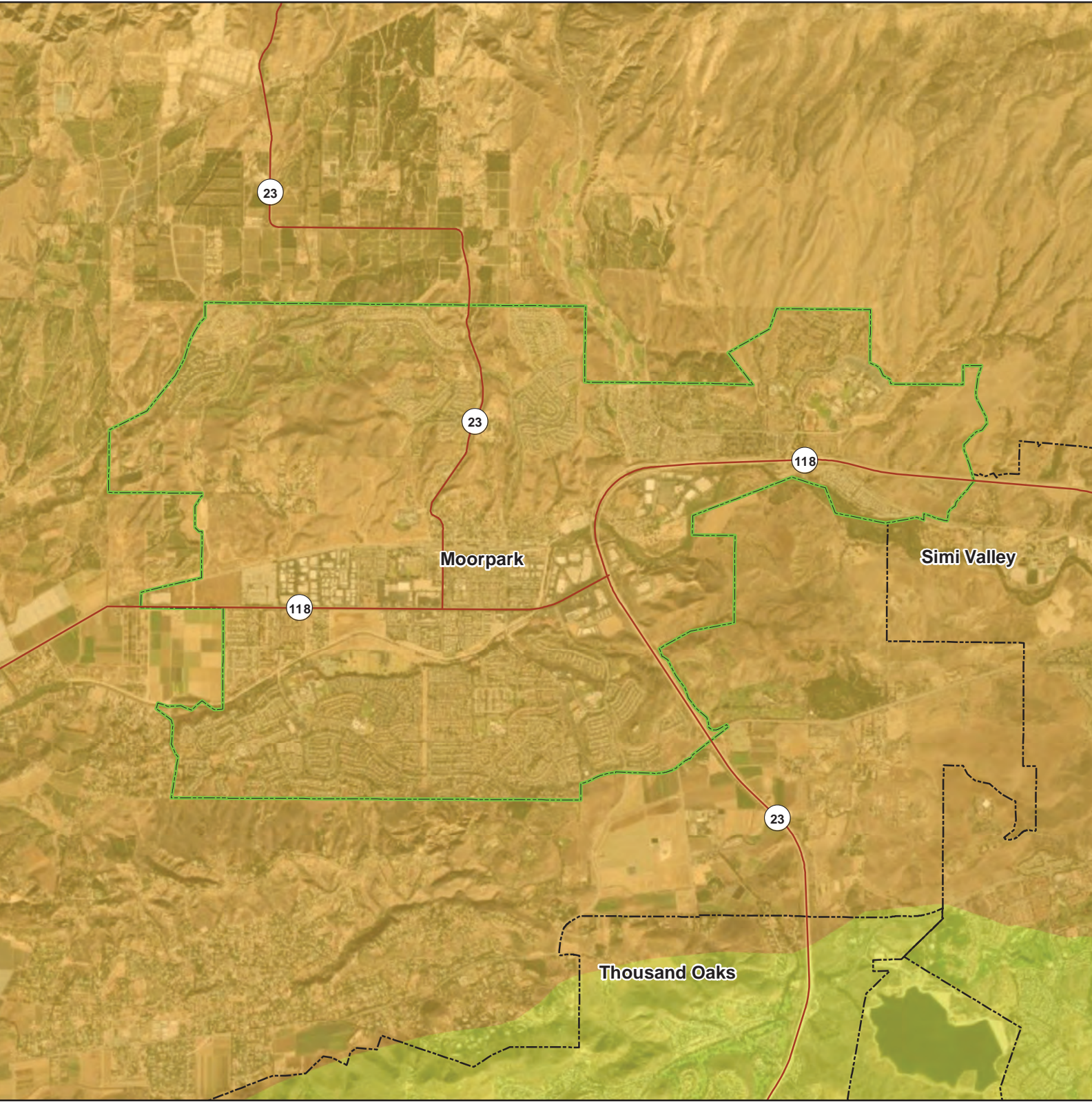
-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



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Miles



Moorpark

Pitas Point M7.12 Earthquake Scenario

Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)

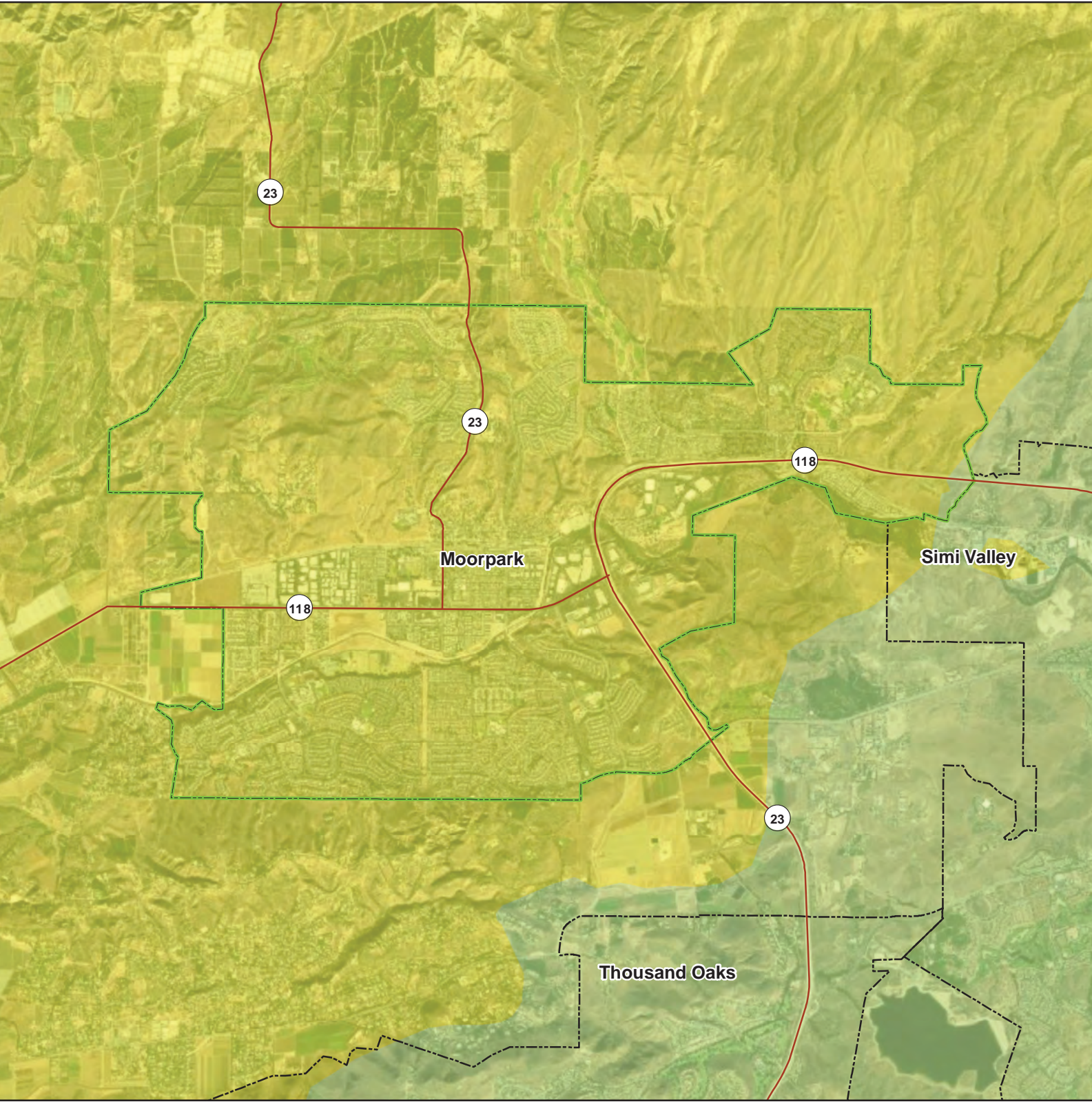
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri





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



Moorpark

San Cayetano M7.16 Earthquake Scenario

Mercalli Intensity Scale

-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)

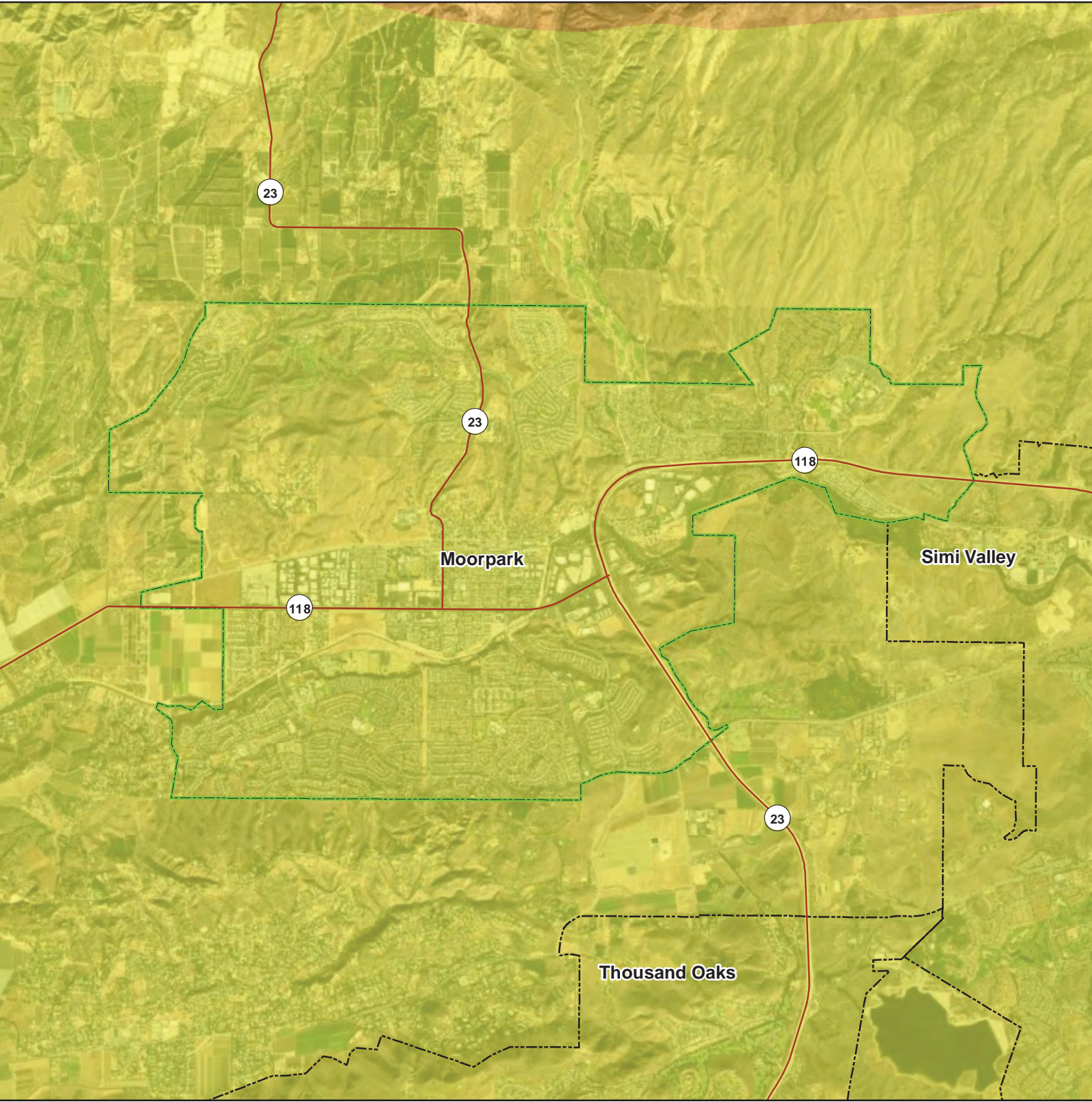
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



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Miles



Moorpark

S. San Andreas M8.03 Earthquake Scenario

Mercalli Intensity Scale

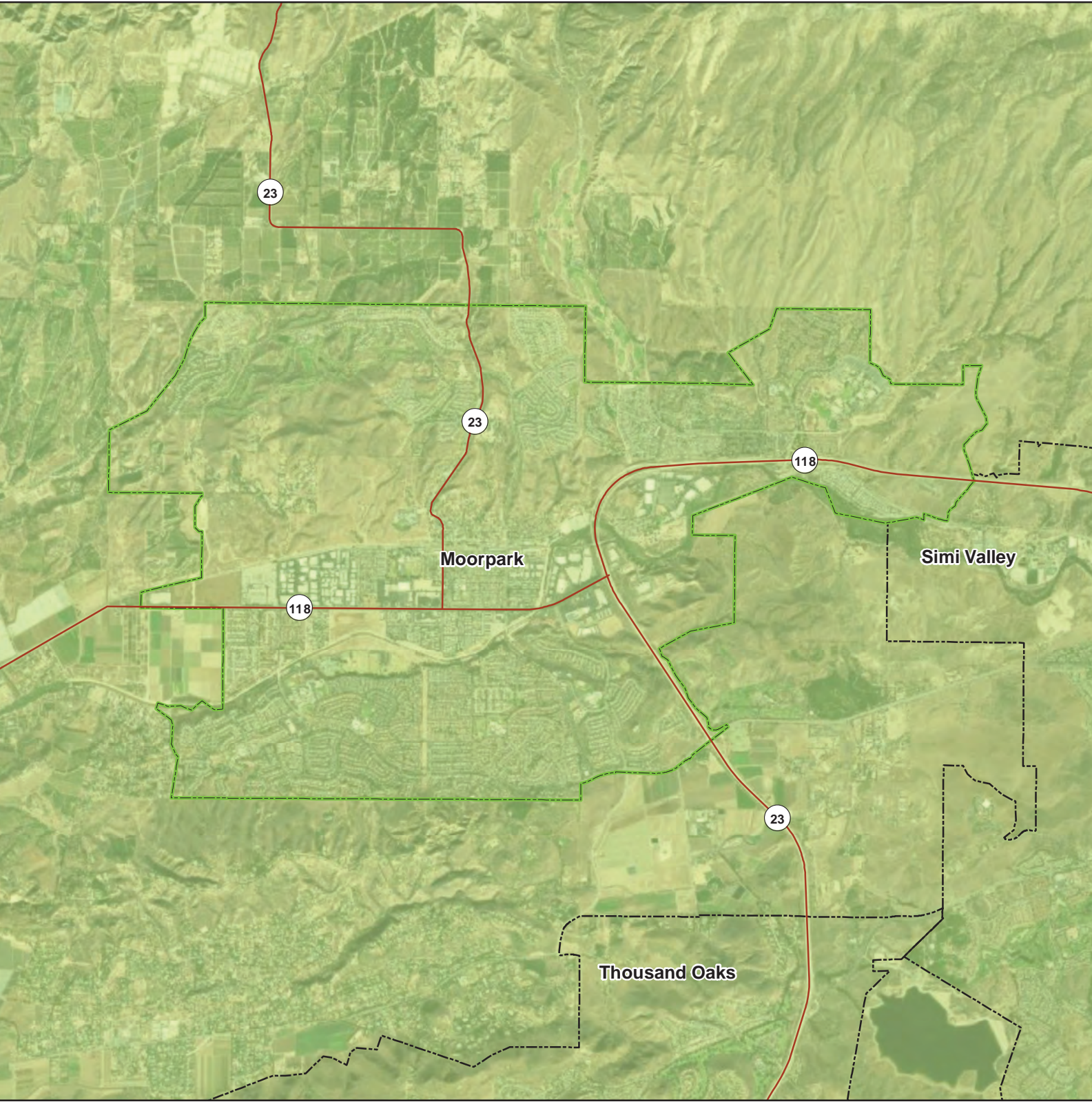
- VI (Strong/Light)
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri









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Moorpark

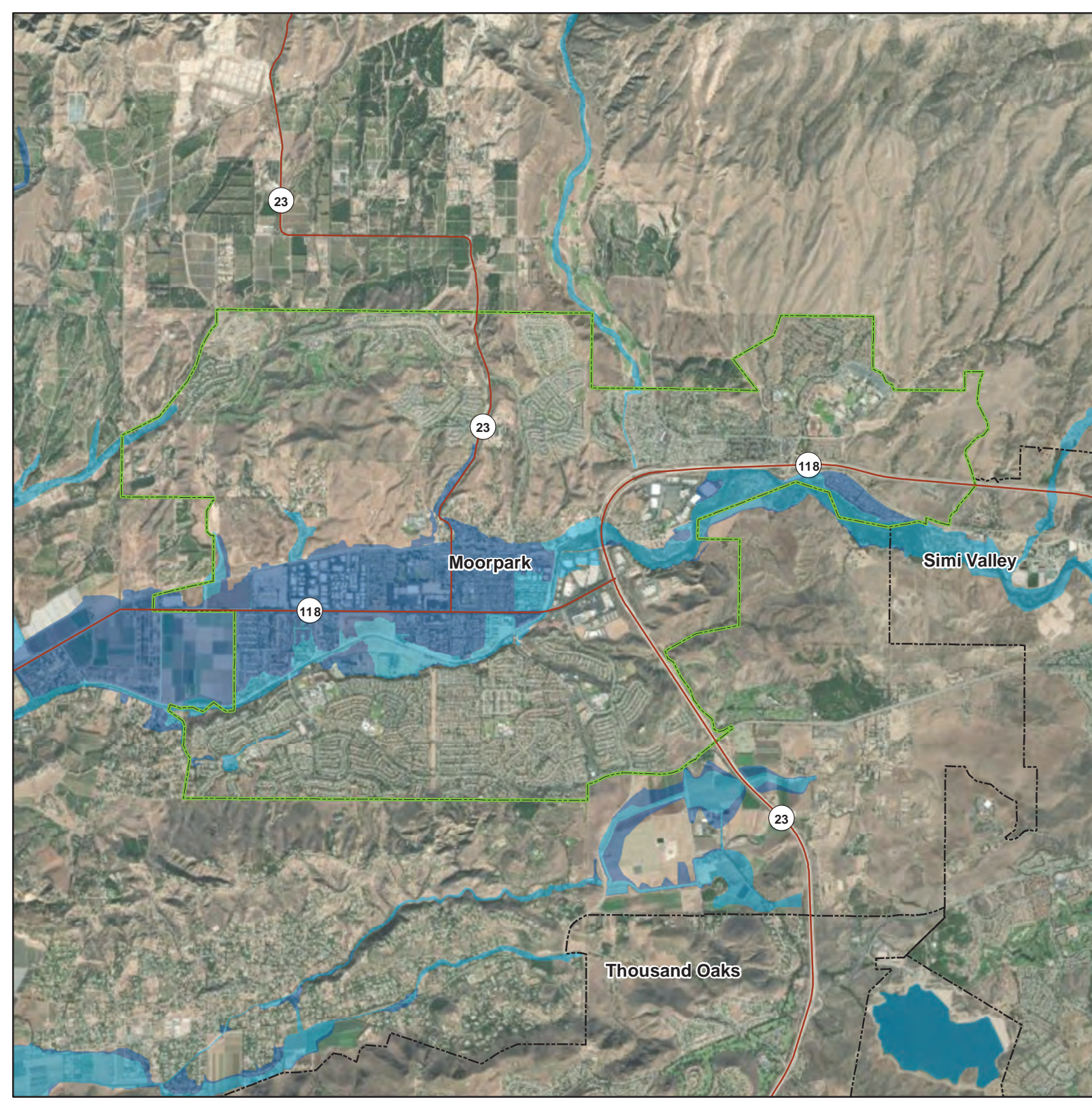
FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
FEMA, Esri











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Moorpark

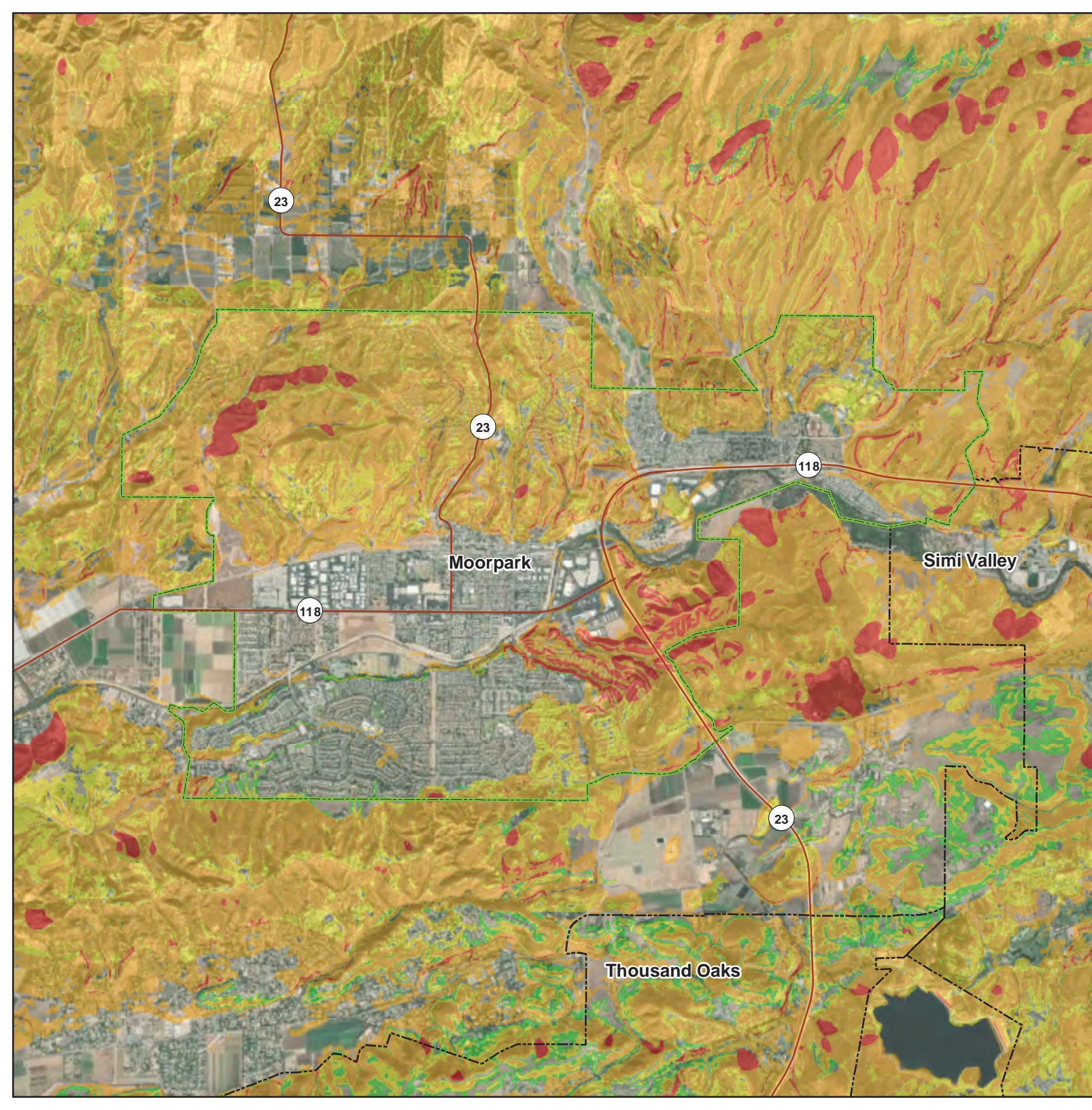
Susceptibility to Deep-Seated Landslides

-  Low
-  Moderate
-  High
-  Very High
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri










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Moorpark

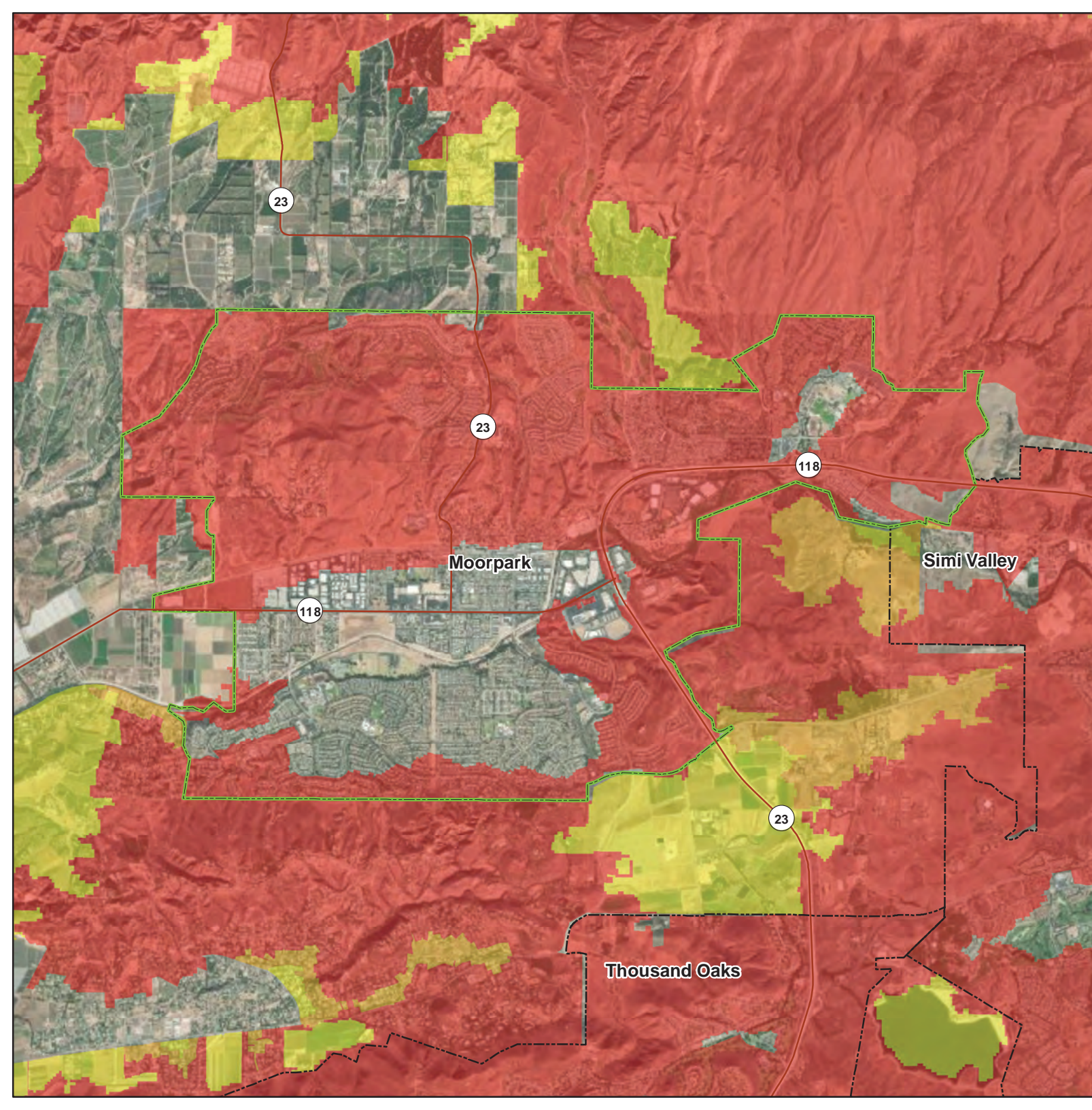
Wildfire Hazard Severity Zones

-  Moderate
-  High
-  Very High
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co., CAL FIRE, Esri



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5. CITY OF OJAI

5.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

James Vega, City Manager
401 S. Ventura Street
Ojai, CA 93023
Telephone: (805) 646-5581 ext. 102
e-mail Address: james.vega@ojai.ca.gov

Alternate Point of Contact

Alma Quezada, Interim Public Works
Director
408 S. Signal Street
Ojai, CA 93023
Telephone: (805) 646-5581 ext. 209
e-mail Address:
alma.quezada@ojai.ca.gov

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 5-1.

Table 5-1. Local Mitigation Planning Team Members

Name	Title
James Vega	City Manager
Lucas Seibert	Community Development Director
Alma Quezada	Interim Public Works Director
Andrea Mackey	Management Analyst
James Hahn	Technical Support Specialist
Juan Morales	Interim Public Works Supervisor

5.2 JURISDICTION PROFILE

5.2.1 Location and Features

The City of Ojai is located in the Ojai Valley. The current boundaries generally extend from Villanova Road to Boardman Road, encompassing an area of 4.37 square miles.

Ojai is a small town that is known as a tourist destination for its boutique hotels, recreation opportunities, hiking, and farmer's market of local organic agriculture. It is home to the annual Ojai Music Festival and the Ojai Tennis Tournament.

5.2.2 History

City of Ojai was incorporated in 1921. The town was originally named Nordhoff in 1874 but was later changed to Ojai in 1917. Edward Libbey of Libbey Glass Company built the Spanish-style downtown Arcade and park that exist today.

5.2.3 Governing Body Format

The City of Ojai is a Council-Manager form of government with five Council members elected by district. The City consists of five departments: Community Development, Finance, Public Works, Recreation, and the City Manager's office. The City Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.

5.3 CURRENT TRENDS

5.3.1 Population

According to the California Department of Finance, the population of the City of Ojai as of January 2020 was 7,450. Since 2010, the population has grown at an average annual rate of 0.13 percent.

5.3.2 Development

Anticipated future development for the City of Ojai is low to moderate. Recent development has been mostly infill. There has been a focus on accessory dwelling units. Future growth in the City will be managed as identified in the City's upcoming General Plan. City Actions such as those relating to land use, annexations, zoning, subdivision and design review, redevelopment, and capital improvements, must be consistent with the plan.

Table 5-2 summarizes development trends in the period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

5.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in this annex identifies these as community capacity building mitigation actions.

Table 5-2. Recent and Expected Future Development Trends

Criterion	Response				
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?	No				
Is your jurisdiction expected to annex any areas during the performance period of this plan?	No				
Are any areas targeted for development or major redevelopment in the next five years? • If yes, briefly describe, including whether any of the areas are in known hazard risk areas	<p>Yes</p> <p>Chaparral School site at 414 E. Ojai Avenue</p> <p>DESIGN CONCEPT</p> <p>Ojai Town Square development celebrates Ojai as the unique and special place that it is. The development responds to this character as a bookend to the Arcade and town center, enhancing the pedestrian neighborhood linked with outdoor spaces and surrounding public-oriented program uses. The architectural expression is inspired by historic structures on the site as well as the statement of theme defined by City Ordinance. The concept finds the balance of history and future in a way that is distinctly “of Ojai.”</p> <p>PROGRAM HIGHLIGHTS</p> <ul style="list-style-type: none"> • Establish a ±200 room hotel. • Provide Residential Housing: Market Senior, Affordable. • Creating pedestrian-friendly gardens throughout the site. • Activate historic structures on Ojai Avenue for retail and restaurant use. • Provide ample parking to support the on-site activities. • Maintain the skate park as built • Provide additional community programming opportunities. • Maintain 35 height limit to new structures. 				
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?	2016	2017	2018	2019	2020
	437	419	438	432	23
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	One replacement single-family dwelling, 22 Accessory Dwelling Units, 2 by new construction, 7 by conversion, 13 legalized through the Compliance program.				
Describe the level of buildout in the jurisdiction, based on your jurisdiction’s buildable lands inventory. If no such inventory exists, provide a qualitative description.	The City is largely built out within city limits. The remaining pockets of infill land development opportunities within city limits are sprinkled throughout the City and respective zoning districts with smaller lots, which typically present some level of developable challenges.				

The findings of the capability assessment are presented as follows:

- Table 5-3 presents an assessment of planning and regulatory capabilities
- Table 5-4 presents development and permitting capabilities
- Table 5-5 presents an assessment of fiscal capabilities
- Table 5-6 presents an assessment of administrative and technical capabilities
- Table 5-7 presents an assessment of education and outreach capabilities
- Table 5-8 presents information on National Flood Insurance Program (NFIP) compliance
- Table 5-9 presents classifications under various community mitigation programs
- Table 5-10 presents the community’s adaptive capacity for the impacts of climate change

Table 5-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: OMC 9-1.102 (§ 1, Ord. 718, eff. April 25, 1997)</i>	Yes	No	Yes	Yes
Zoning Code <i>Comment: OMC 10-2.202 (§ 3, Ord. 771, eff. February 13, 2004, as amended by § 1, Ord. 787, eff. February 10, 2006, § 2, Ord. No. 827, eff. June 28, 2013)</i>	Yes	No	No	Yes
Subdivisions <i>Comment: OMC 10-3.301 (§ 2, Ord. 637, eff. January 9, 1986)</i>	Yes	Yes	Yes	No
Stormwater Management <i>Comment: OMC 5-12.101 Co-permittee with the Ventura County Flood Control District</i>	Yes	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment: None</i>	No	No	No	No
Real Estate Disclosure <i>Comment: OMC 4-11.12 (§ 1, Ord. 738, eff. July 22, 1999, as amended by § 1, Ord. 744, eff. March 24, 2000, as renumbered by § 2, Ord. 800, eff. August 8, 2008)</i>	No	Yes	Yes	No
Growth Management <i>Comment: OMC 10-6.101 (§ 1, Ord. 769, eff. January 8, 2004)</i>	Yes	No	No	Yes
Site Plan Review <i>Comment: OMC 10-2.101 (§ 3, Ord. 771, eff. February 13, 2004)</i>	Yes	No	No	Yes
Environmental Protection <i>Comment: None</i>	No	No	No	No
Flood Damage Prevention <i>Comment: OMC 9-9.101 (§ 1, Ord. 655, eff. May 19, 1988, as amended by § 2, Ord. 914, eff. March 24, 2021)</i>	Yes	Yes	No	Yes
Emergency Management <i>Comment: OMC 3-1.01 (Part 2, Ord. 468, eff. March 29, 1973)</i>	Yes	Yes	Yes	Yes
Climate Change <i>Comment: None</i>	No	No	No	No
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? No</i> <i>Comment: Currently being updated</i>	Yes	No	Yes	Yes
Capital Improvement Plan <i>How often is the plan updated? Annually</i> <i>Comment:</i>	Yes	No	No	Yes
Disaster Debris Management Plan <i>Comment: None</i>	No	No	No	No
Floodplain or Watershed Plan <i>Comment: The city participates in the NFIP.</i>	Yes	Yes	No	Yes
Stormwater Plan <i>Comment: Ventura Countywide Storm Water Quality Management Program to discharge wastes for municipal storm water and urban runoff discharges under waste discharge requirements contained in Order No. 94-082, adopted on July 27, 2000</i>	Yes	Yes	Yes	Yes
Urban Water Management Plan <i>Comment: Casitas Municipal Water District</i>	No	Yes	Yes	No
Habitat Conservation Plan <i>Comment: None</i>	No	No	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Economic Development Plan <i>Comment: General Plan guides economic growth</i>	Yes	No	No	No
Shoreline Management Plan <i>Comment: None</i>	No	No	No	No
Community Wildfire Protection Plan <i>Comment: Ventura County Community Wildfire Protection Plan, 2010</i>	No	Yes	No	No
Forest Management Plan <i>Comment: City of Ojai Community Forest Management Plan</i>	Yes	No	No	No
Climate Action Plan <i>Comment: None</i>	No	No	No	No
Comprehensive Emergency Management Plan <i>Comment: Emergency Operations Plan (EOP), 2013</i>	Yes	Yes	Yes	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: Not a stand-alone plan, but addressed in the EOP</i>	No	No	No	No
Post-Disaster Recovery Plan <i>Comment: None</i>	No	No	No	No
Continuity of Operations Plan <i>Comment: Not a stand-alone plan, but addressed in the EOP</i>	No	No	No	No
Public Health Plan <i>Comment: Ventura County Public Health Emergency Response Plan, 2019</i>	No	Yes	Yes	No

Table 5-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i>	Yes Community Development Department
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	No

Table 5-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

Table 5-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Community Development Dept./ City Planner	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Community Development Dept./ Building Official	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Community Development Dept. / City Planner	Yes
Staff with training in benefit-cost analysis <i>If Yes, Department /Position:</i> Finance Dept./ Finance Director	Yes
Surveyors	No
Personnel skilled or trained in GIS applications	No
Scientist familiar with natural hazards in local area	No
Emergency manager <i>If Yes, Department /Position:</i> City Manager's Office/ City Manager	Yes
Grant writers	No
Other <i>If Yes, Department /Position:</i>	No

Table 5-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	No
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> ojai.ca.gov › emergency-preparedness	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> Post pertinent information as required	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i> The City of Ojai Disaster Council	Yes
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> City Website, City smart phone App, government access TV channel, AM radio station	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> City Website, City smart phone App, government access TV channel, AM radio station	Yes

Table 5-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Public Works Department
Who is your floodplain administrator? (department/position)	Public Works Dept. / Public Works Director
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	3/24/2021
Does your floodplain management program meet or exceed minimum requirements?	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	N/A

Criterion	Response
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Are any RiskMAP projects currently underway in your jurisdiction?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<i>If so, what type of assistance/training is needed?</i> Ongoing training	
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<i>If no, is your jurisdiction interested in joining the CRS program?</i> Possibly	
How many flood insurance policies are in force in your jurisdiction? ^a	79
<i>What is the insurance in force?</i> \$25,299,000	
<i>What is the premium in force?</i> \$41,007	
How many total loss claims have been filed in your jurisdiction? ^a	43
<i>What were the total payments for losses?</i> \$223,301	

a. According to FEMA statistics as of March 31, 2021

Table 5-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	0611153476	N/A
DUNS #	Yes	085921781	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection, contract with VCFPD	Yes	03/3X	12/21/2018
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 5-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: City is aware of current drought issues and potential wildfire issues</i>	High
Jurisdiction-level monitoring of climate change impacts <i>Comment:</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment:</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment:</i>	Low
Participation in regional groups addressing climate risks <i>Comment:</i>	Low

Criterion	Jurisdiction Rating ^a
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment:</i>	Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment:</i>	Low
Identified strategies for adaptation to impacts <i>Comment:</i>	Low
Champions for climate action in local government departments <i>Comment:</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment:</i>	Low
Financial resources devoted to climate change adaptation <i>Comment:</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment:</i>	Low
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: Water use reduction due to drought</i>	High
Local residents' support of adaptation efforts <i>Comment: Installation and use of solar power</i>	High
Local residents' capacity to adapt to climate impacts <i>Comment: Water conservation</i>	High
Local economy current capacity to adapt to climate impacts <i>Comment:</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Unsure

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

5.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

5.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- Building Code 9-1.102
- Capital Improvement Plan—Includes projects that can help mitigate potential hazards.

5.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **General Plan**—Consider new update to the Housing Element
- **Emergency Operations Plan (EOP), 2013**—Assesses threats from natural hazards that could impact the City.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

5.6 RISK ASSESSMENT

5.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 5-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 5-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4482	1/20/2020 and continuing	\$3-4 million in lost revenue
Thomas Fire	FM-5224	12/4/2017	No structures lost, City activated Emergency Operation Center, major impact to City
Pine Fire		6/30/2016	Unknown
Severe Storms, Flooding, Debris Flows, and Mudslides	DR-1577	1/9/2005	Impacted City. Daly park and surrounding homes in neighborhood affected by mud
Wolf Fire		6/1/2002	Unknown
Lightning Strike		4/18/2000	One residential home struck
Flood/Landslide		2/20/2000	Unknown
Ranch Fire		12/21/1999	Unknown

5.6.2 Hazard Risk Ranking

Table 5-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions primarily target hazards with high and medium rankings. The drought hazard has been increased from low to high to match Casitas Municipal Water District, City of Ojai's water purveyor, and to better reflect local knowledge. The City is vulnerable to drought as it is dependent on Lake Casitas for water. As of October 2021, Lake Casitas is at 33% capacity—a Stage 3 drought. If lake level is reduced to 30% or less, CMWD would implement Stage 4.

Table 5-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Landslide	33	High
2	Earthquake	32	High
3	Drought	30	High
4	Severe Storms	24	Medium
5	Severe Weather	24	Medium
6	Wildfire	18	Medium
7	Flooding	18	Medium
8	Dam Failure	12	Low

5.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- The City Recreation Department is the only Cooling Center in the City. If there is a Public Safety Power Shut-off (PSPS) then a generator is necessary.
- Urban flooding with storm drain issues

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

5.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 5-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 5-13. Status of Previous Plan Actions

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
OA 10 —Seismically retrofit or upgrade seismically deficient government facilities and pre-identified shelter facilities. Comment: No action. Lack of funding			✓	OJC-1
OA 11 —Develop and implement plans to increase the building owner’s general knowledge of and appreciation for the value of seismic upgrading of the building’s structural and nonstructural elements. Comment: No action. Lack of staffing			✓	OJC-2
OA 14 —Acquire, relocate, or elevate residential structures, in particular those that have been identified as RL properties, within the 100-year floodplain. Comment: No action. Lack of funding/staff			✓	OJC-1
OA 21 —Maintain hazards fuel treatment program for areas that have been identified with overgrown/dead brush/trees to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program. Comment: Ongoing tree and brush clearing for fire abatement			✓	OJC-8

5.8 HAZARD MITIGATION ACTION PLAN

Table 5-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 5-15 identifies the priority for each action. Table 5-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 5-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action OJC-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas. Hazards Mitigated: Landslide, Earthquake, Severe Storms, Severe Weather, Wildfire, Flooding, Dam Failure						
Existing	1, 2, 4, 6, 9, 10, 11, 16	Community Development Dept	Public Works Dept	High	FEMA HMA (BRIC, FMA, PDM and HMGP)	Short-term
Action OJC-2 —Develop and implement plans to increase the building owner’s general knowledge of and appreciation for the value of seismic upgrading of the building’s structural and nonstructural elements. Hazards Mitigated: Earthquake						
Existing	1, 9, 12, 16, 17	Community Development Dept	Public Works Dept	Low	Staff Time, General Funds	Short-term
Action OJC-3 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including General Plan Update, Emergency Action Plan Hazards Mitigated: Landslide, Earthquake, Severe Storms, Severe Weather, Wildfire, Flooding, Dam Failure						
New & Existing	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19	Community Development Dept	Public Works Dept	Low	Staff Time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action OJC-4 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storms, Severe Weather, Wildfire, Flooding, Dam Failure, Drought						
New & Existing	1, 2, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15	City of Ojai	Community Development Dept	Low	Staff Time, General Funds	Short-term
Action OJC-5 —Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:						
<ul style="list-style-type: none"> Enforce the flood damage prevention ordinance. Participate in floodplain identification and mapping updates. Provide public assistance/information on floodplain requirements and impacts. 						
<u>Hazards Mitigated:</u> Flooding						
New & Existing	1, 2, 6, 7, 17	Public Works Dept		Low	Staff Time, General Funds	Ongoing
Action OJC-6 —Identify and pursue strategies to increase adaptive capacity to climate change.						
<u>Hazards Mitigated:</u> Severe Storms, Severe Weather, Wildfire, Flooding, Drought						
New & Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 19	Enter Response	Enter Response	Low	FEMA HMA (BRIC, FMA, HMGP), Staff Time, General Funds	Short-term
Action OJC-7 —Purchase generators for critical facilities and infrastructure that lack adequate backup power, including Public Works Dept. and Recreation Dept.						
<u>Hazards Mitigated:</u> Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
Existing	2, 19	Public Works Dept	Enter Response	High	FEMA HMA (BRIC and HMGP), Staff Time, General Funds	Short-term
Action OJC-8 —Maintain wildfire hazard fuel reduction program for areas that have been identified with overgrown or dead brush, trees and weeds to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program. (Coordinates with VCFPD Action VFP-6)						
<u>Hazards Mitigated:</u> Wildfire						
New & Existing	2, 4, 5, 6, 8, 10, 11, 13, 14, 15, 18, 19	VCFPD	City of Ojai, CAL FIRE & USDA	Medium	FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing
Action OJC-9 —Determine feasibility of the City of Ojai joining the Community Rating System (CRS) program to enhance public safety, reduce flood damage to property and infrastructure, and reduce flood insurance rates in the community.						
<u>Hazards Mitigated:</u> Flooding						
New & Existing	1, 2, 19	City of Ojai	None	Low	Staff Time & General Funds	Short-term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 5-15. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	8	High	High	Yes	Yes	No	Medium	High
2	5	Medium	Low	Yes	No	Yes	High	Low
3	16	Medium	Low	Yes	No	Yes	High	Low
4	12	Low	Low	Yes	No	Yes	High	Low
5	5	Medium	Low	Yes	No	Yes	High	Low
6	17	Medium	Low	Yes	Yes	Yes	High	Medium
7	2	High	High	Yes	Yes	No	Medium	High
8	12	High	Medium	Yes	Yes	Yes	High	High
9	3	Medium	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 5-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building ^b
High-Risk Hazards								
Landslide	OJC-3	OJC-1	OJC-4		OJC-7			OJC-4
Medium-Risk Hazards								
Earthquake	OJC-3	OJC-1	OJC-2, 4		OJC-7			OJC-4
Severe Storms	OJC-3	OJC-1	OJC-4				OJC-6	OJC-4
Severe Weather	OJC-3	OJC-1	OJC-4		OJC-7		OJC-6	OJC-4
Wildfire	OJC-3	OJC-1	OJC-4	OJC-8	OJC-7		OJC-6	OJC-4
Flooding	OJC-3, 5	OJC-1	OJC-4, 5		OJC-7		OJC-6	OJC-4, 5, 9
Low-Risk Hazards								
Dam Failure	OJC-3	OJC-1	OJC-4					OJC-4
Drought			OJC-4				OJC-6	OJC-4

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

5.9 PUBLIC OUTREACH

Table 5-17 lists public outreach activities for this jurisdiction.

Table 5-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Social Media	8/2020	1,000

5.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **City of Ojai Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Ojai Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvement Projects Program**—The municipal code was reviewed for the full capability assessment.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

Ojai

Critical Facilities (1 of 2)

- Food, Water, Shelter
- Health and Medical
- Safety and Security

- Major Roads
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri



0 0.175 0.35 0.7 Miles



Ojai

Critical Facilities (1 of 2)

● Communications

● Energy

● Transportation

— Major Roads

▭ Selected City

▭ Incorporated Cities

▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri








0 0.175 0.35 0.7 Miles



Ojai

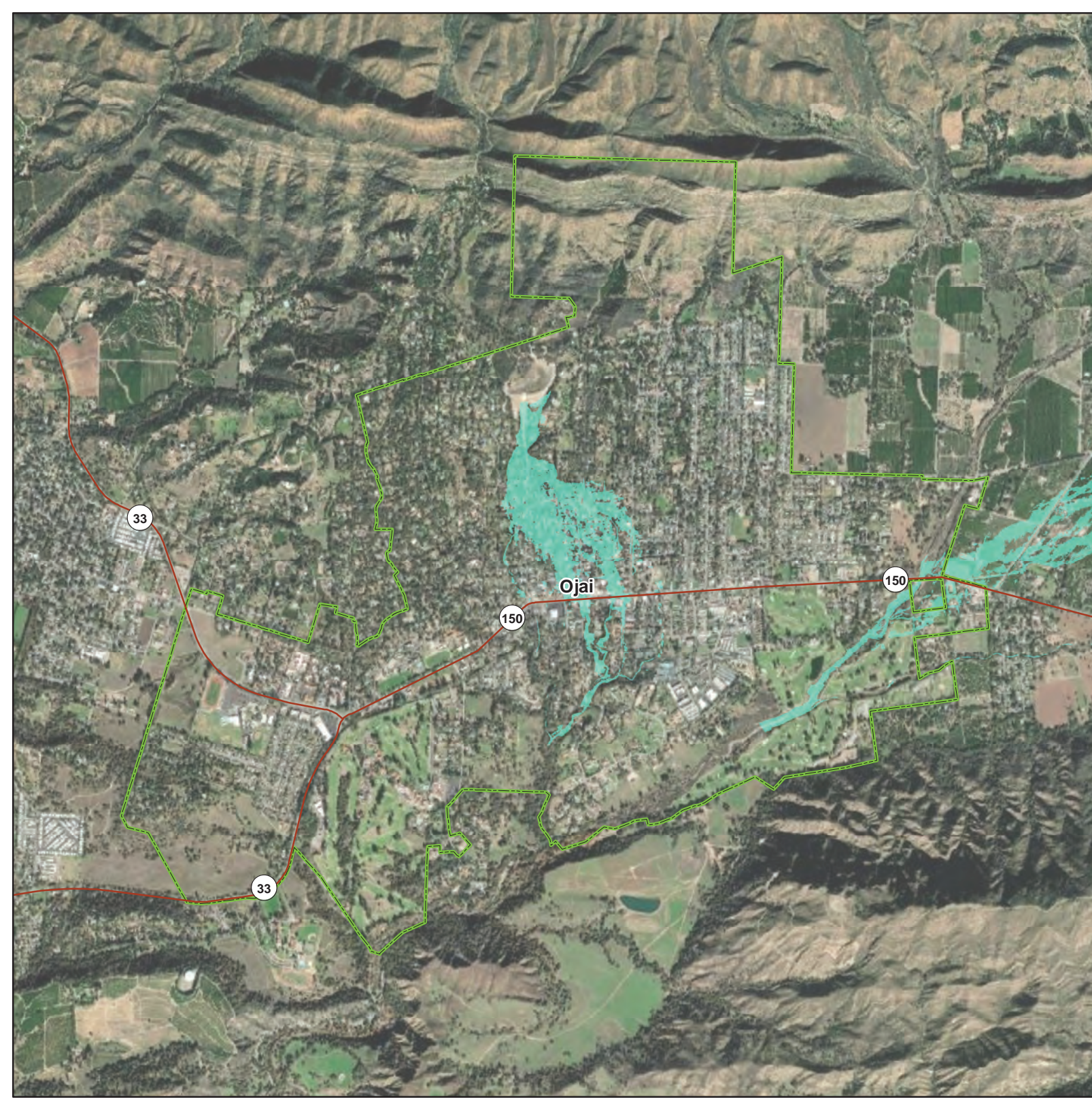
Dam Failure Inundation Areas

-  Combined Inundation Areas
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CA DWR, Esri









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Miles



Ojai

NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri








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Miles



Ojai

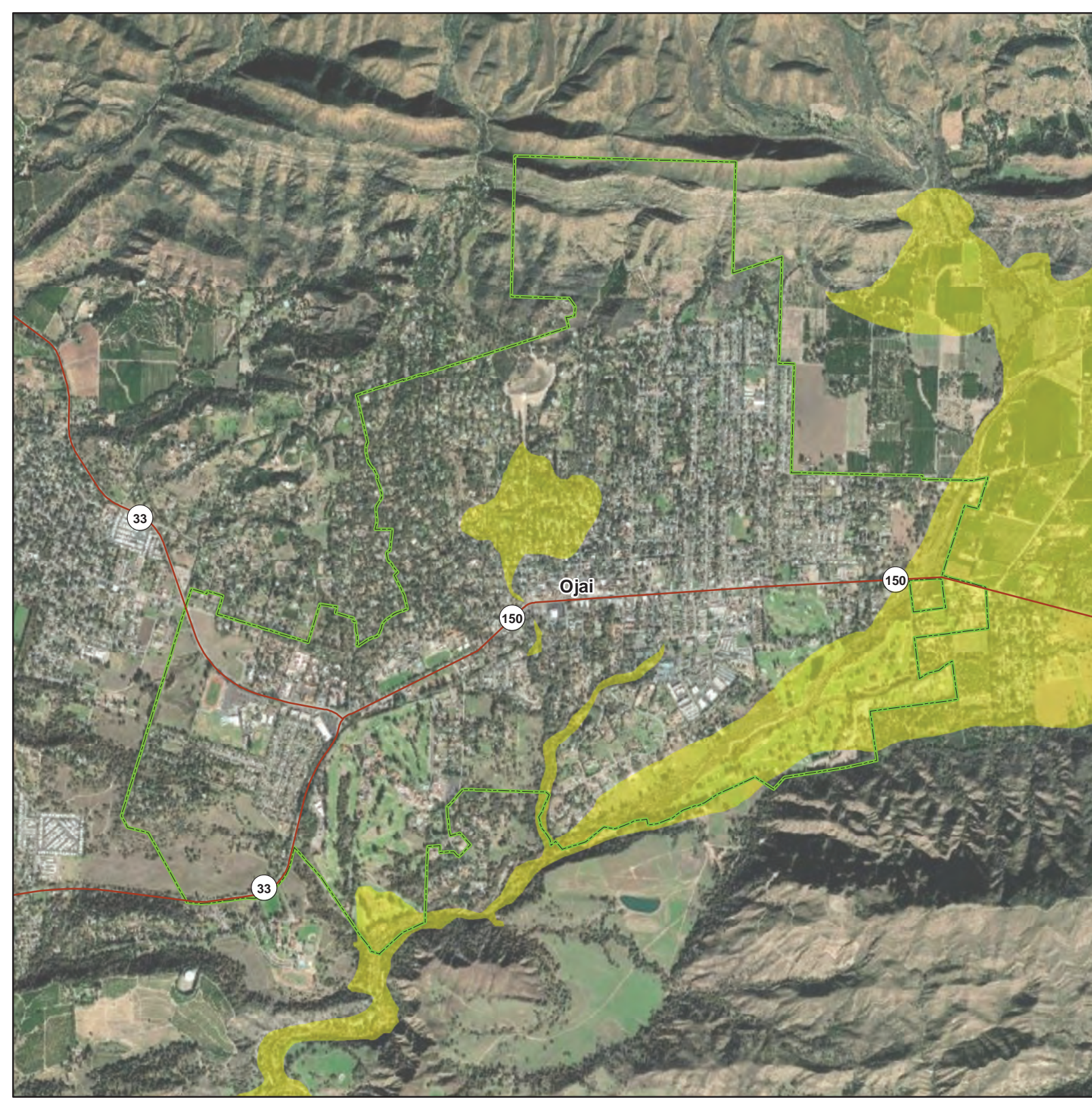
Liquefaction Susceptibility

-  Liquefaction zone
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
Esri



0 0.175 0.35 0.7
Miles



Ojai

100-Year Probabilistic Earthquake Scenario


Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Major Roads

 Selected City

 Incorporated Cities

 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.175 0.35 0.7
 Miles



Ojai

Oak Ridge M7.16 Earthquake Scenario

Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.175 0.35 0.7
Miles



Ojai

Pitas Point M7.12 Earthquake Scenario

Mercalli Intensity Scale

- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)

- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri







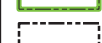

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Miles



Ojai

San Cayetano M7.16 Earthquake Scenario

Mercalli Intensity Scale

-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.175 0.35 0.7
Miles



Ojai

S. San Andreas M8.03 Earthquake Scenario

Mercalli Intensity Scale

- VI (Strong/Light)
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri









0 0.175 0.35 0.7 Miles



Ojai

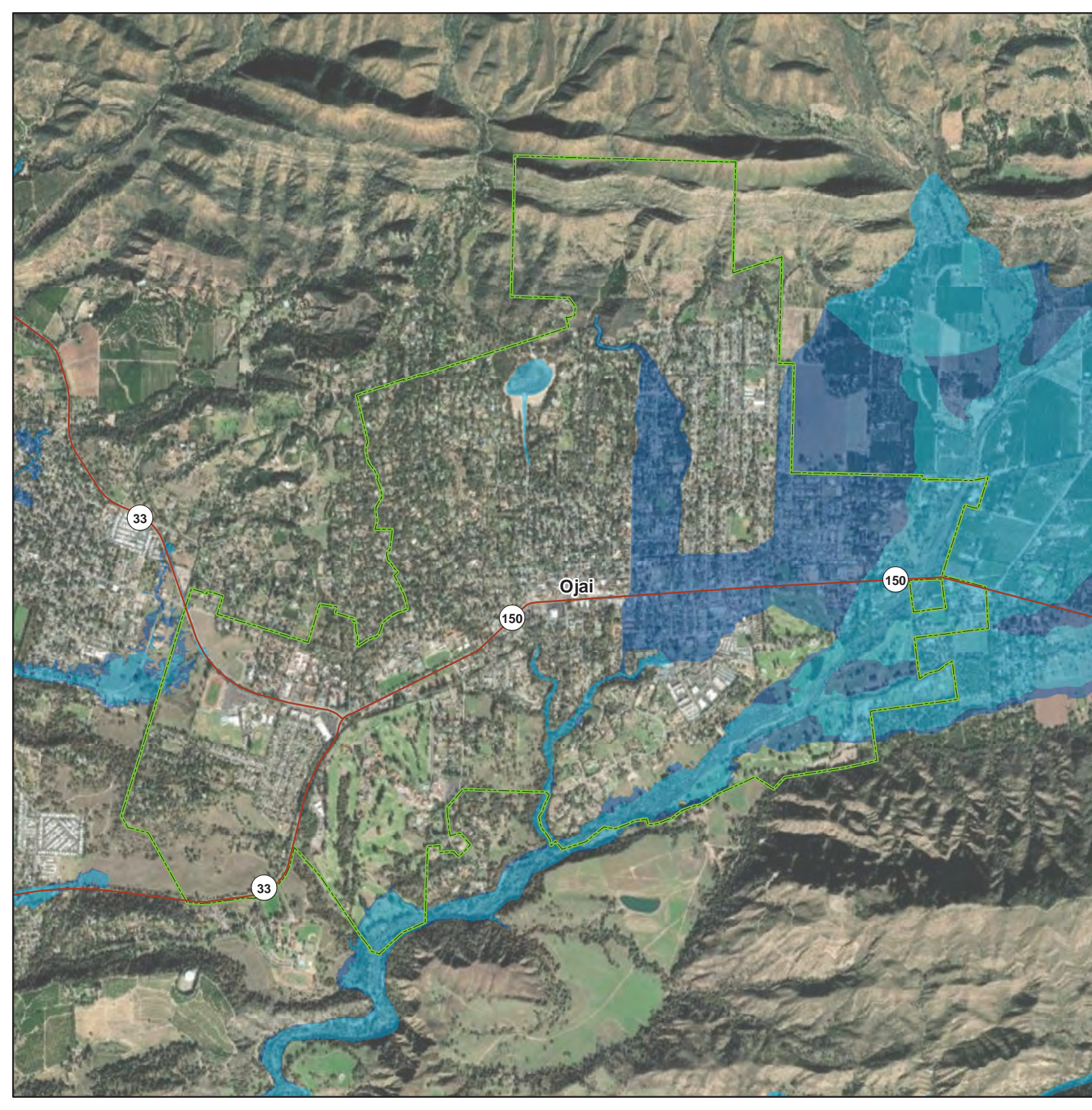
FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
FEMA, Esri

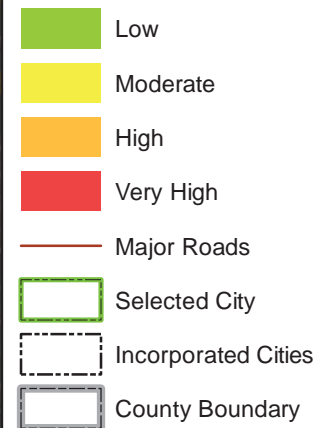


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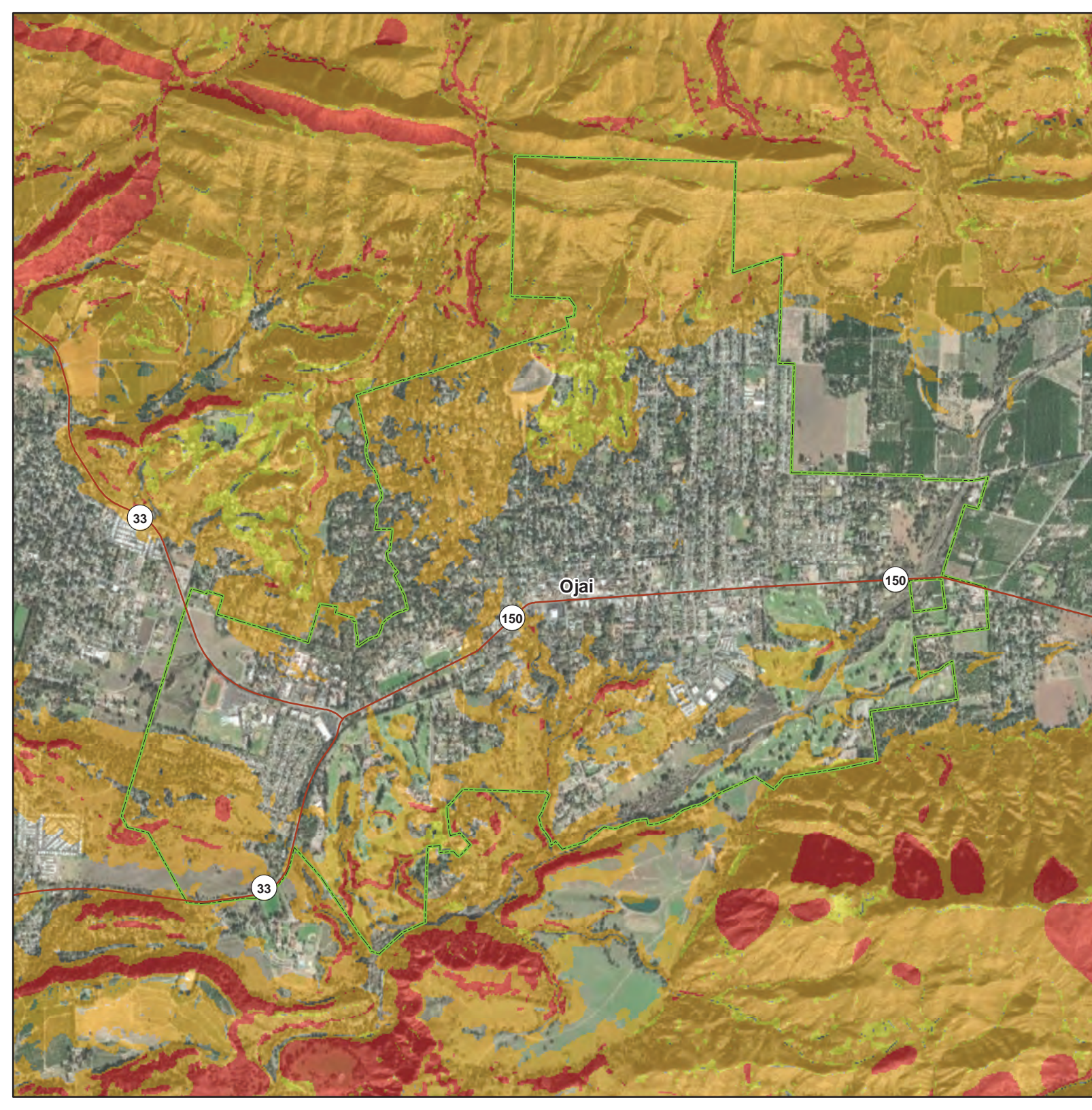


Ojai

Susceptibility to Deep-Seated Landslides










Data Sources: Ventura Co.,
CGS, Esri



Ojai

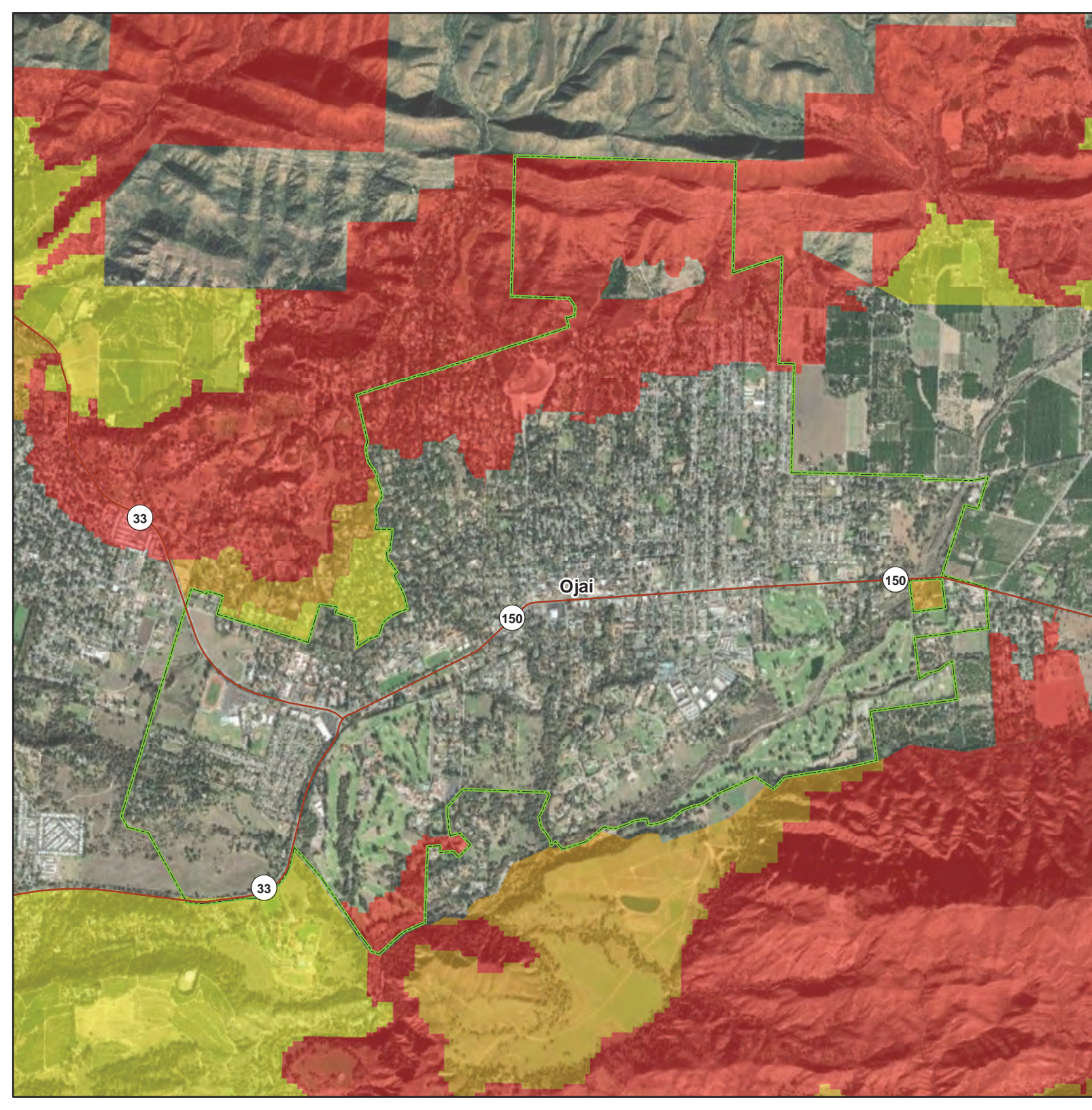
Wildfire Hazard Severity Zones

-  Moderate
-  High
-  Very High
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CAL FIRE, Esri



0 0.175 0.35 0.7
Miles



6. CITY OF OXNARD

6.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Scott Brewer, Emergency Services Manager
 360 West Second Street
 Oxnard, CA 93030
 Telephone: 805-385-7717
 e-mail Address: scott.brewer@oxnard.org

Alternate Point of Contact

Alexander Hamilton, Fire Chief
 360 West Second Street
 Oxnard, CA 93030
 Telephone: 805-385-7700
 e-mail Address:
 alexander.hamilton@oxnard.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 6-1.

Table 6-1. Local Mitigation Planning Team Members

Name	Title
Alexander Nguyen	City Manager
Jason Benites	Police Chief
Eric Sonstegard	Assistant Police Chief
Alexander Hamilton	Fire Chief
John Colamarino	Assistant Fire Chief
Brian Yanez	Assistant Public Works Director
Mike More	Risk Manager
Scott Kolwitz	Planning Manager
Betsy George	Chief Financial Officer
Terrel Harrison	Cultural/Community Services Director
Stephen Fischer	City Attorney
Tatiana Arnaout	City Engineer/Floodplain Manager
Mike Shaffer	GIS Manager
Katie Casey	Communications Manager
Kathleen Mallory	Planning & Sustainability Manager
Scott Brewer	Emergency Services Manager

6.2 JURISDICTION PROFILE

6.2.1 Location and Features

The City is located about 60 miles northwest of Los Angeles along a beautiful stretch of the Pacific Ocean coastline. The largest city within Ventura County, Oxnard is the center of a regional agricultural industry and a progressive business center while, at the same time, a relaxed seaside destination with a variety of neighborhoods and community services. Bordered by mountains and the Pacific Ocean, West Ventura County provides a seaside environment with expansive mountain views. Oxnard incorporates both of these attributes through its pattern of relatively compact urban development focused on the downtown, coastline and harbor, and the Highway 101 corridor. The moderate Mediterranean climate, fertile topsoil, and generally adequate groundwater supply lead to year-round agricultural production in the surrounding Oxnard Plain.

The City of Oxnard is located in the County of Ventura. The current boundaries generally extend from the Santa Clara River on the west to Del Norte Blvd on the east, as well as just north of the Highway 101 to the Pacific Ocean on the South, encompassing an area of 27.12 square miles.

6.2.2 History

Oxnard Incorporated: The City Oxnard was incorporated in 1903 by the Ventura County Board of Supervisors, who officially named the city after the Oxnard brothers. The city grew steadily into what is now the largest city in Ventura County, with a population of just over 207,000 residents.

Oxnard History: In 1896, local farmers began experimenting with sugar beets in addition to barley and lima beans. A prominent local farmer, Albert Maulhardt, visited Henry T. Oxnard and his three brothers' American Beet Sugar factory in Chino, which led him to plant sugar beets for shipment to the plant. Maulhardt's success persuaded other ranchers to switch from grain to sugar beets.

Encouraged by a pledge of 18,000 acres of sugar beets from local farmers, the Oxnard brothers completed construction of a sugar beet factory adjacent to the beet fields in 1898 on what was then known as Rancho Colonia. The massive brick factory, with its 150-foot smokestacks, was located a few blocks northeast of a town-site that, five years later, would become the City of Oxnard.

The sugar beet factory was responsible for another significant event—bringing a spur line of the Southern Pacific Railroad to the plant site and passenger service to the community.

6.2.3 Governing Body Format

The City of Oxnard was incorporated as a general law city on June 30, 1903 and operates under a council-manager form of government. The City Council consists of the Mayor and six other Councilmembers. The term of office is four years for all elected officials, with elections held every two years for three City Council seats at a time. All Councilmembers are elected by district except for the Mayor, who is elected at large during presidential election years. The City Treasurer, who is elected Citywide at the same time as the Mayor, invests idle cash and manages the City's investment portfolio. The City Clerk, also elected Citywide at the same time as the Mayor and City Treasurer, manages the City Council and Committee meeting agenda process, official records, and elections.

The Oxnard City Council assumes responsibility for the adoption of this plan; the Oxnard Fire Department along with designated City departments will oversee its implementation.

6.3 CURRENT TRENDS

6.3.1 Population

According to the United States Census Bureau, the population of the City of Oxnard as of January 2020 was 207,887. Since 2010, the population has grown at an average annual rate of 0.48 percent.

6.3.2 Development

The Planning Division coordinates the City's review of residential, commercial, office, and industrial development projects. This includes working with property owners, developers, business owners, and residents to ensure that their development proposals conform to City policies and guidelines.

Table 6-2 summarizes development trends in the period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 6-2. Recent and Expected Future Development Trends

Criterion	Response
<p>Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?</p> <ul style="list-style-type: none"> <i>If yes, give the estimated area annexed and estimated number of parcels or structures.</i> 	<p>Yes</p> <p>Local Agency Formation Commission 18-07, Ocean View School District: 5.31 Acres, 1 Parcel Local Agency Formation Commission 16-01, City of Oxnard Reorganization: 0.77 Acres, 1 Parcel</p>
<p>Is your jurisdiction expected to annex any areas during the performance period of this plan?</p> <ul style="list-style-type: none"> <i>If yes, describe land areas and dominant uses.</i> <i>If yes, who currently has permitting authority over these areas?</i> 	<p>Yes</p> <p>Teal Club Annexation—990 single and multifamily dwelling units, 132,000 square-feet of business park, 60,000 square-feet of commercial space, 17.76 acres of parks and open space. The project also includes annexation of 11.4 acres that is pre-zoned for light manufacturing uses.</p> <p>Rio Urbana Annexation—The Rio Urbana annexation would allow the construction of a new mixed-use development that includes 182 condominium residential units and a 15,000-square-foot office building containing the Rio School District administrative offices.</p> <p>The County of Ventura currently has permitting authority over the Teal Club area and the Rio Urbana project site.</p>
<p>Are any areas targeted for development or major redevelopment in the next five years?</p> <ul style="list-style-type: none"> <i>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</i> 	<p>Yes</p> <p>Downtown adding up to 2800 units, The Village Specific Plan buildout, Northshore Development, Riverpark Specific Plan buildout, continued industrial development in Sakioka Farms Specific Plan. All areas are within city limits and all areas are in the liquefaction zone.</p> <p>One annexation approval with 167 housing units is expected in 2021. One large specific plan annexation (Teal Club) with 990 units is under consideration.</p>

Criterion	Response					
	2016	2017	2018	2019	2020	
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?	Single Family	140	86	36	59	19
	Multi-Family	26	27	18	34	42
	Other (commercial, mixed use, etc.)	17	12	10	7	7
	Total	183	125	64	100	68
	Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> • Special Flood Hazard Areas: 0—Based on FEMA National Flood Hazard Layer (NFHL) downloaded June 9, 2021 Using zones A, A99 , AE, AH, AO, & VE as SFHA and excluding zones X & D • Landslide: 0—Based on Webservice of Seismic Hazard Zone Maps for Landslides produced by the Seismic Hazards Program, California Geological Survey, California Department of Conservation and downloaded from open data site on June 17, 2021 • High Liquefaction Areas: 540—Based on information contained hereon was obtained from California Department of Conservation, Division of Mines and Geology via the County of Ventura GIS • Tsunami Inundation Area: 51—Based on information contained hereon was obtained from California Department of Conservation, Division of Mines and Geology via the County of Ventura GIS • Wildfire Risk Areas: 0 				
Describe the level of buildout in the jurisdiction, based on your jurisdiction’s buildable lands inventory. If no such inventory exists, provide a qualitative description.	Almost entire city (26 sq miles) is first or second generation construction. About 500 acres of farming remain within city limits in areas zoned for industrial or housing but not yet built. Planning capacity for about 8,000 units and 8 million sf industrial/commercial remains under the 2030 General Plan.					

6.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 6-3.
- Development and permitting capabilities are presented in Table 6-4.
- An assessment of fiscal capabilities is presented in Table 6-5.
- An assessment of administrative and technical capabilities is presented in Table 6-6.
- An assessment of education and outreach capabilities is presented in Table 6-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 6-8.
- Classifications under various community mitigation programs are presented in Table 6-9.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 6-10.

Table 6-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	No
<i>Comment: 2019 California Building Code as adopted by the City of Oxnard Ordinance No. 2968</i>				
Zoning Code	Yes	No	Yes	No
<i>Comment: Chapter 16 (Inland Zoning Ordinance) and Chapter 17 (Coastal Zoning Ordinance) of the Oxnard City Code (OCC) Pursuant to the California Coastal Act (Public Resources Code Division 20, Chapter 6, Article 1, 30500), the City shall prepare a Local Coastal Program for the portion of the coastal zone within its jurisdiction. The LCP is comprised of a Land Use Plan and a Local Implementation Plan which is the Coastal Zoning Ordinance.</i>				
Subdivisions	Yes	No	Yes	No
<i>Comment: Chapter 15 of the OCC regulates and control the design and improvement of subdivisions of land within the city and supplement the provisions of the Subdivision Map Act of the State of California set forth at Government Code Section 66410 et seq. concerning the design, improvement and survey data of subdivisions, the form and content of all maps provided for by the Subdivision Map Act, and the procedure to be followed in securing the official approval of the City regarding the maps.</i>				
Stormwater Management	Yes	No	No	Yes
<i>Comment: Chapter 22, Article 12 implements the Federal Water Pollution Control Act (the Clean Water Act), 33 U.S.C. Section 1251 et seq., as amended, and Division 7 of the California Water Code by prohibiting the discharge of any pollutant to navigable waters of the United States from a point source unless the discharge is authorized by a permit issued pursuant to the Metropolitan required by Clean Water Act Section 402 (33 U.S.C. Section 1342), and by prohibiting non-storm water discharges into the storm drain system.</i>				
Post-Disaster Recovery	Yes	No	Yes	Yes
<i>Comment: The City of Oxnard does not have a separate disaster recovery plan, guidance and direction for disaster recovery is provided in the Oxnard Emergency Operations Plan (EOP)</i>				
Real Estate Disclosure	No	Yes	Yes	Yes
<i>Comment: California State Civil Code 1102 requires full disclosure on natural hazard exposure of the sale/re-sale of any and all real property. To be implemented by sellers and realtors. City of Oxnard Ordinance 2383 requires that at the time of entering into an agreement of sale or exchange of any building, the owner or authorized representative shall obtain from the city a report of the building record showing the regularly authorized use, occupancy and zoning classification of such property.</i>				
Growth Management	Yes	No	Yes	Yes
<i>Comment: California state law requires that every county and city prepare and adopt a comprehensive long-range plan to serve as a guide for community development. The General Plan for the City of Oxnard was amended and adopted in July 2011. The General Plan contains 10 elements that address many aspects of the community including: land use, housing, parks and open space, community design, circulation, infrastructure, safety, sustainability and conservation of resources. The General Plan is the City's overarching policy document. All City policies and ordinances must be consistent with the General Plan. The Planning Division is responsible for maintaining the General Plan and preparing amendments to the document as directed by the City Council. The City is preparing a Climate Action and Adaptation Plan consistent with SB39.</i>				
Site Plan Review	Yes	No	No	No
<i>Comment: Chapter 15 of the OCC regulates the form and contents, submittal and approval of tentative tract maps for the subdivision of five (5) or more parcels and tentative parcel maps for the subdivision of four (4) or fewer parcels shall be governed by the provisions of this chapter. Chapters 16 and 17 of the OCC identify allowed uses and provide development standards that regulate development within the City.</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Environmental Protection	Yes	No	Yes	Yes
<p><i>Comment: The California Environmental Quality Act (CEQA) requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. On June 28, 2017, the City Council adopted Resolution 15,040 approving an update to the California Environmental Quality Act (CEQA) Guidelines.</i></p> <p><i>Chapter 22, Article 12 implements the Federal Water Pollution Control Act (the Clean Water Act), 33 U.S.C. Section 1251 et seq., as amended, and Division 7 of the California Water Code by prohibiting the discharge of any pollutant to navigable waters of the United States from a point source unless the discharge is authorized by a permit issued pursuant to the National Pollutant Discharge Elimination System required by the Clean Water Act Section 402 (33 U.S.C. Section 1342), and by prohibiting non-storm water discharges into the storm drain system.</i></p> <p><i>Chapter 18, Article 4 recently updated in December 2020 with the authority conferred by Cal. Gov't Code sections 65302, 65560 and 65800 to adopt regulations designed to promote the public health, safety, and general welfare.</i></p>				
Flood Damage Prevention	Yes	No	Yes	Yes
<p><i>Comment: Chapter 18, Article 4 recently updated in December 2020 with the authority conferred by Cal. Gov't Code sections 65302, 65560 and 65800 to adopt regulations designed to promote the public health, safety and general welfare.</i></p>				
Emergency Management	Yes	No	Yes	Yes
<p><i>Comment: Oxnard Emergency Operations Plan—City Ordinance No. 2916</i></p>				
Climate Change	Yes	No	Yes	Yes
<p><i>Comment: The City is currently preparing a Climate Action and Adaptation Plan which intends to be comprehensive, robust and innovative to help the City plan for future climate goals and develop vision for how sustainability should be implemented in the City. The Climate Action and Adaptation Plan is anticipated to culminate with adoption by the City Council in mid/late-2022.</i></p>				
Planning Documents				
General Plan	Yes	No	Yes	Yes
<p><i>Is the plan compliant with Assembly Bill 2140? Yes</i></p> <p><i>Comment: The City's current 2030 General Plan contains Safety Element that includes goals and policies that address liquefaction and subsidence risk; coastline and beach preservation; emergency preparedness; and hazardous materials and uses.</i></p>				
Capital Improvement Plan	Yes	No	Yes	Yes
<p><i>How often is the plan updated? Once a year</i></p> <p><i>Comment: The City Council adopts a 5-year Capital Improvement Plan with the City Council making amendments on an annual basis.</i></p>				
Disaster Debris Management Plan	Yes	Yes	Yes	Yes
<p><i>Comment: Ventura County Disaster Recovery Plan, Adopted by BOS in April 2019</i></p>				
Floodplain or Watershed Plan	Yes	No	Yes	No
<p><i>Comment: Chapter 18, Article 4 recently updated in December 2020 with the authority conferred by Cal. Gov't Code sections 65302, 65560 and 65800 to adopt regulations designed to promote the public health, safety and general welfare. The City participates in the National Flood Insurance Program (NFIP) Community Rating System (CRS) Class 7</i></p>				
Stormwater Plan	Yes	No	Yes	Yes
<p><i>Comment: The City is developing the Public Works Integrated Master Plan to develop long-term recommendations for policies, programs, and projects that successfully address and respond to immediate drought conditions while also planning for long-term water needs, reducing dependence upon costly imported water, addressing aging infrastructure and reliability concerns, pursuing aggressive goals for energy efficiency and sustainable solutions, maintaining compliance with changing regulatory requirements, and the ongoing loss of seasoned staff and personnel.</i></p>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Urban Water Management Plan <i>Comment: The City has an adopted Urban Water Management Plan. The plan details long-term resource planning to ensure that adequate water supplies are available to meet existing and future water needs. In conjunction with the Urban Water Management Plan, a separate Water Shortage Contingency Plan, is also being prepared. The Water Shortage Contingency Plan outlines how an urban water supplier will respond to various stages of a drought or a prolonged shortage caused by other events.</i>	Yes	No	Yes	Yes
Habitat Conservation Plan <i>Comment: Not applicable for the City of Oxnard</i>	No	No	No	No
Economic Development Plan <i>Comment: The City's 2030 General Plan contains an Economic Development Chapter within the Community Development Element. The City created a draft strategic plan which was presented to the Housing and Economic Development Committee and the Chamber of Commerce in 2020 before the pandemic. However, given that COVID significantly impacted the business landscape, staff will be working on a new strategic plan to emphasize business retention, workforce development, and site-based development.</i>	Yes	No	Yes	No
Shoreline Management Plan <i>Comment: The City of Oxnard is currently updating the City's Local Coastal Program to address Sea Level Rise and coastal hazards.</i>	Yes	No	Yes	No
Community Wildfire Protection Plan <i>Comment: Not applicable for the City of Oxnard</i>	No	No	No	No
Forest Management Plan <i>Comment: Not applicable for the City of Oxnard</i>	No	Yes	No	Yes
Climate Action Plan <i>Comment: The City is currently preparing a Climate Action and Adaptation Plan which intends to be comprehensive, robust and innovative to help the City plan for future climate goals and develop vision for how sustainability should be implemented in the City. The Climate Action and Adaptation Plan is anticipated to culminate with adoption by the City Council in mid 2022.</i>	Yes	No	Yes	Yes
Emergency Operations Plan <i>Comment: Oxnard Emergency Operations Plan</i>	Yes	No	Yes	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: We are currently evaluating the need to complete a THIRA for the City of Oxnard.</i>	No	Yes	No	Yes
Post-Disaster Recovery Plan <i>Comment: Disaster Recovery Operations are covered in the Oxnard Emergency Operations Plan</i>	Yes	No	Yes	Yes
Continuity of Operations Plan <i>Comment: Continuity of Government—Section within the Oxnard Emergency Operation Plan</i>	Yes	No	Yes	Yes
Public Health Plan <i>Comment: County of Ventura Health Care Agency Public Health Emergency Response Plan (ERP)</i>	No	Yes	Yes	Yes
Other—Countywide Tsunami Plan <i>Comment: The County of Ventura has an existing plan that describes each City's role and has been adopted locally. A revision of this document is required within the coming year.</i>	No	Yes	Yes	Yes

Table 6-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i>	Yes Building and Safety Division of the Community Development Department
Does your jurisdiction have the ability to track permits by hazard area?	No The City does not currently track building permits issued by hazard area.
Does your jurisdiction have a buildable lands inventory?	No

Table 6-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No. Requires a vote of the people
User Fees for Water, Sewer, Gas or Electric Service	Yes
<i>If yes, specify:</i> Water and Sewer	
Incur Debt through General Obligation Bonds	No. Requires a vote of the people
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes
<i>If yes, specify:</i> Federal-sponsored grant programs	

Table 6-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	Yes
<i>If Yes, Department /Position:</i> Community Development, all Planners) Public Works—City Engineer; Supervising Civil Engineer	
Engineers or professionals trained in building or infrastructure construction practices	Yes
<i>If Yes, Department /Position:</i> Public Works—City Engineer; Supervising Civil Engineer; Project Manager; Senior Civil Engineer; Construction Inspector; Project Coordinator; Engineering Tech	
Planners or engineers with an understanding of natural hazards	Yes
<i>If Yes, Department /Position:</i> Public Works—City Engineer	
Staff with training in benefit-cost analysis	Yes
<i>If Yes, Department /Position:</i> Public Works—Transportation Planner and Grants Coordinator	
Surveyors	Yes
<i>If Yes, Department /Position:</i> Public Works (Consultant)	
Personnel skilled or trained in GIS applications	Yes
<i>If Yes, Department /Position:</i> Information Technology—GIS Manager, GIS Technician III, GIS Systems Analyst, GIS Programmer Analyst	
Scientist familiar with natural hazards in local area	No
<i>If Yes, Department /Position:</i> None	
Emergency manager	Yes
<i>If Yes, Department /Position:</i> Fire Department—City Emergency Services Manager	
Grant writers	Yes
<i>If Yes, Department /Position:</i> Public Works—Grants Coordinator and Transportation Planner	

Table 6-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> City website has disaster preparedness and fire prevention information in English and Spanish	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> We have in the past used social media to address specific hazard mitigation issues.	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i> Yes, the Fire Chief has an advisory "Team" that address emergency preparedness and hazard reduction issues. Organized "Neighborhood Councils" are also used to disseminate emergency preparedness and hazard mitigation information.	Yes
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> Community events such as: neighborhood fairs, emergency preparedness fairs, CERT training, neighborhood council meetings, homeowners' association meetings are all used to disseminate emergency preparedness and hazard mitigation information.	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> "Alert and Warning" procedures as described in the Oxnard Emergency Operations Plan and the VC Alert System	Yes

Table 6-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	City Engineer
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	December 2020
Does your floodplain management program meet or exceed minimum requirements? <i>If exceeds, in what ways?</i>	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	2017 Community Assistance Visit
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If so, state what they are.</i>	No
Are any RiskMAP projects currently underway in your jurisdiction? <i>If so, state what they are.</i> RiskMAP, Ventura County Levees	Yes
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If so, what type of assistance/training is needed?</i> Admin training	Yes
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If yes, is your jurisdiction interested in improving its CRS Classification?</i> No <i>If no, is your jurisdiction interested in joining the CRS program?</i> N/A	Yes, Class 7
How many flood insurance policies are in force in your jurisdiction? ^a <i>What is the insurance in force?</i> \$166,210,700 <i>What is the premium in force?</i> \$323,235	497
How many total loss claims have been filed in your jurisdiction? ^a <i>What were the total payments for losses?</i> \$244,574	71

a. According to FEMA statistics as of March 31, 2021

Table 6-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	06-111-54652	N/A
DUNS #	Yes	081790214	N/A
Community Rating System	Yes	7	N/A
Building Code Effectiveness Grading Schedule	Yes	Residential: 3 Commercial Industrial: 2	2015/2016
Public Protection	Yes	02/2X	December 1, 2017
Storm Ready	Yes	N/A	July 2021
Firewise	No	N/A	N/A
Tsunami Ready	Yes	N/A	July 2021

Table 6-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Ratings
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: The City is preparing a Climate Action and Adaptation Plan (CAAP). Community engagement has highlighted interest in and knowledge of climate impacts.</i>	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment: The CAAP will establish programs and monitoring protocols.</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: Documentation prepared for CAAP and SLR and vulnerability study</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: Through the CAAP this has occurred.</i>	High
Capital planning and land use decisions informed by potential climate impacts <i>Comment: This will come out of the CAAP.</i>	Medium
Participation in regional groups addressing climate risks <i>Comment: Professional planner and focused position</i>	High
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: This will come out of CAAP implementation.</i>	Medium
Identified strategies for greenhouse gas mitigation efforts <i>Comment: The CAAP includes this information including strategies</i>	High
Identified strategies for adaptation to impacts <i>Comment: The CAAP includes this information including strategies</i>	High
Champions for climate action in local government departments <i>Comment: The CAAP includes this information including strategies</i>	High
Political support for implementing climate change adaptation strategies <i>Comment: Financial support for CAAP study.</i>	High
Financial resources devoted to climate change adaptation <i>Comment: The CAAP includes this information including strategies</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment: Addressed in CAAP engagement</i>	Medium

Criterion	Jurisdiction Ratings
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: Addressed in CAAP engagement</i>	Medium
Local residents' support of adaptation efforts <i>Comment: Addressed through CAAP engagement</i>	Medium
Local residents' capacity to adapt to climate impacts <i>Comment: Input provided during sea level rise engagement and CAAP efforts</i>	Low
Local economy current capacity to adapt to climate impacts <i>Comment:</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

6.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

6.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Oxnard Emergency Operations Plan (EOP)**—The Emergency Operations Plan addresses the City of Oxnard’s planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies.
- **Ventura County Mass Care and Shelter Plan**—This document is intended for use during the preparedness phase to help guide care and shelter planning. It provides all the planning information and guidelines that are relevant for government’s consideration before opening disaster shelters. This document is intended to help cities plan for shelter operations, while also providing an overview of the complete scope of care and shelter services.
- **Ventura County Operational Area Emergency Operations Plan**—The County of Ventura Emergency Operations Plan (EOP) provides the structure and processes that all key partner agencies within the county use to respond to, and initially recover from, a major emergency or disaster event.
- **California Tsunami Evacuation Playbook (Ventura County, City of Oxnard)**—This playbook is designed to help the emergency managers with tsunami evacuation and

response activities. The goal is to protect the residents within the local Tsunami Inundation Zone by providing guidance for early warning and coordinated evacuations.

- **2030 City of Oxnard General Plan**—The General plan contains a Safety Element that includes goals and policies that address liquefaction and subsidence risk; coastline and beach preservation; emergency preparedness; and hazardous materials and uses.

6.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **2030 City of Oxnard General Plan:** The 2030 General Plan should be revised to address hazard mitigation plan elements as needed in the 2022 HMP program and consider integration opportunities by adopting relevant policies in future Safety Element. updates
- **Local Coastal Program (LCP) Update:** The City is in the process of a comprehensive LCP update. One of the goals of the City's LCP update is to consider and address Sea Level Rise (SLR) and to ensure that policies to implement adaptation options occur in a way that protects the City's coastal economic vitality, community character, public and private property, coastal resources and public safety.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

6.6 RISK ASSESSMENT

6.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 6-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

6.6.2 Hazard Risk Ranking

Table 6-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions primarily target hazards with high and medium rankings.

Table 6-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Rain and High Wind Event		January 19, 2021	Trees down, road closures, power outages, damage to structures
Pandemic Influenza COVID-19	4482-DR-CA	January 20, 2020 Continuing	Ongoing
Atmospheric River Storm System	CA Disaster 109	January/February 2019	Local stream and street flooding, trees down, power outages
Wildfires, Flooding, Mudflows, and Debris Flows	DR-4353	December 4, 2017- January 31, 2018	Post Thomas Fire debris flows in local rivers, large deposits of debris on local beaches, road closures
Thomas Fire	4224-DR-CA	December 4, 2017	Public Health issues due to smoke, power outages, sewage spill due to power outage
February Winter Storm	CA Disaster 77.1	February 2017	Local stream and street flooding, trees down, power outages, debris deposits in local stream and on beaches
January Winter Storm	CA Disaster 77	January 2017	Local stream and street flooding, trees down, power outages, debris deposits in local stream and on beaches
Extreme Windstorm		February 2016	Trees down, power outages, street closures, damage to structures, debris
Erratic Weather (frost, heat, drought)		Winter 2013	Damage to crops, economic loss
Tsunami (7.1 earthquake in Japan)		March 11, 2011	Damage to local harbors, marinas and docks
Tsunami (8.8 Quake in Chile)		February 27, 2010	Damage to local harbors, marinas and docks
Storm and Flood		January 18 – 22, 2010.	Local stream and street flooding, trees down, power outages
Wildfires, Flooding, Mudflows, and Debris Flows	DR-1731	October 21 – March 31, 2008	Post burn, flooding, debris and mud flows.
Severe Storm	DR-1267	January 7 – 11, 2005	Flooding and debris flows
“El Nino” Storm and Flood		February 1998	Street and stream flooding, debris flows
Storms and Floods		January and March, 1995	Unknown
Northridge Earthquake	DR-1008	January 17 – November 30, 1994	Power and communications disruptions, damage to structures
Storm and Flood		February 10-15, 1992	Street and stream flooding, debris flows
Earthquake (Whittier Narrows Earthquake)		October 1, 1987	Unknown
Storm and Flood		February 25-March 3, 1983	Street and stream flooding, debris flows
Storm and Flood		February 13-22, 1980	Street and stream flooding, debris flows
Sespe Creek Flood		March 4, 1978	Street and stream flooding, debris flows
Storms and Floods (Calleguas Creek Flood)		February 28-March 5, 1978	Street and stream flooding, debris flows
St Francis Dam Disaster		March 12, 1928	\$7 Million (1928)—Inundation of nearly the entire city, flooding, debris flows, destruction of infrastructure, high loss of life

Table 6-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Dam Failure	36	High
2	Earthquake	32	Medium
3	Severe Storm	24	Medium
4	Severe Weather	24	Medium
5	Flooding	18	Medium
6	Landslide	18	Medium
7	Sea Level Rise	18	Medium
8	Tsunami	12	Low
9	Drought	9	Low
10	Wildfire	0	Low

6.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 7
- Number of FEMA-identified Severe-Repetitive-Loss Properties: N/A
- Number of Repetitive-Loss or Severe-Repetitive-Loss Properties that have been mitigated: N/A

Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- **Unreinforced Masonry and Soft Story Structures**—Oxnard has numerous unreinforced masonry and soft story buildings within the city limits. These buildings are subject to severe damage or structural collapse during a moderate to severe earthquake.
- **Homeless Population**—A significant number of persons commonly defined as “Homeless” live in the Santa Clara River and other undeveloped areas. During wildland fires, storms and flooding these individuals are at great risk.
- **Street and Urban Flooding**—There are numerous areas of the city that flood to varying degrees during periods of high rain. The effects of this flooding range from street closures to damage to property, vehicles and buildings.
- **Power Outages/Emergency Power**—Local power outages have resulted from high winds and storm conditions as well as from the effects of wildland fire in the region. Many key city buildings including the Main City Hall and Council Chambers buildings have no back-up power or emergency generators.

- **Debris Flows**—Following heavy rains and winter storms, substantial debris flows have occurred in the Santa Clara River as well as other local streams and culverts. Debris flows following wildland fires are particularly bad and can require removal of material from streams, streets, culverts and beaches.
- **Liquefaction Potential**—Nearly the entire City of Oxnard is located in a “Liquefaction Zone”. The effects and damage caused by seismic activities can be amplified resulting in increased damage to buildings and infrastructure.
- **Tsunami Awareness and Notification**—Oxnard has a large visitor and tourist population who may not be aware of the tsunami risk.
- **Sea Level Rise (SLR)**—SLR is an identified flooding threat to the future of the City of Oxnard. Therefore, planning for local adaptation and resiliency is an identified City Council priority and part of the Local Coastal Program update. It is a complex and difficult issue that will require strong coordination at the federal, State, and local level over the long term to effectively plan for and adapt to changing variables over time. Adaptation strategies are based upon various SLR projections anticipated to occur in years 2030, 2060, and 2100.
- **Drought**—Much of California, Ventura County and the City of Oxnard has been experiencing a multiyear drought. Continued drought can directly impact land use, development options, as well as economic development in the city. This includes negatively impacting business development, including expansion and retention and support for agricultural resources and industries. More prolonged and severe drought conditions could potentially impact potable water supplies to the point of creating a public health and safety emergency.
 - **For background:** The City of Oxnard purchases 40-50% of its total water supply from Calleguas Municipal Water District. This water is State Water Project water supplied by Metropolitan Water District. In addition to State water, the City of Oxnard supplements its remaining water needs from groundwater that is pumped by the City (20-30%) and by the United Water Conservation District (20-30%). According to the 2021 Groundwater Sustainability Plan (GSP), the Oxnard Subbasin water has experienced drier than average conditions since 2015 and anticipates little change to the water elevation level due to the current drought. The subbasin is currently at a level categorized as being in overdraft per the GSP.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

6.7 STATUS OF PREVIOUS PLAN ACTIONS

The following table summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 6-13. Status of Previous Plan Actions

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>OX 3—Increase participation in the NFIP by maintaining a CRS rating Class 9, which through enhanced floodplain management activities would allow property owners to receive a discount on their flood insurance.</p> <p>Comment: Increased participation by upgrading CRS rating from Class 9 to Class 7. The City will continue to maintain CRS rating Class 7.</p>	✓			
<p>OX 4—Develop a tool to collect and analyze post-flood disaster risk assessment information to allow the City of Oxnard to analyze the effects of the flood and implement future mitigation projects. Information to be collected will include: number and location of structures, including RL properties, flooded; identification of flooded areas outside of the SFHA and floodwater heights at these locations; number and location of failed gages; etc.</p> <p>Comment: Information is being collected as required by CRS program. The tool is to be developed once funding is available. Funding was requested in FY 21-22 for this purpose</p>			✓	OXN-19
<p>OX 5—Continue to participate in the NWS TsunamiReady Program through continued implementation of Guideline 4: Community Preparedness measures, including public outreach material and curriculum.</p> <p>Comment: Oxnard continues to participate in the TsunamiReady Program and will be updating and renewing its application again this year. This is an ongoing program.</p>			✓	OXN-10
<p>OX 6—Evaluate Santa Clara Levees 1, 2 and 3 for upgrade and construction.</p> <p>Comment: Evaluations have been completed by the County of Ventura. Levees are County-owned.</p>	✓			
<p>OX 7—Construct a Mandalay Beach storm drainage system to the Channel Islands Harbor. During rain events, stormwater accumulation along Mandalay Beach Road is caused by wind and sand blocking the drainage to the ocean outfall.</p> <p>Comment: This is currently being mitigated with a dedicated portable pump that is deployed and turned on during storm events. Pump station construction is estimated at \$30M+ and has not been completed due to lack of funding.</p>			✓	OXN-20
<p>OX 8—Construct a permanent lift station for Ventura Road @ Wagon Wheel Road. Water in the low point in the roadway must be manually pumped with each rain event.</p> <p>Comment: The improvements are currently in the design phase. Wagon Wheel Development conditioned to construct.</p>	✓			
<p>OX 9—Construct a stormwater lift station at Perkins Road. Flooding occurs at the point in Perkins Road which is caused by an undersized sump pump. The proposed stormwater lift system will transport stormwater to the Advanced Water Purification Facility and recycle the storm water for agricultural use along Hueneme Road.</p> <p>Comment: Currently being mitigated with a portable pump that is turned on during storm events. Pump station has not been completed due to lack of funding. The discharge location may change so discharge location is not included in the updated action plan.</p>			✓	OXN-20
<p>OX 10—Construct a permanent flood protection pump station at Dodge Road. Flooding occurs at the low point in Dodge Road at the intersection with Maulhardt Road.</p> <p>Comment: Currently being mitigated with a portable pump that is turned on during storm events. Pump station has not been completed due to lack of funding.</p>			✓	OXN-20

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
OX 11—As part of the Memorandum of Agreement / Memorandum of Understanding with The Nature Conservancy (TNC): continue to partner with TNC on acquisition, restoration and mitigation planning processes; partner on grant proposals; participate in negotiations with land use owners; carry-out restoration projects; hold titles to floodplain properties as appropriate; and hold or co-hold with TNC multipurpose easements.			✓	OXN-21
Comment: In 2016, the California State Coastal Conservancy, City of Oxnard, and The Nature Conservancy (collectively known as the Ormond Beach Partners) entered into a Memorandum of Understanding to actively coordinate and collaborate across the Ormond Beach Partners' respective properties that total over 630 acres in order to protect, manage, and restore the Ormond Beach Area. The Project Partners are leading the Ormond Beach Restoration and Public Access Plan (OBRAP), with the goals of restoring the natural ecosystem and habitats and improving public access and enjoyment of Ormond Beach while protecting nature. The Ormond Beach Partners have held two public outreach meetings soliciting public input on the OBRAP in 2017 and 2019. The Ormond Beach Partners will conduct a public outreach meeting in 2021 to highlight the Preferred Alternative and Preliminary Design. The next phases of the OBRAP will be the environmental review, gap assessment, final design, permitting, funding and construction.				

6.8 HAZARD MITIGATION ACTION PLAN

Table 6-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 6-15 identifies the priority for each action. Table 6-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 6-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
Action OXN-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flooding, Landslide, Sea Level Rise, Tsunami						
Existing	2, 6, 9, 10, 11	Public Works.	Community Development	High	HMGP, PDM, FMA	Short-term
Action OXN-2 —Amend General Plan Safety and Hazard Element text and as needed hazard maps, to reflect updated mapping of hazard areas identified by this Hazard Mitigation Plan, FEMA, Cal Fire, or the CA Seismic Hazard Mapping Program, in addition to background data associated with Local Coastal Plan update and background work associated with the City's Climate Action and Adaptation Plan (CAAP)						
<u>Hazards Mitigated:</u> Dam Failure, Drought, Earthquake, Flooding, Sea Level Rise, Severe Weather, Tsunami, Wildfire						
New & Existing	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19	Community Development	Public Works	\$500,000	Staff Time, General Fund, Grant Funding, FEMA HMA, BRICK, Pre and Post Disaster Mitigation Grant Funding	Short-term
Action OXN-3 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this Hazard Mitigation Plan.						
<u>Hazards Mitigated:</u> Dam Failure, Drought, Earthquake, Flooding, Sea Level Rise, Severe Weather, Tsunami, Wildfire						
New & Existing	1, 2, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15	Public Works	Community Development	Low	Staff Time, General Funds	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
<p>Action OXN-4—Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP) through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:</p> <ul style="list-style-type: none"> • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts. <p><u>Hazards Mitigated:</u> Dam Failure, Severe Storm, Severe Weather, Flooding</p>						
New & Existing	1, 2, 6, 7, 17	Public Works	Community Development	Low	Staff Time, General Funds	Short term and ongoing
<p>Action OXN-5—Develop, approve, and implement the City’s Climate Action and Adaptation Plan (CAAP); including adaptive strategies to address hazards.</p> <p><u>Hazards Mitigated:</u> Sea Level Rise, Flooding, Wildfire, Severe Storms, Severe Weather, Drought</p>						
New & Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 19	Community Development	Public Works	High	Staff Time, General Funds	Short-term and on going
<p>Action OXN-6—Purchase generators for critical facilities and infrastructure that lack adequate backup power, & as recommended by the City’s CAAP .</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Tsunami, Wildfire</p>						
New & Existing	2, 19	Public Works	Community Development	Estimated: \$500,000 per generator (avg.)	Staff Time, General Funds, Enterprise Funds, HMGP, PDM	Short-term
<p>Action OXN-7—Retrofit existing Seawalls at Mandalay Bay in order to withstand seismic events per the latest provisions in the California Building Code (CBC, 2019)</p> <p><u>Hazards Mitigated:</u> Earthquake</p>						
Existing	2, 4, 6, 9, 11, 19	Public Works	Community Development	Estimated: \$200,000,000	Staff Time, General Funds, HMGP, PDM, FMA	Short-term
<p>Action OXN-8—Replace existing 45-inch diameter water transmission main that is critical as a lifeline for residents, industry, and national defense, including the region’s military base. This project will prevent seismic-related failure of the transmission line of State Water Project water that provides potable water to a population of approximately 245,000. This pipeline supplies 60% of the City of Oxnard’s water and 50% of the City of Port Hueneme’s water which is then purveyed to Naval Base Ventura County’s Point Mugu and Port Hueneme installations.</p> <p><u>Hazards Mitigated:</u> Earthquake</p>						
Existing	2, 4, 6, 9, 11, 19	City of Oxnard	City of Port Hueneme	Estimated: \$50,000,000	Staff Time, Enterprise Funds, HMGP, PDM, FMA	Short-term
<p>Action OXN-9—Develop a comprehensive Sea Level Rise (SLR) Adaptation Plan to be implemented in the four identified coastal planning areas located within the City’s coastal zone to adopt long term adaptation policies and strategies to identify, manage, and reduce SLR impacts on coastal resources, private property and critical City facilities. The SLR adaptation policies and strategies included in the Local Coastal Program update would also be coordinated with the Climate Action and Adaptation Plan to address SLR vulnerabilities.</p> <p><u>Hazards Mitigated:</u> Sea Level Rise</p>						
New & Existing	Enter Response 1, 2, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	Public Works	Community Development; County of Ventura and Harbor Department; City of Port Hueneme; U.S. Department of Defense (Navy)	High	Grant State Federal	Long Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
Action OXN-10 —Continue to participate in the NWS TsunamiReady Program through continued implementation of Guidelines for Community Preparedness measures, including public outreach material and curriculum. In 2021 Oxnard updated its application and has received approval from the NWS as a TsunamiReady Community. This is an ongoing program						
<i>Hazards Mitigated:</i> Tsunami						
New & Existing	1, 2, 6, 7, 8, 12, 17, 18, 19	Emergency Services Manager	Oxnard Fire and Public Works Departments	Low	Staff Time, Enterprise Funds, EMPG, DHS	Ongoing
Action OXN-11 —Construction of Aquifer Storage and Recovery (ASR) wells in order to ensure future reliable and affordable supply of high-quality water for the Oxnard Plain.						
<i>Hazards Mitigated:</i> Drought						
Existing	2, 4, 6, 9, 11, 19	City of Oxnard	State Division of Drinking Water	High	Staff Time, Enterprise Funds, HMGP, PDM, FMA	Short-term
Action OXN-12 —Develop and implement a resident and visitor tsunami awareness and safety public education and outreach program. Provide tsunami awareness, hazard, safety, and evacuation information at visitor locations including hotels, vacation rentals, campgrounds and day use recreational areas. Program would include signs, posters, handouts and public presentations.						
<i>Hazards Mitigated:</i> Tsunami						
New	1, 2, 7, 8, 10, 12, 17, 18, 19	Oxnard Police and Fire Departments	Oxnard Community Development	Low	Staff Time, Enterprise Funds, EMPG, DHS	Short-term
Action OXN-13 —Engage in a study to determine the best methods and strategies to communicate hazards and warnings to the city's homeless population, particularly those living in undeveloped areas such as fields, creeks and riverbeds. Warnings would include notification of impending or immediate dangers.						
<i>Hazards Mitigated:</i> Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Tsunami, Wildfire						
New	1, 2, 7, 8, 10, 12, 17, 18, 19	City of Oxnard		High	Grant Funding-FEMA HMA (BRIC, FMA, HMGP), Staff Time, Enterprise Funds	Short-Term
Action OXN-14 —Engage in a feasibility study to determine if Oxnard Fire Station 6 can be retrofitted, replaced or relocated due to seismic and tsunami hazards.						
<i>Hazards Mitigated:</i> Earthquake, Tsunami						
Existing	1, 2, 6, 7, 8, 9, 18, 19	Oxnard Fire Department	City Planning Department	High	Grant Funding-FEMA HMA (BRIC, HMGP), Staff Time, Enterprise Funds	Short-Term
Action OXN-15 —Engage in a feasibility study to determine if Oxnard Fire Stations 2, 3, 4 & 5 can be retrofitted, replaced or relocated due to seismic hazards.						
<i>Hazards Mitigated:</i> Earthquake						
Existing	1, 2, 6, 7, 8, 9, 18, 19	Oxnard Fire Department	City Planning Department	High	Grant Funding-FEMA HMA (BRIC, HMGP), Staff Time, Enterprise Funds	Short-Term
Action OXN-16 —Implement the findings of the feasibility studies with retrofits to, relocation of, or replacement of existing City Fire Stations including, Stations # 2, 3, 4, 5, 6. These stations were built between 1954 and 1978 prior to current building standards. Damage to these stations could seriously impact fire, rescue and EMS service within the City.						
<i>Hazards Mitigated:</i> Earthquake, Tsunami						
Existing	1, 2, 6, 7, 8, 9, 18, 19	Oxnard Fire Department	City Planning Department	High	Grant Funding-FEMA HMA (BRIC, HMGP), Staff Time, Enterprise Funds	Short-Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
<p>Action OXN-17—Engage in a feasibility study to determine if the Oxnard Police Headquarters building, including the Dispatch facility, can be retrofitted or should be replaced due to seismic hazards.</p> <p><u>Hazards Mitigated:</u> Earthquake</p>						
New	1, 2, 7, 8, 10, 12, 17, 18, 19	City of Oxnard	Oxnard Police Department	High	Grant Funding-FEMA HMA (BRIC, HMGP), Staff Time, Enterprise Funds	Short-Term
<p>Action OXN-18—Implement the findings of the feasibility study by retrofitting or replacing Oxnard Police Headquarters building. This will include expansion of the Dispatch facility to accommodate equipment for the radio and data traffic needed to support disaster response communications.</p> <p><u>Hazards Mitigated:</u> Earthquake, Tsunami, Severe Storms, Dam Failure, Wildfires, Flooding</p>						
Existing	1, 2, 6, 7, 8, 9, 18, 19	Oxnard Police Department	Oxnard Fire Department	High	Grant Funding-FEMA HMA (BRIC, HMGP), Staff Time, Enterprise Funds	Short-Term
<p>Action OXN-19—Develop a tool to collect and analyze post-flood disaster risk assessment information to allow the City of Oxnard to analyze the effects of the flood and implement future mitigation projects. Information to be collected will include: number and location of structures, including RL properties, flooded; identification of flooded areas outside of the SFHA and floodwater heights at these locations; number and location of failed gages; etc.</p> <p><u>Hazards Mitigated:</u> Flooding</p>						
New & Existing	1, 2, 17	City of Oxnard		High	Grant Funding-FEMA HMA (BRIC, FMA, HMGP), Staff Time, Enterprise Funds	Short-Term
<p>Action OXN-20—Construct pump stations for roadway areas affected by chronic flooding including, but not limited to:</p> <ul style="list-style-type: none"> Mandalay Beach storm drainage system to the Channel Islands Harbor. During rain events, stormwater accumulation along Mandalay Beach Road is caused by wind and sand blocking the drainage to the ocean outfall. Construct a stormwater lift station at Perkins Road. Flooding occurs at the point in Perkins Road which is caused by an undersized sump pump. Construct a permanent flood protection pump station at Dodge Road. Flooding occurs at the low point in Dodge Road at the intersection with Maulhardt Road. <p><u>Hazards Mitigated:</u> Flooding, Severe Storms</p>						
Existing	2, 6, 10, 11	Public Works		High	Grant Funding-FEMA HMA (BRIC, FMA, HMGP), Staff Time, Enterprise Funds	Short-Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
<p>Action OXN-21—As part of the Memorandum of Agreement / Memorandum of Understanding with The Nature Conservancy (TNC):</p> <ul style="list-style-type: none"> • Continue to partner with TNC on acquisition, restoration and mitigation planning processes • Partner on grant proposals • Participate in negotiations with land use owners • Carry-out restoration projects • Hold titles to floodplain properties as appropriate • Hold or co-hold with TNC multipurpose easements. <p>Secure a Consolidated Coastal Development Permit to cover conservation and preservation activities over the next five years (2021-2026) that consist of the following:</p> <ul style="list-style-type: none"> • Nesting shorebird protection activities • Invasive plant removal activities • Access road and trail maintenance activities • Field data collection and research. <p>Collaborate with Ventura County Public Works Agency-Watershed Protection, TNC, and State Coastal Conservancy to advance planning, design, and implementation of the Ormond Beach Restoration and Access Plan (OBRAP), particularly those components alleviating flooding along the Ormond Lagoon Waterway and creating public access along tsumaš Creek. This supports the VCPWA-WP Action VCPWA-13.</p> <p><u>Hazards Mitigated:</u> Drought, Flood, Severe Weather, Severe Storms, Sea Level Rise, Tsunami</p>						
Existing and New	1, 2, 3, 9, 12, 13, 14, 15, 17, 18, 19	City of Oxnard	VCPWA-WP	Medium	Staff Time, Enterprise Funds, FEMA Grants (BRIC), CDFG	Ongoing

- a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date
Acronyms used here are defined at the beginning of this volume.

Table 6-15. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority	Grant Pursuit Priority
OXN 1	5	High	High	Yes	Yes	No	Medium	High
OXN 2	16	Medium	Low	Yes	No	Yes	High	Low
OXN 3	12	Low	Low	Yes	No	Yes	High	Low
OXN 4	5	Medium	Low	Yes	No	Yes	High	Low
OXN 5	17	Medium	Low	Yes	No	Yes	High	Medium
OXN 6	2	High	Medium	Yes	Yes	No	Medium	High
OXN 7	6	High	High	Yes	Yes	No	High	High
OXN 8	6	High	High	Yes	Yes	No	High	High
OXN 9	17	Medium	High	No	Yes	No	Low	Medium
OXN 10	9	High	Low	Yes	Yes	Yes	High	Low
OXN 11	6	High	High	Yes	Yes	No	High	High
OXN 12	9	High	Low	Yes	Yes	No	High	High
OXN 13	9	Low	Medium	Yes	Yes	No	Medium	High
OXN 14	8	Medium	Medium	Yes	Yes	No	Medium	High
OXN 15	8	Medium	Medium	Yes	Yes	No	Medium	High

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority	Grant Pursuit Priority
OXN 16	8	High	High	Yes	Yes	No	Medium	High
OXN 17	9	Medium	Medium	Yes	Yes	No	Medium	High
OXN 18	8	High	High	Yes	Yes	No	Medium	High
OXN 19	3	Medium	High	No	Yes	No	Medium	Medium
OXN 20	4	High	High	Yes	Yes	No	Medium	High
OXN 21	11	Medium	Medium	Yes	Yes	Yes	High	Medium

a. See the introduction to this volume for an explanation of priorities.

Table 6-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Types ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Dam Failure	OXN-1, 2, 3, 4, 6	OXN-1, 2, 3, 4, 6, 18	OXN-2, 3, 4, 13	OXN-1, 2, 3, 4, 6	OXN-2, 3, 4, 6, 13, 18	OXN-1, 2, 3, 4, 6, 18	OXN-1, 2, 3, 4, 6	OXN-4, 13, 18
Medium-Risk Hazards								
Earthquake	OXN-2, 3, 6, 8, 14, 15, 16	OXN-2, 3, 6, 8, 14, 15, 16, 17, 18	OXN-2, 3, 8, 13	OXN-2, 3, 6	OXN-2, 3, 6, 8, 16, 17, 18	OXN-3, 6, 14, 15, 16, 17, 18	OXN-2, 6	OXN-8, 13, 14, 15, 16, 17, 18
Severe Storm	OXN-1, 2, 3, 4, 20, 21	OXN-1, 2, 3, 4, 5, 18, 20	OXN-2, 3, 4, 5, 21	OXN-1, 2, 3, 4, 5, 20, 21	OXN-1, 2, 3, 4, 5, 18, 20	OXN-1, 2, 3, 18, 20	OXN-1, 2, 4, 5, 20, 21	OXN-4, 5, 18, 21
Severe Weather	OXN-1, 2, 3, 4, 5, 6, 21	OXN-1, 2, 3, 4, 5, 6	OXN-3, 4, 5, 6, 21	OXN-1, 2, 3, 4, 5, 6, 21	OXN-1, 2, 3, 4, 6	OXN-1, 3, 5	OXN-1, 2, 3, 4, 5, 6, 21	OXN-4, 5, 6, 21
Flooding	OXN-1, 2, 3, 4, 5, 6, 7, 20, 21	OXN-1, 2, 3, 4, 5, 6, 7, 18, 20, 21	OXN-2, 3, 4, 5, 6, 7, 13, 19	OXN-1, 2, 3, 4, 5, 6, 7, 20, 21	OXN-1, 2, 3, 4, 5, 6, 18, 20	OXN-1, 2, 3, 4, 7, 18, 20	OXN-1, 2, 3, 4, 5, 6, 20, 21	OXN-4, 5, 6, 7, 13, 15, 18, 19, 21
Sea Level Rise	OXN-1, 2, 5, 9, 21	OXN-1, 2, 3, 5, 9, 21	OXN-1, 2, 3, 5, 9	OXN-1, 2, 3, 5, 9, 21	OXN-2, 3	OXN-1, 2, 3, 5, 9	OXN-1, 2, 3, 5, 9, 21	OXN-1, 2, 3, 5, 9, 21
Low-Risk Hazards								
Drought	OXN-5, 11, 21	OXN-21	OXN-2, 5	OXN-2, 5, 11, 21	OXN-5		OXN-2, 3, 5, 11, 21	OXN-2, 3, 5, 11, 21
Wildfire	OXN-1, 2, 3, 6	OXN-1, 2, 3, 6	OXN-2, 3, 5, 6, 20	OXN-2, 3, 5, 6	OXN-2, 5, 6, 13		OXN-2, 3, 5, 6	OXN-2, 3, 5, 6, 13
Tsunami	OXN-1, 2, 3, 6, 10, 14, 16, 21	OXN-1, 2, 3, 6, 10, 14, 16, 18, 21	OXN-1, 2, 3, 6, 10, 12, 13	OXN-1, 2, 3, 6, 10, 21	OXN-1, 2, 3, 6, 10, 13, 14, 16, 18	OXN-1, 2, 3, 10, 14, 16, 18	OXN-1, 2, 3, 6, 10, 21	OXN-1, 2, 3, 6, 10, 13, 14, 16, 18, 21

a. See the introduction to this volume for an explanation of mitigation types.

6.9 PUBLIC OUTREACH

Table 6-17 lists public outreach activities for this jurisdiction.

Table 6-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Virtual Emergency Preparedness Worship	September 16, 2021	70
Adaptation Plan, outreach		
Sea Level Rise Vulnerability Assessment Report Results and Adaptation Strategies Workshop	August 9, 2017	Approximately 25
Sea Level Rise Adaptation Strategy Results & Conceptual Policies	March 14, 2018	Approximately 25

6.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **City of Oxnard Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Oxnard Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **City of Oxnard 2021-2026 Five Year Capital Improvement Program (CIP)**—The CIP was reviewed for identifying opportunities for action plan integration.
- **Flood Info Community Rating System Website (Ventura County):**
<https://www.vcfloodinfo.com/programs/flooding-and-flood-risk/vc-flood-history>
- **City of Oxnard Sea Level Rise Atlas:** As required by the adopted California Coastal Commission Sea Level Rise Guidance Policy, a risk and vulnerability assessment using the best-available information and science regarding coastal erosion, flooding, wave impacts, tidal inundation and tsunamis is needed to identify potential physical impacts in the City's coastal zone. In this way, the City can determine what areas are vulnerable to impacts from these five coastal hazards individually and combined, and with projected sea level rise.
<https://www.oxnard.org/wp-content/uploads/2021/06/OXNARD-FINAL-LCP-Sea-Level-Rise-Map-Atlas-Task-2.pdf>
- **Sea Level Rise Vulnerability Assessment and Fiscal Impact Report:** This study included a cost-benefit analysis of the adaptation strategies to allow comparison. The aim of the economic analysis was to provide a common metric against which the trade-offs between the costs and benefits of each adaptation strategy may be evaluated. The analysis accounts for the physical changes, economic benefits, and damages associated with each adaptation strategy, including th
- **City of Oxnard Emergency Operations Plan (EOP)**—The EOP was used to obtain the listing of official natural hazards that can impact the City, reference materials such as tsunami and dam inundation maps as well emergency management priorities, and public alert and warning procedures.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

6.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

The City of Oxnard Fire Department is currently developing a Strategic Plan composed of numerous elements including a community risk analysis, infrastructure assessment, and community planning prioritization process. These elements are being created with significant input from key stakeholders including Fire Department personnel, City departments, external agencies, and the residential and business communities. It is anticipated that the Department's Strategic Plan, anticipated for release in 2022, will strengthen the City's understanding of risk and vulnerabilities and serve as a foundation for additional hazard mitigation project development during the next planning cycle.

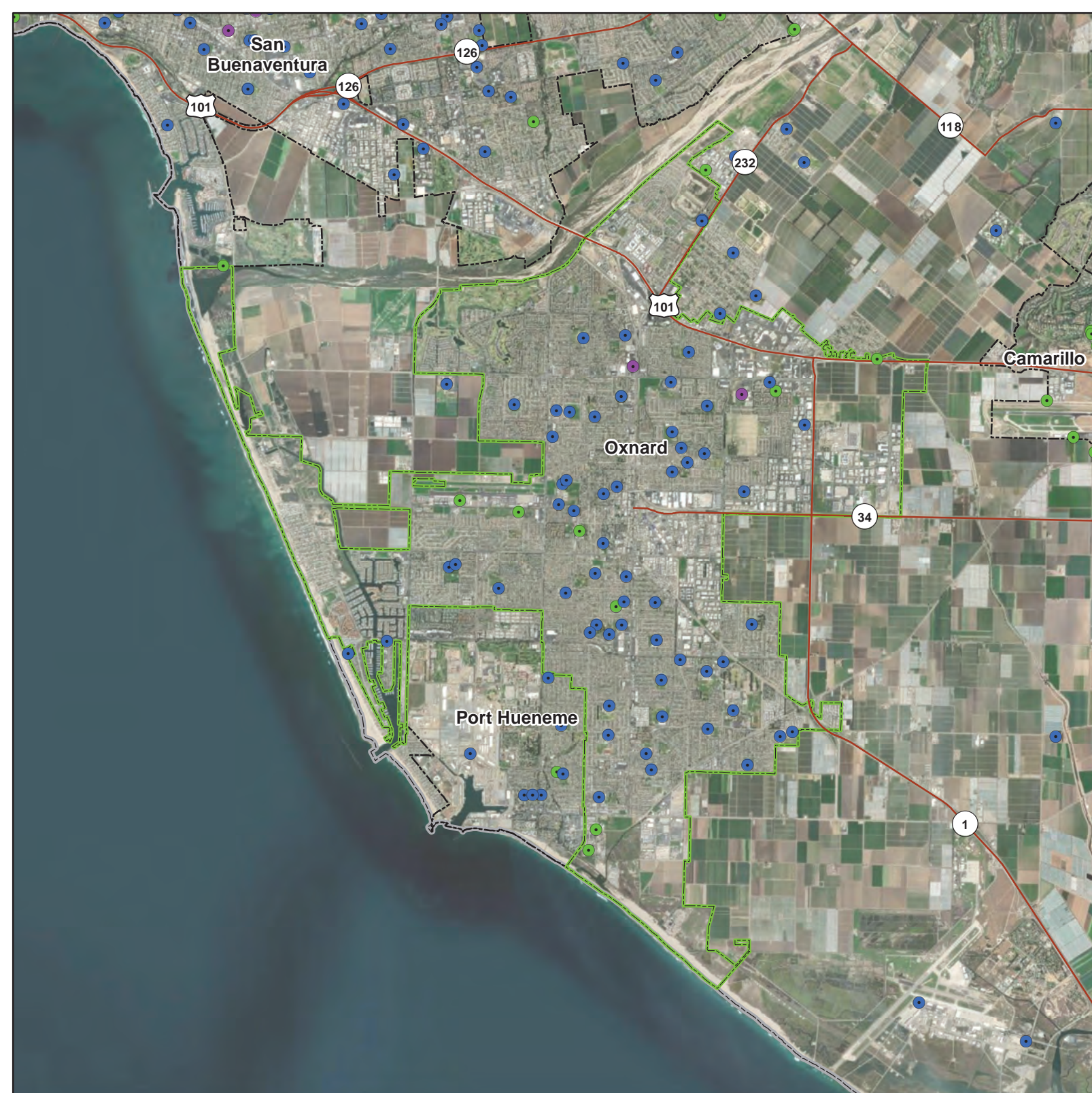
Oxnard

Critical Facilities (1 of 2)

- Food, Water, Shelter
- Health and Medical
- Safety and Security

- Major Roads
- ▭ Selected City
- - - Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri



Oxnard

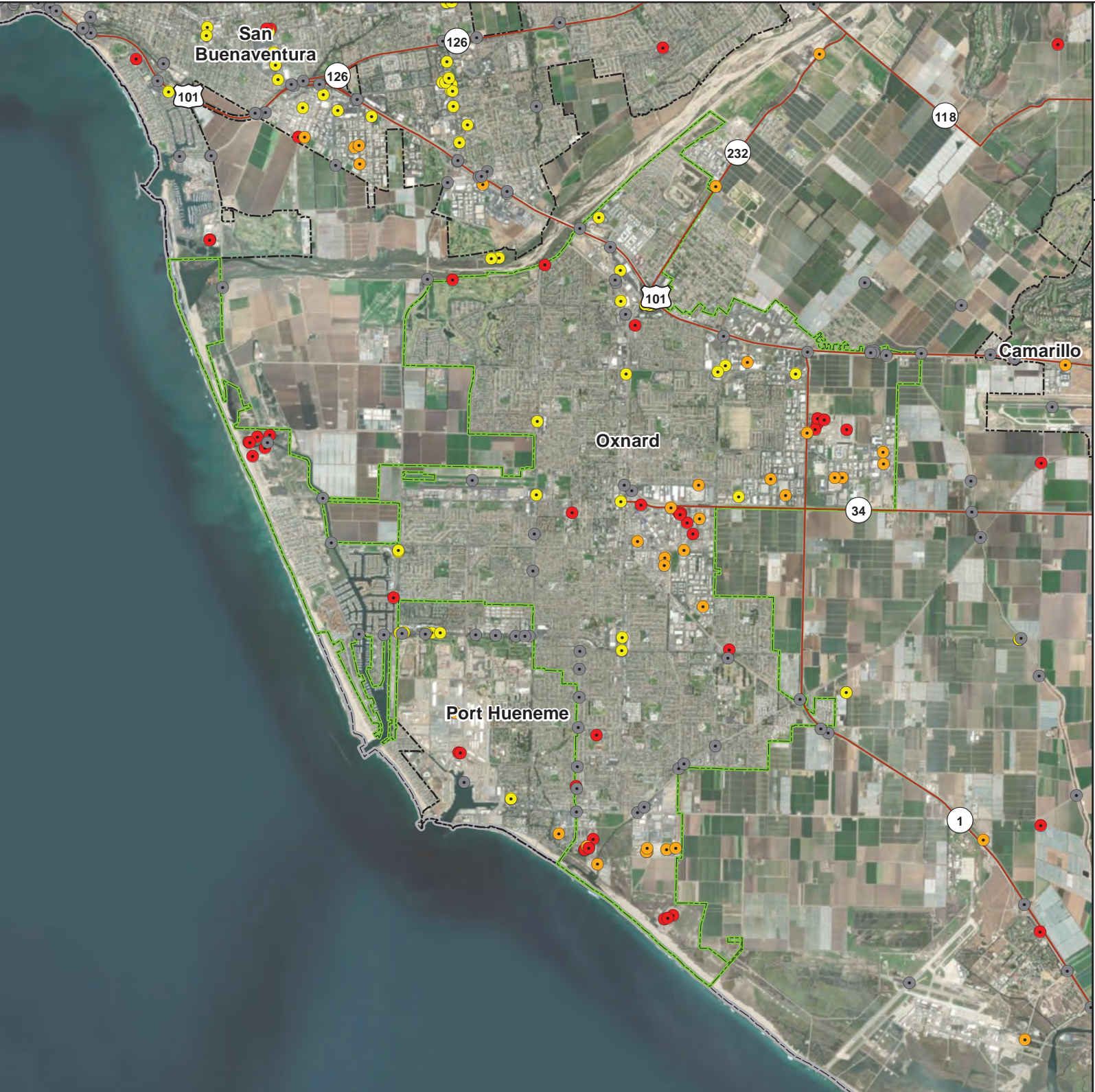
Critical Facilities (1 of 2)

- Communications
- Energy
- Hazardous Material
- Transportation
- Major Roads
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri

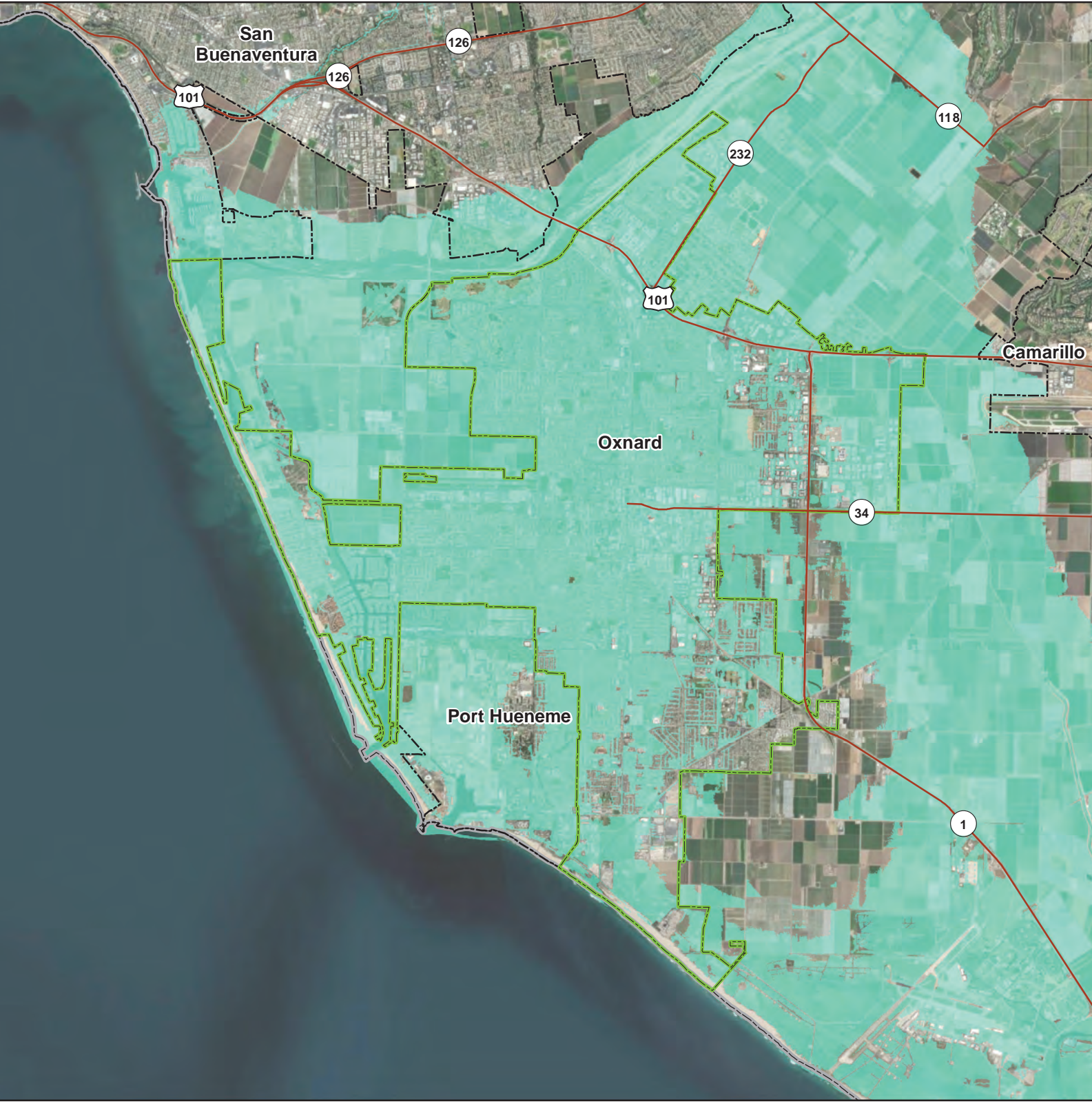


0 0.5 1 2 Miles



Oxnard

Dam Failure Inundation Areas










- Combined Inundation Areas
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Data Sources: Ventura Co.,
CA DWR, Esri



Oxnard

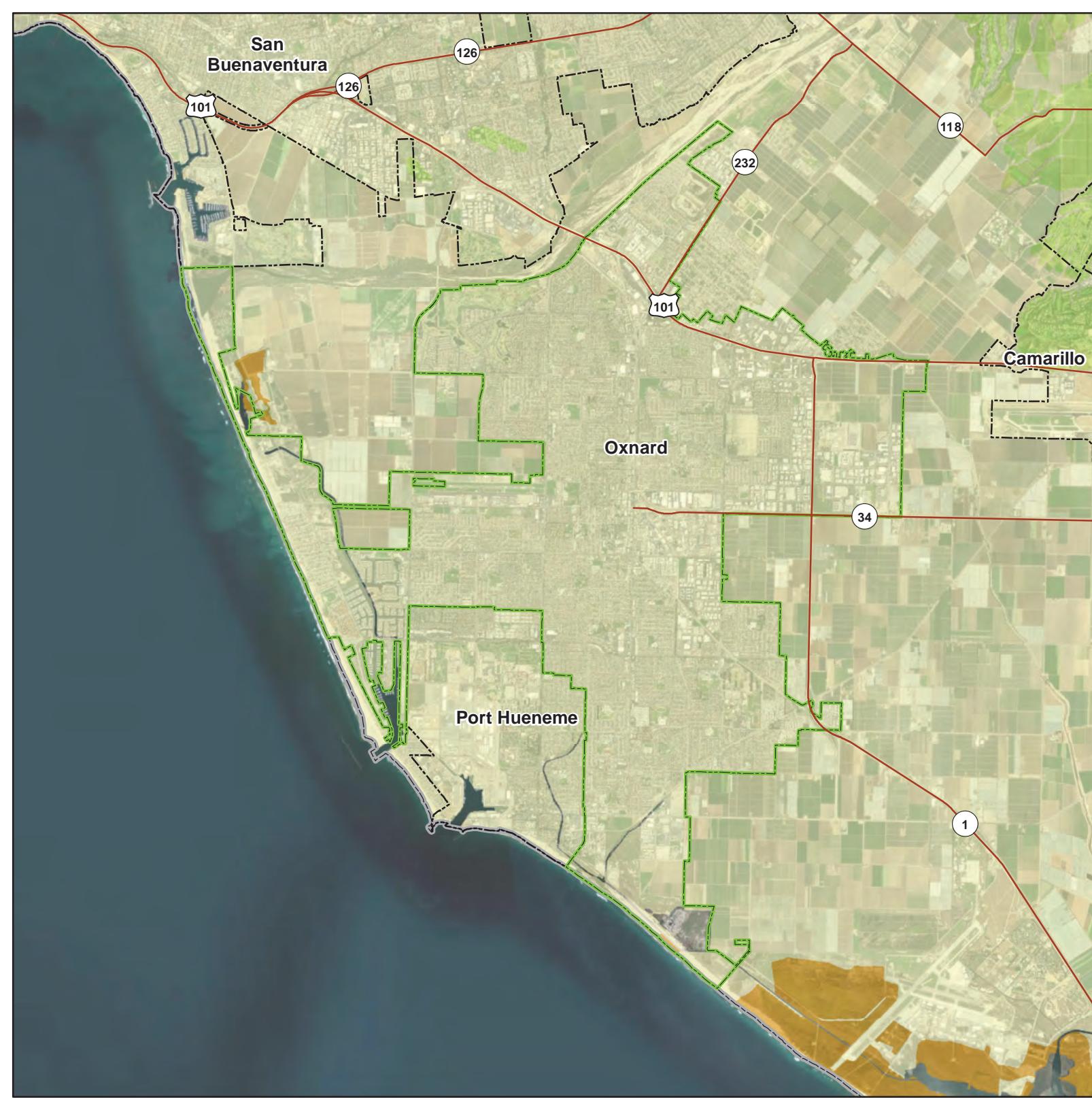
NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  E (Soft clay)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri

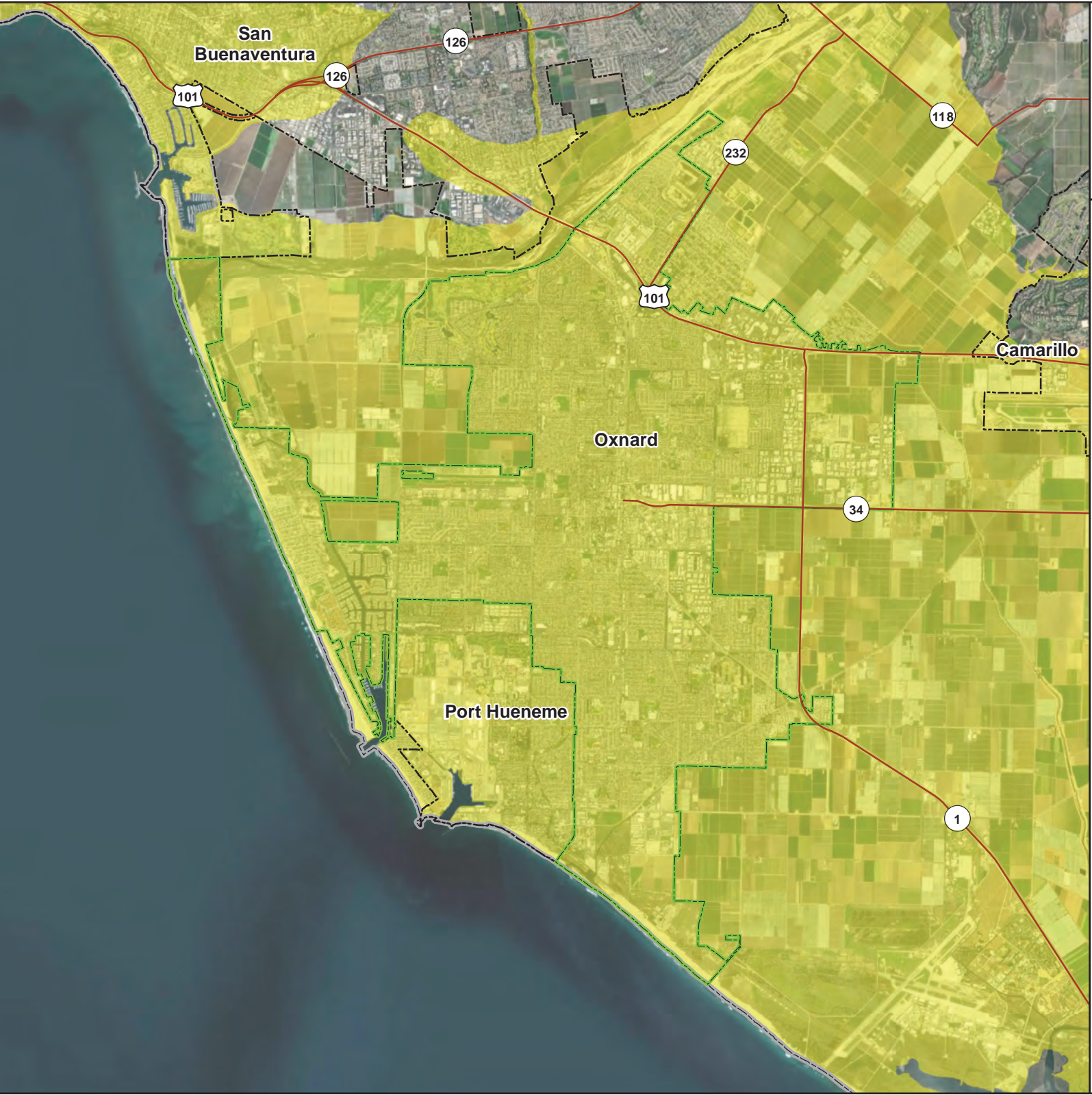







0 0.5 1 2 Miles



Oxnard

Liquefaction Susceptibility



-  Liquefaction zone
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary






Data Sources: Ventura Co., Esri



Oxnard

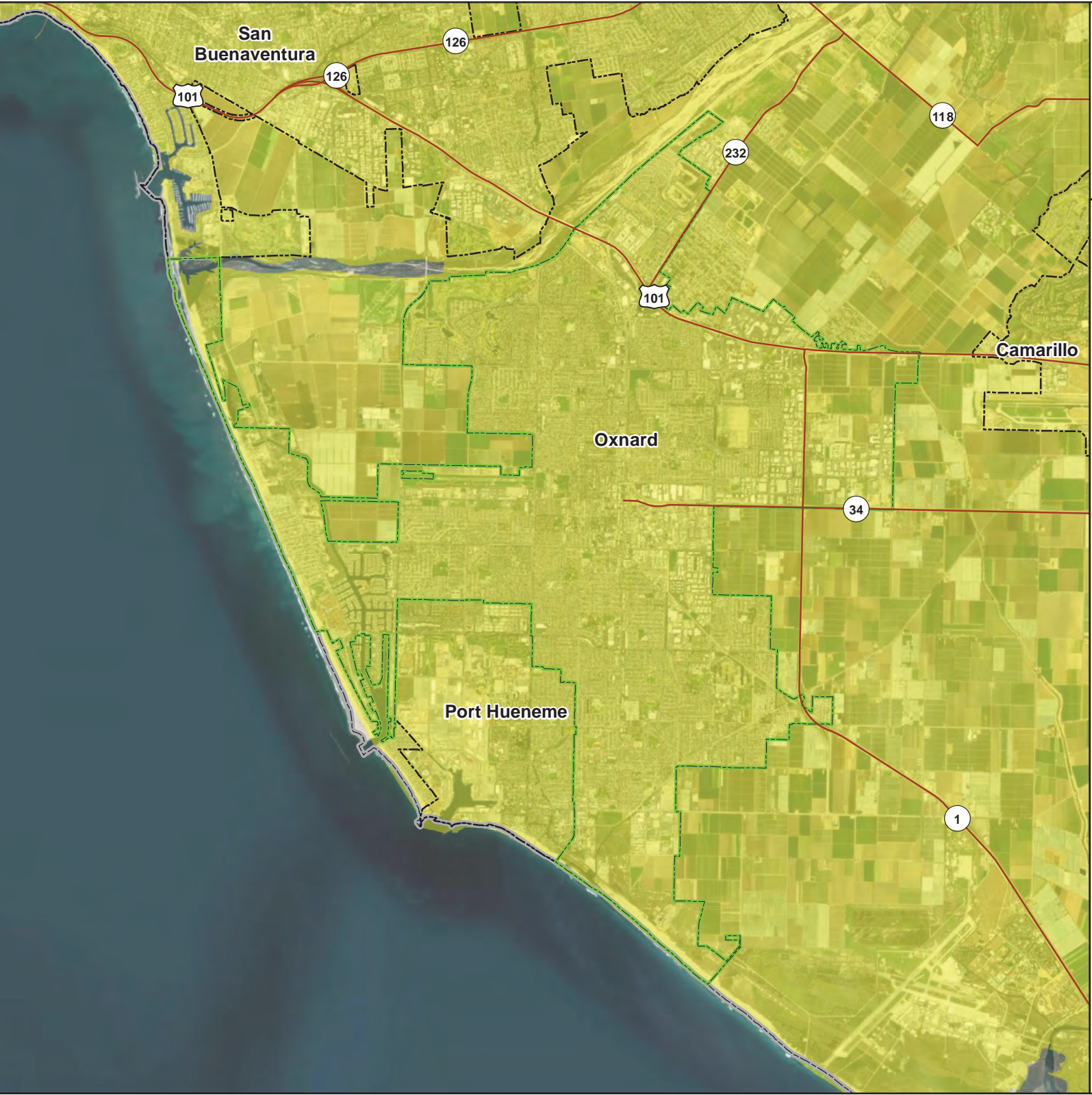
100-Year Probabilistic Earthquake Scenario

Mercalli Intensity Scale

-  VII (Very Strong/Moderate)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



Oxnard

Oak Ridge M7.16 Earthquake Scenario

Mercalli Intensity Scale

- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)

- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.5 1 2 Miles



Oxnard

Pitas Point M7.12 Earthquake Scenario

Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)

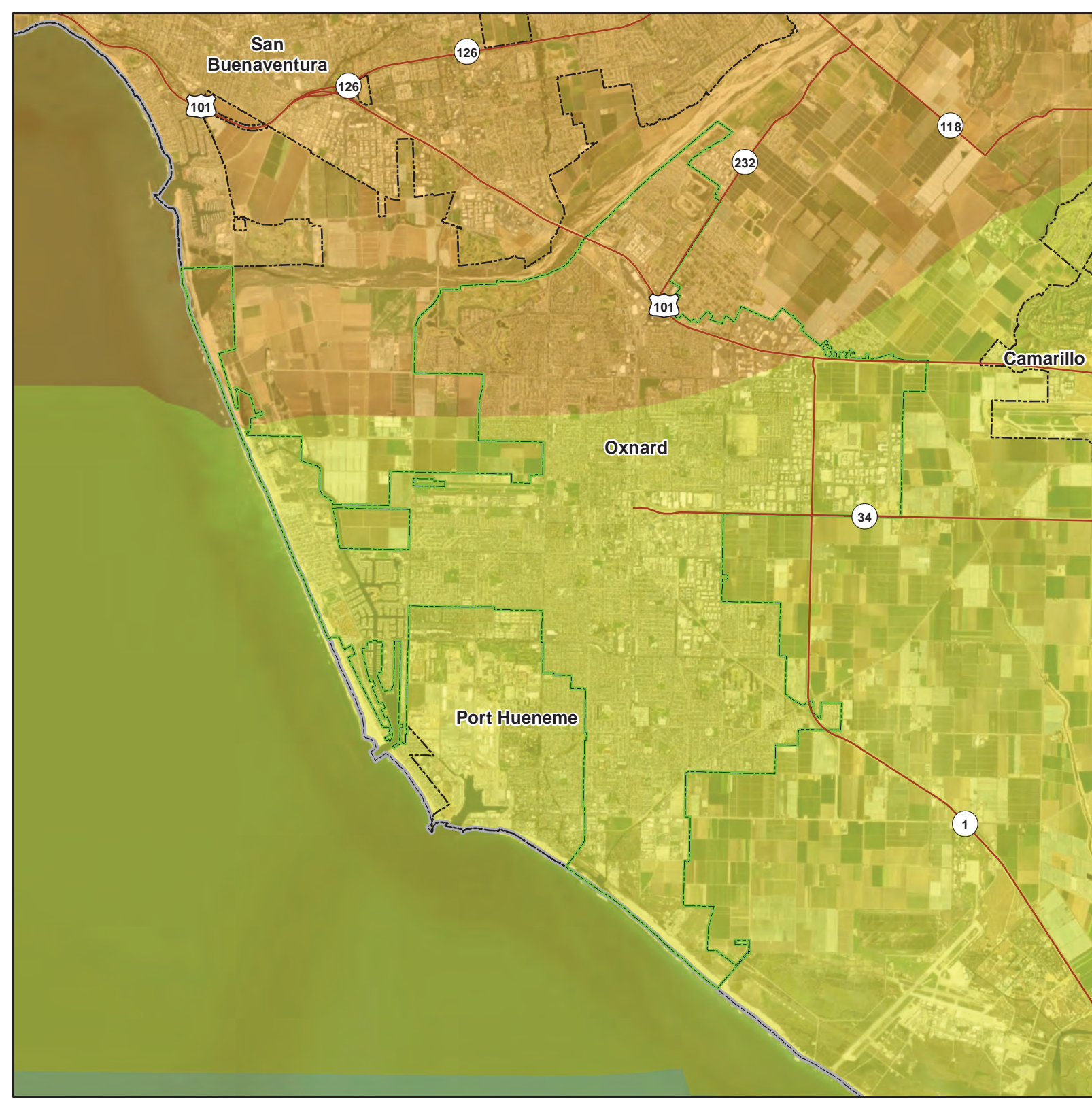
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.5 1 2 Miles



Oxnard

San Cayetano M7.16 Earthquake Scenario

Mercalli Intensity Scale

- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)

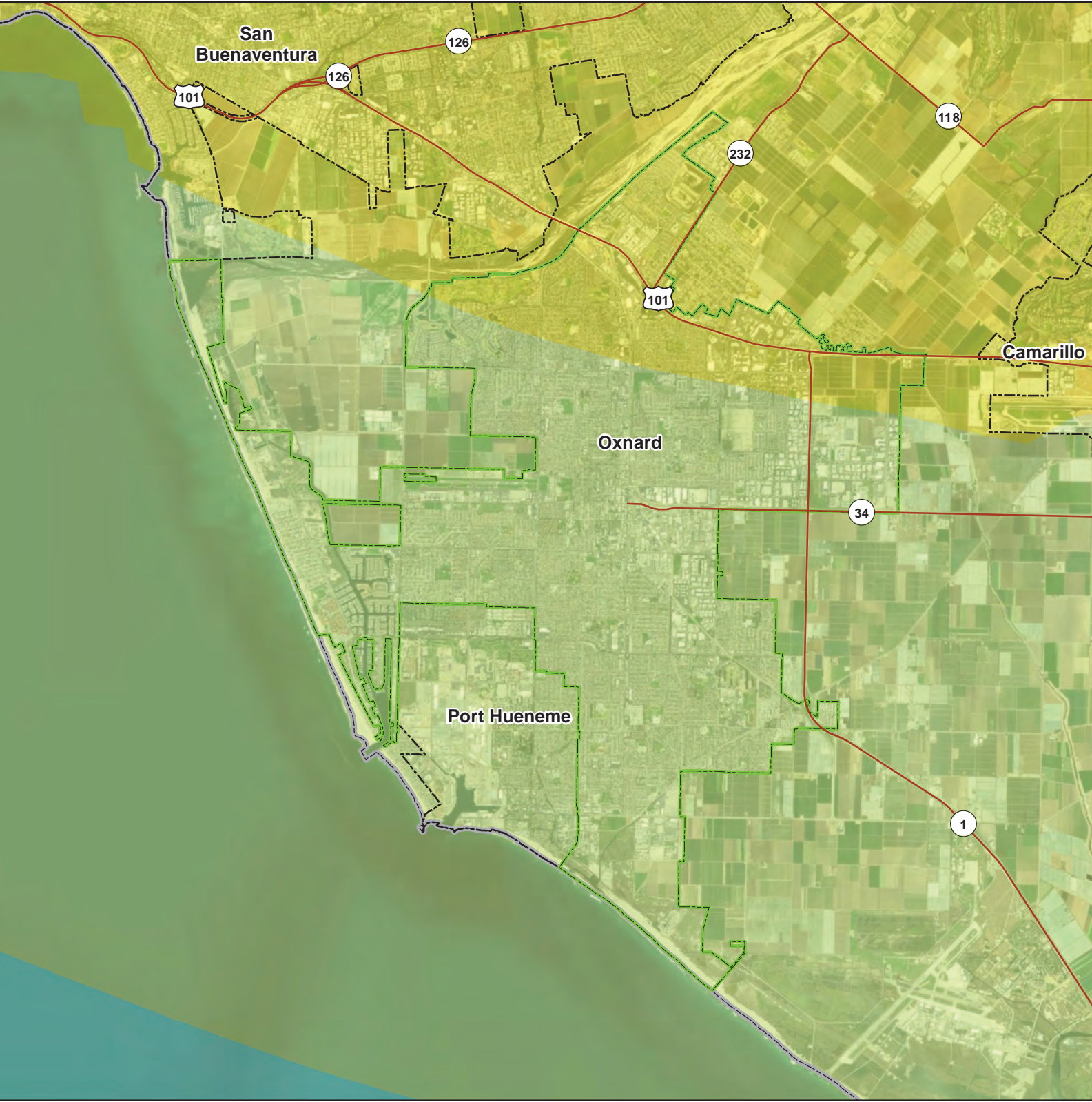
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri









0 0.5 1 2 Miles



Oxnard

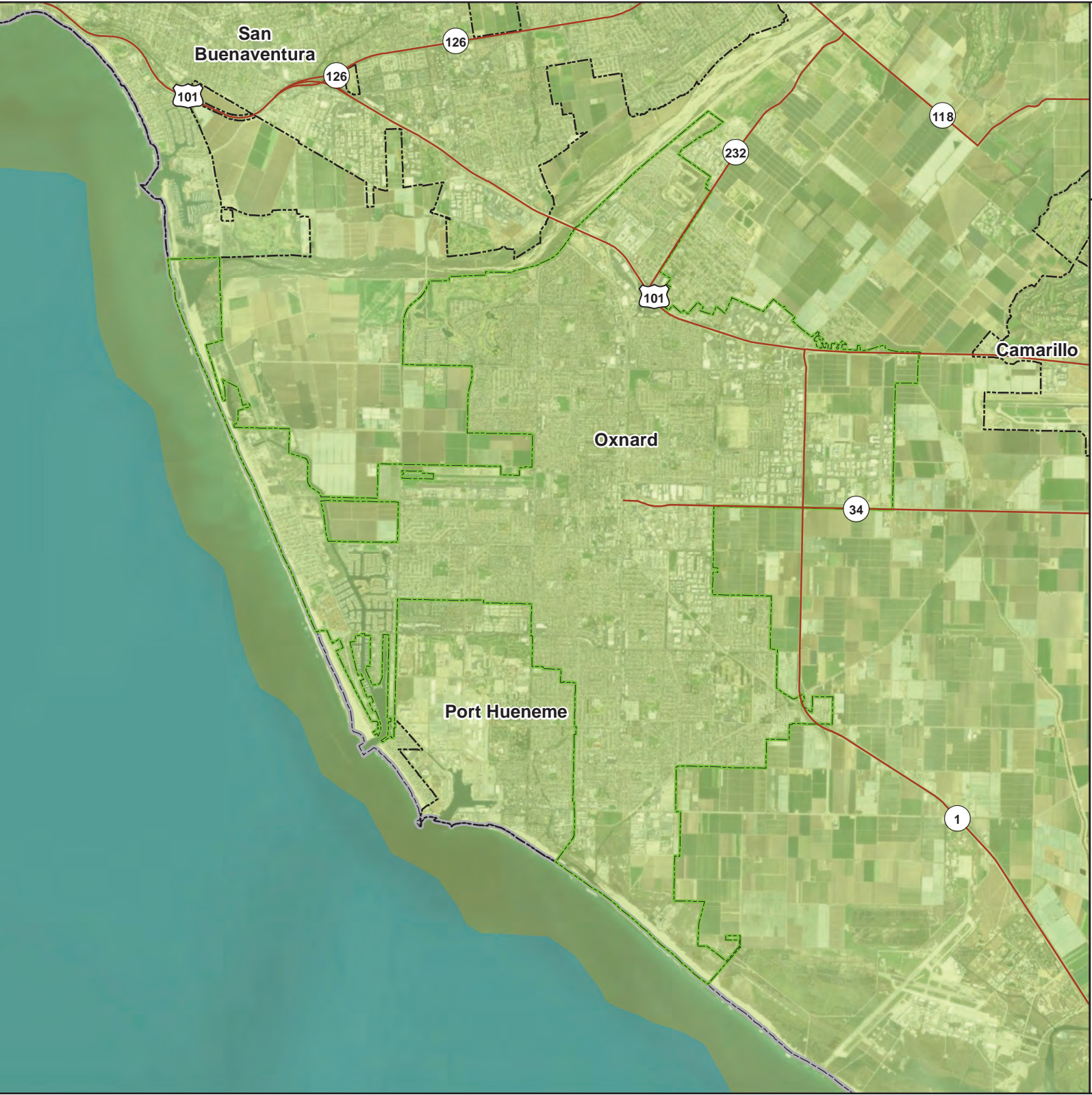
S. San Andreas M8.03 Earthquake Scenario

Mercalli Intensity Scale

-  V (Moderate/Very Light)
-  VI (Strong/Light)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary







Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



Oxnard

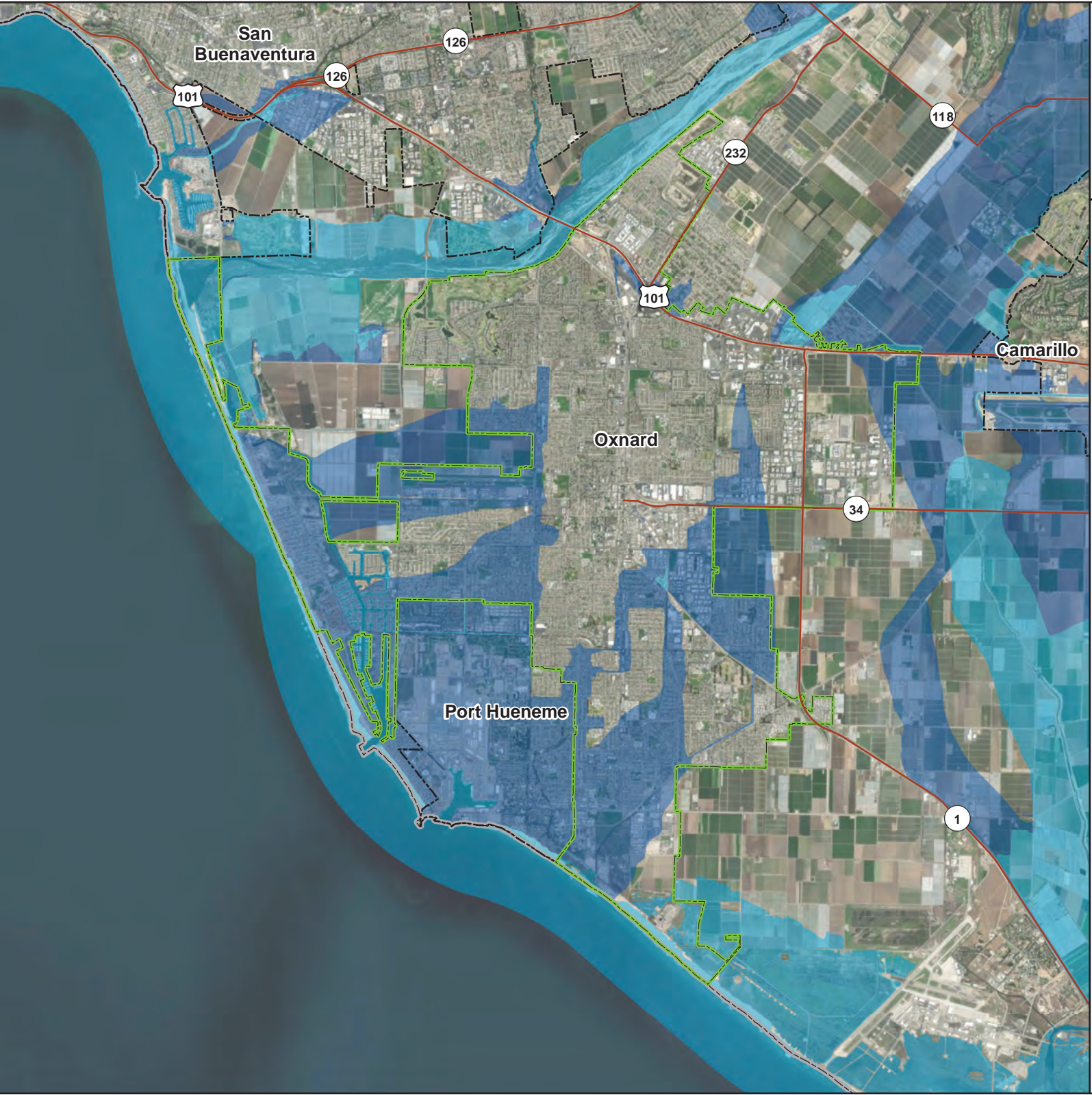
FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co., FEMA, Esri



0 0.5 1 2 Miles



Oxnard

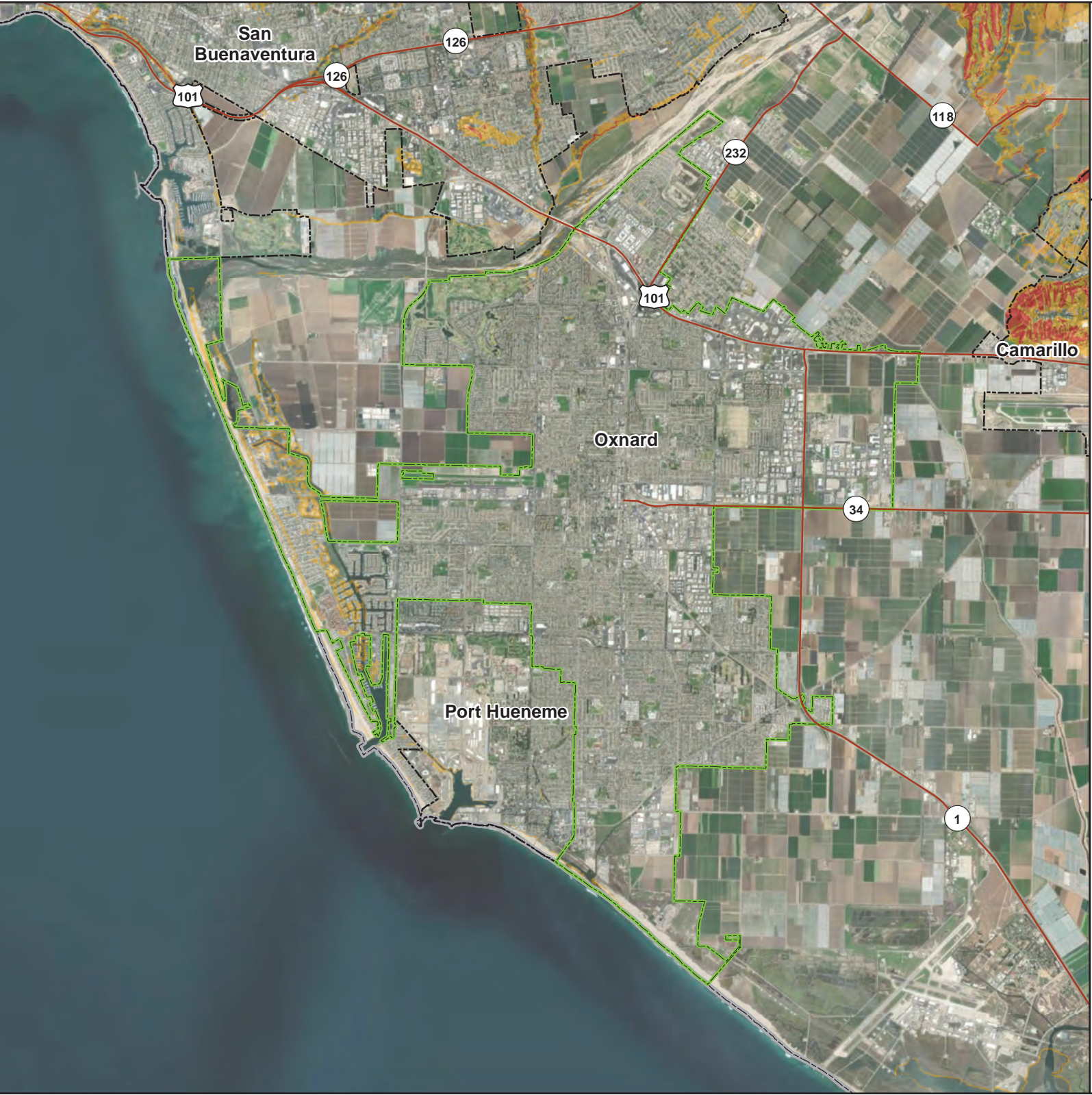
Susceptibility to Deep-Seated Landslides

- Low
- Moderate
- High
- Very High
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Data Sources: Ventura Co., CGS, Esri








0 0.5 1 2 Miles



Oxnard

Sea Level Rise of 25 cm (9.8 in.)

-  Sea Level Rise Inundation Area
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co., OCOF, Esri








0 0.5 1 2 Miles



Oxnard

Sea Level Rise of 100 cm (39.4 in.)

-  Sea Level Rise Inundation Area
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
OCOF, Esri








0 0.5 1 2 Miles



Oxnard

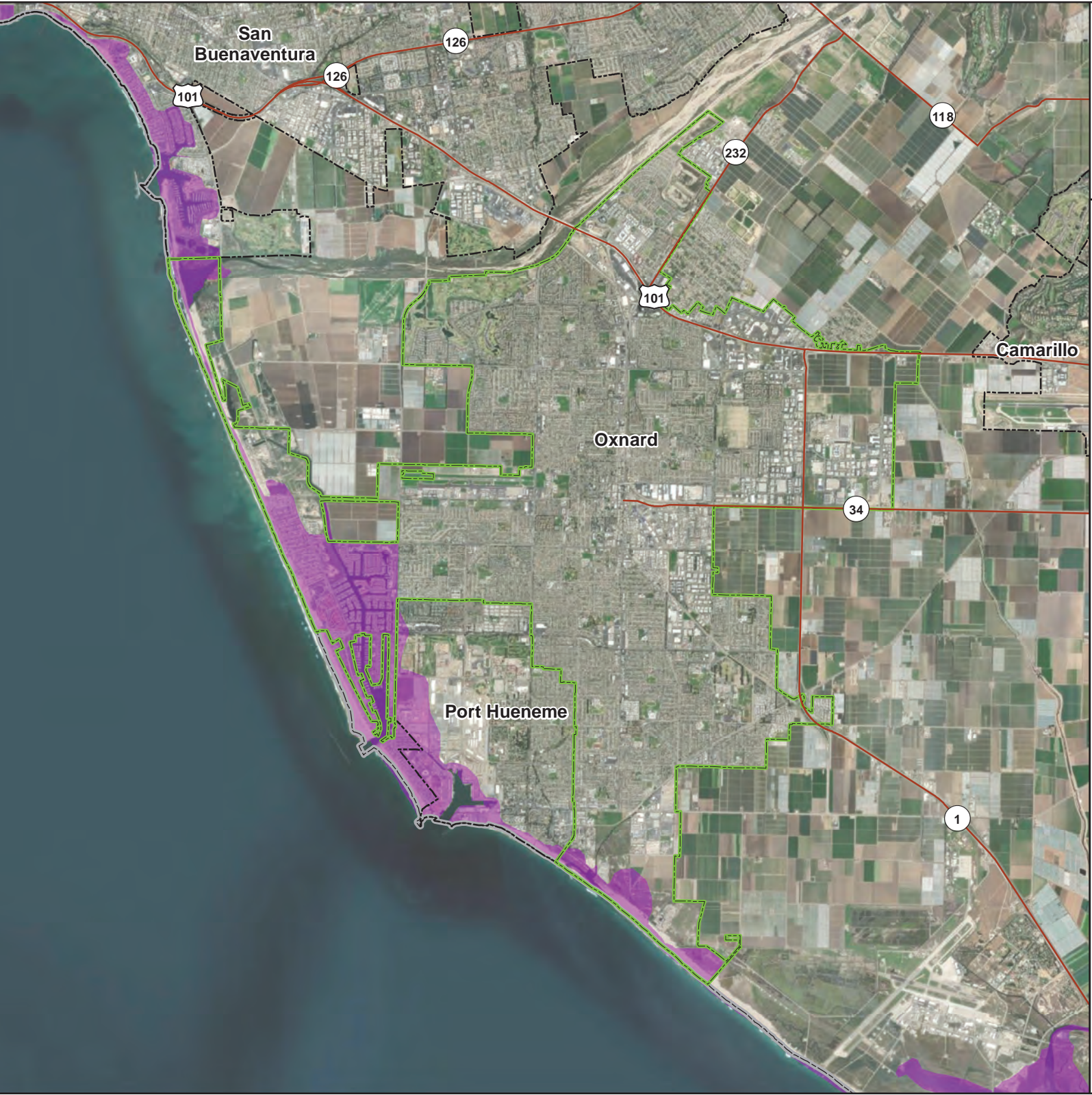
Tsunami Inundation Zones

-  Inundation Zones
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co., CGS, Esri



0 0.5 1 2 Miles



7. CITY OF PORT HUENEME

7.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Brad Conners, City Manager
250 N. Ventura Road
Port Hueneme, CA 93041
Telephone: 805-986-6501
e-mail Address: BConners@ci.port-hueneme.ca.us

Alternate Point of Contact

Charles Peretz, Deputy City Manager
250 N. Ventura Road
Port Hueneme, CA 93041
Telephone: 805-986-6501
e-mail Address: CPeretz@ci.port-hueneme.ca.us

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 7-1.

Table 7-1. Local Mitigation Planning Team Members

Name	Title
Don Villafana	Public Works Director
Lupe Acero	Deputy Finance Director
Andrew Salinas	Chief of Police
Tony Stewart	Director of Community Development
Scott Matalon	Emergency Preparedness Manager
Brad Conners	City Manager
Charles Peretz	Deputy City Manager

7.2 JURISDICTION PROFILE

7.2.1 Location and Features

Port Hueneme is a small coastal town located in Ventura County, just south of the City of Oxnard and east of Channel Islands Harbor. The City is home to Naval Base Ventura County (NBVC) and the Port of Hueneme and about five miles to the south is Naval Air Station Point Mugu. Port Hueneme is primarily built out and has a total land area of 4.5 square miles with a population of 23,647 people. Regional access to the City is provided by Highway 101 and State Route 1. The City also includes beach front properties, parks, and public beaches visited from residents and non-residents alike.

7.2.2 History

The City of Port Hueneme was incorporated on March 24, 1948. The City of Port Hueneme (pronounced “Why-nee-mee”) is a unique community along Ventura County’s Gold Coast just south of the City of Oxnard and Channel Islands Harbor. Port Hueneme is unique because of its rich history, culture, and traditions, dating back to the Chumash Indians who made their home here for centuries and because of its long-established, close relationship with the U.S. Navy’s Port Hueneme and Point Mugu naval facilities.

7.2.3 Governing Body Format

The City of Port Hueneme is governed by a five-member city council. The City consists of six departments: Finance, Housing and Facilities, Community Development, Public Works, Police, and the City Manager’s Office. The City has 2 commissions which report to the City Council. The City currently employs a total of 170 employees (full-time equivalent).

The City Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.

7.3 CURRENT TRENDS

7.3.1 Population

According to the California Department of Finance, the population of the City of Port Hueneme as of January 2020 was 23,607. Since 2010, the population has grown at an average annual rate of 0.85 percent.

7.3.2 Development

Anticipated future development for Port Hueneme includes creating and sustaining a strong, viable economic base for the City. The City encourages development of diversified housing types that will meet our community’s needs. This includes establishing a mix of housing types in local neighborhoods to avoid economic stratification and enhance community diversity. Future growth in the City will be managed as identified in the City’s 2045 general plan. City actions, such as those relating to land use, annexations, zoning, subdivision and design review, redevelopment, and capital improvements, must be consistent with the plan.

Table 7-2 summarizes development trends in the period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

7.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were

identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions.

Table 7-2. Recent and Expected Future Development Trends

Criterion	Response				
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?	No				
Is your jurisdiction expected to annex any areas during the performance period of this plan?	No				
Are any areas targeted for development or major redevelopment in the next five years? • If yes, briefly describe, including whether any of the areas are in known hazard risk areas	Yes Parcel located Victoria and Channel Islands, not in hazard area.				
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?	2016	2017	2018	2019	2020
	Single Family	0	0	0	0
	Multi-Family	0	0	0	0
	Other (commercial, mixed use, etc.)	0	0	0	0
	Total	0	0	0	0
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	From 2016 to current, there have been zero new permits issued as the City of Port Hueneme is built out to capacity.				
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	99.5%				

The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 7-3.
- Development and permitting capabilities are presented in Table 7-4.
- An assessment of fiscal capabilities is presented in Table 7-5.
- An assessment of administrative and technical capabilities is presented in Table 7-6.
- An assessment of education and outreach capabilities is presented in Table 7-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 7-8.
- Classifications under various community mitigation programs are presented in Table 7-9.
- The community's adaptive capacity for the impacts of climate change is presented in Table 7-10.

Table 7-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: Article 8 Municipal Code starting 8001. (Ord. 637 § 5 Exh. A (part), 2001) "California Building Code", the "California Residential Building Code", and the "California Green Building Standards Code", 2019 Editions</i>	Yes	Yes	Yes	Yes
Zoning Code <i>Comment: Article 10 Section 10,000 (Ord. 579 § 6 (1), 1992)</i>	Yes	Yes	Yes	Yes
Subdivisions <i>Comment: Article 9, Section 9,000 (Ord. 579 § 5 (1), 1992)</i>	Yes	Yes	Yes	Yes
Stormwater Management <i>Comment: Follow County's Reports</i>	Yes	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment: No Official plan</i>	No	Yes	Yes	Yes
Real Estate Disclosure <i>Comment: Report of Building Records. California State Civil Code 1102 requires full disclosure on natural hazard exposure of the sale/re-sale of any and all real property. To be implemented by sellers and realtors.</i>	Yes	Yes	Yes	Yes
Growth Management <i>Comment: City is built out</i>	No	No	No	No
Site Plan Review <i>Comment: Section 10350</i>	Yes	No	No	Yes
Environmental Protection <i>Comment: The California Environmental Quality Act (CEQA) requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible.</i>	Yes	Yes	Yes	Yes
Flood Damage Prevention <i>Comment: Section 10590</i>	Yes	Yes	Yes	Yes
Emergency Management <i>Comment: Police Department Emergency Manager</i>	Yes	Yes	Yes	Yes
Climate Change <i>Comment: In Development</i>	No	Yes	Yes	Yes
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? 1998 Not Compliant</i> <i>Comment: 2045 Will Be set for October 2021 Release</i>	Yes	No	Yes	Yes
Capital Improvement Plan <i>How often is the plan updated? 5 years</i> <i>Comment: Under Development</i>	Yes	No	Yes	Yes
Disaster Debris Management Plan <i>Comment:</i>	No	Yes	Yes	Yes
Floodplain or Watershed Plan <i>Comment: The Ventura County Watershed Protection creates and maintains countywide plans</i>	No	Yes	Yes/No	No
Stormwater Plan <i>Comment: Ordinance #775</i>	Yes	No	Yes	Yes
Urban Water Management Plan <i>Comment: City of Port Hueneme Urban Water Management Plan</i>	Yes	No	Yes	Yes

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Habitat Conservation Plan <i>Comment: Local Coastal Program</i>	Yes	No	Yes	Yes
Economic Development Plan <i>Comment: No Official</i>	No	No	No	No
Shoreline Management Plan <i>Comment: General Plan</i>	No	No	No	No
Community Wildfire Protection Plan <i>Comment: Not in wildfire area, no current plan</i>	No	Yes	Yes	No
Forest Management Plan <i>Comment: Urban Forestry</i>	No	Yes	No	No
Climate Action Plan <i>Comment: In Process for General Plan 2045</i>	Yes	No	No	Yes
Comprehensive Emergency Management Plan <i>Comment: EOP Plan Scheduled to finished 12/21</i>	Yes	Yes	Yes	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: The County of Ventura has performed a THIRA within the past 5 years. We are currently assessing the timing and requirements for the City of Ventura.</i>	No	Yes	No	No
Post-Disaster Recovery Plan <i>Comment: EOP December 2021</i>	Yes	No	Yes	Yes
Continuity of Operations Plan <i>Comment: EOP December 2021</i>	No	Yes/No	Yes/No	Yes/No
Public Health Plan <i>Comment: County of Ventura Public Health Department has a plan</i>	No	Yes	No	No
Other: Tsunami Plan <i>Comment: The County of Ventura has an existing plan that describes each City role and has been adopted locally. A revision of this document is required within the coming year 2022.</i>	No	Yes	Yes	Yes

Table 7-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i>	Yes Community Development
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	Yes

Table 7-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service <i>If yes, specify: Water/Sewer</i>	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No

Table 7-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position: Community Development</i>	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position: Public Works, Charles Cable, Don Villafana</i>	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position: Community Development and Don Villafana</i>	Yes
Staff with training in benefit-cost analysis <i>If Yes, Department /Position: City Contractor</i>	Yes
Surveyors	No
Personnel skilled or trained in GIS applications	No
Scientist familiar with natural hazards in local area	No
Emergency manager <i>If Yes, Department /Position: Emergency and Communications Manager, Police Department</i>	Yes
Grant writers	No

Table 7-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	No
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe: Facebook Postings</i>	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe: Currently re-developing our CERT team.</i>	Yes
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe: VC Alert, Everbridge, email, Door Knocking, Website</i>	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe: VC Alert</i>	Yes

Table 7-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Community Dev, PW
Who is your floodplain administrator? (department/position)	Tony Stewart, Charles Cable
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	1/21
Does your floodplain management program meet or exceed minimum requirements?	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	Not had one
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Are any RiskMAP projects currently underway in your jurisdiction?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If no, is your jurisdiction interested in joining the CRS program?</i> Yes	No
How many flood insurance policies are in force in your jurisdiction? ^a <i>What is the insurance in force?</i> \$17,732,000 <i>What is the premium in force?</i> \$37,235	57
How many total loss claims have been filed in your jurisdiction? ^a <i>What were the total payments for losses?</i> \$846	7

a. According to FEMA statistics as of March 31, 2021

Table 7-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	0611158296	N/A
DUNS #	Yes	157675430	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	Yes	03/3X	12/21/2018
Storm Ready	Yes	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	Yes	N/A	N/A

Table 7-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Addressed in 2045 Plan</i>	Low
Jurisdiction-level monitoring of climate change impacts <i>Comment: No current ability / Port of Hueneme itself conducts studies and publishes results to public</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: No resources identified at this time.</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: None available at this time</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment: Community Development/Public Works</i>	Medium
Participation in regional groups addressing climate risks <i>Comment: Public Works / Environmental Sustainability</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: Considerations outlined in General Plan</i>	Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment: Continued research for adoption is needed for General Plan</i>	Low
Identified strategies for adaptation to impacts <i>Comment: The current update to the General plan has addressed strategies for adaptation to impacts.</i>	High
Champions for climate action in local government departments <i>Comment: Local non-profits and groups address issues</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment: City Council is supportive as well as many local organizations</i>	Medium
Financial resources devoted to climate change adaptation <i>Comment: Non identified, however grants could be looked into</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment: None that we are aware of at this time</i>	Low
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: Many environmentalists in our community who monitor and report</i>	Low
Local residents' support of adaptation efforts <i>Comment: Local residences are concerned with issues and are generally supportive</i>	Low
Local residents' capacity to adapt to climate impacts <i>Comment: High likelihood to adapt based on our environmental position</i>	Medium
Local economy current capacity to adapt to climate impacts <i>Comment: None seen.</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment: Not a lot of ecosystems</i>	Medium

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

7.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

7.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **City of Port Hueneme:** General Plan
- **City of Port Hueneme:** Emergency Operations Plan (EOP)
- **Ventura County:** Operational Area Emergency Operations Plan

7.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **City of Port Hueneme: General Plan**—This comprehensive effort is underway and will be integrated into this effort to be compliant with AB2140.
- **City of Port Hueneme: Citizen Emergency Response Team (CERT)**—This effort will be a collaboration between the following: CERT volunteers, City staff, community-based organizations, with the existing CERT team manual.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

7.6 RISK ASSESSMENT

7.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 7-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 7-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Erosion Events	N/A	Biennially, 2021 most recent	Every two years 2 million cubic yards of sand is dredged from the Port of Hueneme and deposited onto the east side of the Port. This erosion is ongoing and threatens roads and other infrastructure and leads to habitat disruption of local species of birds.
Pandemic COVID-19	4482-DR	January 20, 2020 Continuing	Ongoing
High Wind	N/A	2020	Strong surface high pressure in the Great Basin along with strong north to northeast flow aloft generated strong Santa Ana winds across Ventura and Los Angeles counties. North to northeast wind gusts up to 83 mph were reported in the mountains while gusts to 59 mph were reported across the coastal plain.
Wind Event	N/A	2018	Strong surface high pressure building in the Great Basin generated strong and gusty Santa Ana winds across sections of Ventura and Los Angeles counties.
Winter Storm	N/A	2018	Strong surface high pressure in the Great Basin helped to generate a moderate Santa Ana wind event across Southern California. Strong northeast winds were reported across the mountains and valleys of Ventura and Los Angeles Counties.
Tornado	N/A	2018	A powerful winter storm brought significant rain, snow and wind to the area. Rainfall totals ranged from 1 to 2 inches across coastal and valleys areas with 2 to 4 inches in the foothills and mountains. With snow levels dropping to between 2500 and 3500 feet, significant snowfall was reported in the mountains (up to 1 to 2 feet) and even the Antelope Valley (4 to 8 inches). Numerous road closures due to winter storm conditions were reported, including Interstate 5 through the Grapevine as well as Highways 14 and 138. Additionally, thunderstorms generated a waterspout over the coastal waters as well as a very weak tornado over Ventura Harbor.
Flash Flood	N/A	2018	High pressure over the four-corners region resulted in an extended monsoonal flow pattern across Southern California. For several days, strong thunderstorms produced heavy rain, flash flooding and large hail across parts of Southern California.
Debris Flow	N/A	2018	A powerful early-season winter storm moves across Southwestern California on Halloween night. The storm produced some significant rainfall with amounts in the coastal areas ranging from 0.25 to 1.50 while the mountains received up to 2.00. In the Camarillo area, near the Springs burn scar, a mud/debris flow occurred. Otherwise just some minor nuisance flooding was reported.
Thunderstorm	N/A	2017	A powerful winter storm brought heavy rain and snow, flash flooding and gusty winds to the area. Rainfall totals from this storm generally ranged between 2 and 6 inches with locally higher amounts in some foothill areas. With such rainfall amounts, there was significant snowfall totals in the local mountains with up to 28 inches of snow reported at the resort level. Additionally, the heavy rain did generate several flash flooding events including several mud and debris flows.
High Surf	N/A	4/2014	High tides and strong surf damaged the pier, beach and local streets causing road damage, pipe damage and damage to the pier.
Tsunami		March 11, 2011	7.1 earthquake in Japan. Damage to local harbors, marinas and docks
Tsunami		February 27, 2010	8.8 Quake in Chile. Damage to local harbors, marinas and docks
Northridge Earthquake	DR-1008	January 17 – November 30, 1994	Power and communications disruptions, damage to structures
St Francis Dam Disaster		March 12, 1928	\$7 Million (1928)—Inundation of nearly the entire city, flooding, debris flows, destruction of infrastructure, high loss of life

7.6.2 Hazard Risk Ranking

Table 7-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions primarily target hazards with high and medium rankings.

Table 7-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Dam Failure	36	High
2	Earthquake	32	Medium
3	Severe Storms	24	Medium
4	Severe Weather	24	Medium
5	Landslide	18	Medium
6	Flooding	15	Low
7	Tsunami	14	Low
8	Drought	9	Low
9	Sea Level Rise	6	Low

7.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- **Street and Urban Flooding**—There are numerous areas of the city that flood to varying degrees during periods of high rain. The effects of this flooding range from street closures to damage to property, vehicles and buildings.
- **Power Outages/Emergency Power**—Local power outages have resulted from high winds and storm conditions as well as from the effects of wildland fire in the region. Many key city buildings including the Main City Hall and Council Chambers buildings have no backup power or emergency generators.

- **Debris Flows-** Following heavy rains and winter storms, substantial debris flows have occurred in the Santa Clara River, Ventura River, as well as local streams and culverts. Debris flows following wildland fires are particularly bad and can require removal of material from streams, streets, culverts and beaches.
- **Liquefaction Potential**—Nearly the entire City of Port Hueneme is in a “Liquefaction Zone”. The effects and damage caused by seismic activities can be amplified resulting in increased damage to buildings and infrastructure.
- **Homeless Population-** A significant number of persons commonly defined as “Homeless” live on and around our local beach. During high tides and significant tidal pushes, the homeless are at greater risk.
- **Tsunami Awareness and Notification**—Port Hueneme has many visitors to its beach who may not be aware of the tsunami risk. The City does not have tsunami warning sirens.
- **Wildfire Smoke**—During wildfire events in the region the air quality in the City can become hazardous, especially when the Santa Ana winds push wildfire smoke toward the coast. Wildfire can trigger PSPS events, which amplify the hazard when city buildings lacking backup power cannot operate air conditioning systems.

Actions addressing these issues were prioritized for consideration in the action plan in this annex.

7.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 7-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 7-13. Status of Previous Plan Actions

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>OA 6—Develop a public outreach program that informs property owners located in the dam and levee failure inundation areas about voluntary flood insurance.</p> <p><i>Comment: Action status unknown due to staff turnover</i></p>			✓	PHE-7
<p>OA 10—Seismically retrofit or upgrade seismically deficient government facilities and pre-identified shelter facilities.</p> <p><i>Comment: Not completed due to lack of funding and staff capacity</i></p>			✓	PHE-1
<p>OA 11—Develop and implement plans to increase the building owner’s general knowledge of and appreciation for the value of seismic upgrading of the building’s structural and nonstructural elements.</p> <p><i>Comment: Action status unknown due to staff turnover</i></p>			✓	PHE-9
<p>OA 13—Reinforce roads/bridges from flooding through protection activities, including elevating the roads/bridges and installing/widening culverts beneath the roads/bridges or upgrading storm drains.</p> <p><i>Comment: City does not have bridges but storm drain upgrades are in process in the location of the beach. Continued work needs to continue on other parts of the city.</i></p>			✓	PHE-10
<p>OA 18—Continue to participate in the NWS TsunamiReady Program through continued implementation of Guideline 4: Community Preparedness measures, including public outreach material and curriculum.</p> <p><i>Comment: Continued participation in the program</i></p>			✓	PHE-11

7.8 HAZARD MITIGATION ACTION PLAN

Table 7-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 7-15 identifies the priority for each action. Table 7-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 7-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action PHE-1 —Mitigate beach erosion to protect shoreline roads, properties, harbor facilities, and the natural habitat, including endangered species.						
<i>Hazards Mitigated:</i> Flooding, Sea Level Rise, Tsunami, Severe Storms						
New & Existing	2, 13, 14, 18	USACE	Public Works	Medium	General Funds, FEMA HMA (BRIC, FMA, HMGP)	Ongoing
Action PHE-2 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<i>Hazards Mitigated:</i> Landslide, Earthquake, Severe Storms, Severe Weather, Flooding, Wildfire, Dam Failure, Sea Level Rise, Tsunami						
Existing	1, 4, 6, 9, 10, 11, 16	Public Works	Community Development	High	FEMA HMA (BRIC, FMA, HMGP)	Short-term
Action PHE-3 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including shoreline development.						
<i>Hazards Mitigated:</i> Landslide, Earthquake, Severe Storms, Severe Weather, Flooding, Wildfire, Dam Failure, Sea Level Rise, Tsunami, Drought						
New & Existing	1, 2, 10, 11, 12, 15, 16, 19	Community Development	Public Works	Low	Staff Time, General Funds	Ongoing
Action PHE-4 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> Landslide, Severe Storms, Severe Weather, Flooding, Wildfire, Dam Failure, Sea Level Rise, Tsunami, Drought						
New & Existing	1, 2, 3, 4, 6, 10, 15, 17, 19	Community Development	Public Works	Low	Staff Time, General Funds	Short-term
Action PHE-5 —Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:						
<ul style="list-style-type: none"> • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts. 						
<i>Hazards Mitigated:</i> Severe Storms, Severe Weather, Flooding, Dam Failure, Sea Level Rise, Tsunami						
New & Existing	1, 2, 4, 6, 9, 10, 11, 13, 14, 15, 17, 18, 19	Public Works		Low	Staff Time, General Funds	Ongoing
Action PHE-6 —Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:						
<ul style="list-style-type: none"> • Adopt a Climate Action Plan to reflect new State legislation, changing priorities, and environmental sustainability and greenhouse gas (GHG) reduction policies and goals. • Adopt modifications to existing plans and procedures to meet climate change issues and impacts. 						
<i>Hazards Mitigated:</i> Landslide, Severe Storms, Severe Weather, Flooding, Wildfire, Dam Failure, Sea Level Rise, Tsunami, Drought						
New & Existing	1, 3, 4, 9, 10, 13, 14, 15, 16, 17, 19	Community Development	Public Works	Low	Staff Time, General Funds	Short-term
Action PHE-7 —Purchase generators for critical facilities and infrastructure that lack adequate backup power, including the Emergency Operations Center and other critical facilities throughout the city.						
<i>Hazards Mitigated:</i> Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Tsunami, Wildfire						
Existing	1, 2, 7, 10	Public Works	City Manager	Medium	General Funds, FEMA HMA (BRIC, HMGP)	Long-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action PHE-8 —Develop a public outreach program that informs property owners located in the dam and levee failure inundation areas about voluntary flood insurance.						
<i>Hazards Mitigated:</i> Severe Storms, Severe Weather, Flooding, Dam Failure, Sea Level Rise, Tsunami						
Existing	1, 2, 7, 10, 17, 19	Community Development		Low	Staff Time/ General Funds	Short-Term
Action PHE-9 — Develop and implement plans to increase the building owner’s general knowledge of and appreciation for the value of seismic upgrading of the building’s structural and nonstructural elements.						
<i>Hazards Mitigated:</i> Earthquake						
Existing	1, 2, 7, 10, 17, 19	Community Development	Public Works	Low	Staff Time / General Fund	Short-Term
Action PHE-10 —Reinforce roads from flooding through protection activities, including elevating the roads and installing/widening culverts beneath the roads/bridges or upgrading storm drains.						
<i>Hazards Mitigated:</i> Severe Storms, Severe Weather, Flood, Sea Level Rise, Tsunami						
Existing	2, 4, 6, 9, 11	Public Works		Medium	FEMA HMA (BRIC, FMA, HMGP)	Long-Term
Action PHE-11 —Continue to participate in the NWS TsunamiReady and StormReady Programs through continued implementation of Guideline 4: Community Preparedness measures, including public outreach material and curriculum.						
<i>Hazards Mitigated:</i> Severe Storms, Severe Weather, Flood, Sea Level Rise, Tsunami						
New & Existing	1, 2, 6, 7, 8, 12, 17, 18, 19	Public Works		Low	General Funds	Ongoing
Action PHE-12 —Install City tsunami warning siren network.						
<i>Hazards Mitigated:</i> Tsunami						
New & Existing	1, 2, 7	Public Works		Medium	FEMA HMA (BRIC, FMA, HMGP)	Short-Term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date
 Acronyms used here are defined at the beginning of this volume.

Table 7-15. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	4	High	Medium	Yes	Yes	Yes	High	High
2	7	High	High	Yes	Yes	No	Medium	High
3	8	Medium	Low	Yes	No	Yes	High	Low
4	9	Medium	Low	Yes	No	Yes	High	Low
5	13	Medium	Low	Yes	No	Yes	High	Low
6	11	Medium	Low	Yes	No	Yes	High	Medium
7	4	High	Medium	Yes	Yes	No	Medium	High
8	6	Low	Low	Yes	No	Yes	High	Low
9	6	Low	Low	Yes	No	Yes	High	Low
10	5	High	Medium	Yes	Yes	No	Medium	High
11	9	Medium	Low	Yes	No	Yes	High	Medium
12	3	Medium	Medium	Yes	Yes	No	Medium	Medium

a. See the introduction to this volume for explanation of priorities.

Table 7-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building ^b
High-Risk Hazards								
Dam Failure	PHE-5	PHE-2	PHE-8		PHE-7		PHE-6	PHE-3, 4, 5, 6
Medium-Risk Hazards								
Earthquake		PHE-2	PHE-9		PHE-7		PHE-6	PHE-3, 4, 6
Severe Storms	PHE-5	PHE-2, 10	PHE-8	PHE-1		PHE-10	PHE-6	PHE-3, 4, 5, 6, 11
Severe Weather	PHE-5	PHE-2, 10	PHE-8		PHE-7	PHE-10	PHE-6	PHE-3, 4, 5, 6, 11
Landslide		PHE-2			PHE-7		PHE-6	PHE-3, 4, 6
Low-Risk Hazards								
Flooding	PHE-5	PHE-2, 10	PHE-8	PHE-1	PHE-7	PHE-10	PHE-6	PHE-3, 4, 5, 6, 11
Tsunami	PHE-5, 12	PHE-2, 10	PHE-8, 12	PHE-1	PHE-7, 12	PHE-10	PHE-6	PHE-3, 4, 5, 6, 11
Drought		PHE-2					PHE-6	PHE-3, 4, 6
Sea Level Rise	PHE-5	PHE-2, 10	PHE-8	PHE-1			PHE-6	PHE-3, 4, 5, 6, 11

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

7.9 PUBLIC OUTREACH

Table 7-17 lists public outreach activities for this jurisdiction.

Table 7-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Social media and website (in coordination with General Plan)	9-02	45

7.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

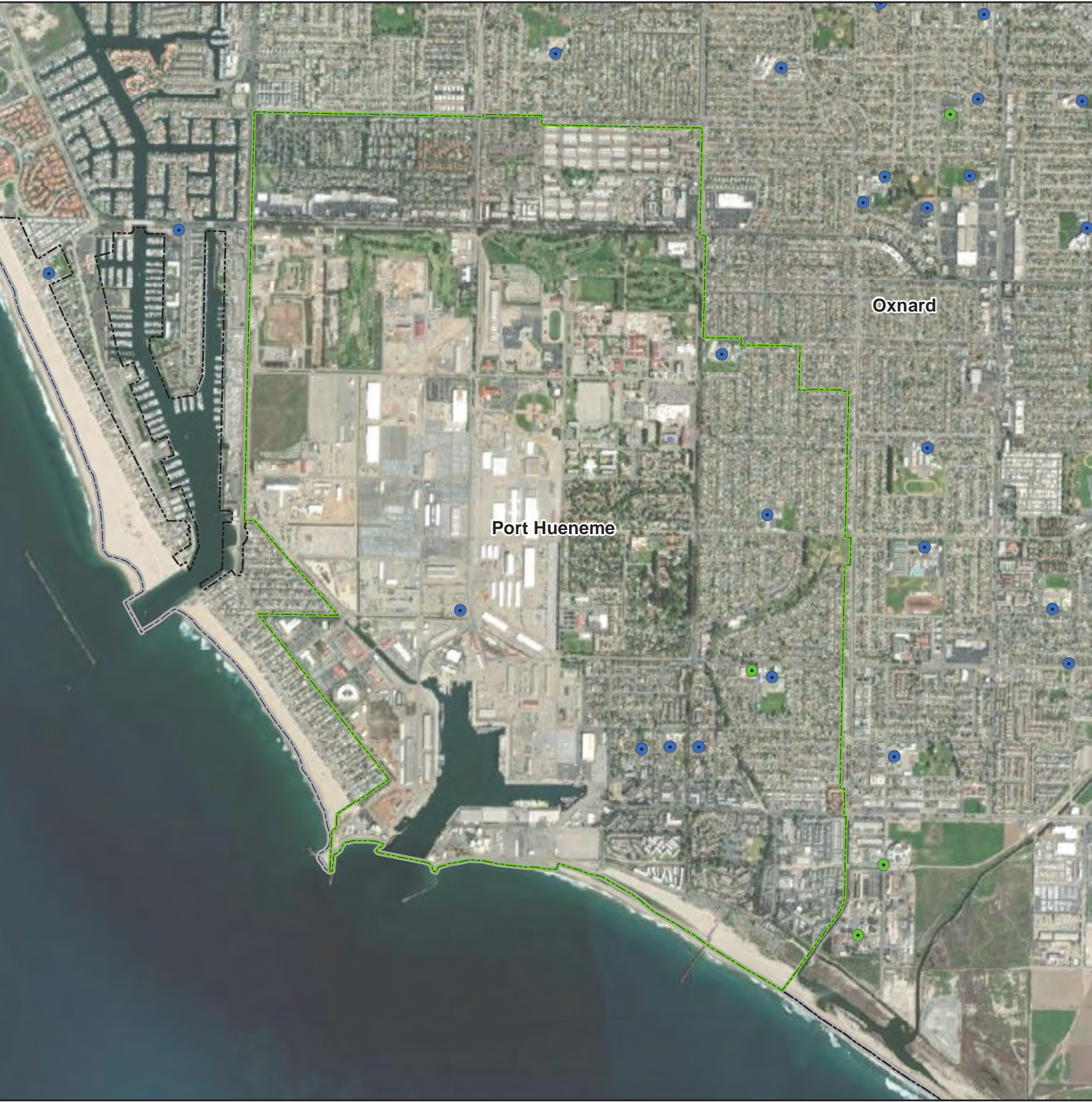
- **City of Port Hueneme Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Port Hueneme General Plan**—The General Plan is under revision and had been aligned to be compliant with AB2140. It was reviewed for the capability assessment and action plan development.

The following outside resources and references were reviewed:

Hazard Mitigation Plan Annex Development Toolkit—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

Port Hueneme

Critical Facilities (1 of 2)



- Food, Water, Shelter
- Safety and Security
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri

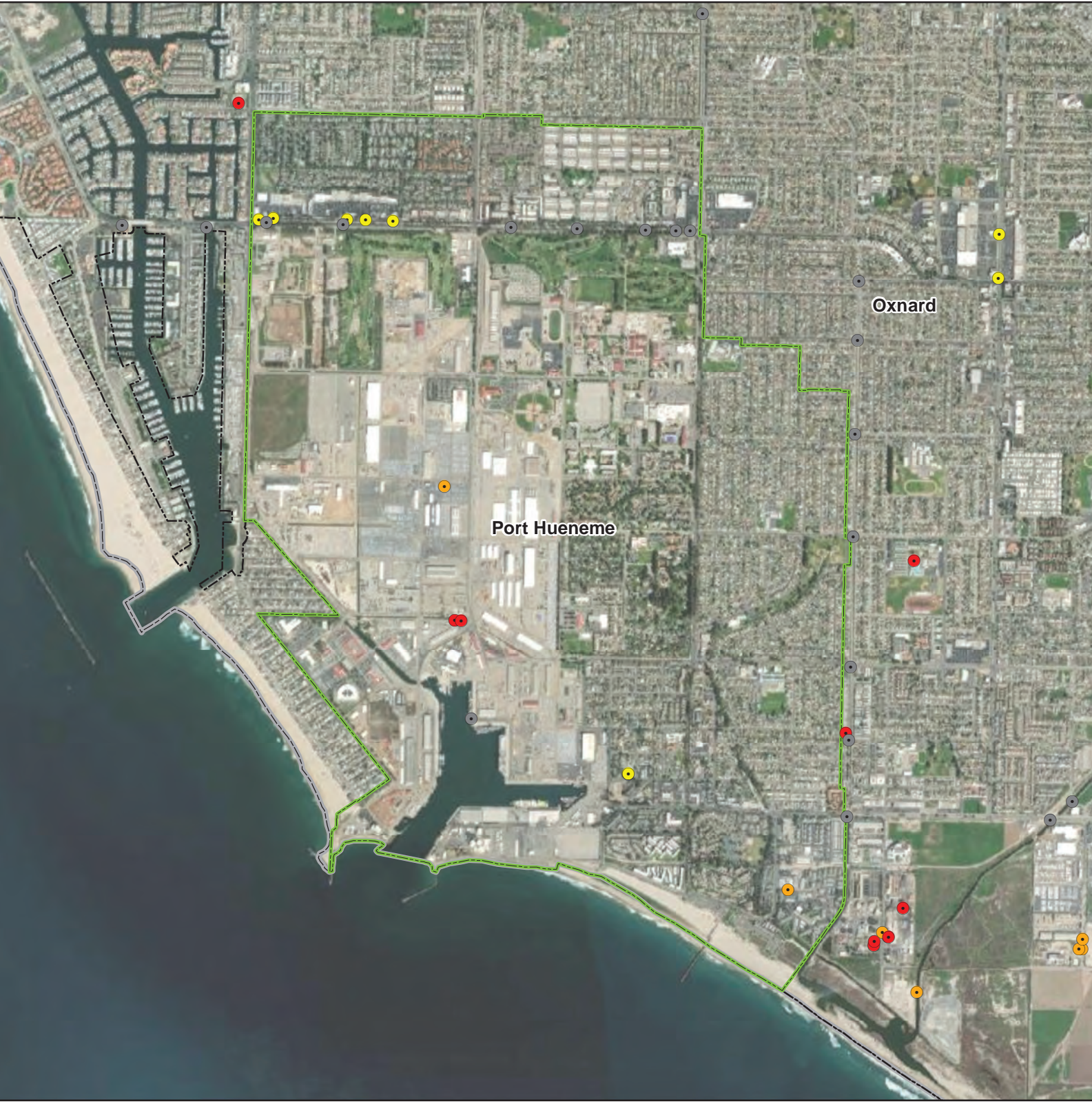


Port Hueneme

Critical Facilities (1 of 2)

- Communications
- Energy
- Hazardous Material
- Transportation
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri







Port Hueneme

Dam Failure Inundation Areas



Oxnard

Port Hueneme

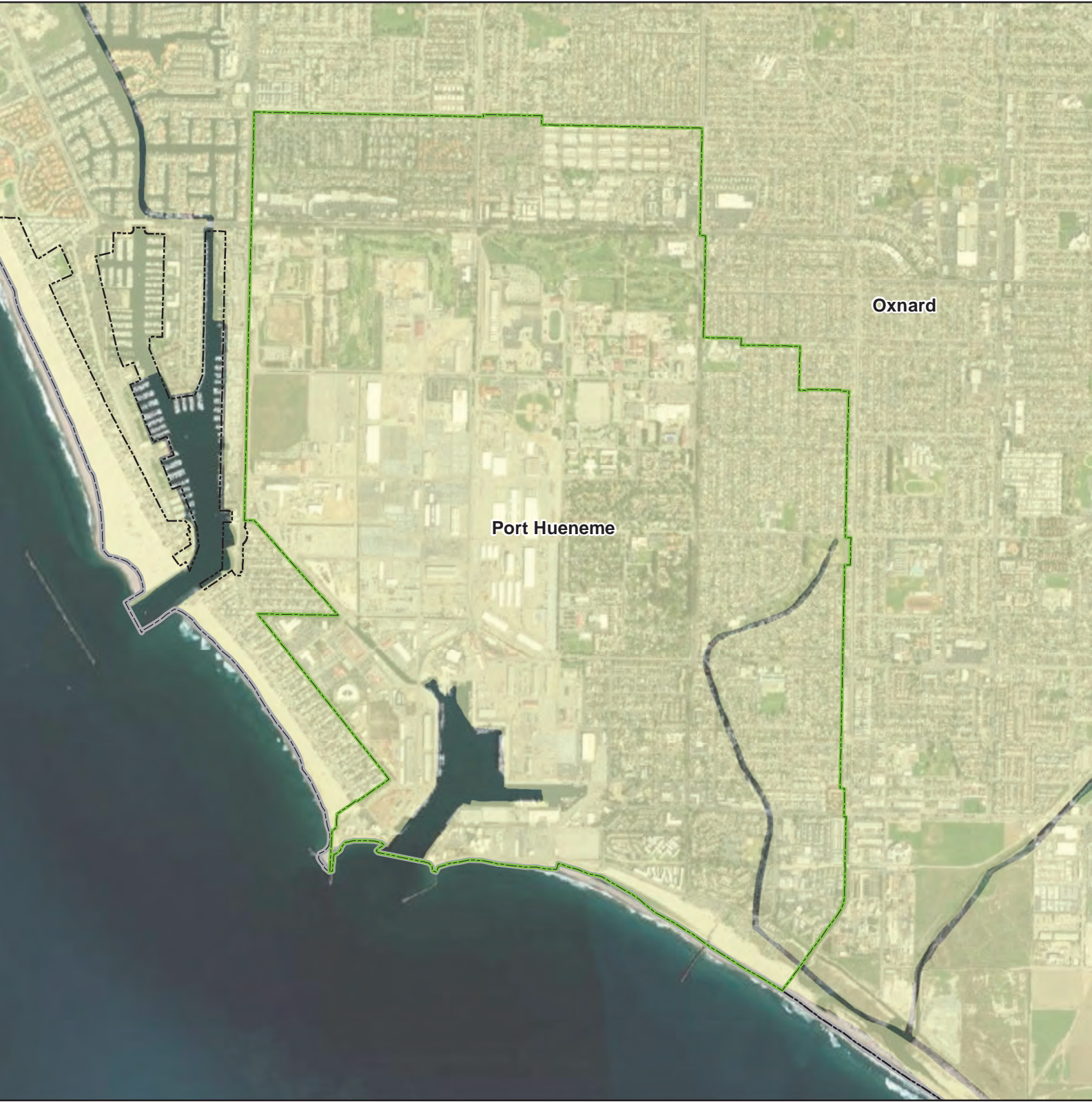
-  Combined Inundation Areas
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CA DWR, Esri







Port Hueneme

NEHRP Soil Class



Oxnard

Port Hueneme

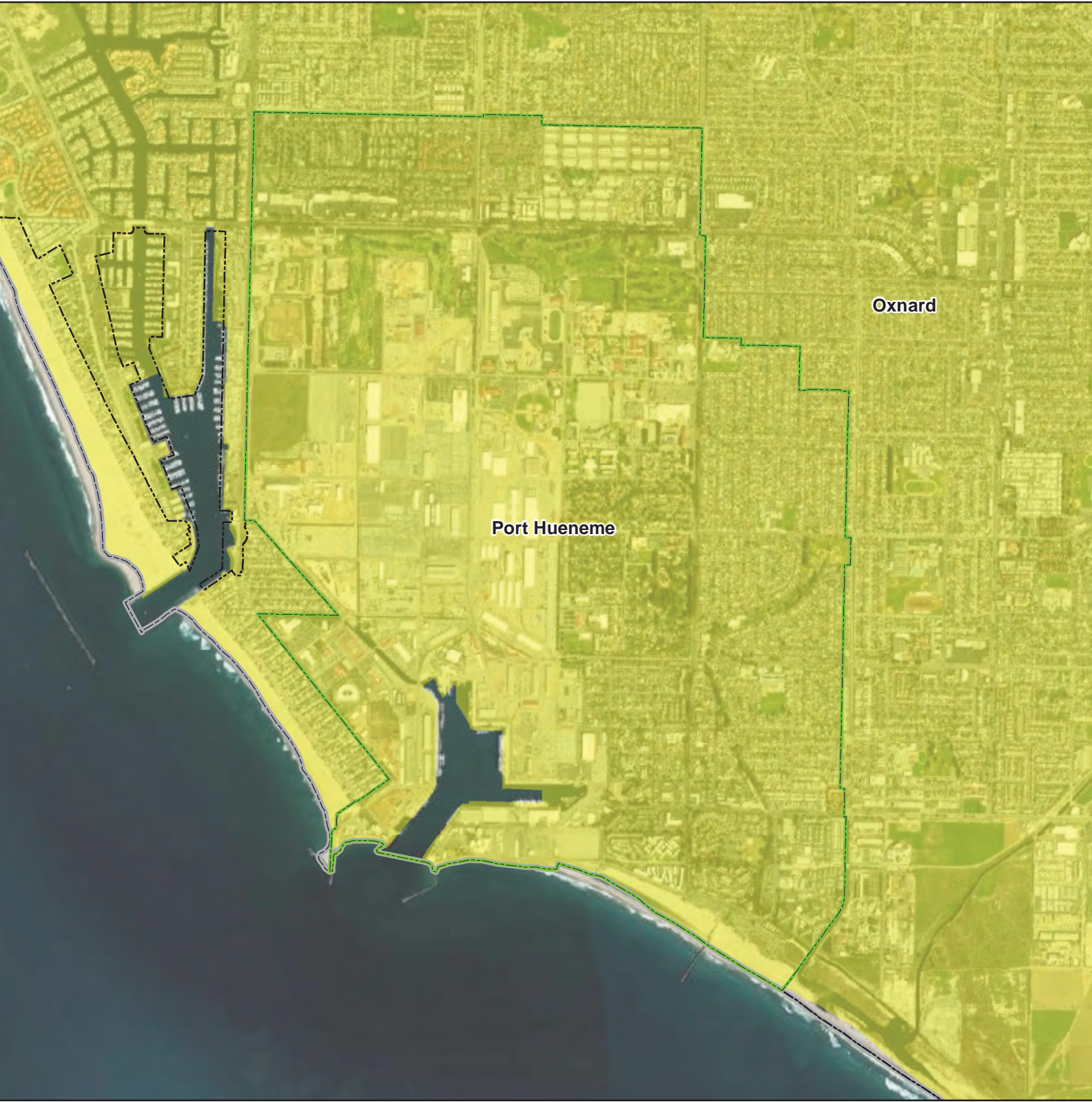
-  D (Stiff soil)
-  Selected City
-  Incorporated Cities
-  County Boundary





Data Sources: Ventura Co.,
CGS, Esri



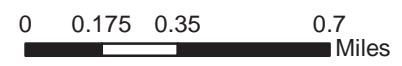
Port Hueneme

Liquefaction Susceptibility



-  Liquefaction zone
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
Esri



Port Hueneme

100-Year Probabilistic Earthquake Scenario

Oxnard


Port Hueneme

Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Selected City

 Incorporated Cities

 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.175 0.35 0.7
 Miles

Port Hueneme

Oak Ridge M7.16 Earthquake Scenario



Oxnard

Port Hueneme

Mercalli Intensity Scale

-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Selected City
-  Incorporated Cities
-  County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri




Port Hueneme

Pitas Point M7.12 Earthquake Scenario

Oxnard


Port Hueneme

Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Selected City

 Incorporated Cities

 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.175 0.35 0.7
 Miles

Port Hueneme

San Cayetano M7.16 Earthquake Scenario



Oxnard

Port Hueneme

Mercalli Intensity Scale

- VI (Strong/Light)
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

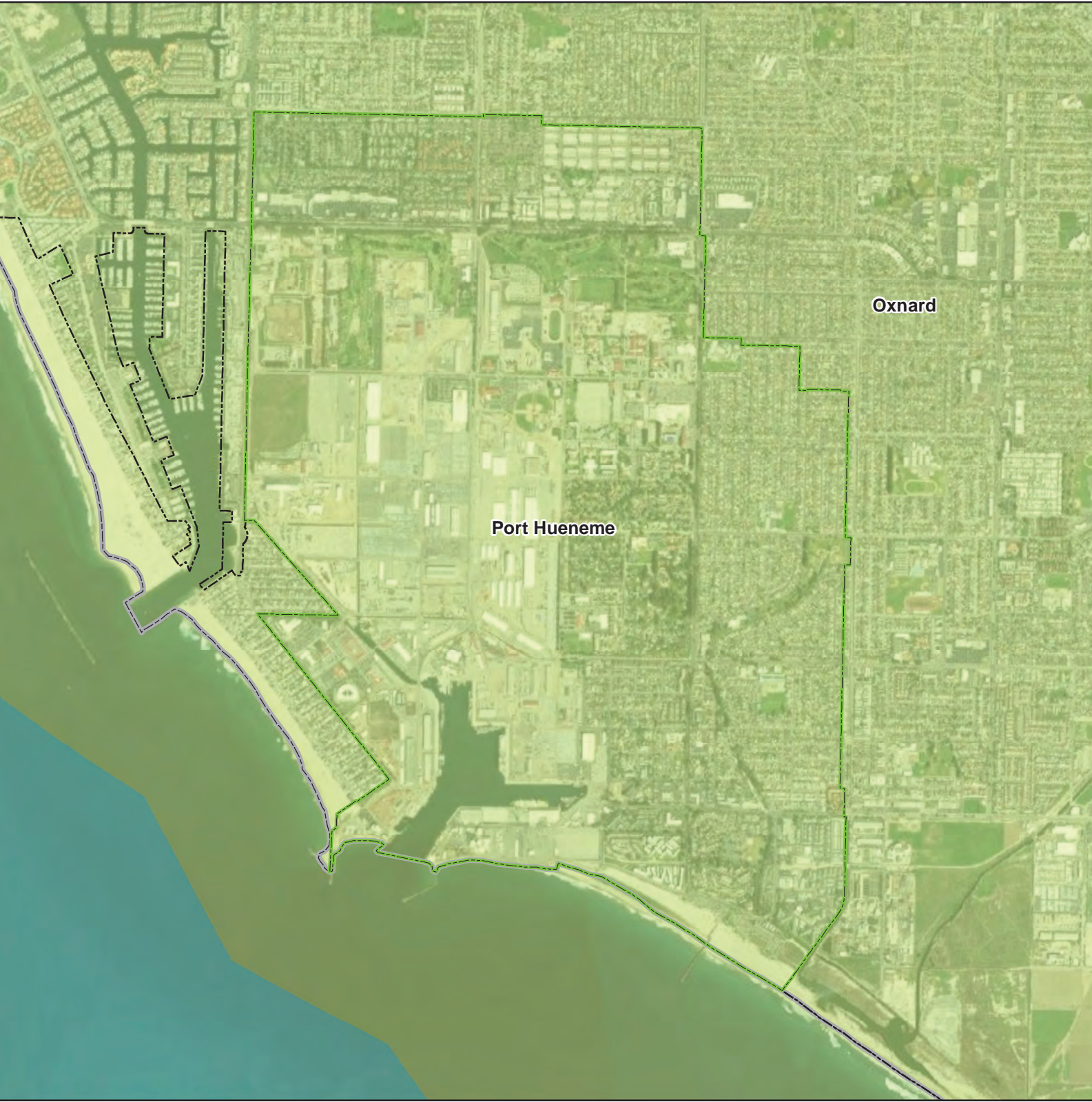
Data Sources: Ventura Co.,
USGS, Esri



0 0.175 0.35 0.7 Miles

Port Hueneme


S. San Andreas M8.03 Earthquake Scenario



Oxnard


Port Hueneme


Mercalli Intensity Scale

 V (Moderate/Very Light)

 VI (Strong/Light)

 Selected City

 Incorporated Cities

 County Boundary






Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



Port Hueneme

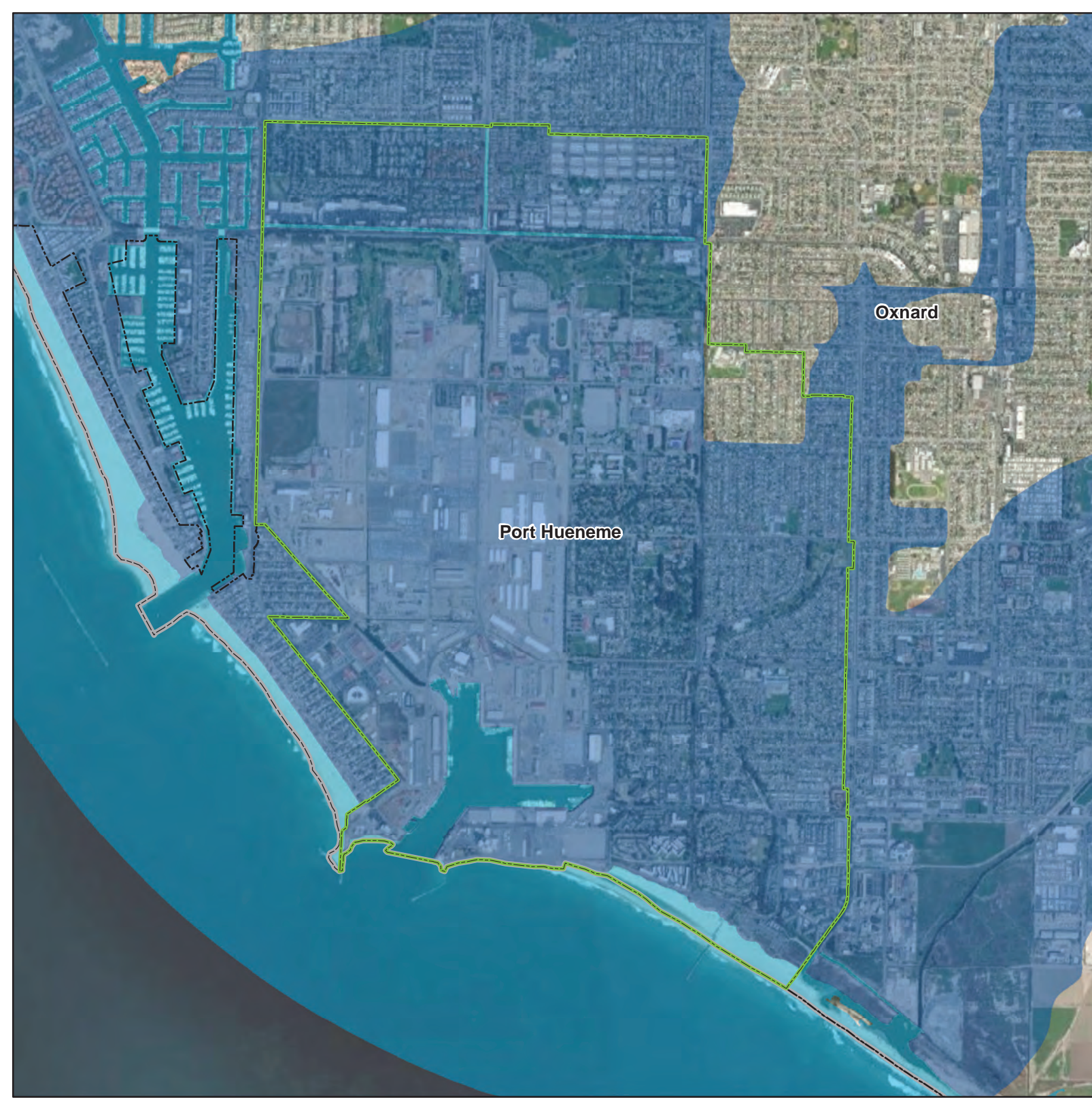
FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
FEMA, Esri










0 0.175 0.35 0.7
Miles



Port Hueneme

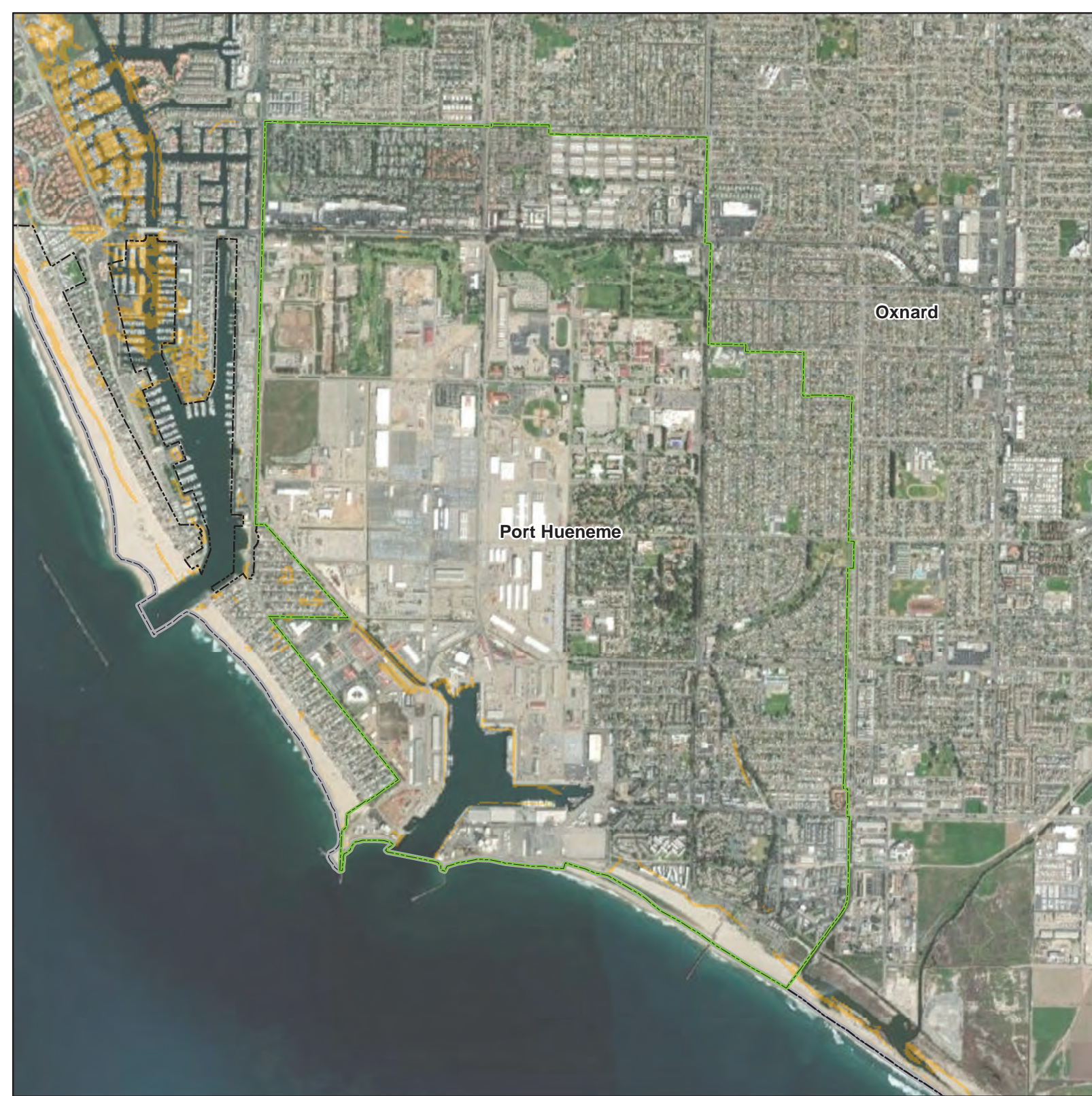
Susceptibility to Deep-Seated Landslides

-  Low
-  Moderate
-  High
-  Very High
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri

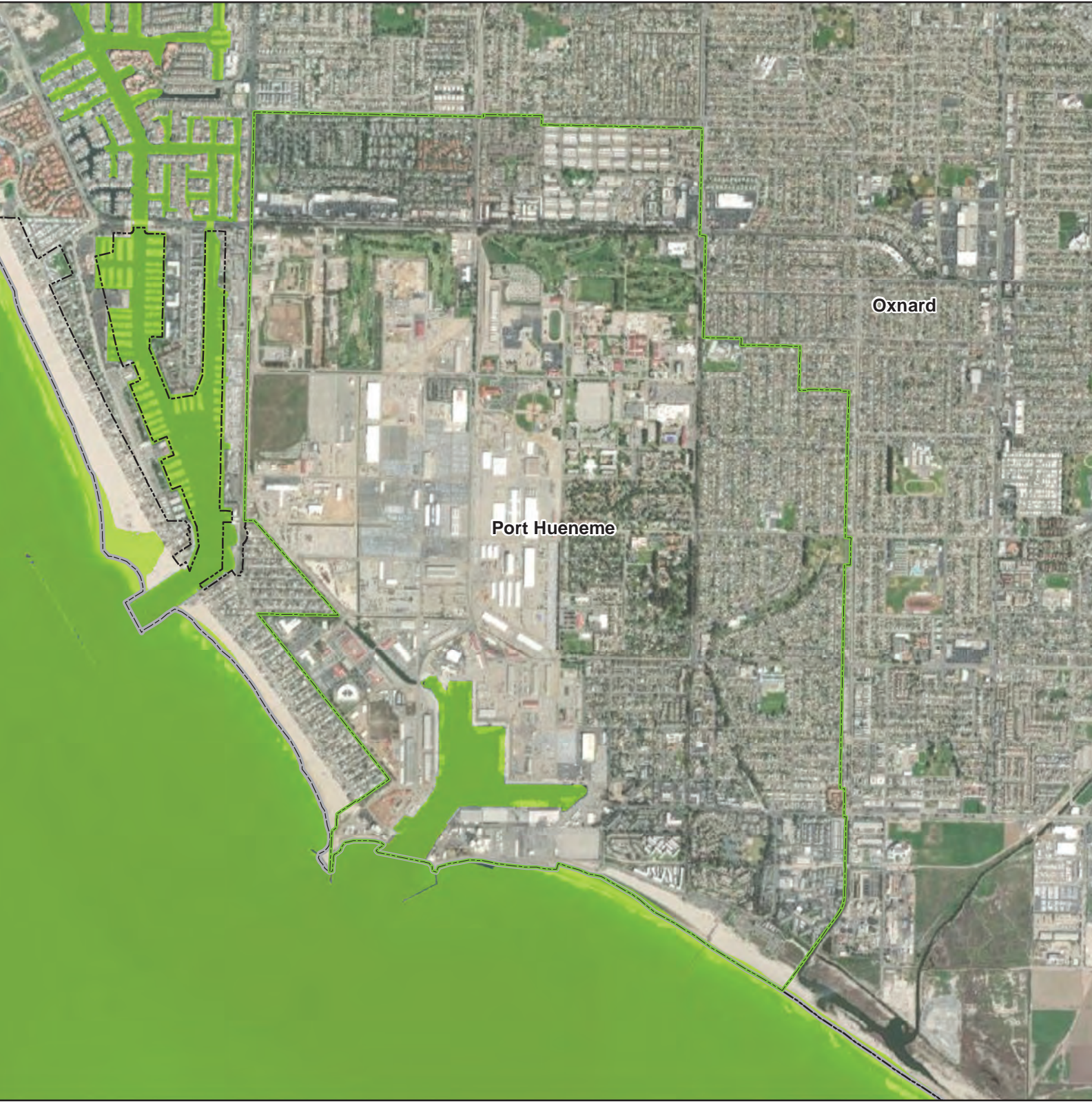






0 0.175 0.35 0.7
Miles



Port Hueneme

Sea Level Rise of 25 cm (9.8 in.)



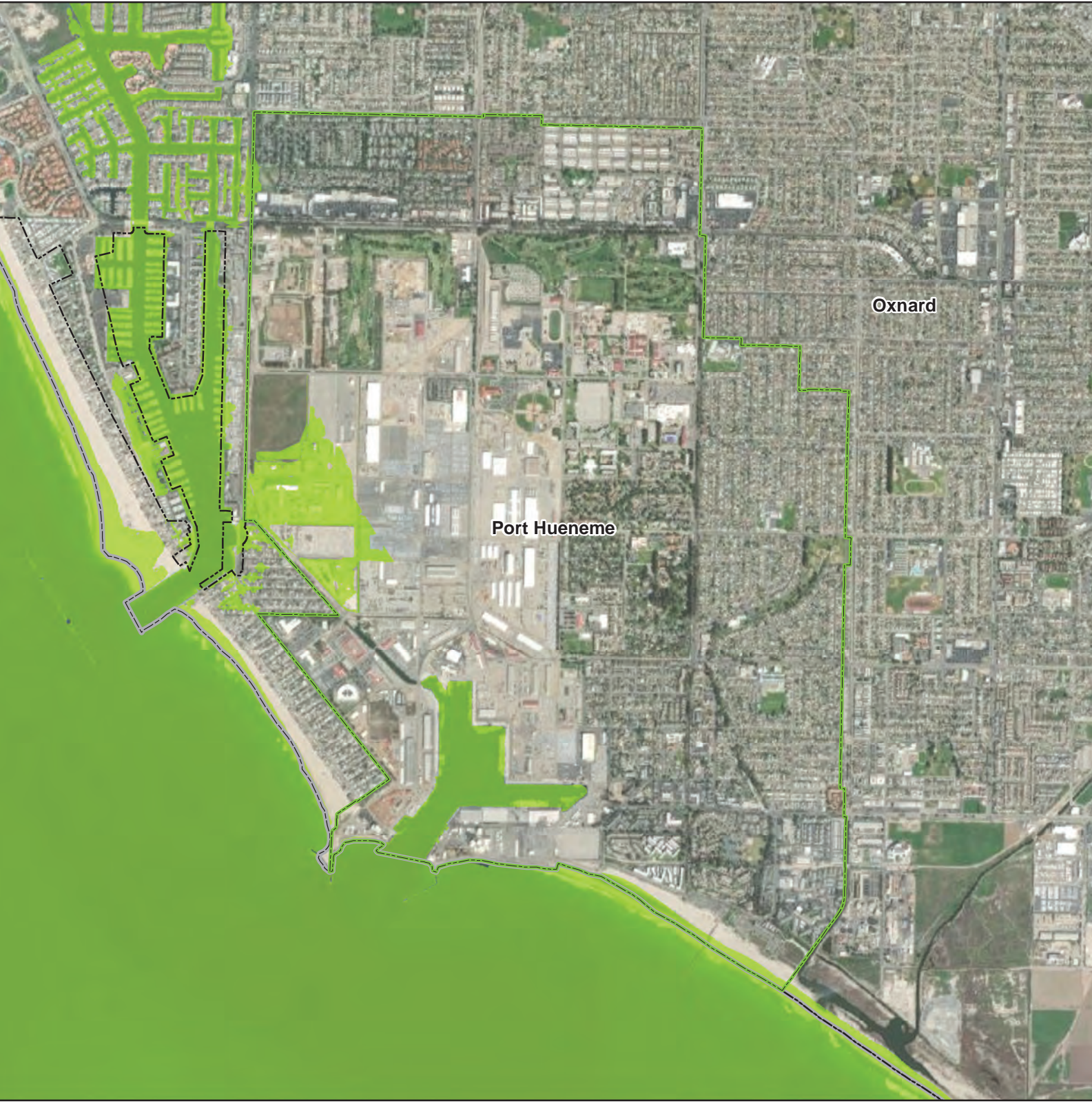
-  Sea Level Rise Inundation Area
-  Selected City
-  Incorporated Cities
-  County Boundary





Data Sources: Ventura Co., OCOF, Esri



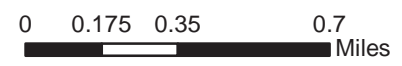
Port Hueneme

Sea Level Rise of 100 cm (39.4 in.)







-  Sea Level Rise Inundation Area
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co., OCOF, Esri



Port Hueneme

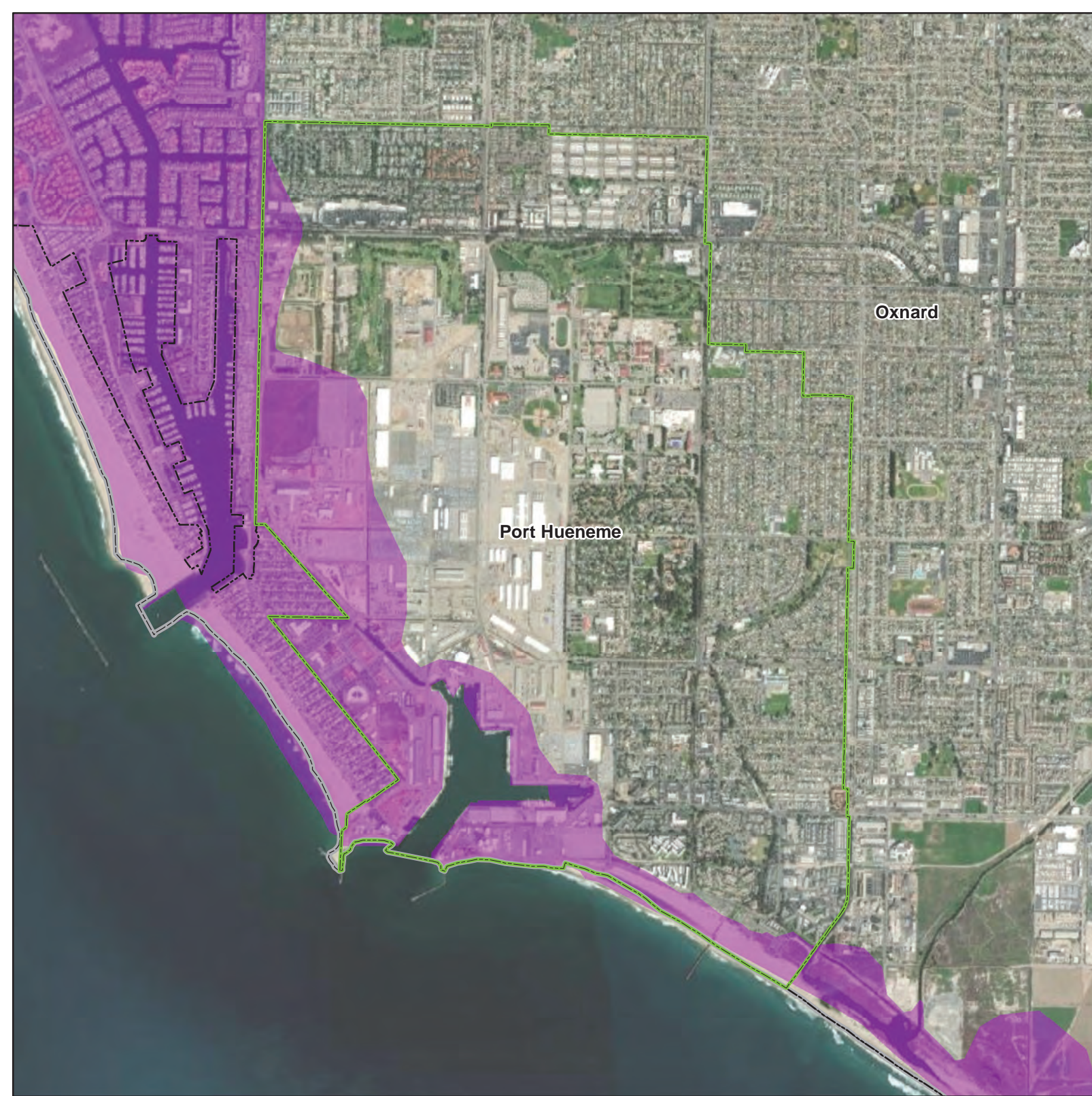
Tsunami Inundation Zones

-  Inundation Zones
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri



0 0.175 0.35 0.7
Miles



8. CITY OF SANTA PAULA

8.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Scott Varner, Support Services Commander
214 S. 10th Street
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Alternate Point of Contact

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Santa Paula, CA 93060
805-525-4474 ext. 113
kbader@spcity.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 8-1.

Table 8-1. Local Mitigation Planning Team Members

Name	Title
Dan Singer	City Manager
James Mason	Community & Economic Development Director
Jeff Mitchem	Planning Manager
Tom Tarantino	Associate Planner
Alexander Wallsten	Administrative Analyst

8.2 JURISDICTION PROFILE

8.2.1 Location and Features

The City of Santa Paula is in Ventura County, California, United States.

The current boundaries generally extend out from 34.3542° N, 119.0593° W, encompassing an area of 5.69 square miles.

The City of Santa Paula, California is located 65 miles northwest of Los Angeles and 14 miles east of Ventura and the coastline of the Pacific Ocean. Santa Paula is near the geographical center of Ventura County, situated in the rich agricultural Santa Clara River Valley. The City is surrounded by rolling hills and rugged mountain peaks in addition to orange, lemon, and avocado groves. In fact, Santa Paula is referred to as the “Citrus Capital of the World.”

8.2.2 History

The city of Santa Paula was incorporated in 1902. The original community that has become known as Santa Paula was established by the Chumash Indians as the villages of Mupu and Srswa. The land was later given away as part of a Spanish land grant to Rancho Santa Paula and Saticoy in 1840. In the 1860s the area was subdivided into small farms. In 1880, oil was discovered in Santa Paula leading to the formation of the Union Oil Company in 1890. The City of Santa Paula was incorporated on April 22, 1902. In the early 1900s Santa Paula was considered the pre-Hollywood film capital, the “Queen of the Silver Screen.” Even today, Santa Paula is noted for its movie personalities (silent and sound) who resided in and adjacent to the city and a TV or movie crew is not an unusual sight in the community.

8.2.3 Governing Body Format

The City of Santa Paula assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.

The City of Santa Paula is governed by a five-member city council. The City consists of eight departments: Administration, City Clerk, Community and Economic Development, Finance, Human Resources, Parks & Recreation, Police, and Public Works. The city has 10 commissions and task forces, which report to the City Council. The City currently employs a total of 126 employees, 98 of which are full-time.

8.3 CURRENT TRENDS

8.3.1 Population

According to the California Department of Finance, the population of the Santa Paula as of January 2020 was 30,389. Since 2010, the population has grown at an average annual rate of 0.27 percent.

8.3.2 Development

Development interest in Santa Paula has greatly increased in recent years, particularly since construction began on the highly visible East Area 1 / Harvest at Limoneira project. As Santa Paula is surrounded by a mix of greenbelt and urban curb restrictions, the majority of development proposals are for infill and adaptive reuse projects—areas where Santa Paula offers numerous opportunities. Recent legislation aimed at streamlining the entitlement process for housing projects has also generated a great deal of interest from developers.

Table 8-2 summarizes development trends in the period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 8-2. Recent and Expected Future Development Trends

Criterion	Response																														
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?	No																														
Is your jurisdiction expected to annex any areas during the performance period of this plan? <i>If yes, describe land areas and dominant uses.</i>	<p>Yes, Santa Paula West Business Park</p> <p>The Santa Paula West Business Park is located on 53 acres of agricultural land, currently zoned AE-40 (Agricultural Exclusive, 40 acre minimum parcel size) in the County of Ventura, on the southwestern boundary of the City of Santa Paula. It is bound to the north by Telegraph Road and residential property (zoned MHP and R-2), to the east by existing industrial and commercial development (zoned CG and C-LI), to the south by agriculture (zoned AE 40 in the County of Ventura) and to the west by the Adams Creek and agriculture (zoned AE-40 in the County of Ventura).</p> <p>The area is identified as SP-6, West Area 2 in the City of Santa Paula's General Plan. It is within the Sphere of Influence and the city urban restriction boundary of the City of Santa Paula with frontage along State Route 126 and Telegraph Road and is bisected by the railroad right-of-way. While it is just west of the Santa Paula City limits, the area is outside of the Santa Paula -Ventura Greenbelt. Annexation of the Santa Paula West Business Park into the City of Santa Paula has been approved by the City Council, and is currently under review by Ventura County LAFCo.</p>																														
<i>If yes, who currently has permitting authority over these areas?</i>	County of Ventura																														
Are any areas targeted for development or major redevelopment in the next five years? <i>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</i>	<p>Yes</p> <p>Santa Paula West Business Park (SP-6/West Area 2), see above.</p> <p>East Area 1 / Harvest at Limoneira—500-acres on eastern end of the City. Remaining 1,100 homes (of approved 1,500) to be constructed under adopted Specific Plan, along with commercial areas and park facilities. Hazard mitigation included in EA1 Specific Plan (SP-3)/EIR.</p>																														
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?	<table border="1"> <thead> <tr> <th></th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td>4</td> <td>10</td> <td>2</td> <td>41</td> <td>174</td> </tr> <tr> <td>Multi-Family</td> <td>8</td> <td>0</td> <td>11</td> <td>0</td> <td>0</td> </tr> <tr> <td>Other (commercial, mixed use, etc.)</td> <td>1</td> <td>2</td> <td>1</td> <td>1</td> <td>0</td> </tr> <tr> <td>Total</td> <td>13</td> <td>12</td> <td>14</td> <td>42</td> <td>174</td> </tr> </tbody> </table>		2016	2017	2018	2019	2020	Single Family	4	10	2	41	174	Multi-Family	8	0	11	0	0	Other (commercial, mixed use, etc.)	1	2	1	1	0	Total	13	12	14	42	174
	2016	2017	2018	2019	2020																										
Single Family	4	10	2	41	174																										
Multi-Family	8	0	11	0	0																										
Other (commercial, mixed use, etc.)	1	2	1	1	0																										
Total	13	12	14	42	174																										
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	Hillside residences along northerly city boundary are either within or abutting high-fire risk areas as defined by CAL FIRE/VCFPD. Residences and businesses, including a portion of those in the new East Area 1/Harvest at Limoneira development, on the east end of the city are within FEMA flood hazard areas of Santa Paula Creek and/or Santa Clara River. These flood/liquefaction hazards have been mitigated by requirements of applicable Specific Plan(s) or development conditions.																														
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	Santa Paula is largely built-out within city limits. Remaining pockets of developable land within city limits are situated near the southeast and southwest corners. These areas either have development proposals (with hazard mitigation) under review, or an adopted Specific Plan (also including hazard mitigation).																														

8.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 8-3.
- Development and permitting capabilities are presented in Table 8-4.
- An assessment of fiscal capabilities is presented in Table 8-5.
- An assessment of administrative and technical capabilities is presented in Table 8-6.
- An assessment of education and outreach capabilities is presented in Table 8-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 8-8.
- Classifications under various community mitigation programs are presented in Table 8-9.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 8-10.

Table 8-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: 2019 California Building Code</i>	Yes	No	Yes	No
Zoning Code <i>Comment: COSP Municipal Code, Chapter 16</i>	Yes	No	Yes	Yes
Subdivisions <i>Comment: State Subdivision Map Act COSP Municipal Code, Chapter 16.80 Subdivision Regulations</i>	Yes	No	Yes	Yes
Stormwater Management <i>Comment: COSP Municipal Code, Chapter 54</i>	Yes	No	Yes	No
Post-Disaster Recovery <i>Comment: COSP Municipal Code, Chapter 150</i>	Yes	No	Yes	Yes
Real Estate Disclosure <i>Comment: COSP Municipal Code, Chapter 156.043</i>	Yes	No	Yes	No
Growth Management <i>Comment: COSP Municipal Code, Chapter 16.106 (7-19-04)</i>	Yes	No	Yes	No
Site Plan Review <i>Comment: COSP Municipal Code, Chapter 16.226</i>	Yes	No	Yes	Yes
Environmental Protection <i>Comment: COSP Municipal Code, Chapter</i>	Yes	No	Yes	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Flood Damage Prevention <i>Comment: COSP Municipal Code, Chapter 151</i>	Yes	No	Yes	Yes
Emergency Management <i>Comment: COSP Emergency Operations Plan 2019</i>	Yes	No	Yes	Yes
Climate Change <i>Comment: COSP 2040 General Plan 4-6 Environmental and Cultural Resources, C. Air Quality and Greenhouse Gases</i>	Yes	No	Yes	No
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? Yes</i> <i>Comment: COSP 2040 General Plan</i>	Yes	No	Yes	Yes
Capital Improvement Plan <i>How often is the plan updated? Annually (Five Years)</i> <i>Comment: California Government Code §65103(c); COSP 2040 General Plan</i>	Yes	No	Yes	Yes
Disaster Debris Management Plan <i>Comment: Ventura County Disaster Recovery Plan, Adopted by BOS in April 2019</i>	Yes	Yes	Yes	Yes
Floodplain or Watershed Plan <i>Comment: The City participates in the National Flood Insurance Program (NFIP)</i>	Yes	No	Yes	Yes
Stormwater Plan <i>Comment: Ventura County Storm Water Quality Management Program, COSP 2024 General Plan 4-6 Environmental and Cultural Resources, H. Water Quality</i>	Yes	No	Yes	No
Urban Water Management Plan <i>Comment: COSP 2020 Urban Water Management Plan</i>	Yes	No	Yes	No
Habitat Conservation Plan <i>Comment: N/A</i>	No	No	No	Yes
Economic Development Plan <i>Comment: City Council Strategic Goals Approved July 2021//Economic Development Strategic Plan under development</i>	Yes	No	No	Yes
Shoreline Management Plan <i>Comment: N/A</i>	No	No	No	No
Community Wildfire Protection Plan <i>Comment: COSP Emergency Operations Plan 2019, Section 8, Threat Assessments 8—Wildland Fire</i>	Yes	Yes	Yes	Yes
Forest Management Plan <i>Comment: No forest area, unknown on plans or jurisdiction if required.</i>	No	Unknown	Unknown	Yes
Climate Action Plan <i>Comment: N/A</i>	No	Unknown	Unknown	Yes
Comprehensive Emergency Management Plan <i>Comment: COSP Emergency Operations Plan 2019</i>	Yes	No	Yes	No
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: COSP Emergency Operations Plan 2019 Section 8, Threat Summary and Assessments</i>	Yes	No	Yes	No
Post-Disaster Recovery Plan <i>Comment: COSP Emergency Operations Plan 2019</i>	Yes	Yes	Yes	Yes
Continuity of Operations Plan <i>Comment: COSP Emergency Operations Plan 2019 Part one-35</i>	Yes	Yes	Yes	Yes
Public Health Plan <i>Comment: COSP Emergency Operations Plan 2019 addressed Public Health Emergencies, County of Ventura Health Care Agency Public Health Emergency Response Plan (ERP)</i>	No	Yes	Yes	Yes

Table 8-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i> Building and Safety	Yes
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	Currently being developed

Table 8-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service <i>If yes, specify:</i> Water and Sewer	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

Table 8-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Public Works/Assistant City Engineer/Community Development /Director & Manager	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Public Works/City Engineer	Yes
Planners or engineers with an understanding of natural hazards	No
Staff with training in benefit-cost analysis	No
Surveyors	No
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Planning Department / Associate Planner	Yes
Scientist familiar with natural hazards in local area	No
Emergency manager <i>If Yes, Department /Position:</i> Scott Varner, Commander, Santa Paula PD	Yes
Grant writers	No

Table 8-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> Will be in development	No
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> In process of developing education	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i> Although not a decision making body, the Citizen Corp meets monthly	Yes
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> Social Media, Nixle	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> 1610 AM, Social Media, County reverse 911, Nixle	Yes

Table 8-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Public Works/Public Works Director
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	May 4, 2009
Does your floodplain management program meet or exceed minimum requirements? <i>If exceeds, in what ways?</i> Enter Response	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	June 18, 2018
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If so, state what they are.</i> Enter Response	No
Are any RiskMAP projects currently underway in your jurisdiction? <i>If so, state what they are.</i> Enter Response	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i> The current FIRM's received from FEMA are being appealed for a variety of reasons, including significant A99 zones within the City's jurisdictional boundary. The City will be conducting its own flood study in the coming months.	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If so, what type of assistance/training is needed?</i> Enter Response	No
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If no, is your jurisdiction interested in joining the CRS program?</i> Yes	No
How many flood insurance policies are in force in your jurisdiction? ^a <i>What is the insurance in force?</i> \$306,954,400 <i>What is the premium in force?</i> \$604,233	1,021
How many total loss claims have been filed in your jurisdiction? ^a <i>What were the total payments for losses?</i> \$134,387	63

a. According to FEMA statistics as of March 31, 2021

Table 8-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	0611170042	N/A
DUNS #	Yes	085937027	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	Unknown	Unknown
Public Protection	Yes	03/3X	12/21/2018
Storm Ready	N/A	N/A	N/A
Firewise	N/A	N/A	N/A
Tsunami Ready	N/A	N/A	N/A

Table 8-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: City's General Plan acknowledges understanding of potential climate change impacts. The City does not currently have an adaptation plan. However, per the General Plan, the City has policies and procedures that will be in force for future developments, entailing strict rules that will not allow for development or construction in high risk wildfire and flood areas, respectively (HPS 2.1 & 3.1). The City's Storm Drain Master Plan was also created to address deficiencies in existing drainage systems and identify proposed facilities needed to address deficiencies. The City also participates in the National Flood Insurance Program (HPS 2.2) which covers over 1,000 residences and has CIPs addressing potential climate change hazards such as the Water Recycling Facility Floodwall, project #9039, funded through SB1.</i>	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment: City itself does not have a committee or task force that monitors climate change impacts. The City does however make informed decisions based on risk zones identified by external sources, such as FEMA, CAL Fire, Ventura County Fire, and USGS. The City updates risk zones as new data is supplied by these external sources and applies the updated information to future decision-making and land use.</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: City does not have any resources specifically dedicated to climate change impacts. City works in collaboration with Ventura County Watershed Protection to protect watercourses, public highways, life, and property from damage or destruction from floodwaters, and Ventura County Fire District in efforts to mitigate future fire risks as guided by the Ventura County Unit Strategic Fire Plan.</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: City does not have resources dedicated to greenhouse gas inventory. City would cooperate with Ventura County Air Pollution Control District under guidelines imposed by AB 617 to develop and implement emissions reporting, monitoring, and reduction plans and measures.</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment: City's General Plan outlines policies and procedures that will be in force for future development that bars construction in designated high risk zones, and for other developments outside those zones requires current Federal, State, and City parameters be met during construction (HPS 2.1 & 3.1). The City has been informed of risk zones as have been identified in FEMA's Flood Hazard Zones map (2018), Ventura County's Countywide Dam Failure Inundation Areas map (2014), Santa Paula Safety Element Fire History map (2015) detailing Wildland Fire History, and CAL Fire's Wildland Fire Hazard Areas (2020) detailing fire risk zones in the Santa Paula area.</i>	Medium
Participation in regional groups addressing climate risks <i>Comment: City complies with Ventura County ordinances and participates in the Ventura County Watershed Protection Program to protect watercourses and property from damage or destruction from floodwaters and the Ventura County Unit Strategic Fire Plan to mitigate future fire risks.</i>	Low

Criterion	Jurisdiction Rating ^a
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
<i>Comment: City does not have a direct mandate that states decision-making must consider climate change impacts. Notwithstanding, the City's General Plan outlines policies and procedures for future development and CIPs that take into account and seek to mitigate climate change hazards. City Council meets every other week and is open to the public to vote on city budgetary and CIP related issues. The Public Works Director is present to provide and inform Council and the public of climate related information as it pertains to project proposals and budget dispensations.</i>	
Identified strategies for greenhouse gas mitigation efforts	Low
<i>Comment: City is in the process of exploring EV technology options and allowing third party alternative energy companies licenses to operate to install and maintain EV charging stations and solar panels.</i>	
Identified strategies for adaptation to impacts	Medium
<i>Comment: City General Plan outlines risk zones and policies for development going forward. Land use policies outlined will bar new development in areas deemed high risk flood zones or high risk wildfire zones (HPS 2.1 & 3.1). The General Plan outlines CIPs to be developed and funded that address climate induced hazards related to flooding (HPS 2.c), programs to be .</i>	
Champions for climate action in local government departments	Low
<i>Comment: City does not have a dedicated department or staff to climate action initiatives. Although there are no direct committees dedicated to this task, Public Works is focused on complying with federal, state, and county regulations. PW has developed a General Plan that acknowledges and plans around known risk zones with the goal of mitigating future hazards and restricting further development into high risk zones.</i>	
Political support for implementing climate change adaptation strategies	Medium
<i>Comment: City Council is on board with climate change adaptation projects if they are projects that would reduce energy usage and increase energy efficiency. An Energy Efficiency Program will go before Council in Dec 2021 to vote on energy programs to implement. Council members are supportive of projects and initiatives if they will provide the community with a measurable return value or if they will directly aid further development of the city.</i>	
Financial resources devoted to climate change adaptation	Low
<i>Comment: City does not allocate resources specifically to climate change adaptation projects. Portions of the budget may be spent on future CIPs related to climate change adaptation.</i>	
Local authority over sectors likely to be negative impacted	Medium
<i>Comment: City has emergency shelters in place that have basic resources that have been used in the recent past during the Thomas Fire. Santa Paula Police have developed evacuation protocols that are enacted when necessary and in coordination with Ventura County Office of Emergency Services and Ventura County Human Services Agency.</i>	
Public Capacity	
Local residents' knowledge of and understanding of climate risk	Medium
<i>Comment: The City does not currently send out informational media content related to climate risks. City residents pay into the National Flood Insurance Program and are aware of the potential flood risks in their area.</i>	
Local residents' support of adaptation efforts	Medium
<i>Comment: Residents are supportive of adaptation efforts that directly benefit them. Residents may not be as supportive if these adaptation efforts were to take funding from projects that would impact them in a short term time frame, such as repaving of streets that are in a state of disrepair.</i>	
Local residents' capacity to adapt to climate impacts	Low
<i>Comment: The City's per capita income is 68% of the national, and the poverty rate is greater than the national average at 14.2% (Census Bureau). Residents have a limited capacity for adaptation and are reliant upon the city to make preparations and fund projects that would mitigate climate induced hazards such as floods or wildfires.</i>	
Local economy current capacity to adapt to climate impacts	Low
<i>Comment: Scope of climate impact will dictate the economy's capacity to adapt. Based on FEMA's updated Ventura County flood maps for communities along Santa Clara River the base floodplain level has risen and portions of the city south of Hwy 126 now exist in a FEMA identified base floodplain zone. Significant portions of the city to the west and east of Santa Paula Creek as well as to the north of Hwy 126 fall within a federally protected A99 zone having met specific requirements. The breaking of the one of four dams located northeast of the city could incur significant cost damages. Also the breaking of a levee could incur damages and rebuilding of said levee would require significant public funding that may not be readily reallocated.</i>	

Criterion	Jurisdiction Rating ^a
<p>Local ecosystems capacity to adapt to climate impacts</p> <p><i>Comment: The local ecosystem consists largely of the Santa Clara River watershed which is protected in cooperation with Ventura County Watershed Protection. Wildfires have burned through the foothills to the north and east of the city, including the Thomas Fire (2017) and Simi Fire (2003), respectively. Extensive research and study has not been conducted to ascertain the long-term ecosystem damage or recovery of the region.</i></p>	Low

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

8.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

8.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **2040 General Plan**—four-year update process recently completed (late 2021).
- **Draft Urban Water Management Plan (UWMP) and Water Shortage Contingency Plan**—updated documents in final stages of review.

8.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **2029 Housing Element**—draft HE Update currently under review w/CA HCD

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

8.6 RISK ASSESSMENT

8.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 8-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 8-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Thomas Fire	FM-5224	2017	281,893 acres burned over the course of 38 days across the Santa Barbara and Ventura Counties. 280 structures were damaged and 1,063 structures were destroyed. Residents were evacuated and significant smoke covered the area. A hazard shelter was set up with basic resources in Santa Paula for evacuees.
Simi Fire	N/A	2003	108,204 acres burned over the course of 10 days in the Simi Valley. Significant smoke billowed over the valley. 11 structures were damaged, 315 structures destroyed, 21 injuries. No property damages in Santa Paula.
Maria Fire	FM-5302	November 1, 2019	9,999 acres burned over 5 days. 4 structures were destroyed. Residents were evacuated and diverted by Santa Paula PD. Significant smoke lingering causing respiratory irritation.
Flash Flood	N/A	January 4, 2008	Rainfall totals between January 4th and 6th ranged from 5 to 11 inches in the foothills and mountains. The total amount of rainfall, combined with rainfall rates around 1 inch per hour, produced numerous reports of flooding as well as mud and debris flows.
SC River Flood/SP Airport	DR-1585	2005	Flooding closed all ingress and egress from the city. Santa Paula airport was closed for several months due to flood damage to the runway--southern portion of the airport and runway was washed away by flood waters.
Flash Flood	N/A	November 30, 2002	An intense thunderstorm produced heavy rain and flash flooding near the community of Santa Paula. Law enforcement officials reported the intersection of Foothill Boulevard and Briggs Road as well as the intersection of Telegraph Road and Briggs Road were inundated with over 2 feet of water.
Wildfire	N/A	December 25, 2000	Gusty Santa Ana winds fueled a wildfire in the hills between the cities of Santa Paula and Somis. The fire, which burned over 360 acres, was started by downed power lines.
Northridge Earthquake	DR-1008	1994	6.7 magnitude earthquake centered in Northridge. 57 fatalities reported during caused by earthquake with injuries over the thousands. Damages caused were over \$20 billion in costs with double that in economic loss. Marked the costliest earthquake in U.S. history.
SC River Flood	DR-253	1969	13 reported deaths. 5 bridge crossings destroyed. Property damage was estimated at \$60 million.
St. Francis Dam Flood	N/A	1928	Countywide, more than 530 people died; bridges, orchards, farms, homes all eradicated in flood's path down the Santa Clara river valley to the Pacific Ocean.

8.6.2 Hazard Risk Ranking

Table 8-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions primarily target hazards with high and medium rankings.

Table 8-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Flooding	48	High
2	Dam Failure	36	High
3	Earthquake	32	Medium
4	Severe Storms	24	Medium
5	Severe Weather	24	Medium
6	Landslide	18	Medium
7	Wildfire	12	Low
8	Drought	9	Low

8.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 3
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other Noted Vulnerabilities

No jurisdiction-specific issues were identified by the results of the risk assessment, public involvement strategy, or other available resources.

8.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 8-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

8.8 HAZARD MITIGATION ACTION PLAN

Table 8-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 8-15 identifies the priority for each action. Table 8-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 8-13. Status of Previous Plan Actions

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
OA 6 —Develop a public outreach program that informs property owners located in the dam and levee failure inundation areas about voluntary flood insurance. Comment: Ongoing initiative, Public Works			✓	SP-4
OA 7 —Develop a water conservation public outreach program to increase awareness about the drought, fines and penalties for overuse and solutions for conserving water. Comment: Ongoing initiative, Public Works			✓	SP-11
OA 11 —Develop and implement plans to increase the building owner's general knowledge of and appreciation for the value of seismic upgrading of the building's structural and nonstructural elements. Comment: Ongoing initiative, Building & Safety / Public Works			✓	SP-1
OA 14 —Acquire, relocate, or elevate residential structures, in particular those that have been identified as RL properties, within the 100-year floodplain. Comment: Ongoing initiative, Public Works			✓	SP-1

Table 8-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action SP-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas. Hazards Mitigated: Flooding, Dam Failure, Earthquake, Severe Storms, Severe Weather, Landslide, Wildfire						
Existing	2, 6, 9, 10, 11	City of Santa Paula	None	High	FEMA HMA (BRIC, FMA, PDM and HMGP)	Short-term
Action SP-2 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including the East Area 1 development. Hazards Mitigated: Flooding, Dam Failure, Earthquake, Severe Storms, Severe Weather, Landslide, Wildfire, Drought						
New & Existing	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19	City of Santa Paula	None	Low	Staff Time, General Funds	Ongoing
Action SP-3 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan. Hazards Mitigated: Flooding, Dam Failure, Earthquake, Severe Storms, Severe Weather, Landslide, Wildfire, Drought						
New & Existing	1, 2, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15	City of Santa Paula	None	Low	Staff Time, General Funds	Short-term
Action SP-4 —Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: <ul style="list-style-type: none"> Enforce the flood damage prevention ordinance. Participate in floodplain identification and mapping updates. Provide public assistance/information on floodplain requirements and impacts. Hazards Mitigated: Flooding						
New & Existing	1, 2, 6, 7, 17	City of Santa Paula	None	Low	Staff Time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action SP-5—Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:</p> <ul style="list-style-type: none"> Outlining floodplains and identifying areas under threat of liquefaction and subsidence that border the Santa Clara River <p><u>Hazards Mitigated:</u> Flooding, Severe Storms, Severe Weather, Wildfire, Drought</p>						
New & Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 19	City of Santa Paula	VCPWA-WP	Low	FEMA HMA (BRIC, FMA, HMGP), Staff Time, General Funds	Short-term
<p>Action SP-6—Purchase generators for critical facilities and infrastructure that lack adequate backup power, including City Hall, Police Station, Community Center, City facilities yards, water pumping stations, sewer lift stations.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flooding, Landslide, Severe Storms, Severe Weather, Wildfire</p>						
Existing	2, 19	City of Santa Paula		High	FEMA HMA (BRIC and HMGP), Staff Time, General Funds	Short-term
<p>Action SP-7—Policies and procedures (HPS 1.1-4 & HPS 1.a-i) to reduce severity and damage caused by geologic hazards, including seismic upgrade of unreinforced masonry buildings as required by State regulations, annual review of building codes to ensure State codes are used in reviewing development proposals, establishing of geotechnical investigation standards and requirements to be followed by development applicants</p> <p><u>Hazards Mitigated:</u> Earthquake</p>						
New & Existing	1, 2, 4, 6, 9, 10, 11, 12, 16	City of Santa Paula	None	Medium	FEMA HMA (BRIC, HMGP), Staff Time & General Funds	Ongoing
<p>Action SP-8—Policies and procedures (HPS 2.1-6 & HPS 2.a-f) to address dam failure and storm water flood hazards, including but not limited to flood hazard mitigation planning that locates development areas where such risk can be mitigated to acceptable levels, locating development for any new public or emergency facilities outside flood hazard zones, participation in the National Flood Insurance Program and the Community Rating System to ensure the city is incentivized to reduce risk of damage from flooding and improve flood preparedness, support of flood control projects on the Santa Clara River, Santa Paula Creek, and other waterways, inter-agency cooperation with Army Corps of Engineers and VCPWA-WP</p> <p><u>Hazards Mitigated:</u> Flooding, Dam Failure</p>						
New & Existing	1, 2, 4, 6, 9, 10, 11, 12, 16	City of Santa Paula	VCPWA-WP	Medium	FEMA HMA (BRIC, FMA, HMGP), Staff Time & General Funds	Ongoing
<p>Action SP-9—Policies and procedures (HPS 3.1-4 & HPS 3.a-i) to address risk of wildland fire including but not limited to locating development in areas where wildland fire risks can be mitigated to an acceptable level, locating new public and emergency facilities outside high fire hazard zones, enforcement of new State fire safe and defensible space regulations and standards (Public Resource Code Sec. 4290-4291 and Government Code Sec. 51182), ensuring adequate water supply for firefighting is available in all new development, consideration of a future fire station along the urban wildland interface along State Route 150, identification of effective methods to establish buffer zones separating residential development in foothills from chaparral and other native vegetation.</p> <p><u>Hazards Mitigated:</u> Wildfire</p>						
New & Existing	1, 2, 4, 5, 6, 9, 10, 11, 12, 16	City of Santa Paula	Ventura County	Medium	FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing
<p>Action SP-10—Maintain wildfire hazard fuel reduction program for areas that have been identified with overgrown or dead brush, trees and weeds to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program. (Coordinates with VCFPD Action VFP-6)</p> <p><u>Hazards Mitigated:</u> Wildfire</p>						
New & Existing	2, 4, 5, 6, 8, 10, 11, 13, 14, 15, 18, 19	VCFPD	City of Santa Paula, CAL FIRE & USDA	Medium	FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action SP-11 —Continue developing the water conservation public outreach program to increase awareness about the drought, fines and penalties for overuse and solutions for conserving water.						
<u>Hazards Mitigated:</u> Drought						
New & Existing	2, 12, 14, 16, 17	City of Santa Paula	None	Low	Staff Time & General Funds	Ongoing
Action SP-12 —Determine feasibility of the City of Santa Paula joining the Community Rating System (CRS) program to enhance public safety, reduce flood damage to property and infrastructure, and reduce flood insurance rates in the community.						
<u>Hazards Mitigated:</u> Flooding						
New & Existing	1, 2, 19	City of Santa Paula	None	Low	Staff Time & General Funds	Short-term
Action SP-13 —Water Recycling Facility Floodwall. Construct a Floodwall to protect the Water Recycling Facility, as required by FEMA. The project will cost an estimated \$550,000 with funds fully secured from the Sewer budget.						
<u>Hazards Mitigated:</u> Flooding						
Existing	2, 6, 11	City of Santa Paula	None	High	FEMA HMA (BRIC, FMA, HMGP), Staff Time & General Funds	Short-term
Action SP-14 —Water Main Replacement Program. Replace water mains deficient in capacity and not up to current seismic standards, as outlined in the City's Potable Water System Master Plan.						
<u>Hazards Mitigated:</u> Earthquake, Flooding, Severe Storms						
Existing	2, 6, 9, 11, 19	City of Santa Paula	None	Low	Sewer Budget, FEMA HMA (BRIC, FMA, HMGP)	Ongoing
Action SP-15 —Construct an Advanced Reverse Osmosis Treatment Facility. The project is part of a mandate by the Los Angeles Area Regional Water Quality Board to construct a recycled water delivery system to be completed no later than May 1, 2022. A Water Discharge Permit was issued to the city Feb. 8, 2019, covering a 10-year period with mandated milestones. The City completed infrastructure design, CEQA/Permitting, and additional Administrative/Financing in the amount of \$1,490,000 in FY 2019/2020 for the proposed transmission line, as required by the LARWQCB in the Waste Discharge Requirements and Cease and Desist Order. Funding partially (43%) secured through Sewer budget.						
<u>Hazards Mitigated:</u> Drought						
New & Existing	2, 3, 8, 14	City of Santa Paula	None	Medium	Sewer Budget, FEMA HMA (BRIC, FMA, HMGP)	Short-term
Action SP-16 —Well Rehabilitation Program. Rehabilitate groundwater wells [18, 11, 12, 13, 14] as recommended by the City's Potable Water System Master Plan. The Decant Pump will require rebuilding or replacement of one well per year. Funding is fully secured through Water Department budget from FY 2021/2022 to FY 2025/2026.						
<u>Hazards Mitigated:</u> Drought						
Existing	2, 3, 14, 19	City of Santa Paula	None	Low	Sewer Budget, FEMA HMA (BRIC, FMA, HMGP)	Short-term
Action SP-17 —Water Recycling Facility Capital Expenditures. Replacement of or plant improvements to critical equipment for the Water Recycling Facility. Past emergency events have identified a need to upgrade and raise elevation of the motor control center and improve water pump and wastewater processing operation sustainability during emergency events and power outage. Funding is fully secured through Sewer budget.						
<u>Hazards Mitigated:</u> Flooding, Drought						
Existing	2, 3, 11, 14	City of Santa Paula	None	Low	Sewer Budget, FEMA HMA (BRIC, FMA, HMGP)	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action SP-18 —FEMA Floodplain Restudy. Develop alternative floodplain study with associated hydrologic and hydraulic analysis to address deficiencies in current FEMA study in key areas of the City. This project will take 6 months to complete and will provide specific detail that builds upon the more general countywide study that was performed by Ventura County.						
<i>Hazards Mitigated:</i> Flooding						
New & Existing	1, 8, 19	City of Santa Paula	None	High	FEMA HMA (BRIC, FMA, HMGP), Staff Time & General Funds	Short-term

Action SP-19—Foothill/Cameron Drainage Improvements. Construct drainage and retaining wall improvements to address safety issues at intersection. Construct: approximately 75' of a 6' maximum height retaining wall to match existing adjacent wall along Foothill Dr; debris inlet and associated piping to address drainage and debris flows from steep adjacent agricultural property. Remove existing concrete barrier from roadway and restore two-way vehicular travel. This area has been identified as a critically affected area during flooding events.

<i>Hazards Mitigated:</i> Flooding						
Existing	6, 11, 14, 18	City of Santa Paula	None	Low	FEMA HMA (BRIC, FMA, HMGP), Staff Time & General Funds	Short-term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 8-15. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	5	High	High	Yes	Yes	No	Medium	High
2	16	Medium	Low	Yes	No	Yes	High	Low
3	12	Low	Low	Yes	No	Yes	High	Low
4	5	Medium	Low	Yes	No	Yes	High	Low
5	17	Medium	Low	Yes	Yes	Yes	High	Medium
6	2	High	High	Yes	Yes	No	Medium	High
7	9	High	Medium	Yes	Yes	Yes	High	High
8	9	High	Medium	Yes	Yes	Yes	High	High
9	10	High	Medium	Yes	Yes	Yes	High	High
10	12	High	Medium	Yes	Yes	Yes	High	High
11	5	Low	Low	Yes	No	Yes	High	Low
12	3	Medium	Low	Yes	No	Yes	High	Low
13	3	High	High	Yes	Yes	No	Medium	High
14	5	Medium	Low	Yes	Yes	Yes	High	Medium
15	4	High	Medium	Yes	Yes	No	Medium	High
16	4	Medium	Low	Yes	Yes	Yes	High	Medium
17	4	Medium	Low	Yes	Yes	Yes	High	Medium
18	3	Medium	High	Yes	Yes	No	Medium	High
19	4	High	Low	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

Table 8-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building ^b
High-Risk Hazards								
Flooding	SP-2, 4, 8	SP-1, 8, 17			SP-6	SP-8, 13, 14, 19	SP-5, 17	SP-2, 3, 4, 8, 12, 18
Dam Failure	SP-2, 8	SP-1, 8			SP-6	SP-8		SP-2, 3, 8
Medium-Risk Hazards								
Earthquake	SP-2, 7	SP-1, 7			SP-6	SP-14		SP-2, 3, 7
Severe Storms	SP-2	SP-1			SP-6	SP-14	SP-5	SP-2, 3
Severe Weather	SP-2	SP-1			SP-6		SP-5	SP-2, 3
Landslide	SP-2	SP-1			SP-6			SP-2, 3
Low-Risk Hazards								
Wildfire	SP-2, 9	SP-1		SP-9, 10	SP-6		SP-5	SP-2, 3, 9
Drought	SP-2		SP-11			SP-15	SP-5, 15, 16, 17	SP-2, 3

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

8.9 PUBLIC OUTREACH

Table 8-17 lists public outreach activities for this jurisdiction.

Table 8-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Seismic Upgrade Handouts/Guides, Building & Safety	Ongoing	Citywide
Water Conservation Handouts/Guides, Building & Safety	Ongoing	Citywide
Participant, California State 'Save Our Water' Program	Ongoing	Citywide

8.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **City of Santa Paula Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Santa Paula Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **City of Santa Paula 2040 General Plan**—The 2040 General Plan (focusing on Section 5, Hazards & Public Safety Element) was reviewed for opportunities for action plan integration. [2040-General-Plan-Section-5---Hazards-and-Public-Safety-Element \(spcity.org\)](https://www.spcity.org/2040-General-Plan-Section-5---Hazards-and-Public-Safety-Element)

- **City of Santa Paula Fiscal Year 2021/2022 & 2022/2023 Proposed Budget**—The budget was reviewed for capability assessment and for identifying opportunities for action plan integration.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- **Census Bureau, Santa Paula** [U.S. Census Bureau QuickFacts: United States](#)
- **CAL FIRE Incidents** [Welcome to Stats & Events \(ca.gov\)](#)
- **Department of Conservation** [Northridge Earthquake, January 17, 1994 \(ca.gov\)](#)
- **Ventura County Public Works** [Santa Clara River, Ventura County Public Works Agency \(vcpublicworks.org\)](#)
- **Ventura County Flood Info** [VC Flood History \(vcfloodinfo.com\)](#)
- **Ventura County Community Air Protection AB 617, 2020 Annual Report** [Ventura County Air Pollution Control District Community Air Protection \(AB 617\)](#)
- **Tetra Tech Loss Matrix**—risk assessment spreadsheet provided by consultant.

Santa Paula

Critical Facilities (1 of 2)

- Food, Water, Shelter
- Health and Medical
- Safety and Security

- Major Roads
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri



0 0.225 0.45 0.9 Miles



Santa Paula

Critical Facilities (1 of 2)

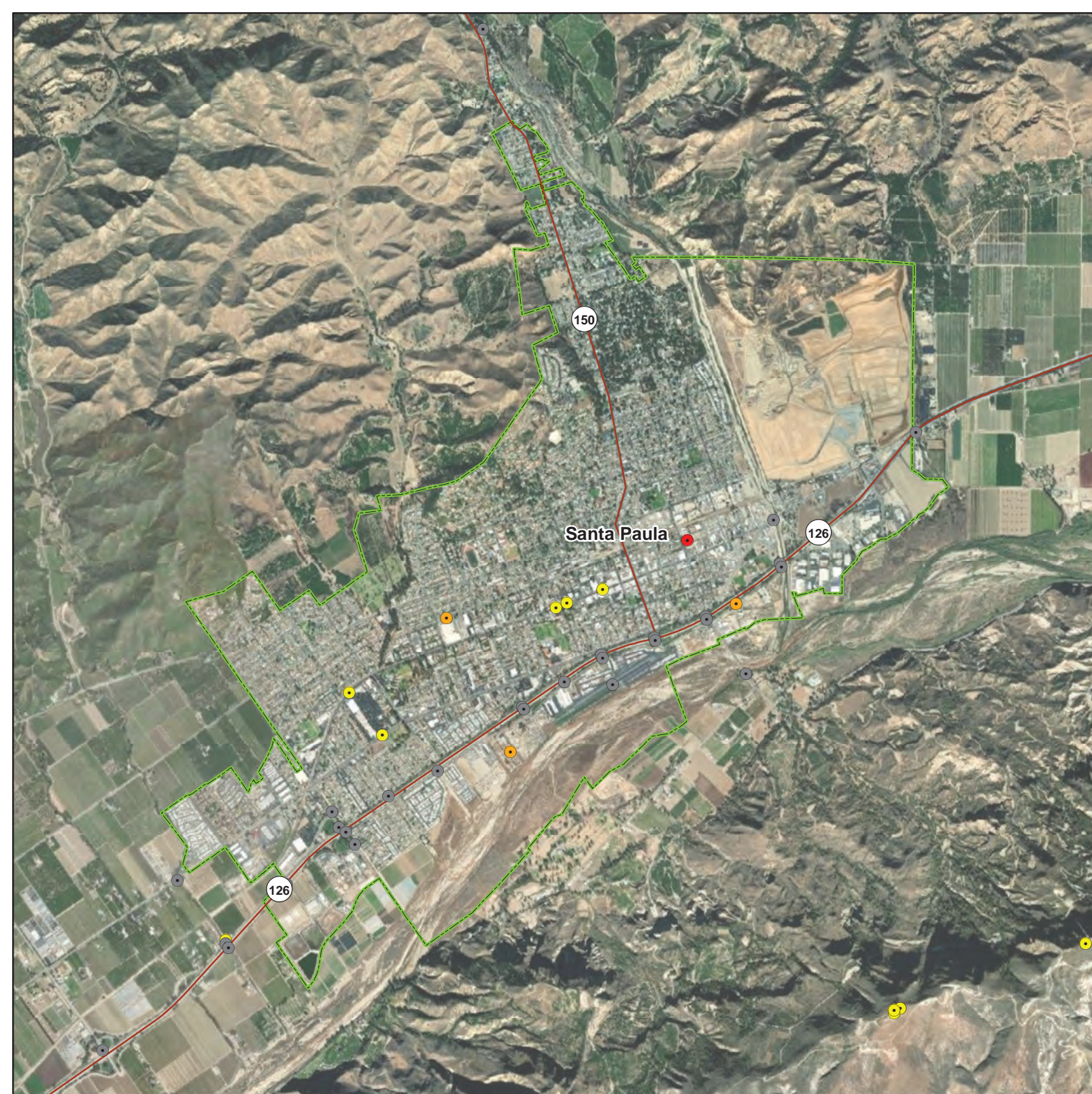
- Communications
- Energy
- Hazardous Material
- Transportation

- Major Roads
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri








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Santa Paula

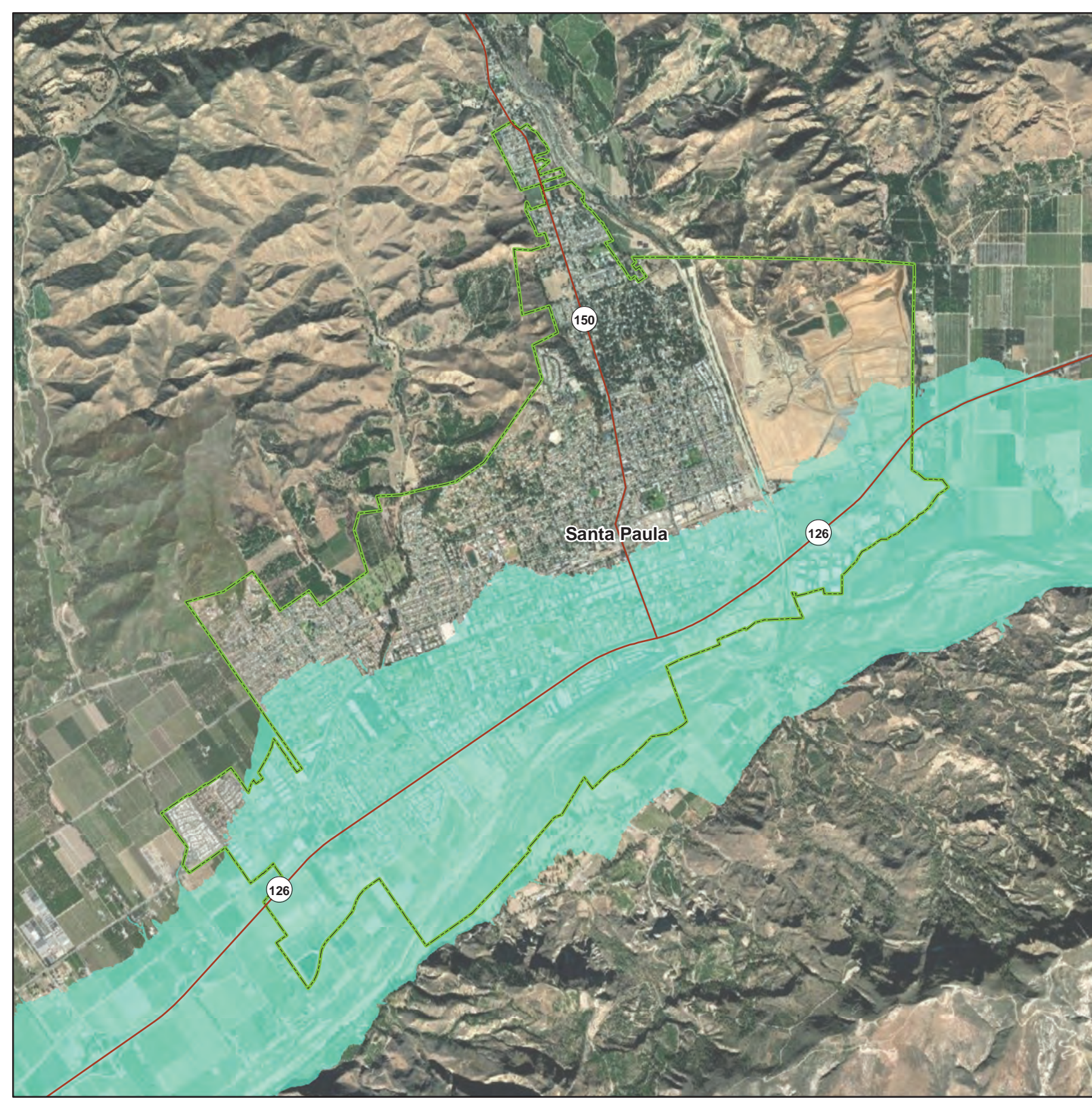
Dam Failure Inundation Areas

-  Combined Inundation Areas
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CA DWR, Esri









0 0.225 0.45 0.9
Miles



Santa Paula

NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri








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Miles



Santa Paula

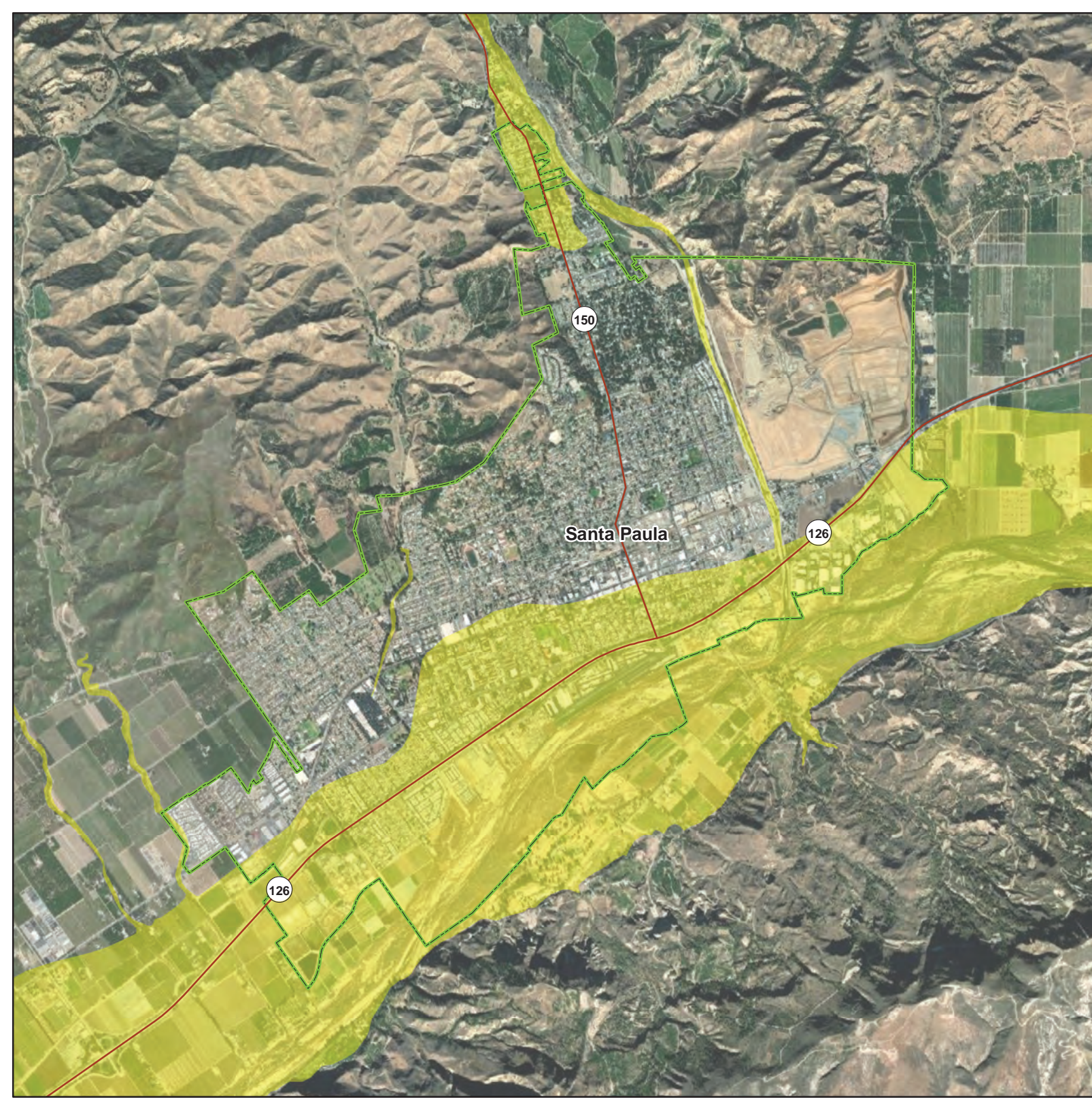
Liquefaction Susceptibility

-  Liquefaction zone
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
Esri



0 0.225 0.45 0.9 Miles



Santa Paula

100-Year Probabilistic Earthquake Scenario


Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Major Roads

 Selected City

 Incorporated Cities

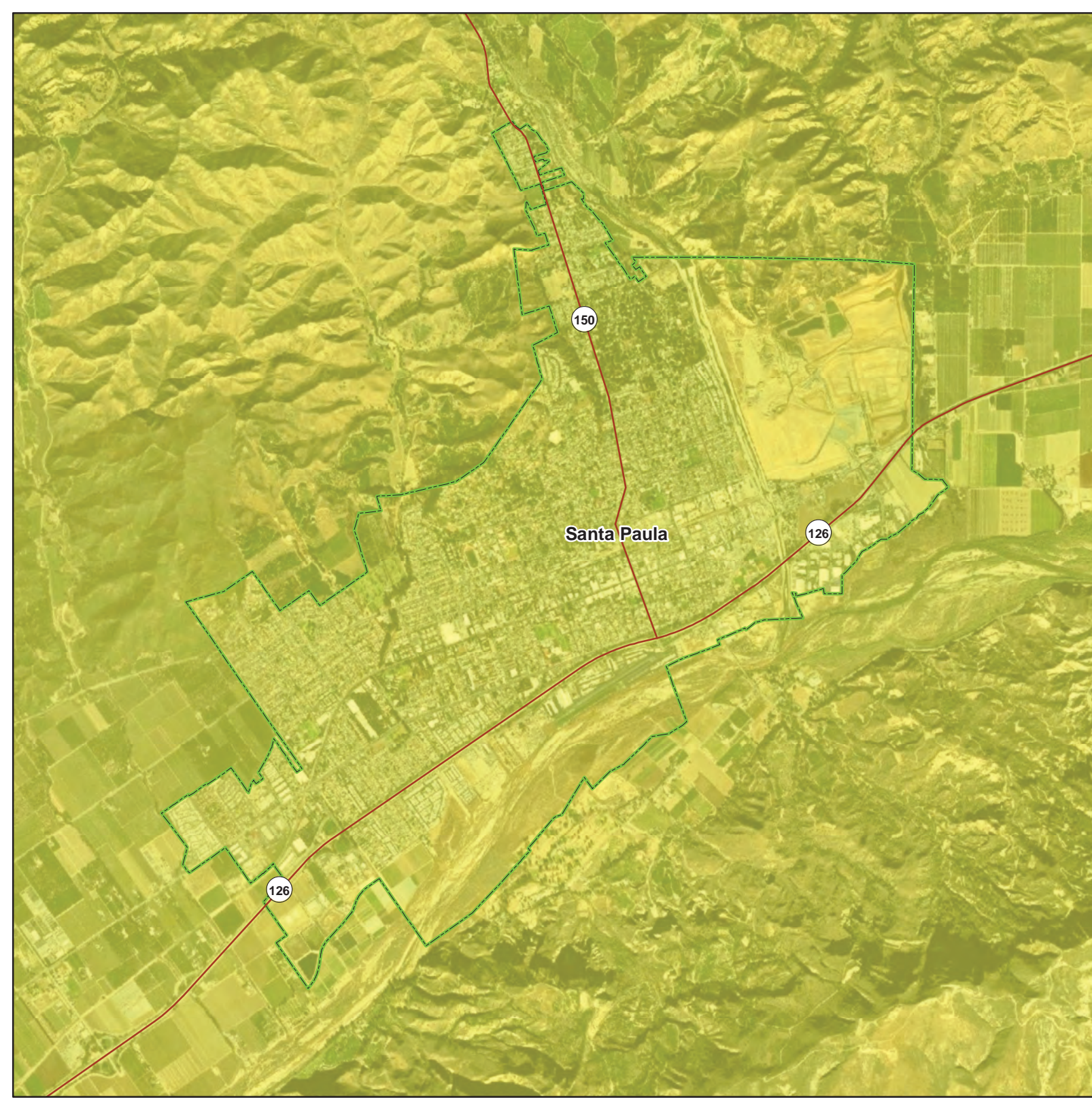
 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.225 0.45 0.9
 Miles



Santa Paula


Oak Ridge M7.16 Earthquake Scenario


Mercalli Intensity Scale

 VIII (Severe/Moderate-Heavy)

 Major Roads

 Selected City

 Incorporated Cities

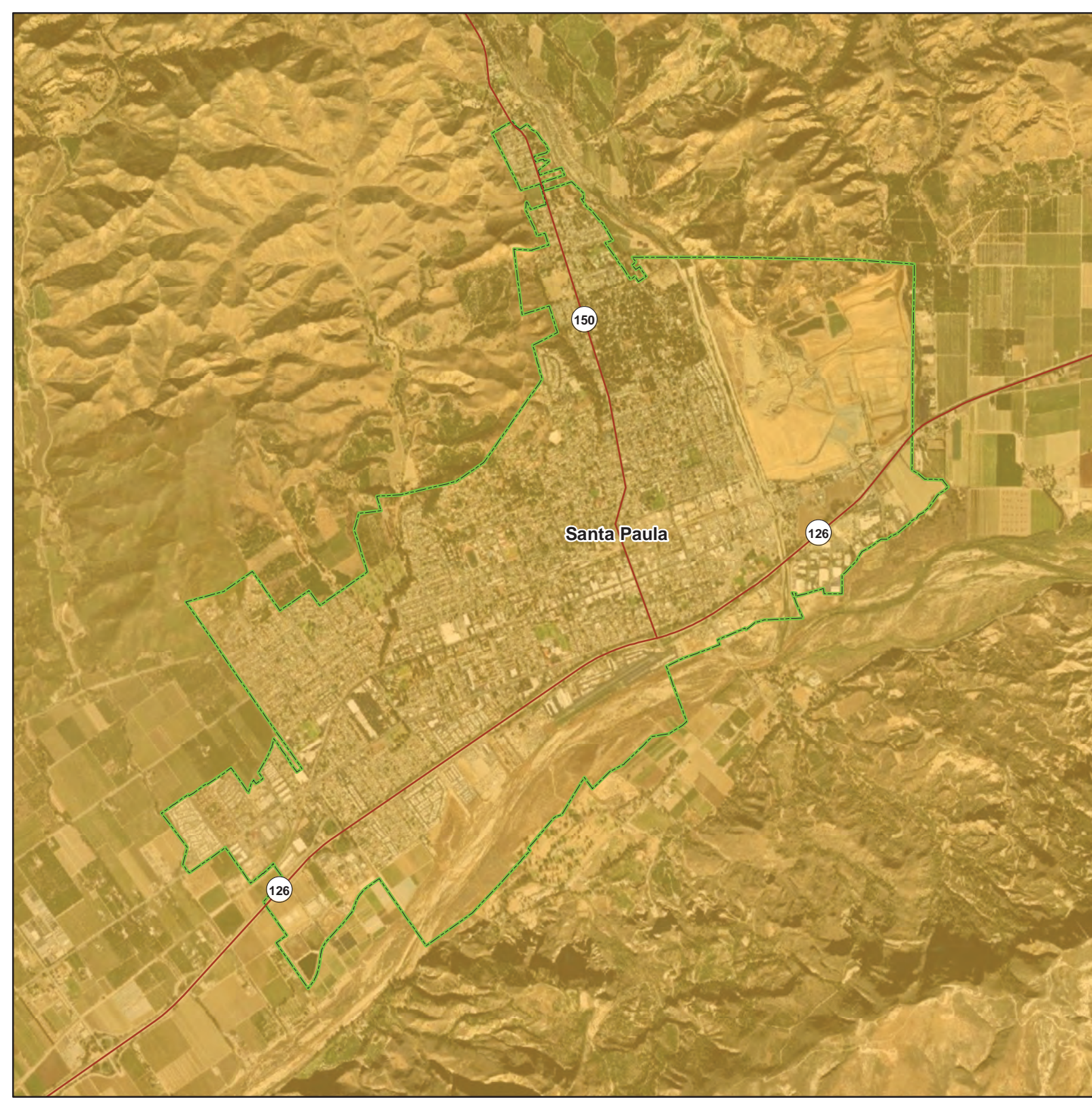
 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



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 Miles



Santa Paula


Pitas Point M7.12 Earthquake Scenario


Mercalli Intensity Scale

 VIII (Severe/Moderate-Heavy)

 Major Roads

 Selected City

 Incorporated Cities

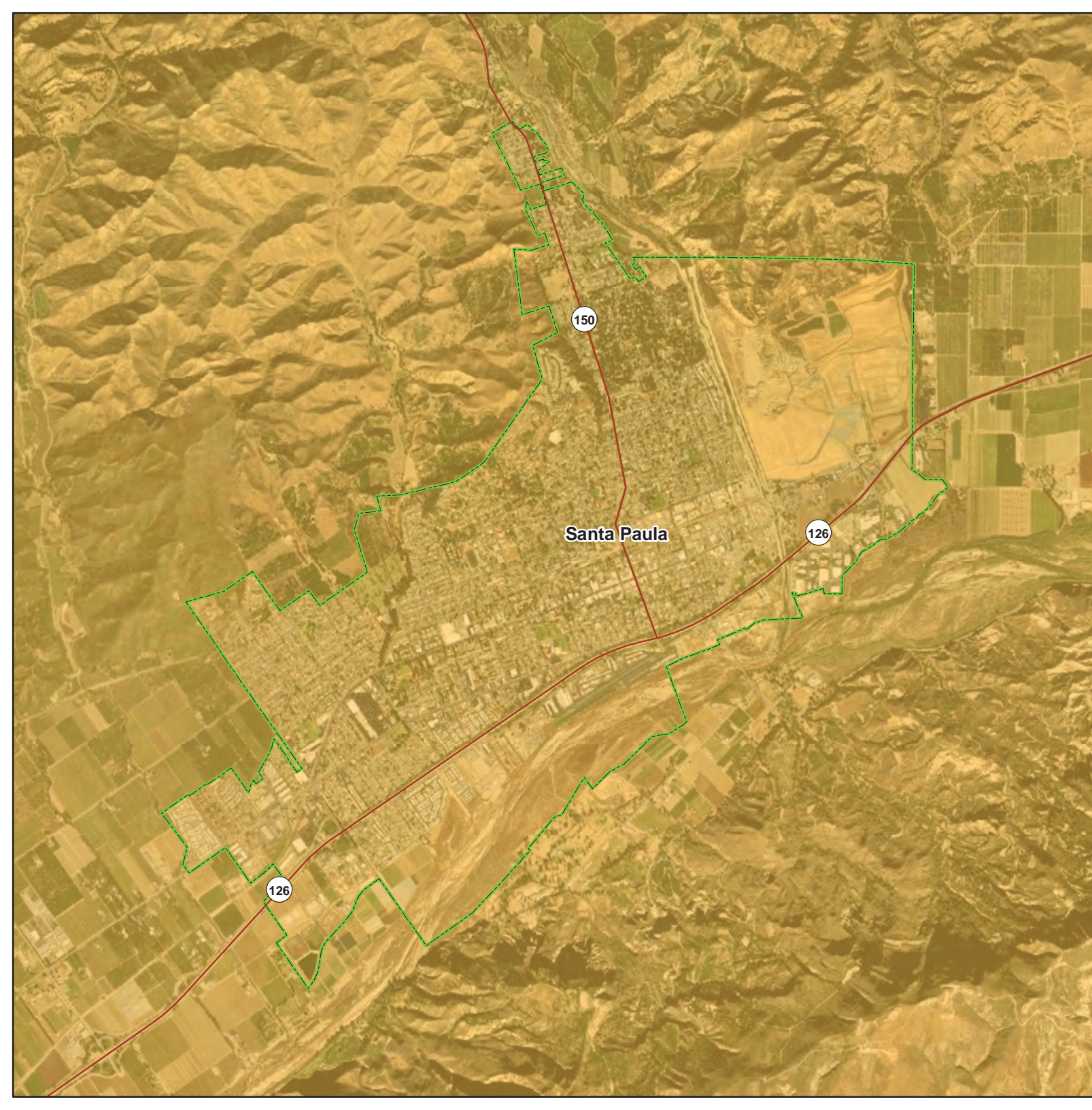
 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.225 0.45 0.9
 Miles



Santa Paula

San Cayetano M7.16 Earthquake Scenario

Mercalli Intensity Scale

- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)

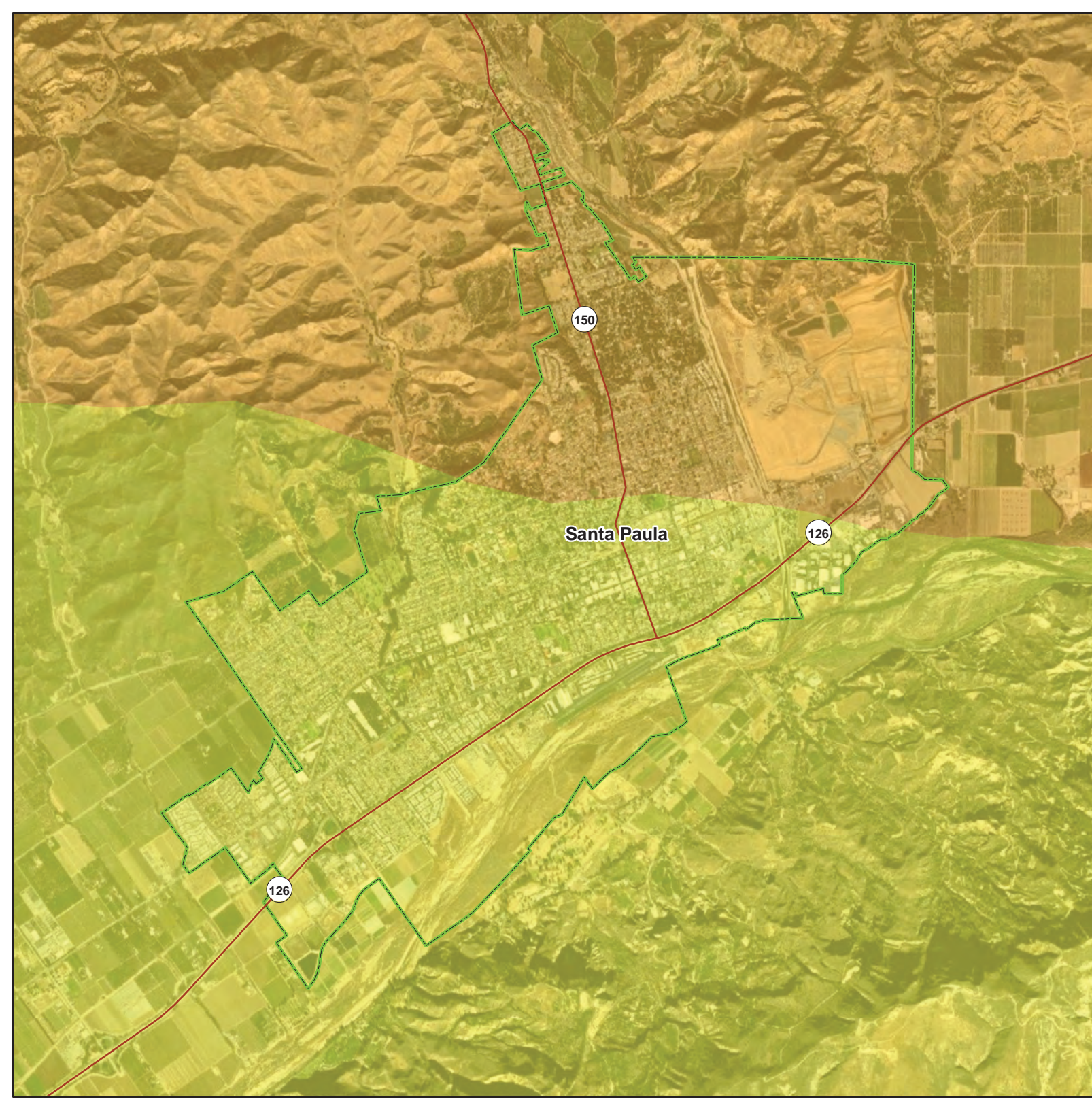
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.225 0.45 0.9
Miles



Santa Paula

S. San Andreas M8.03 Earthquake Scenario

Mercalli Intensity Scale

- VI (Strong/Light)
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri









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Santa Paula

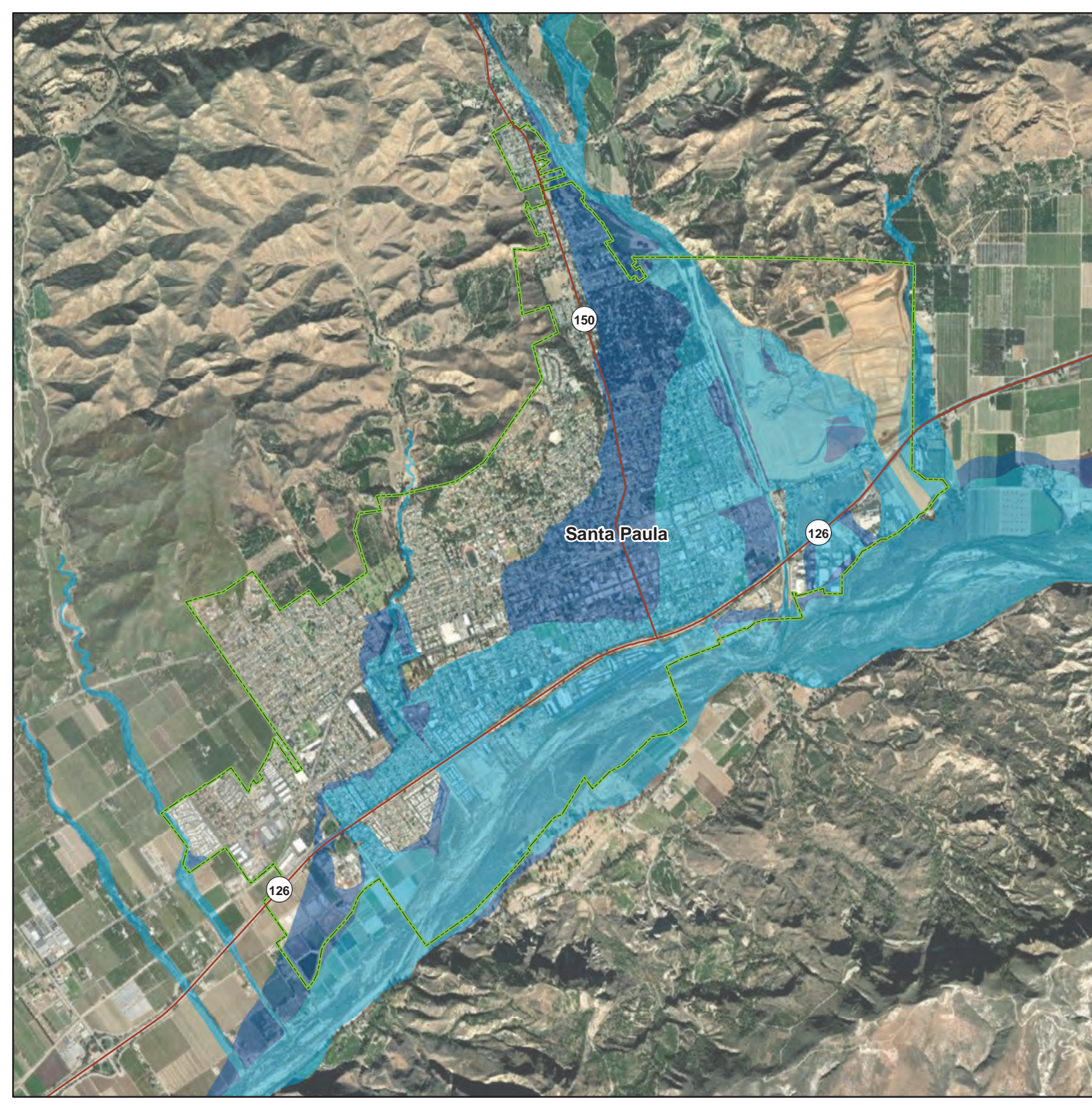
FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
FEMA, Esri

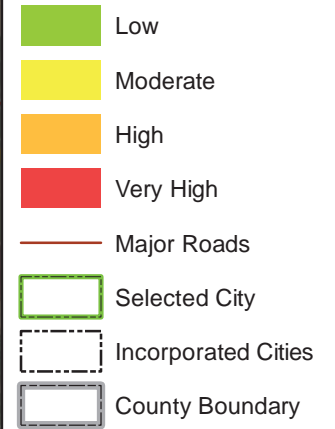


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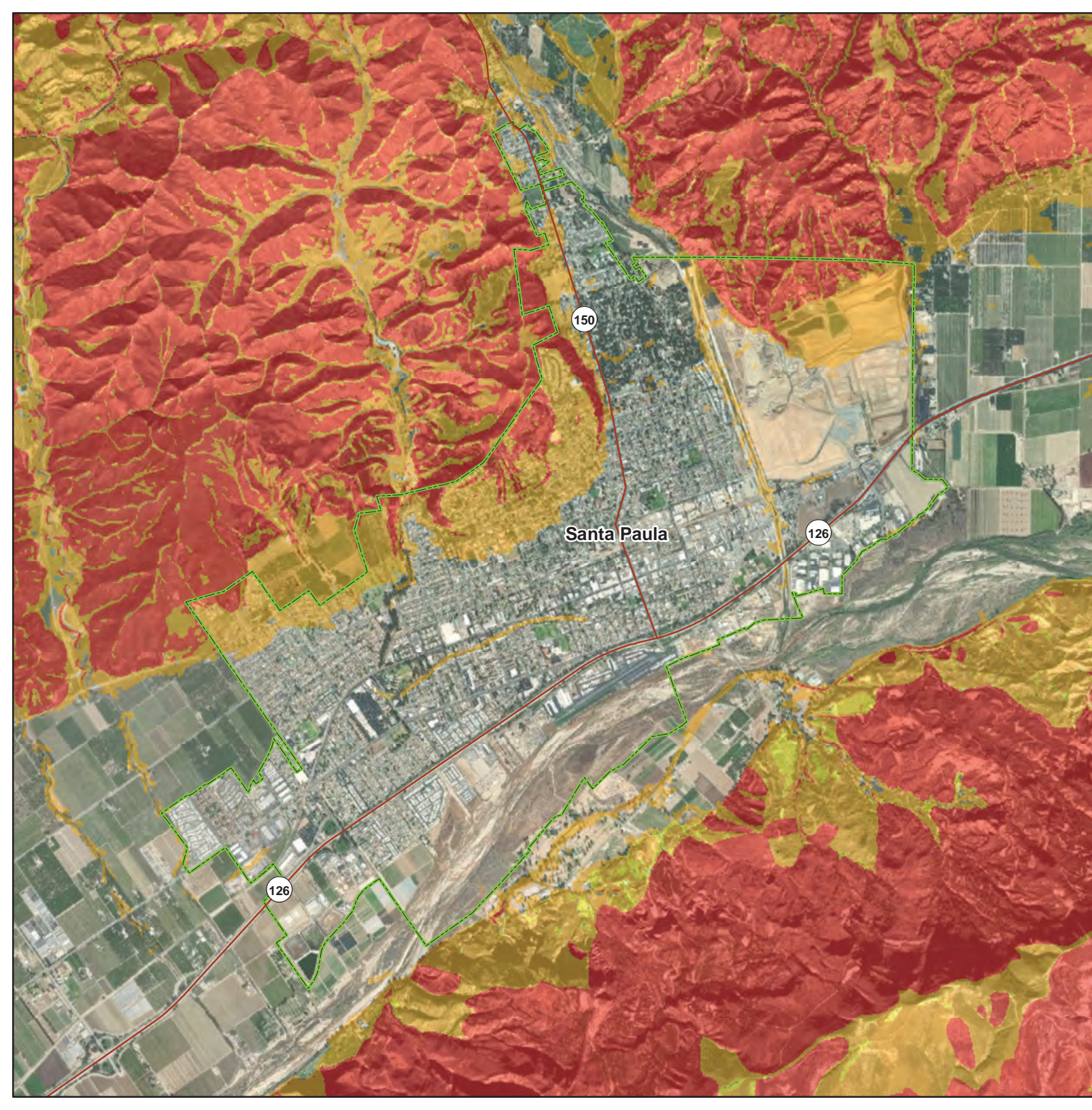


Santa Paula

Susceptibility to Deep-Seated Landslides

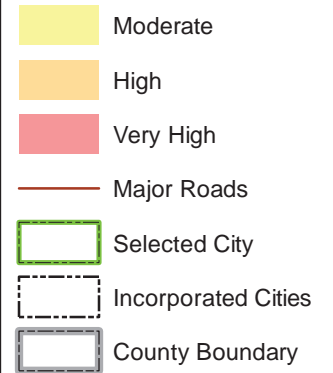


Data Sources: Ventura Co.,
CGS, Esri

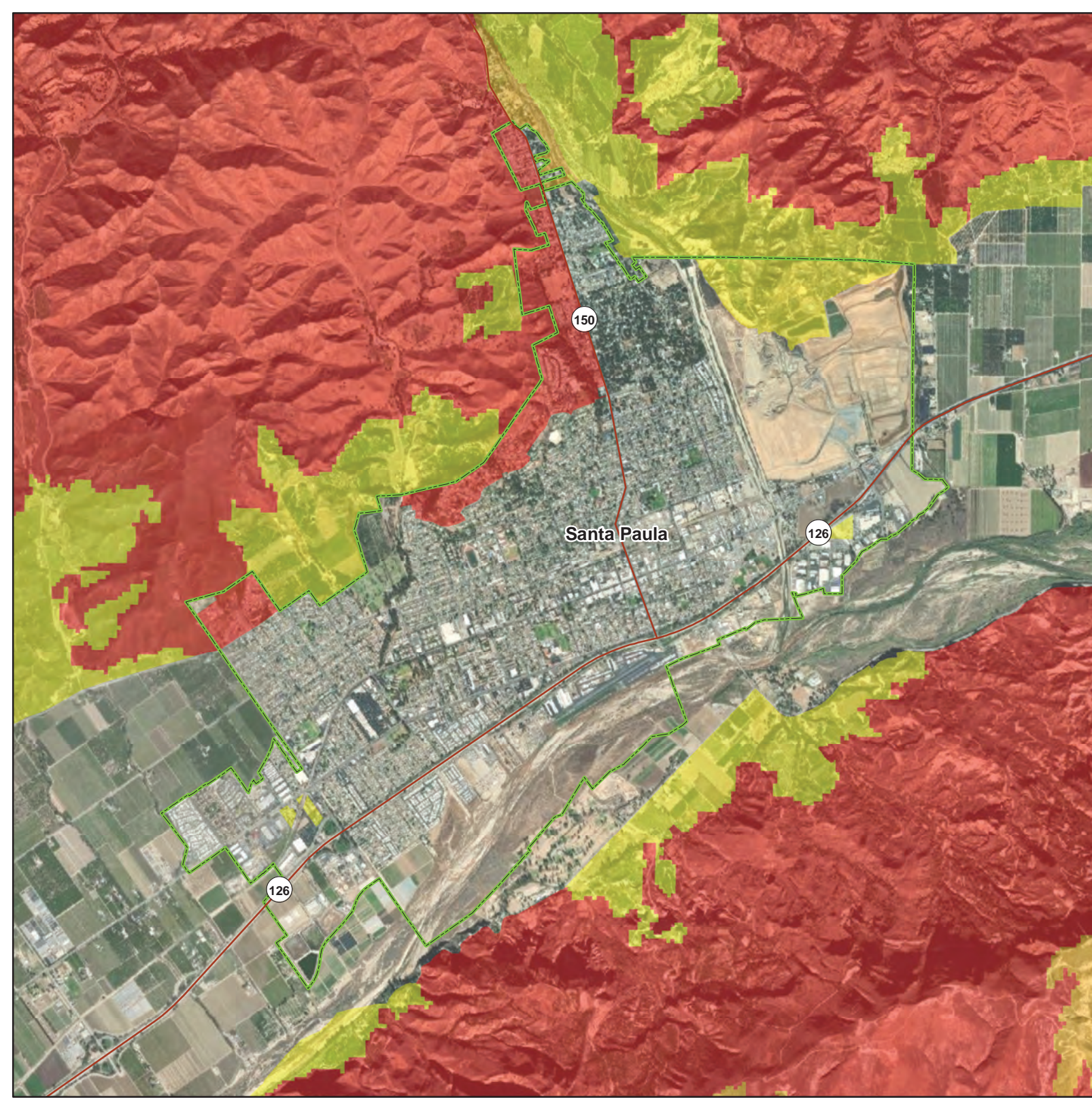


Santa Paula

Wildfire Hazard Severity Zones



Data Sources: Ventura Co., CAL FIRE, Esri



9. CITY OF SIMI VALLEY

9.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Eileen Connors, Emergency Services Manager
 3901 Alamo Street
 Simi Valley, CA 93063
 Telephone: 805-583-6982
 e-mail Address: econnors@simivalley.org

Alternate Point of Contact

Sean Gibson, Deputy ES Director/City
 Planner
 2929 Tapo Canyon Rd.
 Simi Valley, CA 93063
 Telephone: 805-583-6383
 email Address: sgibson@simivalley.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 9-1.

Table 9-1. Local Mitigation Planning Team Members

Name	Title
Chris Oberender	Deputy Public Works Director
Brent Siemer	Deputy Public Works Director
Samantha Argabrite	Deputy City Manager, City Manager's Office
Sean Gibson	Deputy ES Director/City Planner, Planning
Eileen Connors	Emergency Services Manager
Alison Phagan	Deputy Director, Administrative Services
Marvin Lopez	Administrative Services
Jeff Pike	Ventura County Fire Dept.

9.2 JURISDICTION PROFILE

9.2.1 Location and Features

The City of Simi Valley is in southeast Ventura County.

The current boundaries generally extend from the Santa Susana Mountains in the north to the Simi Hills in the south and east to the San Fernando Valley, encompassing an area of forty-two square miles.

Located just minutes from Los Angeles, Simi Valley offers a vibrant city full of cultural diversity, historical landmarks and beautiful rolling hills with the charm of a small town close to Southern California's most famous attractions. Simi Valley is Southern California's best kept secret, the perfect choice for a getaway, meeting, or wedding. The City is home to a variety of business industries,

including Aerospace, Commercial Aircraft, and Defense Manufacturing, software and technology, warehouse and distribution and auto and transportation.

9.2.2 History

The City of Simi Valley was incorporated in 1969 under the general laws of the State of California. It is believed that the name of the Chumash Indian Village “Shimiji” is the origin of the City’s name. Ta’apu is the origin of the names of Tapo Street and Tapo Canyon. The official City tree is the Coast Live Oak, whose acorns were used by the Chumash Indians for food. The official City flower is the California Wild Rose, from which the Chumash Indians ate vitamin-rich rosehips. In 1795, San José de Nuestra Señora de Altagracia y Simí was granted to Santiago Pico, one of 240 colonists from Mexico, by Spanish Governor Diego de Borica. This land grant, approximately 113,000 acres in size, was one of the largest ever made.

9.2.3 Governing Body Format

The City of Simi Valley operates under a General-Law/council-manager form of government.

The City Council of Simi Valley assumes responsibility for the adoption of this plan; the Emergency Services department will oversee its implementation.

9.3 CURRENT TRENDS

9.3.1 Population

According to the California Department of Finance, the population of the City of Simi Valley as of January 2020, was 125,115. Since 2010, the population has grown at an average annual rate of 0.06 percent.

9.3.2 Development

Early development in Simi Valley was agricultural in nature with a variety of crops and cattle grazing on much of the valley floor. As the City grew, development on the valley floor was characterized by a continuous pattern of suburban construction dominated by one and two-story buildings, schools, housing, shopping centers, community facilities, and places of employment, interspersed with parks and open spaces. As growth continued, available vacant land on the valley floor became more limited, and outward expansion of residential development into nearby hillsides occurred. Specific plans have been prepared for several larger-scale projects, in order to preserve the hillside areas as an important natural and visual resource and to provide for the orderly growth of these areas. Examples include the Wood Ranch Specific Plan, Runkle Canyon Specific Plan, and the Whiteface Specific Plan. Commercial development has also occurred in the community, the most recent being the region-serving Simi Valley Town Center.

The City has developed a region-serving shopping center, the Simi Valley Town Center, and a large residential development in the north-central part of the City called the Big Sky Ranch. Both projects incorporated significant hazard mitigation in the development process; they represent a major success story in the use of hazard mitigation policies to build a safe community. The North Simi Detention basin

was built to mitigate flooding in both developments, and in the process, removed downstream homes from the FEMA FIRM areas. The strict enforcement of building codes in the developments incorporated current seismic, fire, and flooding mitigation standards.

Simi Valley's land use pattern reflects the City's identity as a residential community with significant protected open space and parklands. Residential development represents the predominant land use in the City, making up more than 71 percent of its total land area. Parks and other public and semi-public uses such as schools, cemeteries, a regional landfill, and transportation rights-of-way make up just over 20 percent of the land uses. Industrial and commercial are the remaining land uses in the City, occupying approximately 5 percent and 3 percent, respectively, and represent the smallest component of the City's overall land use pattern.

Table 9-2 summarizes development trends in the period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 9-2. Recent and Expected Future Development Trends

Criterion	Response																														
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? <ul style="list-style-type: none"> If yes, give the estimated area annexed and estimated number of parcels or structures. 	No N/A																														
Is your jurisdiction expected to annex any areas during the performance period of this plan? <ul style="list-style-type: none"> If yes, describe land areas and dominant uses. If yes, who currently has permitting authority over these areas? 	Yes Approximately 486 acres of land spread across 447 parcels located on the north west of the City the north east of the City and around Sinaloa Lake. The uses in these areas include vacant and agricultural land as well as land improved with single family residences. Ventura County																														
Are any areas targeted for development or major redevelopment in the next five years? <ul style="list-style-type: none"> If yes, briefly describe, including whether any of the areas are in known hazard risk areas 	Yes The Lost Canyons Residential Development consisting of 364 single-family dwellings located on the northern outskirts of the City Limits is located in a Very High Fire Hazard Severity Zone and pockets of landslide and liquefaction hazards. These areas have been studied in the project's Environmental Impact Report and Mitigation Measures are in place to protect the public safety. The 210-unit North Canyons Ranch Project located adjacent to the northern City Boundary is located in a Very High Fire Hazard Severity Zone and small areas of landslide and liquefaction hazard areas. The project's EIR will address safety issues and mitigation measures to address these hazards																														
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?	<table border="1"> <thead> <tr> <th></th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td>101</td> <td>87</td> <td>91</td> <td>51</td> <td>53</td> </tr> <tr> <td>Multi-Family</td> <td>35</td> <td>8</td> <td>29</td> <td>27</td> <td>3</td> </tr> <tr> <td>Other (commercial, mixed use, etc.)</td> <td>16</td> <td>5</td> <td>6</td> <td>5</td> <td>3</td> </tr> <tr> <td>Total</td> <td>152</td> <td>100</td> <td>126</td> <td>83</td> <td>59</td> </tr> </tbody> </table>		2016	2017	2018	2019	2020	Single Family	101	87	91	51	53	Multi-Family	35	8	29	27	3	Other (commercial, mixed use, etc.)	16	5	6	5	3	Total	152	100	126	83	59
	2016	2017	2018	2019	2020																										
Single Family	101	87	91	51	53																										
Multi-Family	35	8	29	27	3																										
Other (commercial, mixed use, etc.)	16	5	6	5	3																										
Total	152	100	126	83	59																										

Criterion	Response
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> • Special Flood Hazard Areas: 0 (New development is prohibited in the SFHA) • Landslide: * • High Liquefaction Areas: * • Tsunami Inundation Area: 0 • Wildfire Risk Areas: * <p>*The City of Simi Valley includes substantial areas of earthquake-induced landscape and liquefaction areas, and wildfire-risk areas. Pursuant to the General Plan, Building Codes and geotechnical standards have been adopted to provide protection for new and renovated structures in these hazard areas. For Special Flood Hazard Areas, all new construction, substantial repair/improvements, and grading are prohibited. The City does not have any Tsunami Inundation Areas.</p>
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	The City is virtually built out, with little undeveloped land remaining. The hillside open space areas surrounding the community are expected to remain substantially unchanged as development in these areas is regulated through the City's Hillside Performance Standards, which are designed to preserve the natural resources surrounding the community.

9.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 9-3.
- Development and permitting capabilities are presented in Table 9-4.
- An assessment of fiscal capabilities is presented in Table 9-5.
- An assessment of administrative and technical capabilities is presented in Table 9-6.
- An assessment of education and outreach capabilities is presented in Table 9-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 9-8.
- Classifications under various community mitigation programs are presented in Table 9-9.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 9-10.

Table 9-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: Simi Valley Municipal Code, Title 8, Simi Valley Building Code; California Building Codes, Title 24 of the California Code of Regulations</i>	Yes	No	Yes	Yes
Zoning Code <i>Comment: Simi Valley Municipal Code, Title 9, Planning and Zoning</i>	Yes	No	Portions	Yes
Subdivisions <i>Comment: Simi Valley Municipal Code, Title 9, Planning and Zoning/ State Subdivision Map Act (Govt. Code Sec. 66410-66499.58), Title 7, Chapter 5 Flood Damage Prevention</i>	Yes	No	Yes	Yes
Stormwater Management <i>Comment: Simi Valley Municipal Code, Title 7, Chapter 5 Flood Damage Prevention, National Flood Insurance Program (NFIP), NFIP Community Rating System, California State Water Quality Control Board MS4 Permit</i>	Yes	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment: Mandated by CalOES and FEMA for funding.</i>	Yes	No	Yes	Yes
Real Estate Disclosure <i>Comment: SFHA & All-Hazards declaration (State, City)</i>	Yes	No	Yes	Yes
Growth Management <i>Comment: Simi Valley General Plan</i>	Yes	No	Yes	Yes
Site Plan Review <i>Comment: (Rancho Simi Recreation and Park District, VC Fire, VCPWA-WP) Simi Valley Municipal Code, Title 9, Planning and Zoning</i>	Yes	Yes	No	Yes
Environmental Protection <i>Comment: CEQA</i>	Yes	Yes	Yes	Yes
Flood Damage Prevention <i>Comment: Simi Valley Municipal Code, Title 7, Chapter 5 Flood Damage Prevention, National Flood Insurance Program (NFIP), NFIP Community Rating System SFHA (FEMA, City)</i>	Yes	Yes	No	Yes
Emergency Management <i>Comment: Mandated by CalOES and FEMA for funding.</i>	Yes	No	Yes	Yes
Climate Change <i>Comment: CEQA</i>	Yes	Yes	Yes	Yes
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? Yes</i> <i>Comment: Once Safety Element is updated in October 2021, this will comply with AB2140.</i>	Yes	No	Yes	Yes
Capital Improvement Plan <i>How often is the plan updated? Every Year</i> <i>Comment: City of Simi Valley Proposed Five Year Capital Improvement Plan</i>	Yes	No	No	Yes
Disaster Debris Management Plan <i>Comment: Must meet requirements for CalOES and FEMA funding</i>	Yes	No	No	Yes
Floodplain or Watershed Plan <i>Comment: Both plans are in currently in conceptual form (FEMA, VCPWA-WP, City)</i>	No	No	No	Yes
Stormwater Plan <i>Comment: 2016 Master Plan of Drainage requires update (City)</i>	Yes	No	No	No
Urban Water Management Plan <i>Comment: 2020 Plan recently adopted</i>	Yes	No	Yes	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Habitat Conservation Plan <i>Comment: General Plan/CEQA addresses portions of this</i>	Yes	No	Yes	Yes
Economic Development Plan <i>Comment: City of Simi Valley Economic Development Plan</i>	Yes	No	No	Yes
Shoreline Management Plan <i>Comment: The City doesn't have shoreline.</i>	No	No	No	No
Community Wildfire Protection Plan <i>Comment: VCFPD's Ready, Set, Go! Wildfire Action Plan; Ventura County Fire Code Section W106- Fire Protection, Fuel Modification and Vegetation Management Plans and FHRP</i>	Yes	No	No	Yes
Forest Management Plan <i>Comment: The City doesn't have forests.</i>	No	No	No	No
Climate Action Plan <i>Comment: General Plan/CEQA addresses portions of this.</i>	Yes	No	Yes	Yes
Comprehensive Emergency Management Plan <i>Comment: Updating in 2022. Required by CalOES and FEMA for funding.</i>	Yes	No	Yes	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: The City relies on Ventura County's THIRA.</i>	Yes	No	No	Yes
Post-Disaster Recovery Plan <i>Comment: Opportunity to expand it in 2022 EOP update. Required by CalOES and FEMA for funding.</i>	Yes	No	Yes	Yes
Continuity of Operations Plan <i>Comment: Opportunity to expand it in 2022 EOP update. Required by CalOES and FEMA for funding.</i>	Yes	No	Yes	Yes
Public Health Plan <i>Comment: Opportunity to expand it in 2022 EOP update</i>	Yes	Yes	Yes	Yes

Table 9-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i>	Yes Public Works issues Flood Area Development Permits for development within the SFHA. Environmental Services.
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	Yes

Table 9-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service <i>If yes, specify: Water and Sewer Fees</i>	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes

Financial Resource	Accessible or Eligible to Use?
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes (Traffic Mitigation fees)

Table 9-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Public Works/Deputy Director (Development Services) Public Works/Senior Engineer (Development Services) Environmental Services/Planning Division	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Public Works/Deputy Director (Development Services) Public Works/Senior Engineer (Development Services)	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Public Works/Deputy Director (Development Services)	Yes
Staff with training in benefit-cost analysis <i>If Yes, Department /Position:</i> Public Works/Deputy Director (Development Services)	Yes
Surveyors <i>If Yes, Department /Position:</i> The City contracts surveying services with outside consultants.	Yes
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Public Works/GIS Coordinator, Police Dept/Emergency Services Manager	Yes
Scientist familiar with natural hazards in local area <i>If Yes, Department /Position:</i> Public Works/Deputy Director (Development Services)	Yes
Emergency manager <i>If Yes, Department /Position:</i> Police Dept/Emergency Services Manager	Yes
Grant writers <i>If Yes, Department /Position:</i> Police Dept/Emergency Services Manager. Administrative Services also contracts these services through an outside consultant	Yes

Table 9-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> The City's 2015 Multi-Hazard Mitigation Plan is posted.	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> The City and SVPD use Twitter, Next Door and other outlets.	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i> NFIP CRS Program for Public Information Program and Committee; CERT and Disaster Service Worker volunteer teams.	Yes
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> NFIP CRS Program for Public Information Program and Committee; AM530 Radio; Portable digital signs and SVTV cable channel.	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> The County of Ventura uses VC Alert and we encourage residents to sign up.	Yes

Table 9-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Public Works/Public Works Director
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your flood damage prevention ordinance was last amended?	February 27, 2017
Does your floodplain management program meet or exceed minimum requirements? <i>If exceeds, in what ways?</i>	Exceeds All development within the SFHA, including fill, is prohibited. Additional higher regulatory design and construction standards have been codified in the SVMC.
When was the most recent Community Assistance Visit or Community Assistance Contact?	December 3, 2021
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Are any RiskMAP projects currently underway in your jurisdiction?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	No The Flood Insurance Study and FIRMs do not accurately represent true flood risk and are overly conservative. The City is working with FEMA Region 9 to identify funding for either a RiskMap to correct these mapping issues or a Flood Hazard Study to support a subsequent City sponsored mapping change application to FEMA.
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If so, what type of assistance/training is needed?</i>	Yes City staff needs training in grant management (NDGrants) and the Mapping Information Platform (MIP) in order to pursue FEMA grant funding for mapping projects.
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If yes, is your jurisdiction interested in improving its CRS Classification?</i>	Yes Yes
How many flood insurance policies are in force in your jurisdiction? <i>What is the insurance in force?</i> <i>What is the premium in force?</i>	1,624 \$425,325,500 \$1,337,947
How many total loss claims have been filed in your jurisdiction? <i>What were the total payments for losses?</i>	82 \$116,840

a. According to FEMA statistics as of March 31, 2021

Table 9-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	0611172016	N/A
DUNS #	Yes	076238211	N/A
Community Rating System	Yes	5	10/01/19
Building Code Effectiveness Grading Schedule	Yes	2	10/2/17
Public Protection	Yes	03/3X	12/21/2018
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	N/A	N/A	N/A

Table 9-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: The General Plan Safety & Noise Chapter update was adopted on October 25, 2021, and includes new Emergency Preparedness Goals and Policies to respond to climate change.</i>	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment: City of Simi Valley Climate Action Plan</i>	High
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: City of Simi Valley Greenhouse Gas Inventory Policy, Climate Action Plan; City of Sim Valley Green Community Action Plan</i>	High
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: City of Simi Valley Climate Action Plan</i>	High
Capital planning and land use decisions informed by potential climate impacts <i>Comment: Appendix A of General Plan, Policies Addressing Climate Change</i>	High
Participation in regional groups addressing climate risks <i>Comment: Ventura County Fire Protection District, Ventura County Health Department, Ventura County OES</i>	Medium
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: General Plan was adopted on October 25, 2021</i>	High
Identified strategies for greenhouse gas mitigation efforts <i>Comment: City of Simi Valley Climate Action Plan</i>	High
Identified strategies for adaptation to impacts <i>Comment: City of Simi Valley Climate Action Plan</i>	High
Champions for climate action in local government departments <i>Comment: Planning, Public Works and City Manager's Office staff through the implementation of the General Plan, Climate Action Plan and efforts to enhance resiliency of City Buildings.</i>	High
Political support for implementing climate change adaptation strategies <i>Comment: The City Council voted to join the Clean Power Alliance, a Community Choice Aggregator, focused On providing clean energy to communities in Southern California.</i>	High
Financial resources devoted to climate change adaptation <i>Comment: The City has undertaken a multi-million dollar project at the Wastewater Treatment Plant to Enhance the City's resiliency; has invested in solar, battery back-up systems for City facilities, LED lighting, and similar projects.</i>	High
Local authority over sectors likely to be negative impacted <i>Comment: Businesses must abide by the California Green Building Code, the City's General Plan. However, Many sectors are regulated by the State and Federal government.</i>	High
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: Staff does consistent outreach to the community regarding the need for water conservation due to Drought, preparation for PSPS events due to severe weather and possible Wildfire, but there is opportunity for improvement.</i>	Medium
Local residents' support of adaptation efforts <i>Comment: Some Simi Valley residents have adopted the use of solar panels to be less reliant on the grid but there are other opportunities that can be explored.</i>	Medium
Local residents' capacity to adapt to climate impacts <i>Comment: Residents have been installing solar panels and buying electric vehicles, but there are other opportunities that can be explored.</i>	Medium

Criterion	Jurisdiction Rating
Local economy current capacity to adapt to climate impacts <i>Comment: The City has a diversified economy, which can adapt to climate impacts, but much of the workforce needs training to stay current.</i>	Medium
Local ecosystems capacity to adapt to climate impacts <i>Comment: The City does not have the specialized staff and funding to revamp the ecosystem to be more resilient.</i>	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
 Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

9.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

9.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **2016 Master Plan of Drainage**—SVMC 7-5.605, Flood Damage Prevention, Standards for subdivisions and other proposed development.
- **NFIP CRS Program for Public Information**—NFIP CRS PPI Plan adopted by the City Council.
- **Emergency Operations Plan**—The EOP explains how the City will plan for, respond to and recover from hazards and disasters. Disaster Debris Management is included in the EOP.
- **Simi Valley General Plan**—Safety Element addresses integration of hazard mitigation into the overall development of the City’s and identifies policies and implantation programs.
- **Simi Valley Municipal Code, Title 9, Planning and Zoning**—Planning and Building Code integrate safe building and land use practices to mitigate risk.
- **California Environmental Quality Act**—Requires the assessment of wildlife risk, climate change impacts and environmental impacts on land development projects in the City of Simi Valley.

9.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and

programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Post-Disaster Recovery Plan**—The City can expand the 2015 HMP recovery plan into a more detailed version.
- **Continuity of Operations Plan**—The City can expand the current recovery plan to build on the goals and objectives identified in the hazard mitigation plan.
- **Public Health Plan**—The City can expand the current recovery plan to build on the goals and objectives identified in the hazard mitigation plan.
- **Economic Development Plan**—The City can look for mitigation opportunities in private sector partnerships.
- **Home Rehabilitation Program**—The City can investigate expanding the program to incorporate clean energy technology.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

9.6 RISK ASSESSMENT

9.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 9-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 9-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4482	01/20/20 – continuing	N/A
Severe Weather	N/A	02/28/2021	Strong and gusty Santa Ana winds impacted the coastal valleys of Ventura County. Some peak north to northeast wind reports from the local mesonet included east Simi Valley (gust 61 mph).
Wildfire (Easy Fire)	FM-5298	10/30-11/2/2019	The three-day fire burned 1,806 acres in west Simi Valley and threatened the Reagan Presidential Library.
Wildfire (Woolsey Fire)	DR-4407	11/8-25/2018	This fire was active for 56 days in Ventura and LA counties. It burned over 96,000 acres south of Simi Valley and is the eighth most destructive fire in California history.
Wildfire (Peak Fire)	N/A	11/12/2018	This one-day fire burned 186 acres east of Simi Valley off Hwy 118 and Rocky Peak Road.
Wildfire, Flooding, Landslide	DR-4353	12/4/2017-1/31/2018	Wildfire, Mudflows and Debris Flows

Type of Event	FEMA Disaster #	Date	Damage Assessment
Wildfire (Thomas Fire)	FM-5224	12/4/2017	Rancho Simi Recreation and Park District \$4M, SVPD \$35K in SVPD overtime. This fire was active for 38 days in Ventura and Santa Barbara counties. It was started by power lines and burned over 280,000 acres and destroyed 1,063 structures. Rye Fire burned 12/5-12/2017 in Santa Clarita but didn't reach Simi Valley.
Wildfire (Kuehner Fire)	N/A	7/1/2016	This one-day fire burned 45 acres off Hwy 118 at Rocky Peak Road, northeast of Simi Valley.
Wildfire (Rustic Fire)	N/A	8/16/2015	This one-day fire threatened 500 homes in southwest Simi Valley before being extinguished. Residents were advised to prepare to evacuate their animals, especially livestock, but no evacuation orders were issued.
Flooding	N/A	12/12/2014	Heavy rain produced flash flooding and mud and debris flows in the community of Simi Valley. Law enforcement reported mud flows across Hwy 118 at Kuehner Drive.
Wildfire (Springs Fire)	FM-5024	5/2-11/2013	Impacted Ventura County.
Severe Storm and Flooding	N/A	1/18-22/2010	Heavy rain, gusty winds, and heavy snow were witnessed in Ventura County. Rainfall totals ranged from 4-8 inches over coastal areas to 8-16 inches in the foothills and mountains. Flash flood watches were issued in areas of Ventura County that were damaged by wildfires in 2008.
Wildfire, Flooding, Landslide	DR-1731	10/21/2007-3/31/2008	Minor flooding of streets; First Street bridge flooded, which is common with heavy rain. Los Angeles Ave/Madera Road intersection flooded. A blocked storm drain near Santa Susana Park at Katherine Road resulted in the flooding of a few homes.
Wildfire (Sesnon Fire)	N/A	10/13-18/2008	EOC activated 10/13-15/2008. Fire active from 10/13 – 18/2008.
Severe Weather	DR-1689	1/11-17/2007	Freeze.
Wildfire (Day Fire)	FM-2677	9/25-30/2006	Burned 162,000 acres over 28 days north of Simi Valley.
Wildfire (School Fire)	FM-2586	11/18-23/2005	Burned almost 4,000 acres over four days near the City of Ventura.
Wildfire (Topanga Fire)	FM-2583	9/28-10/10/2005	This Chatsworth-area fire burned along the LA/Ventura counties border for seven days, destroying over 24,000 acres.
Flooding	DR-1585	2/16-23/2005	Madera Rd/Los Angeles Ave flooded
Severe Storms and Flooding	DR-1577	12/27/2004-1/11/2005 (Simi Valley: 1/7-11/2005)	\$21,588. In January 2005, winter storms brought heavy rains to the region. The Ventura River reached a maximum stage of 17.5 feet and maximum discharge of 152,560 cfs. High water flows, scouring, and washouts in the Ventura River damaged several water wells and exposed water lines owned by the Ojai Valley Sanitary District. Severe erosion occurred along both embankments of the Ventura River. The Calleguas Creek topped its banks near the state hospital in Camarillo. Damage from the January 2005 storms totaled more than \$200 million.
Wildfire (Simi Fire)	FM-2504	10/24 – 11/11/2003	Per CAL FIRE: 108K acres burned, 315 structures destroyed, 11 structures damaged.
Wildfire	DR-1498	10/21/2003-3/31/2004	Impacted Ventura County.

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Storms, Tornado, High Winds and Flooding	DR-1267	12/20-28/1998	Impacted Ventura County.
Severe Winter Storms and Flooding ("El Nino" winter)	DR-1203	2/2 – 4/30/1998	In this "El Nino" winter, Simi Valley received 17.2 inches of rain during February. The maximum flow in Calleguas Creek as recorded at the California State University Channel Islands was 21,600 ft ³ /s, which caused overtopping of the bridges at Pacific Coast Highway.
Wildfires (Calabasas/Malibu Fires)	EM-3120	10/21-31/1996	Impacted Ventura County.
Severe Storms and Flooding	DR-1046	2/13-4/19/1995 (Simi Valley: 1/3-10/1995; 3/10/1995)	Rainfall intensities in some locations were equivalent or greater than 100-year frequency precipitation. Significant local flooding occurred as a result of channels and local storm drains being overtaxed. On March 10, a cooler winter storm brought significant amounts of precipitation with damaging results due to the saturated soil conditions. The peak flow recorded on Calleguas Creek at the stream gauge above Highway 101 was 9,120 ft ³ /s and at the CSUCI gauge, it was 14,900 ft ³ /s.
Earthquake (Northridge)	DR-1008	1/17-11/30/1994	The Simi Valley Police station was badly damaged and eventually had to be abandoned. Hwy 118 was badly damaged and unusable for months. In the greater Los Angeles area, the 6.7 earthquake caused 57 deaths; 9,253 injuries and displaced over 20,000 people.
Wildfires, Mud & Landslides, Soil Erosion & Flooding	DR-1005	10/26-4/22/1994	Impacted Ventura County.
Severe Storm, Mud & Landslides, Flooding	DR-979	1/5-3/20/1993	Impacted Ventura County.
Severe Storm, Severe Weather, Flooding, Mud & Landslide	DR-935	2/10-19/1992	The storm lasted five days, leaving flood control structures damaged, full of debris, and vulnerable to future storms. Of primary concern in Ventura County was erosion of channels and removal of debris following flood flows. The seven-day depths in Ventura County ranged from 6 to 13 inches, which represented about 60-65 percent of the mean annual rainfall. Although the peak flow in Calleguas Creek was estimated to be about a 10-year event, approximately one million cubic yards of sediment was deposited in the channel system. Conejo Creek contributed much of the sediment, as it was running higher than Calleguas Creek at the confluence of the two streams. On Calleguas Creek, the Lewis Street bridge abutments were undermined and required stone placement on them to prevent further damage.
Severe Weather (Severe Freeze)	DR-894	12/19/1990-1/3/1991	Minor flooding of streets, including the First Street bridge and Los Angeles Ave/Madera Road.
Severe Storm and Flooding	DR-677	1/21-3/30/1983 (Ventura County: 2/25-3/3/1983)	With the ground wet from a January storm, heavy precipitation produced high flows in most creeks in southern California. On Colloques Creek, at the CSUCI stream gage, Madera St. stream gauge, and the stream gauge above Highway 101, the peak discharges of record occurred, 26,600 ft ³ /s, 10,570 ft ³ /s and 17,200 ft ³ /s, respectively. As in 1980, the Calleguas Creek levee was breached. The maximum peak discharge on Conejo Creek at the stream gauge above Highway 101 was 14,000 ft ³ /s.

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Storm and Flooding	N/A	2/13-22/1980	A series of varying intensity fronts coming from the west soaked southern California with eight days of nearly continuous rain. Six storms moved through southern California during February 13-22. The strongest front passed the area midday on Saturday February 16, producing the second highest peak discharge of record on Calleguas Creek of 25,300 ft ³ /s at the CSUCI stream gauge, 9,310 ft ³ /s at the Madera St. stream gauge, and 14,000 ft ³ /s at the stream gauge above Highway 101. This storm caused a breach of the west levee of Calleguas Creek below Hueneme Road, with an estimated total of 24,000 acre-ft of water flowing through the breach before it was repaired. The maximum peak discharge on Conejo Creek at the stream gauge above Highway 101 was 11,800 ft ³ /s.
Severe Storms and Flooding	DR-547	2/15/1978 (Simi Valley: 2/28-3/5/1978)	Storms and accompanying flooding throughout February saturated the ground. A last front on March 4 brought heavy rain, thunderstorms and gale force winds. Measurements were 7,730 ft ³ /s at the Madera St. stream gauge and 8,600 ft ³ /s at the Moorpark stream gauge.
Severe Storms and Flooding	DR-364	2/8/1973	Impacted Ventura County.
Wildfire	DR-295	9/29/1970	Impacted Ventura County.

9.6.2 Hazard Risk Ranking

Table 9-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions primarily target hazards with high and medium rankings.

Table 9-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Wildfire	36	High
1	Landslide	36	High
3	Earthquake	32	Medium
4	Flooding	24	Medium
4	Severe Storms	24	Medium
4	Severe Weather	24	Medium
5	Dam Failure	22	Medium
6	Drought	9	Low

9.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Water tanks and system could be attacked by terrorists using chemical, biological, radiological, nuclear, explosive or other weapons.
- Frequent wildfires along the 118 Freeway, mostly caused by humans.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

9.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 9-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 9-13. Status of Previous Plan Actions

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>1.A.1 Modify the City's zoning ordinance as necessary to address development in hazard areas and reflect changes in the General Plan.</p> <p><i>Comment: This is an ongoing process. Safety Element of the Simi Valley General Plan update was adopted in October, 2021. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-2
<p>1.B.1 Modify local building codes to address development issues in hazard areas.</p> <p><i>In the update, this action has been reworded for a broader application.</i></p> <p><i>Comment: This is an ongoing process. Ordinance 1268 was adopted in 2017 rewriting and significantly expanding the Flood Damage Prevention Ordinance to codify historic City policy and practice as higher regulatory standards for development citywide and particularly within the Special Flood Hazard Areas.</i></p>			✓	SIM-2
<p>1.B.2 Actively participate in the state and national building code development groups to ensure that development issues in hazard areas are properly addressed.</p> <p><i>Comment: This is an ongoing process. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-2
<p>1.B.3 Require site-specific studies to evaluate specific hazards in hazard-prone areas and identify alternative site design criteria to mitigate hazards to the maximum extent possible.</p> <p><i>Comment: Geotechnical, Soils, and Drainage studies are required for all development. The Planning process requires site-specific studies mostly through the CEQA process to evaluate hazards and promote alternative site design criteria. SVMC 9-64.100, Development Code, Geotechnical (Soils) Reports, SVMC 7-5.602, Flood Damage Prevention, Standards of Construction. This is an ongoing action. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-8

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>1.C.1 Review General Plan, Zoning Codes, Fire Codes, Subdivision Ordinance, and Building Code for consistency.</p> <p><i>Comment: The municipal code is routinely reviewed to ensure consistency with NFIP and CRS standards and requirements along with current floodplain management state of practice. This is an ongoing action. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-2
<p>1.C.2 Establish hazard mitigation training for development staff.</p> <p><i>Comment: PW Development Services staff maintains competency in floodplain management through continual training and at least one staff member holds a Certified Floodplain Manager certificate from the American Society of Floodplain Managers. This is an ongoing action. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-8
<p>1.D.1 Update databases/Geographic Information System (GIS), with particular attention to maintaining hazard overlay layers.</p> <p><i>Comment: The City's NFIP SFHA GIS layers are updated whenever FEMA issues FIRM updates and on an ongoing basis. ESRI will perform annual maintenance on GIS system. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-8
<p>2.A.1 Assist local mobile home parks with their community preparedness plans.</p> <p><i>Comment: SVOES can conduct outreach via a preparedness campaign. Not completed due to lack of staff capacity. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-10
<p>2.A.2 Develop and conduct a variety of community workshops to educate about earthquake preparedness and the benefits of retrofitting buildings for improved seismic performance. <i>In the update, this action has been reworded for a broader application.</i></p> <p><i>Comment: SVOES can conduct outreach via a preparedness campaign in partnership with Building & Safety. Not completed due to lack of staff capacity.</i></p>			✓	SIM-10
<p>2.A.3 Increase awareness among at-risk populations of emerging earthquake damage mitigation techniques.</p> <p><i>Comment: SVOES can conduct outreach via a preparedness campaign. Not completed due to lack of staff capacity. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-10
<p>2.A.4 Develop a program that identifies the needs of senior citizens and assists them to meet those needs.</p> <p><i>Comment: The County is responsible for keeping updated records on seniors who may need assistance evacuating in an emergency. This is not a responsibility of the City.</i></p>		✓		
<p>2.B.1 Provide hazard mitigation links on the Chamber of Commerce's website and the City's website.</p> <p><i>Comment: SVOES can conduct outreach via a preparedness campaign. Not completed due to lack of staff capacity. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-10
<p>3.A.1 Promote the upgrade of buildings to provide acceptable performance during an earthquake and adopt cost-effective mitigation techniques for both structural and non-structural elements.</p> <p><i>Comment: SVOES can conduct outreach via a preparedness campaign in partnership with Building & Safety. Not completed due to lack of staff capacity. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-1 SIM-9
<p>3.A.2 Conduct a seismic safety survey/assessment of the City's facilities to ensure that heavy furniture and equipment are properly secured.</p> <p><i>Comment: Ongoing as personnel are added and moved. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-9

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>3.A.3 Support legislative efforts to provide funding for hospital earthquake retrofit projects.</p> <p><i>Comment: This is not currently in our Legislative Platform and would need to be included in order for the City to take action on legislation without going to the Council for approval first.</i></p>		✓		
<p>3.B.1 Retrofit water system infrastructure to seismic safety standards.</p> <p><i>Comment: A seismic evaluation of water system infrastructure was completed in 2021. The District will schedule projects to improve and replace facilities based on public safety and operational importance. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-9
<p>3.B.2 Retrofit sanitation system infrastructure to seismic safety standards</p> <p><i>Comment: The building seismic retrofit projects that were identified in the 2011 Sanitation Asset Reliability Assessment have been completed. In the update, this action has been reworded for a broader application.</i></p>	✓			SIM-1
<p>3.B.3 Conduct seismic non-structural and structural retrofit of critical facilities and infrastructure.</p> <p><i>Comment: Construction has begun on a project to repair and replace structural elements at the City's Public Services Center and Garage Facility. Anticipated completion is Spring 2022. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-1 SIM-9
<p>3.C.1 Identify multi-unit buildings (e.g. soft story construction) that may suffer structural failures in earthquakes.</p> <p><i>Comment: This is an opportunity for earthquake mitigation. Not completed due to lack of staff capacity and funding. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-9
<p>4.A.1 Implement a fuel reduction program, such as the collection and disposal of dead fuel, within open spaces and around critical facilities and residential structures with high or very high wildfire zones.</p> <p><i>Comment: VCFPD Ordinance 31 and Fire Hazard Reduction Program, which is an ongoing program. In the update, this action has been reworded for a broader application and to align with VCFPD's lead.</i></p>			✓	SIM-12
<p>4.A.2 Create a vegetation management program that provides vegetation management services to the elderly, disabled, or low income property owners who lack the resources to remove flammable vegetation near their homes.</p> <p><i>Comment: This is an opportunity for wildfire mitigation. Not completed due to lack of staff capacity. In the update, this action has been reworded for a broader application and to align with VCFPD's lead.</i></p>			✓	SIM-12
<p>4.A.3 Implement a fuel modification program that includes maintenance requirements, plan submittal and approval process and enforcement.</p> <p><i>Comment: Ventura County Fire Code Section W106- Fire Protection, Fuel Modification and Vegetation Management Plans and FHRP Ongoing program. In the update, this action has been reworded for a broader application and to align with VCFPD's lead.</i></p>	✓			SIM-12
<p>5.A.1 Limit uses in floodways to those tolerant of occasional flooding, including but not limited to agriculture, outdoor recreation and natural resource areas.</p> <p><i>Comment: Development within floodways is prohibited. Maintenance of open space as a natural resource area and/or for recreation and agriculture is encouraged. SVMC 7-5.601, Flood Damage Prevention, Prohibitions. Simi Valley General Plan Open Space Element. Ongoing. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-4
<p>5. B.1 Discourage the disruption of natural flowage patterns and encourage the use of natural drainage ways in new development.</p> <p><i>Comment: Disruption of natural flowage patterns is prohibited and maintenance of natural drainage ways within new development is enforced. SVMC 9-32.120, Development Code, Drainage Standards. Ongoing. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-4

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>5.C.1 Submit Letters of Map Revision/ Letters of Map Amendment to FEMA within a prescribed period of time upon completion of drainage improvements or flood-proofing. SVMC 7-5.605, Flood Damage Prevention, Standards for subdivisions and other proposed development</p> <p><i>Comment: SVMC 7-5.605, Flood Damage Prevention, Standards for subdivisions and other proposed development. Ongoing. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-4
<p>6.A.1 Create and maintain a mailing list of all addresses with dam inundation areas for mailings and public information documents.</p> <p><i>Comment: Creation of the mailing list is pending CalOES approval of VCPWA-WP EAPs for each of the 3 State jurisdictional dams within the City. Inundation maps and EAPs for jurisdictional dams owned by the Calleguas Municipal Water District and the Sinaloa Lake homeowners' association are also pending. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-14
<p>6.A.2 Create and maintain a special grouping for emergency notification system users within the dam inundation areas for emergency information delivery.</p> <p><i>Comment: OES will leverage VC Alert. Ongoing. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-14
<p>7.A.1 Increase field personnel's awareness of hazardous materials incidents and the proper response.</p> <p><i>Comment: SVPD conducts regular trainings during briefings and will continue these. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-11
<p>7.B.1 Establish and maintain relationships with operators and regulators involved in the transport, extraction, processing and use of hazardous materials.</p> <p><i>Comment: City code Title 6 Chapter 10 addresses hazardous wastes. Title 9 Chapter 9-26.070 regulates industrial storage. Title 6 Chapter 13 describes the need for plans to prevent releases of hazardous materials/wastes into the sewer system. Dept. Of Transportation regulates rail cars. The Ventura County Certified Unified Program Agency regulates the storage of hazardous materials on commercial properties. Ongoing. In the update, this action has been reworded for a broader application.</i></p>			✓	SIM-11

9.8 HAZARD MITIGATION ACTION PLAN

Table 9-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 9-15 identifies the priority for each action. Table 9-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 9-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
<p>Action SIM-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.</p> <p><i>Hazards Mitigated:</i> Wildfire, Landslide, Earthquake, Flooding, Severe Storms, Severe Weather, Dam Failure</p>						
Existing	9, 10, 11, 16	City of Simi Valley	Ventura County OES	High	FEMA HMA (BRIC, FMA, PDM and HMGP)	Short-term
<p>Action SIM-2—Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including Simi Valley General Plan, Municipal Code, Zoning Ordinance.</p> <p><i>Hazards Mitigated:</i> Wildfires, Landslides, Earthquakes, Flooding, Dam Failure</p>						
New & Existing	1, 2, 4, 5, 6, 9, 10, 11, 13, 14, 15, 16	City of Simi Valley	Ventura County Fire Dept, VCISOES	Low	Staff Time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
Action SIM-3 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<u>Hazards Mitigated:</u> Wildfire, Landslide, Earthquake, Flooding, Severe Storms, Severe Weather, Dam Failure, Drought						
New & Existing	1-19	City of Simi Valley	Ventura County Fire Dept, VCSOES	Low	Staff Time, General Funds	Short-term
Action SIM-4 —Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:						
<ul style="list-style-type: none"> Enforce the flood damage prevention ordinance. Participate in floodplain identification and mapping updates. Provide public assistance/information on floodplain requirements and impacts. 						
<u>Hazards Mitigated:</u> Flooding, Dam Failure, Severe Storms						
New & Existing	1, 4, 11	City of Simi Valley	Public Works	Low	Staff Time, General Funds	Ongoing
Action SIM-5 —Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:						
<ul style="list-style-type: none"> Update the Climate Action Plan and other City plans, when necessary and applicable to remain in compliance and leverage opportunities. Explore clean air technologies for City equipment and infrastructure. 						
<u>Hazards Mitigated:</u> Wildfire, Landslide, Earthquake, Flooding, Drought						
New & Existing	1, 3, 4	City of Simi Valley	Interdepartmental	Low	Staff Time, General Funds	Short-term
Action SIM-6 —Purchase generators for critical facilities and infrastructure that lack adequate backup power, including City Hall, Police Station and Senior Center.						
<u>Hazards Mitigated:</u> Wildfire, Landslide, Earthquake, Flooding, Severe Storms, Severe Weather, Dam Failure						
Existing	2, 6, 9	City Manager's Office	Public Works	High	Staff time, General and enterprise funds, HMGP, BRIC	Long-term
Action SIM-7 —Develop evacuation routes and plans, partnering with neighboring cities and counties.						
<u>Hazards Mitigated:</u> Wildfire, Landslide, Earthquake, Flooding, Dam Failure						
Existing	1, 2, 8, 17	City of Simi Valley	Cities of Thousand Oaks & Moorpark; VCSOES; VCFPD	Low	Staff Time, CDBG20, FEMA HMA (BRIC, FMA, HMGP),	Short-term
Action SIM-8 —Increase knowledge of hazard areas and understanding of vulnerability and risk to life and property in hazard-prone areas, including but not limited to these items:						
<ul style="list-style-type: none"> Conduct site-specific studies to evaluate hazards and identify alternative site design criteria. Continue ongoing training for development staff. Update GIS hazard overlay layers. Map new earth movement hazards and make information available to staff, developers, and residents so that soil types, slope percentage, drainage, or other critical factors are used to identify landslide prone areas Develop flood-after-fire scenarios after wildland fires to identify risks and develop mitigation measures 						
<u>Hazards Mitigated:</u> Earthquake, Wildfire, Landslide, Flooding, Dam Failure, Severe Storms, Severe Weather						
New & Existing	1, 2, 3, 5, 6, 7, 8, 9, 12, 14, 15, 16, 17, 19	Public Works	Environmental Services	Medium	General Fund/Staff time, HMGP, BRIC, FMA	Ongoing
Action SIM-9 —Perform structure-specific, all-risk, vulnerability assessment of all City-owned critical facilities (including bridge, water, sanitation and storm drain infrastructure). Identify potentially vulnerable private utility systems including electric, gas, oil, water, sewer, communications and internet.						
<u>Hazards Mitigated:</u> Earthquake, Flooding, Severe Storms, Severe Weather, Dam Failure						
Existing	1, 2, 4, 6, 9, 18, 19	Building & Safety	Public Works	Low	General Fund/Staff time, HMGP, BRIC, FMA	Long-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
<p>Action SIM-10—Create and conduct hazard mitigation and emergency preparedness outreach campaigns for the low-to-moderate income and Spanish-speaking communities then adapt and expand these campaigns to other demographics and the whole community. <i>Hazards Mitigated:</i> Earthquake, Wildfire, Landslide, Flooding, Dam Failure, Severe Storms, Severe Weather</p>						
Existing	1, 2, 4, 5, 7, 10, 12, 13, 14, 15, 16, 17, 18	SVOES	City of Simi Valley, VCSOES, VCFPD	Low	Staff Time, CDBG20, HMGP	Short-term, Ongoing
<p>Action SIM-11—The City shall continue to provide inspections, emergency response, and enforcement of hazardous materials and waste compliance procedures in the community. The City shall continue to work with relevant agencies regarding enforcement of hazardous materials regulations and continue to conduct household hazardous waste collection events. <i>Hazards Mitigated:</i> Earthquake, Wildfire, Flooding, Dam Failure</p>						
Existing	1, 4, 16, 18, 19	Public Works	Ventura County Certified Unified Program Agency	Low	Staff Time	Ongoing
<p>Action SIM-12—Maintain wildfire hazard fuel reduction program for areas that have been identified with overgrown or dead brush, trees and weeds to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program. (Coordinates with Ventura County Fire Protection District Action VFP-6) <i>Hazards Mitigated:</i> Wildfire</p>						
New & Existing	2, 4, 5, 6, 8, 10, 11, 13, 14, 15, 18, 19	VCFPD	CAL FIRE & USDA	Medium	FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing
<p>Action SIM-13—The City shall amend the local building code to account for additional climate change-induced stressors on buildings, such as including flood proofing for intermittent inundation, building materials to reduce the impacts of high heat days, and fireproofing in preparation for increased wildfire risk. <i>Hazards Mitigated:</i> Wildfire, Flooding, Severe Storm, Severe Weather</p>						
New & Existing	4, 9, 10, 11, 12, 16, 17	Environmental Services	Public Works	Low	Staff time, HMGP, BRIC, FMA	Ongoing
<p>Action SIM-14—Create a levee and dam failure element for the City’s emergency response plan, including but not limited to these items: Assess downstream impacts associated with dam incidents. Develop a public outreach program that informs property owners located in the dam and levee failure inundation areas about voluntary flood insurance. <i>Hazards Mitigated:</i> Dam Failure</p>						
New & Existing	1, 7, 9, 17, 19	SVOES, Public Works	Calleguas Water, Ventura County Watershed Protection	Low	GF/Staff Time, HMGP, BRIC, FMA	Short-Term; Ongoing
<p>Action SIM-15—Assess and retrofit or upgrade City-owned facilities with identified risks, including but not limited to these items: Retrofit or upgrade at-risk and deficient government facilities and public utility systems to ensure the operation and timely restoration of essential systems to reasonable levels of service. Reinforce roads/bridges from flooding through protection activities, including elevating the roads/bridges and installing/widening culverts beneath the roads/bridges or upgrading storm drains. <i>Hazards Mitigated:</i> Earthquake, Flooding, Severe Storms, Severe Weather, Dam Failure</p>						
New & Existing	1, 2, 4, 6, 9, 18, 19	Environmental Services, Public Works	FEMA, CalOES	High	General Fund, Staff Time, HMGP, BRIC, FMA	Long Term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 9-15. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority	Grant Pursuit Priority
1	4	High	High	Yes	Yes	No	Medium	High
2	12	Medium	Low	Yes	No	Yes	High	Low
3	19	Low	Low	Yes	No	Yes	High	Low
4	3	Medium	Low	Yes	No	Yes	High	Low
5	3	Medium	Low	Yes	No	Yes	High	Low
6	3	High	Medium	Yes	Yes	No	Low	Medium
7	4	Medium	Low	Yes	Yes	Yes	High	Medium
8	14	Medium	Low	Yes	Yes	Yes	High	Low
9	7	Medium	High	No	Yes	No	Low	Medium
10	13	Medium	Low	Yes	Yes	Yes	High	Medium
11	5	Medium	Low	Yes	No	Yes	High	Low
12	12	High	Medium	Yes	Yes	Yes	High	High
13	7	High	Medium	Yes	Yes	No	Medium	High
14	5	Medium	Low	Yes	Yes	Yes	High	Medium
15	7	High	High	Yes	Yes	No	Low	Medium

a. See the introduction to this volume for explanation of priorities.

Table 9-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building ^b
High-Risk Hazards								
Wildfire	SIM-1, 2, 3, 5, 10, 11, 12, 13	SIM-1, 2, 3, 5, 10, 11, 12, 13	SIM-2, 3, 5, 7, 10, 11, 12, 13	SIM-2, 3, 11	SIM-3, 6, 7, 10, 11, 12	SIM-1, 2, 3, 5, 13	SIM-3, 5, 13	SIM-2, 3, 5, 6, 7, 8, 10
Landslide	SIM-1, 2, 3, 5, 14	SIM-1, 2, 3, 5	SIM-2, 3, 5, 7	SIM-2, 3, 5	SIM-3, 6, 7	SIM-1, 2, 3, 5	SIM-3, 5	SIM-2, 3, 5, 7, 8
Medium-Risk Hazards								
Earthquake	SIM-1, 2, 3, 9, 10, 11, 15	SIM-1, 2, 3, 10, 11, 15	SIM-3, 7, 10, 11, 15	SIM-3, 11	SIM-3, 6, 7, 10, 11	SIM-1, 2, 3, 9, 15	SIM-3	SIM-2, 3, 6, 7, 8, 10, 15
Flooding	SIM-1, 2, 3, 4, 5, 9, 10, 11, 13, 15	SIM-1, 2, 3, 4, 5, 10, 11, 13, 15	SIM-3, 4, 5, 7, 10, 11, 13, 15	SIM-3, 5, 11	SIM-3, 6, 7, 10, 11	SIM-1, 2, 3, 4, 5, 9, 13, 15	SIM-3, 5	SIM-2, 3, 4, 5, 6, 7, 8, 10, 15
Severe Storms	SIM-3, 4, 9, 10, 13, 15	SIM-3, 4, 10, 13, 15	SIM-3, 4, 10, 13, 15	SIM-3	SIM-3, 6, 10	SIM-3, 4, 6, 9, 15	SIM-3	SIM-3, 4, 6, 8, 10, 15
Severe Weather	SIM-3, 9, 10, 13, 15	SIM-3, 10, 13, 15	SIM-3, 10, 13, 15	SIM-3	SIM-3, 6, 10	SIM-3, 6, 9, 15	SIM-3	SIM-3, 6, 8, 10, 15
Dam Failure	SIM-3, 4, 9, 10, 11, 14, 15	SIM-3, 4, 10, 11, 15	SIM-3, 4, 8, 10, 11, 14, 15	SIM-3, 11	SIM-3, 6, 7, 8, 10, 11, 14, 15	SIM-3, 4, 6, 9, 15	SIM-3	SIM-2, 3, 4, 6, 7, 8, 10, 14, 15

Hazard Type	Action Addressing Hazard, by Mitigation Type							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building ^b
Low-Risk Hazards								
Drought	SIM-3, 5	SIM-3, 5	SIM-3, 5	SIM-3, 5	SIM-3, 5	SIM-3, 5	SIM-3, 5	SIM-3, 5

- a. See the introduction to this volume for explanation of mitigation types.
- b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

9.9 PUBLIC OUTREACH

Table 9-17 lists public outreach activities for this jurisdiction.

Local Outreach Activity	Date	Number of People Involved
Presented at four Neighborhood Council meetings	9/9, 9/14, 9/16, 9/21	N/A
HMP info & survey link via SVPD Nixle sent to residents and posted on social media	7/27/21	N/A
HMP info & survey link via SVPD Tweet	8/17/21	N/A
HMP info & survey link sent to Neighborhood Councils 1-4 E-Notify List.	8/18/21	1, 400
Emergency Services Manager discussed HMP in radio interview	10/25/21	N/A

9.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **Simi Valley Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Simi Valley Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **2015 Hazard Mitigation Plan**—The mitigation strategy action items were used to assess planning and regulatory capabilities and for identifying opportunities for action plan integration.
- **2018 Emergency Operations Plan**—The EOP was reviewed for the full capability assessment and for identifying opportunities for action plan integration and improvement.
- **Simi Valley General Plan**—The General Plan was reviewed for the full capability assessment and for identifying opportunities for action plan integration

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

-
- **FIPS Code**—<https://www.census.gov/geographies/reference-files/2018/demo/popest/2018-fips.html>
 - **DUNS #**—<https://www.dnb.com/duns-number.html>
 - **Community Rating System**—<https://www.fema.gov/floodplain-management/community-rating-system>
 - **Building Code Effectiveness Grading Schedule**—<https://www.isomitigation.com/bcegs/iso-s-building-code-effectiveness-grading-schedule-bcegs.html>
 - **Public Protection Classification**—<https://www.isomitigation.com/ppc/>
 - **Storm Ready**—<https://www.weather.gov/stormready/communities>
 - **Firewise**—<http://www.firewise.org/usa-recognition-program/map-of-active-participants.aspx>
 - **Tsunami Ready**—<https://www.weather.gov/tsunamiready/communities>
 - **CEQA statute** (Public Resources Code Section 21000 and following), the **CEQA Guidelines** (California Code of Regulations, Title 14, Section 15000 and following)
 - **State Subdivision Map Act** (Govt. Code Sec. 66410-66499.58)

Simi Valley

Critical Facilities (1 of 2)

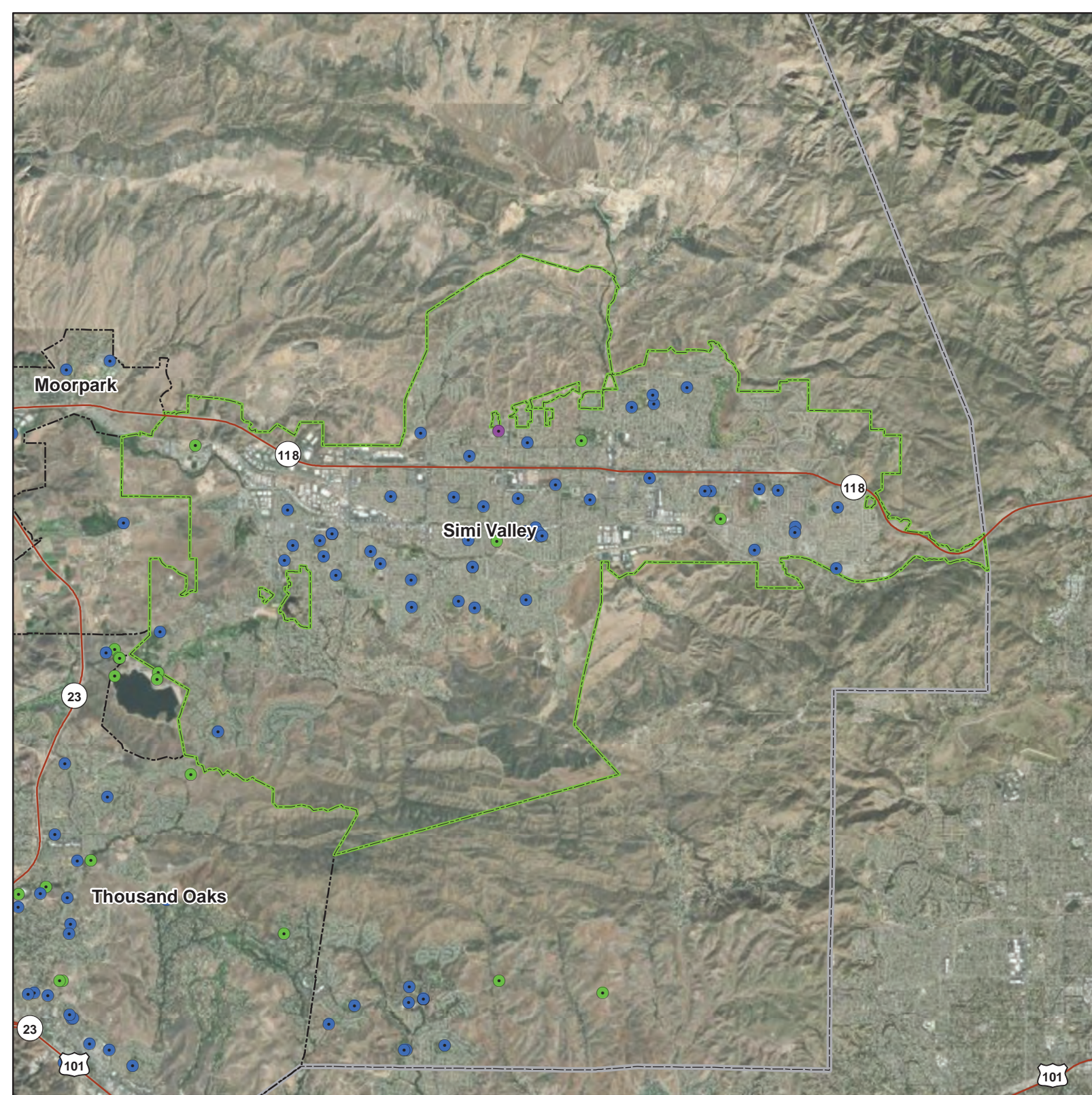
- Food, Water, Shelter
- Health and Medical
- Safety and Security

- Major Roads
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri



0 0.5 1 2 Miles



Simi Valley

Critical Facilities (1 of 2)

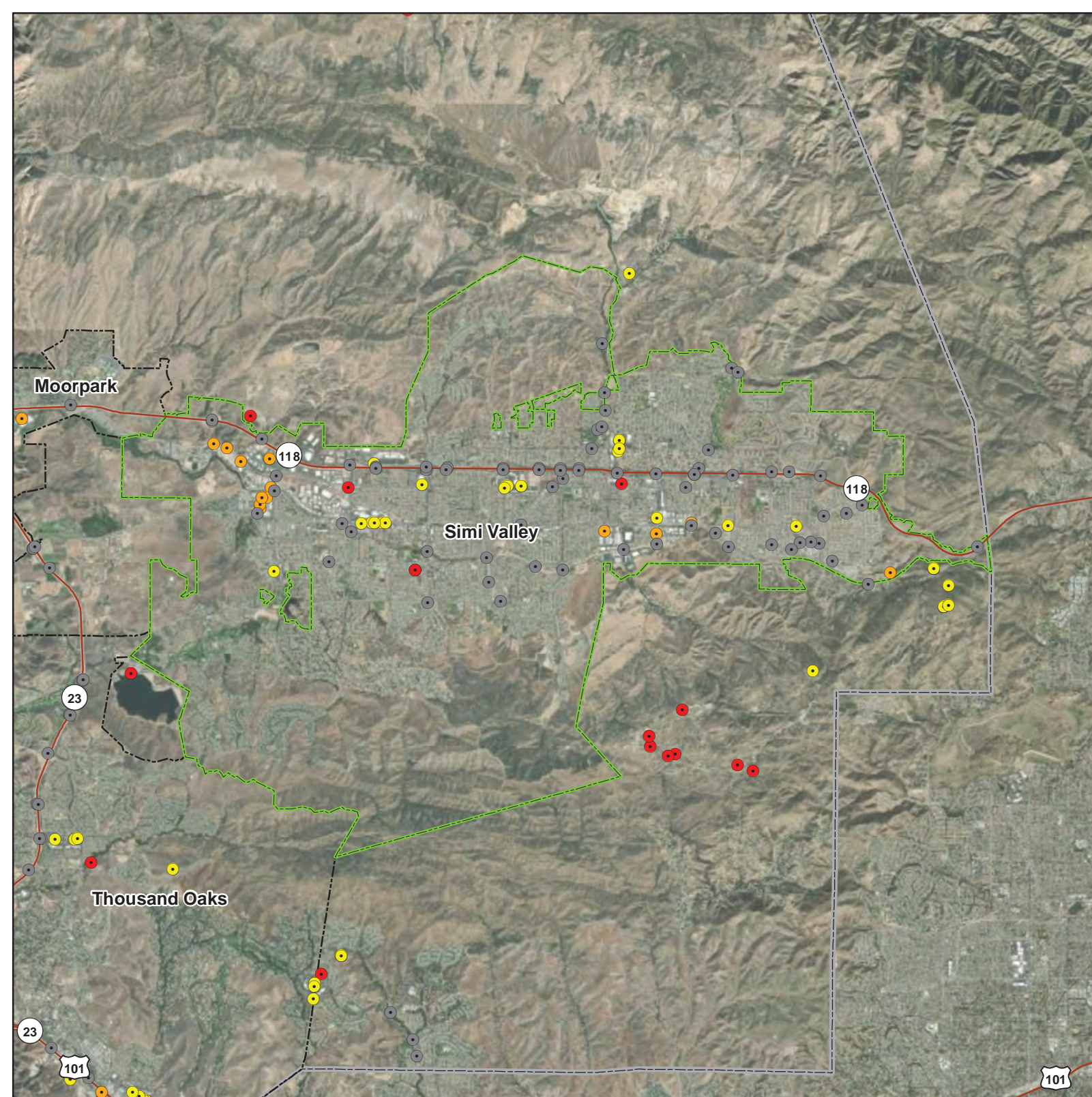
- Communications
- Energy
- Hazardous Material
- Transportation

- Major Roads
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri








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Simi Valley

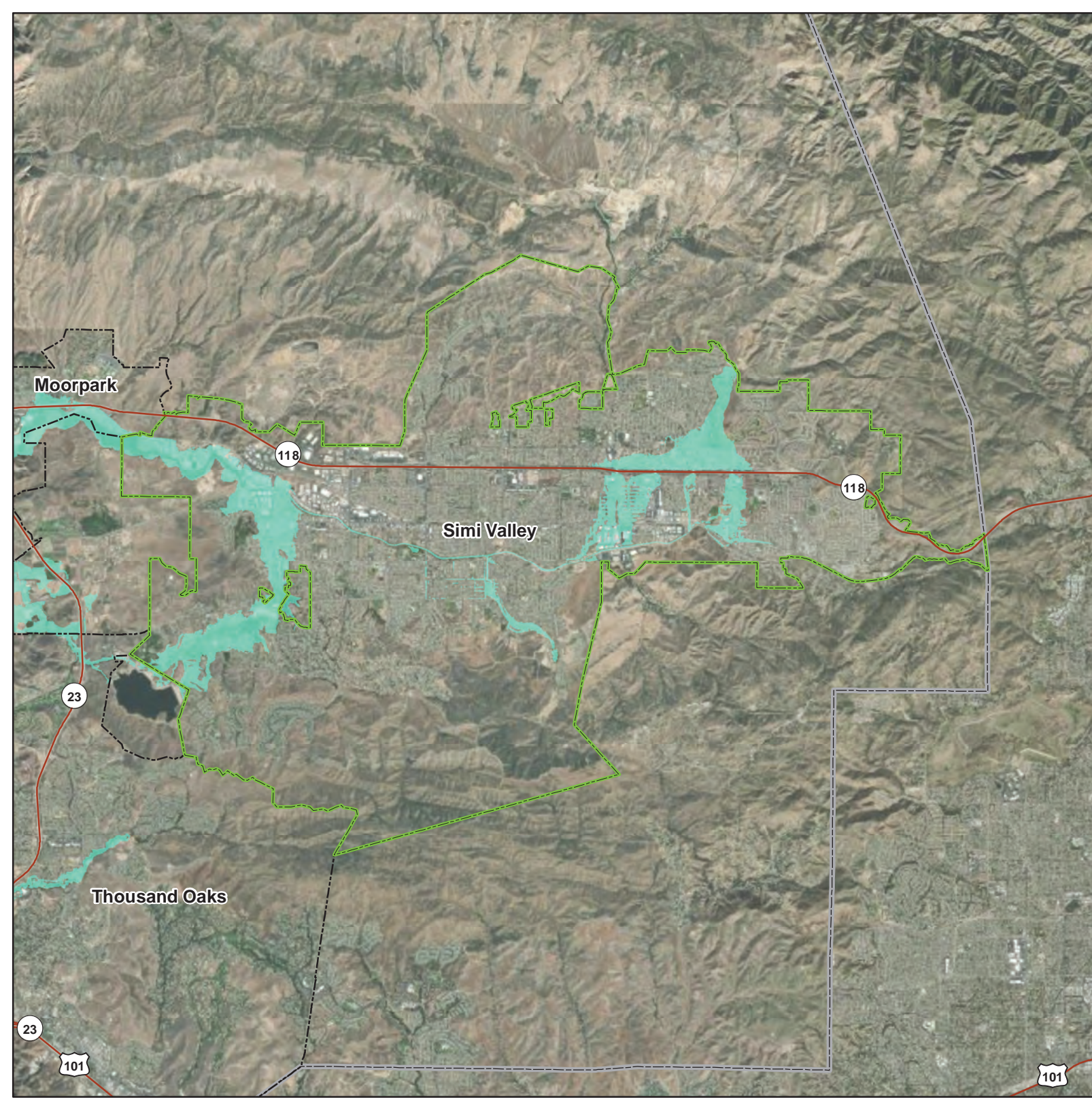
Dam Failure Inundation Areas

-  Combined Inundation Areas
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co., CA DWR, Esri









0 0.5 1 2 Miles



Simi Valley

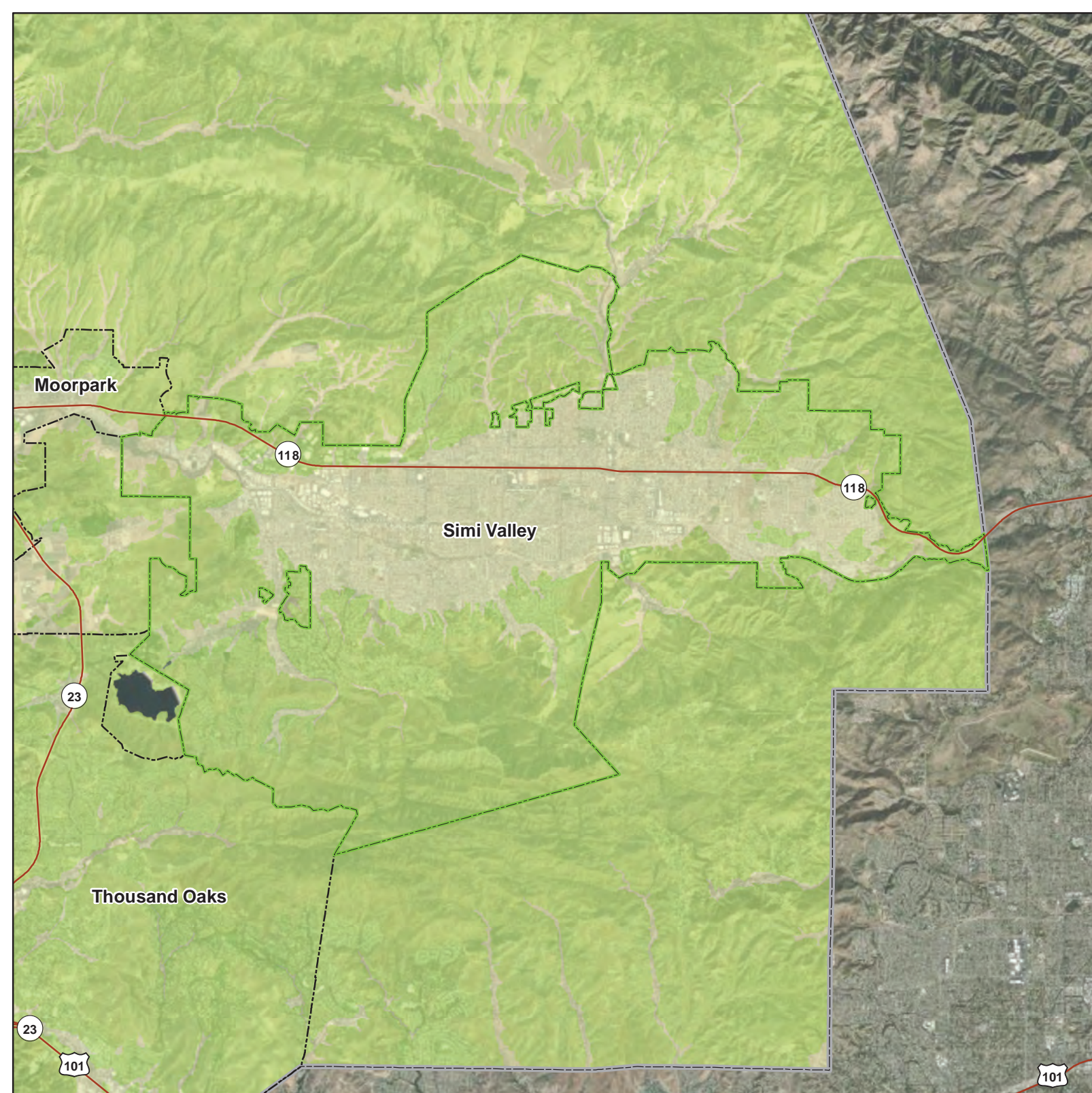
NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri








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Simi Valley

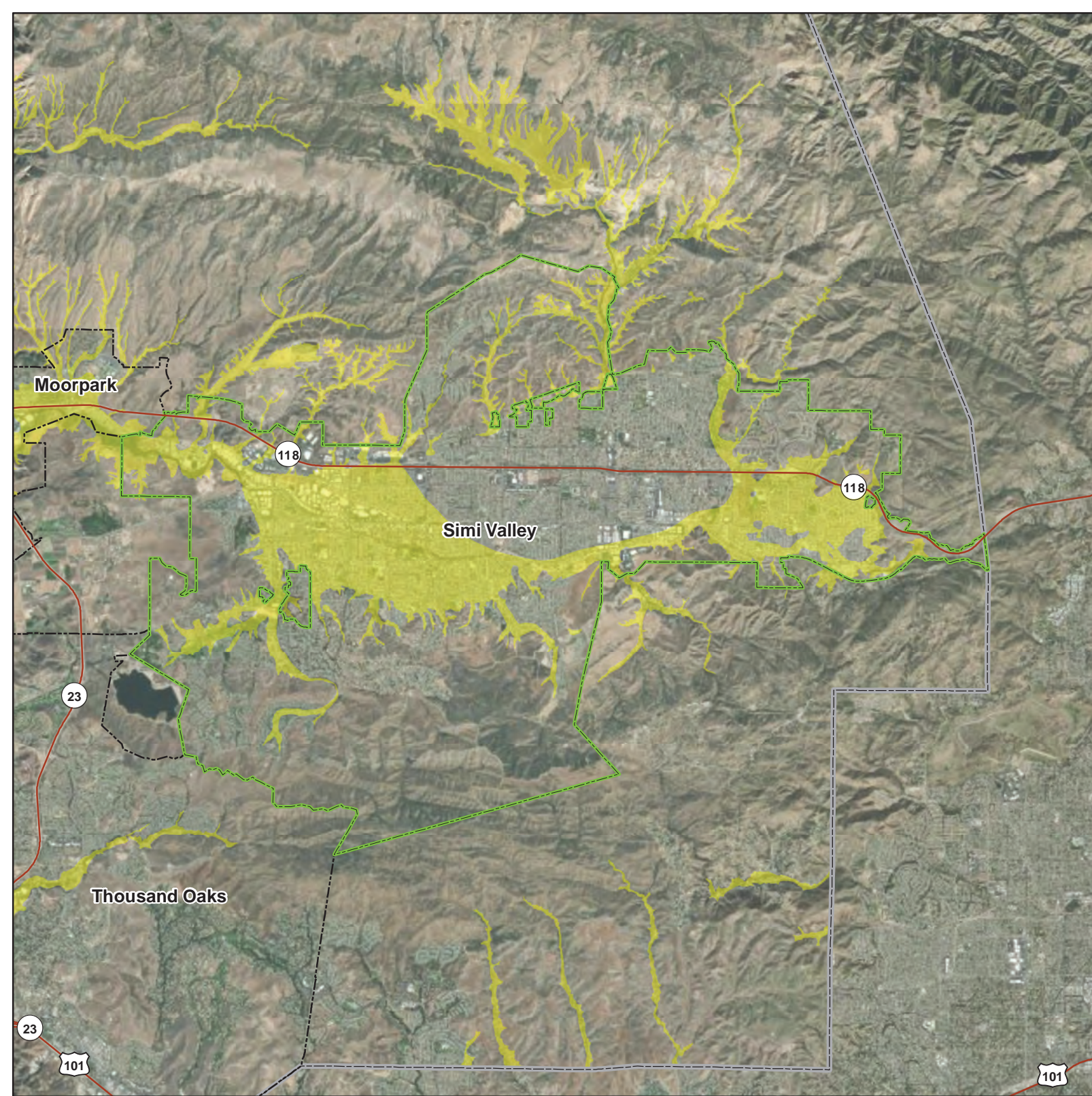
Liquefaction Susceptibility

-  Liquefaction zone
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
Esri



0 0.5 1 2 Miles



Simi Valley

100-Year Probabilistic Earthquake Scenario


Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Major Roads

 Selected City

 Incorporated Cities

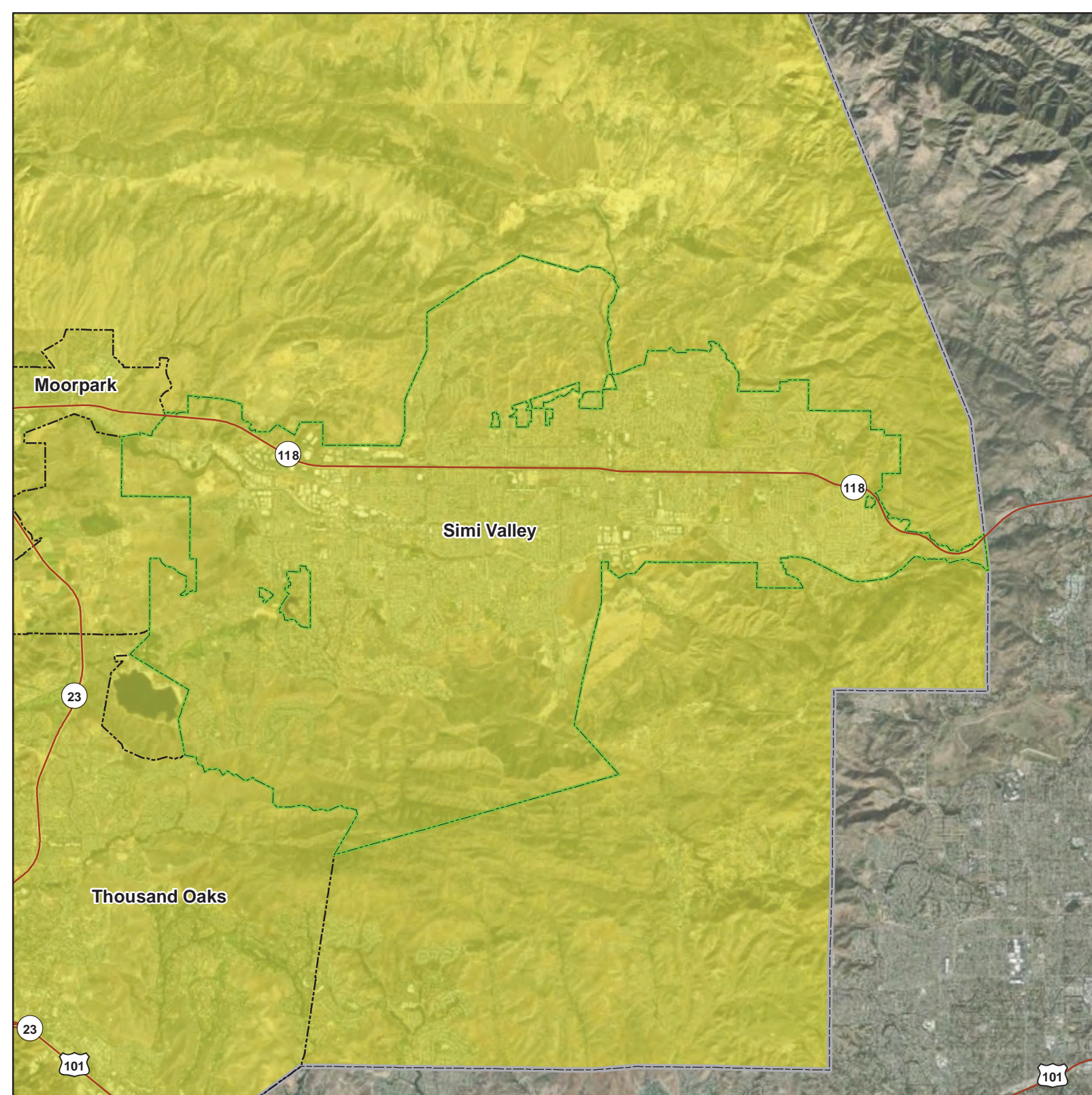
 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.5 1 2 Miles



Simi Valley

Oak Ridge M7.16 Earthquake Scenario

Mercalli Intensity Scale

- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)

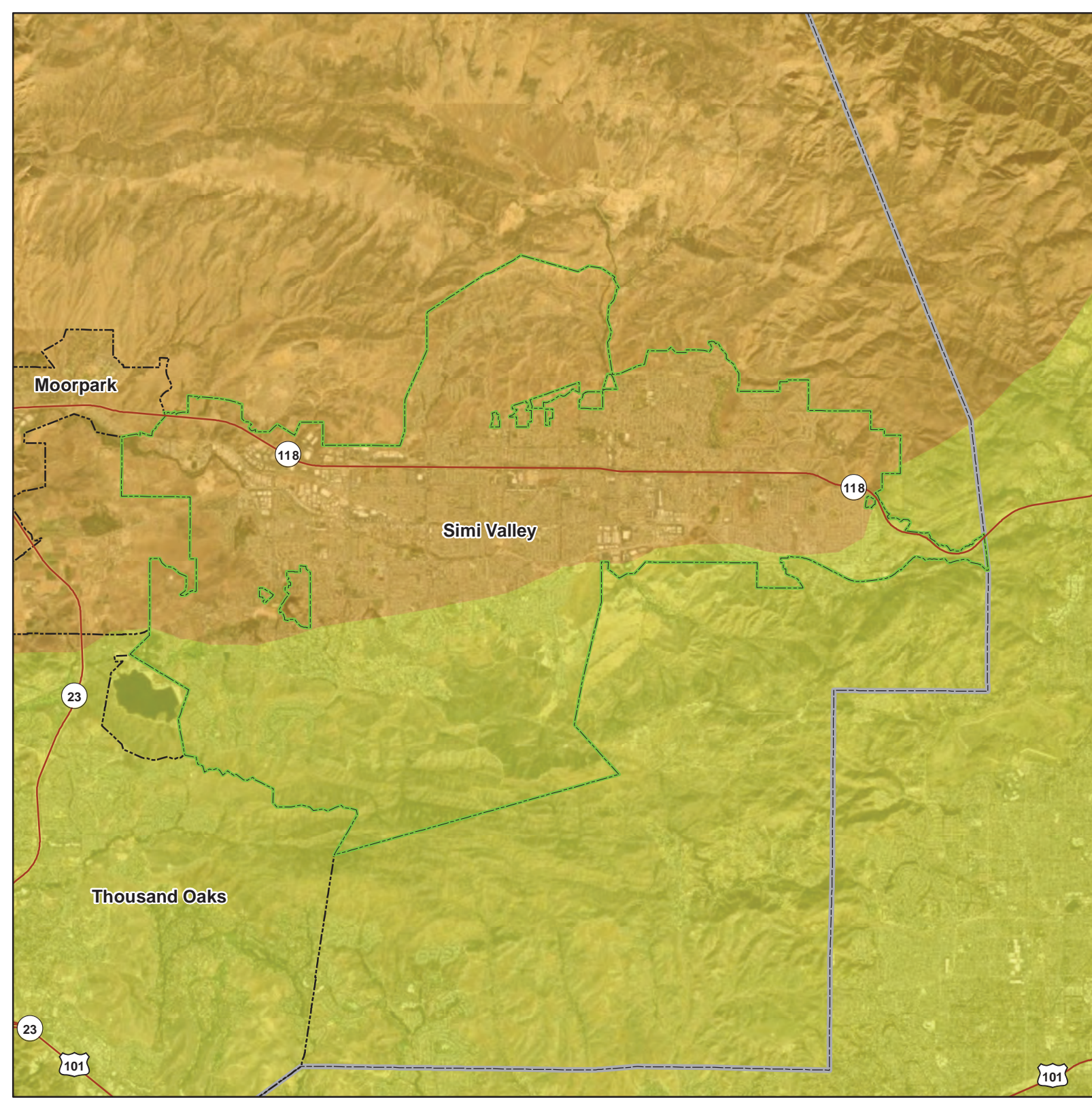
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.5 1 2 Miles



Simi Valley

Pitas Point M7.12 Earthquake Scenario

Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)

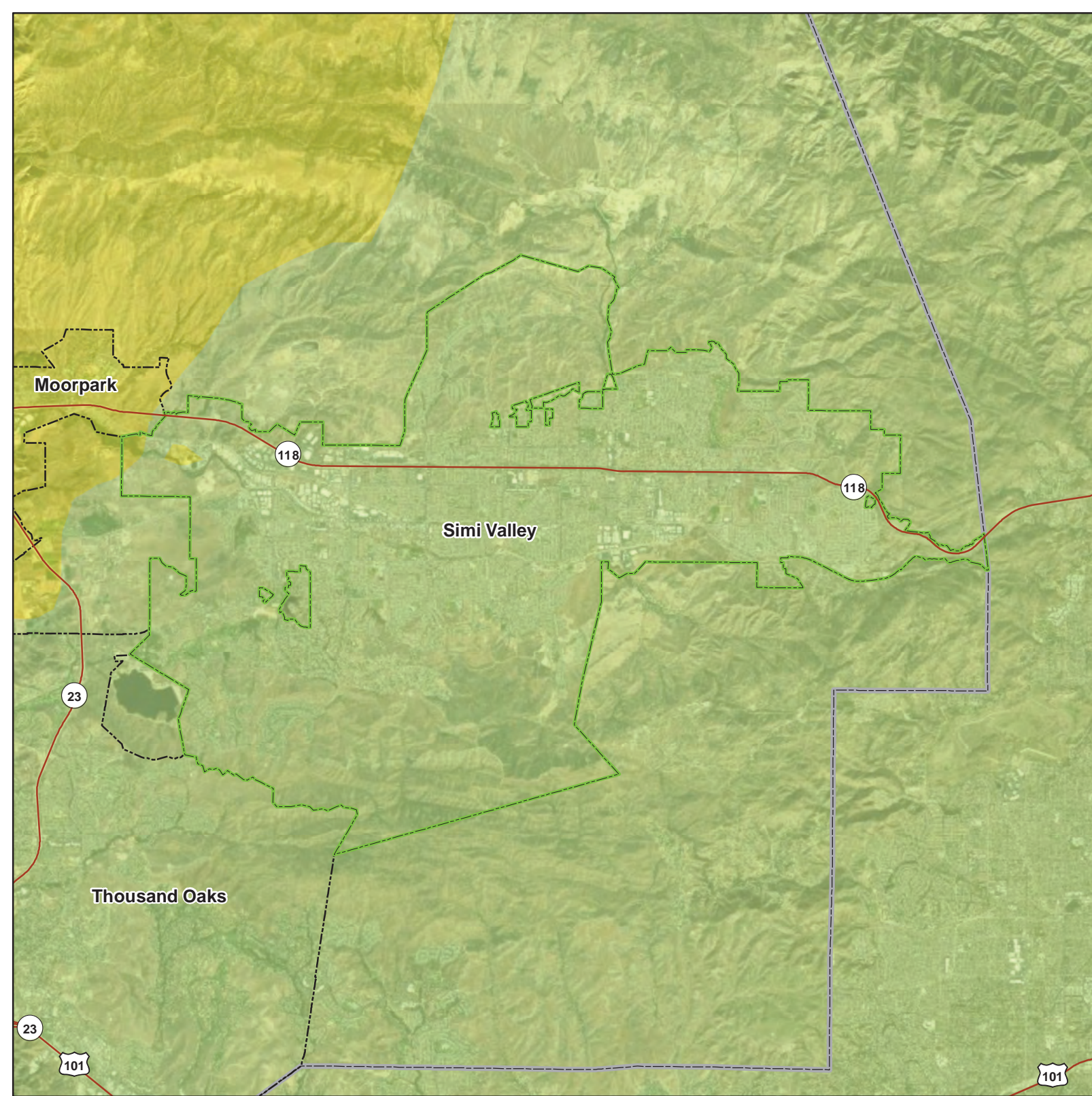
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.5 1 2 Miles



Simi Valley

San Cayetano M7.16 Earthquake Scenario

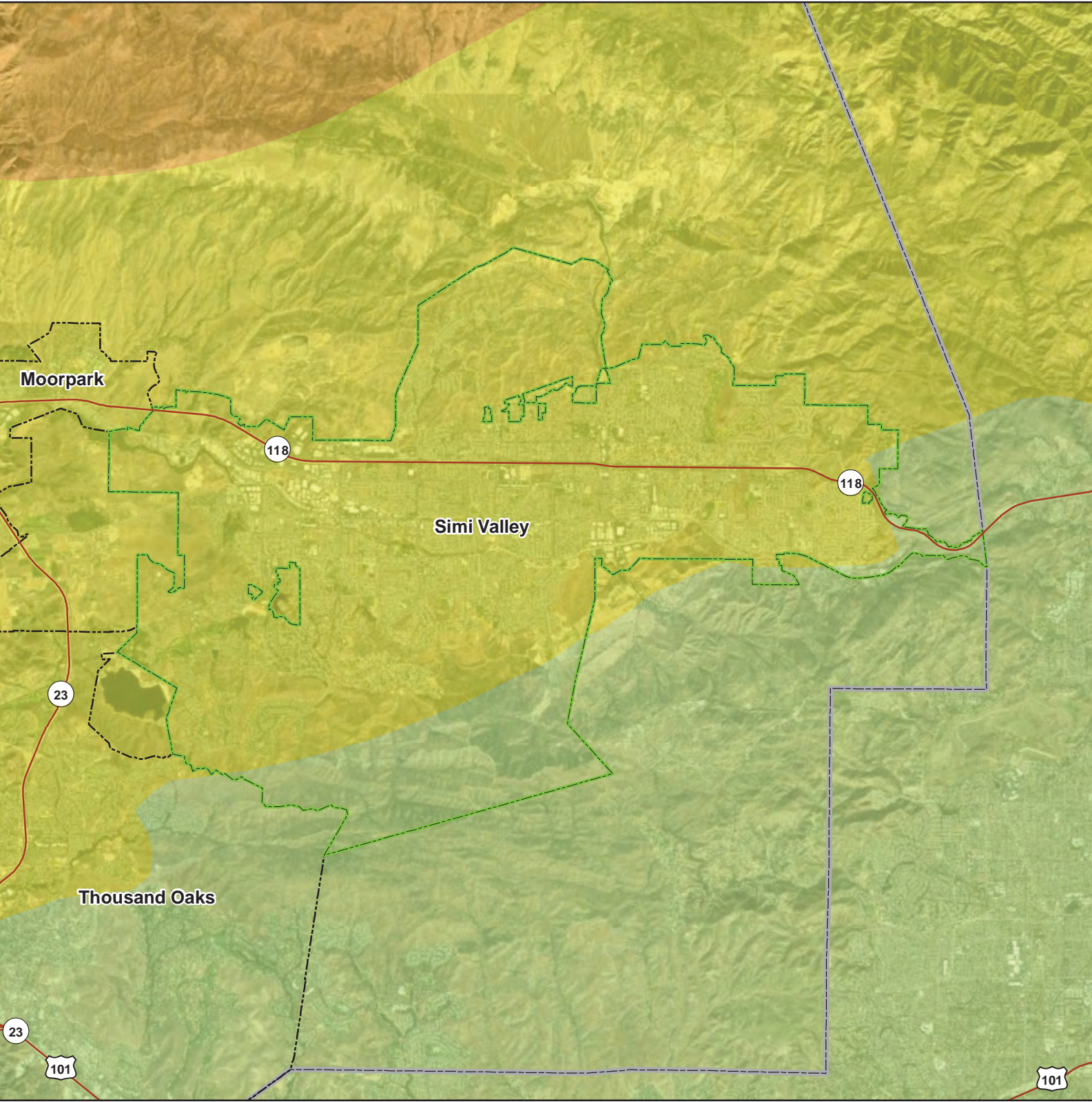
Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)

- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



Simi Valley

S. San Andreas M8.03 Earthquake Scenario

Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)

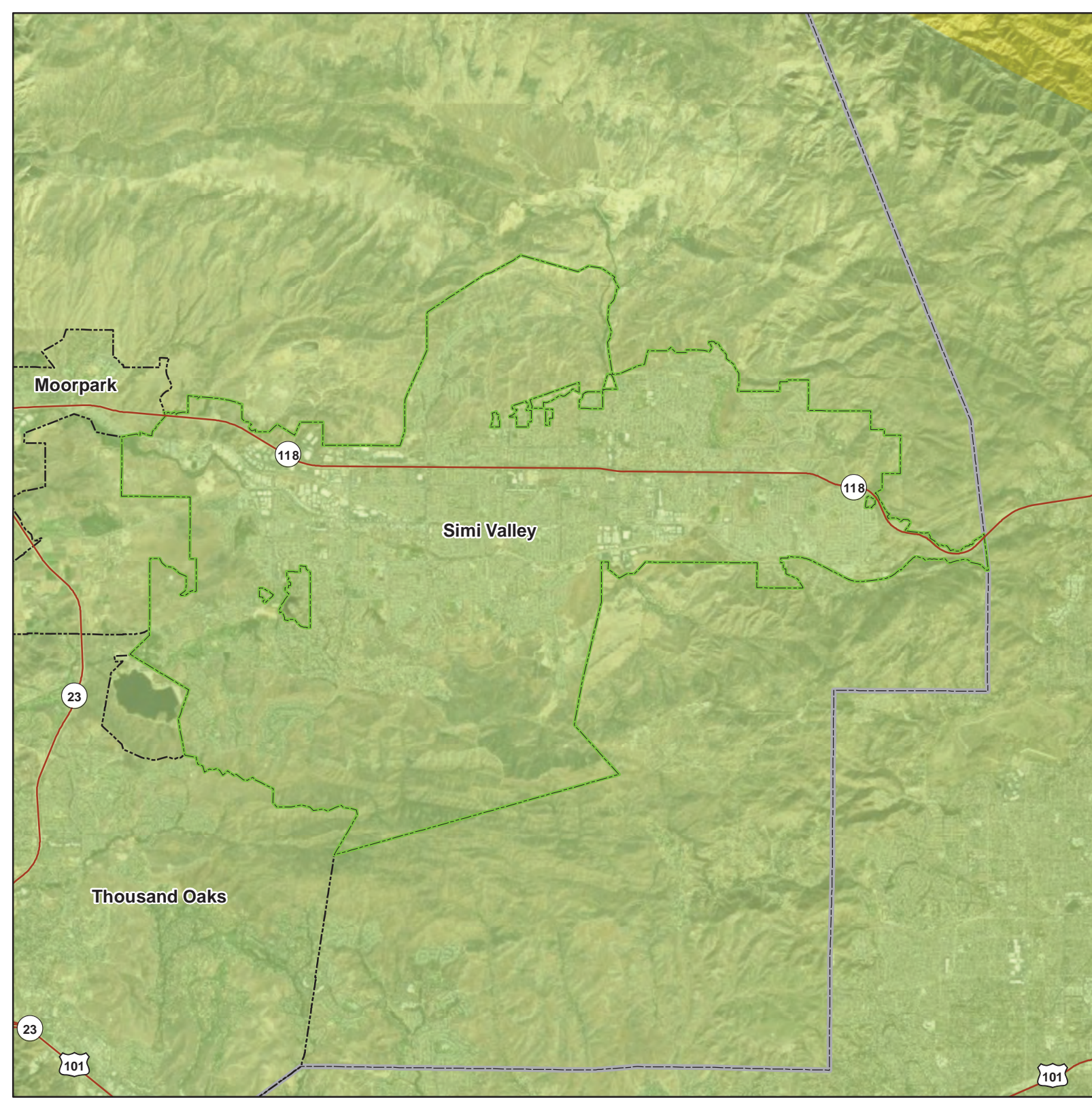
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri









0 0.5 1 2 Miles



Simi Valley

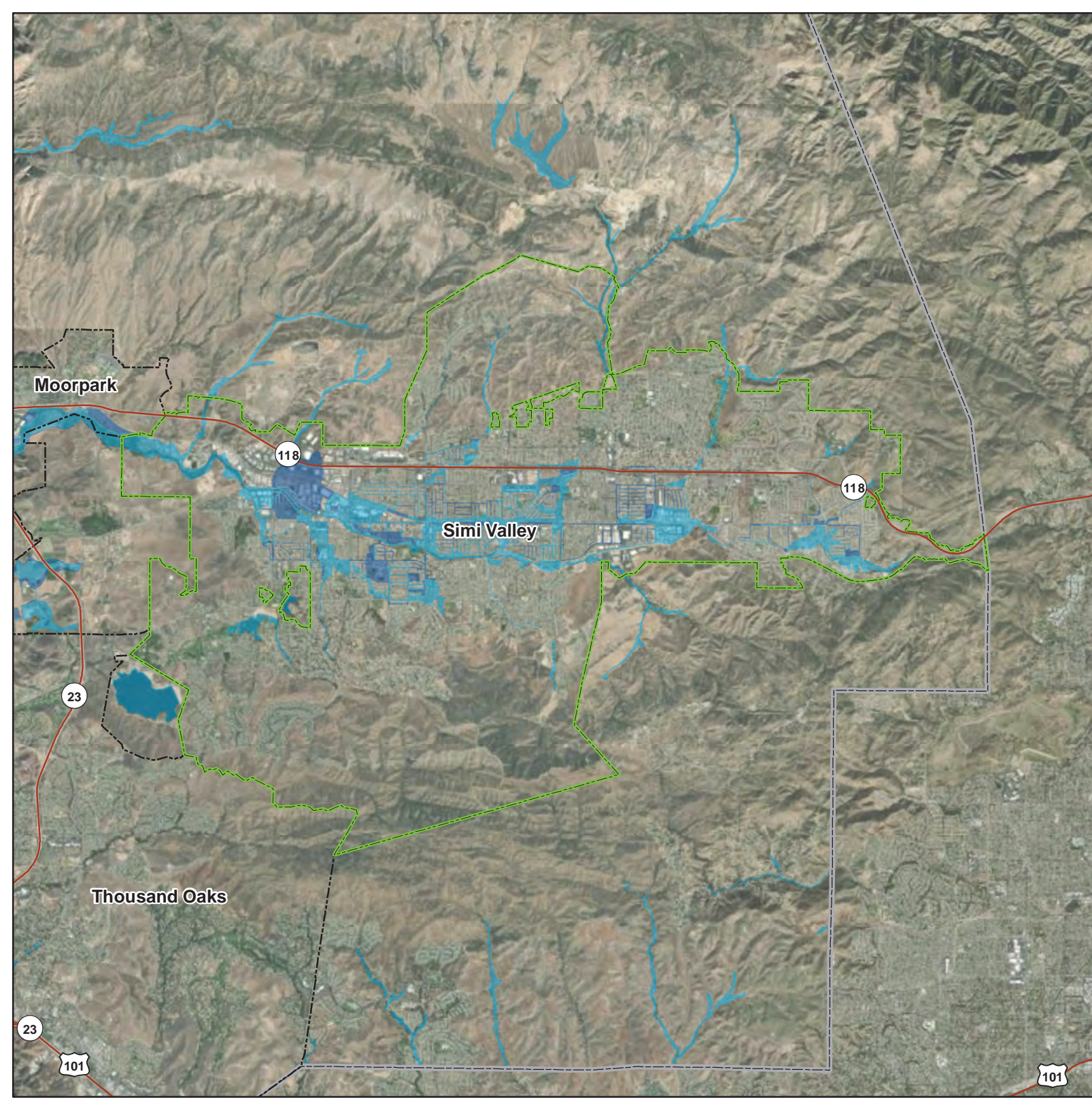
FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
FEMA, Esri



0 0.5 1 2 Miles



Simi Valley

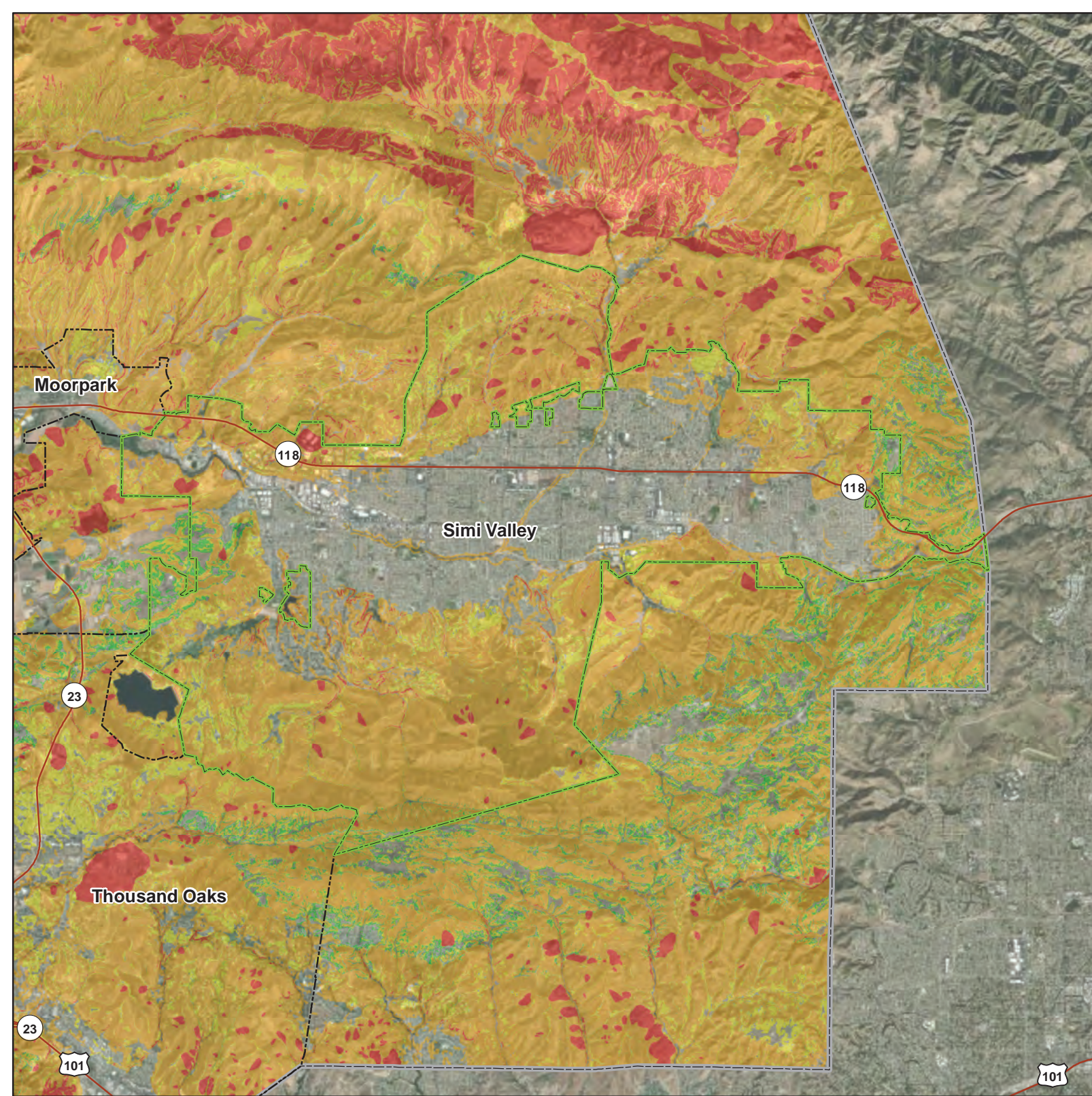
Susceptibility to Deep-Seated Landslides

- Low
- Moderate
- High
- Very High
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Data Sources: Ventura Co., CGS, Esri










0 0.5 1 2 Miles



Simi Valley

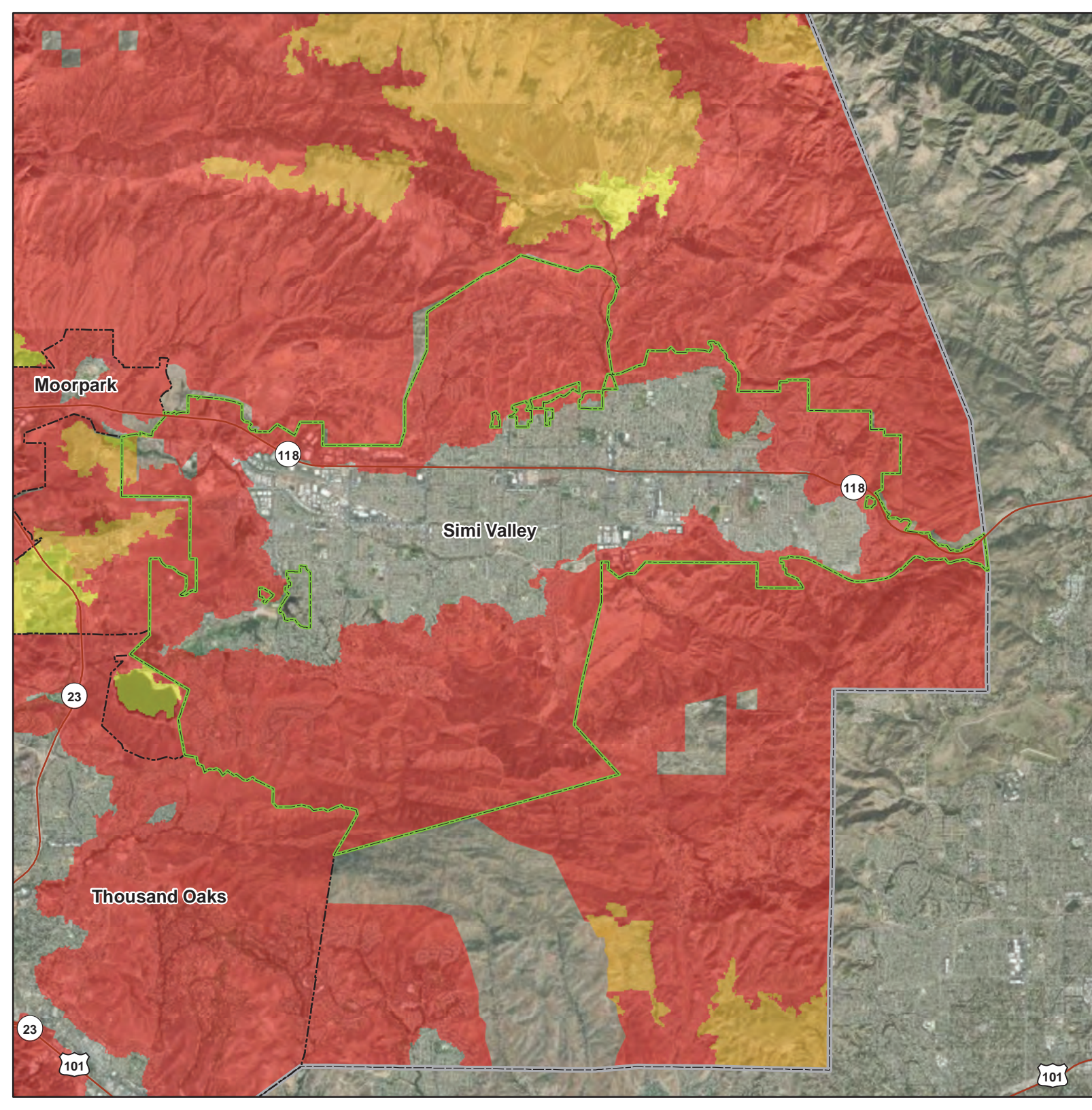
Wildfire Hazard Severity Zones

-  Moderate
-  High
-  Very High
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co., CAL FIRE, Esri



0 0.5 1 2 Miles



10. CITY OF THOUSAND OAKS

10.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Grahame Watts, Emergency Services Manager
2100 Thousand Oaks Blvd.
Thousand Oaks, CA 91362
805-449-2453
gwatts@toaks.org

Alternate Point of Contact

Nader Heydari, Deputy Public Works
Director
2100 Thousand Oaks Blvd.
Thousand Oaks, CA 91362
805-449-2392
nheydari@toaks.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 10-1.

Table 10-1. Local Mitigation Planning Team Members

Name	Title
Grahame Watts	Emergency Services Manager (Project Manager)
Jim Taylor	Senior Civil Engineer
John Brooks	Senior Analyst
Michael Devlahovich	Utilities Maintenance Supervisor
Kari Finley	Planning Division Manager
Iain Holt	Senior Planner
David Chavez	Landscape Maintenance Supervisor

10.2 JURISDICTION PROFILE

10.2.1 Location and Features

Thousand Oaks is the second-largest city in Ventura County and is 40 miles northwest of Downtown Los Angeles. The City is named after the many oak trees present in the area. The City forms the central populated core of the Conejo Valley and includes two-thirds of master-planned community of Westlake Village and most of Newbury Park, which were annexed by the city during the late 1960s and 1970s.

The City of Thousand Oaks has a population of 126,484 and is nearly built out, placing emphasis upon in-fill development, redevelopment and maintenance of aging infrastructure. The Downtown Core Master Plan provides the blueprint for a centralized, walkable shopping, dining and entertainment area adjacent to the Civic Arts Plaza/City Hall, and land use alternatives under the General Plan were

updated for increased density and mixed-use development along the Thousand Oaks Boulevard corridor.

10.2.2 History

Thousand Oaks was incorporated in 1964 and has evolved from a rural Ventura County settlement into an attractive and desirable Southern California city. Thousand Oaks offers the ideal mixture of commercial, industrial, residential and recreational space in an exceptional location.

The City's history dates to the Chumash Native Americans who dwelled in the Conejo Valley hundreds of years ago. In 1542, the area was discovered by Spanish explorer Juan Rodriguez Cabrillo, who claimed the land for his Spanish king. The area remained virtually unsettled until the early 1800s when the Spanish governor granted 48,671 acres of land grants to loyal soldiers—land which included the Conejo Valley (Conejo is the Spanish word for rabbit which are abundant in the area).

Throughout the 19th Century, early pioneers migrated to the area. The first post office was built in 1875, and the small settlement became a stop on the stagecoach route between Los Angeles and San Francisco. With the invention of the motor car and the construction of a highway between those two major cities, the Conejo Valley began to evolve.

10.2.3 Governing Body Format

Thousand Oaks is a General Law city with a Council/Manager form of government. This type of government structure designates the City Council as the policy making body, who appoint the City Manager to carrying out Council policy.

The Council consists of five members elected from residents at large. Council members serve four-year staggered terms. Municipal elections are held in November of even numbered years. The City Council annually selects a Mayor who serves as the presiding officer during City Council meetings that are scheduled on Tuesdays approximately two times per month.

The Thousand Oaks City Council is responsible for the adoption of this plan and the Public Works Department oversees its implementation.

10.3 CURRENT TRENDS

10.3.1 Population

According to the California Department of Finance, the population of the Thousand Oaks as of January 2020 was 126,484. Since 2010, the population has decreased at an average annual rate of 0.02 percent.

10.3.2 Development

The development mission of Thousand Oaks is to be stewards of the City's General Plan, and to assist the community with land development, housing, construction, code compliance, open space, and regional issues, all of which are balanced with the City's environment and resources.

Table 10-2 summarizes development trends in the period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 10-2. Recent and Expected Future Development Trends

Criterion	Response																														
<p>Has the City annexed any land since the preparation of the previous hazard mitigation plan?</p> <ul style="list-style-type: none"> If yes, give the estimated area annexed and estimated number of parcels or structures. 	<p>Yes</p> <p>2015—Kelly Estates A & B: Parcel "A" = 20.32 ac., Parcel "B" = 1.26 ac. (existing developed single-family lots in former County "island") 2021—Edward-Ventu Park Parcels A & B: Parcel "A" = 0.18 ac., Parcel "B" = 0.22 ac. (2- single-family lots)</p>																														
<p>Is the City expected to annex any areas during the performance period of this plan?</p>	No																														
<p>Are any areas targeted for development or major redevelopment in the next five years?</p> <ul style="list-style-type: none"> If yes, briefly describe, including whether any of the areas are in known hazard risk areas 	<p>Yes</p> <p>These areas primarily consist of larger scale residential projects along Thousand Oaks Boulevard as included in the Community Development Department's Development Activity Report (May 2021). Projects in the High Fire Severity Hazard Zone include The Lakes Residential, One Baxter Way residential and the Shapell Industrial Project (49.64 acres and 754,222 SF of building floor area) at northern section of Rancho Conejo Blvd..</p>																														
<p>How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?</p>	<table border="1"> <thead> <tr> <th></th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td>2,124</td> <td>1,984</td> <td>1,870</td> <td>1,947</td> <td>1,870</td> </tr> <tr> <td>Multi-Family</td> <td>315</td> <td>239</td> <td>244</td> <td>369</td> <td>154</td> </tr> <tr> <td>Other (commercial, mixed use, etc.)</td> <td>501</td> <td>427</td> <td>379</td> <td>381</td> <td>285</td> </tr> <tr> <td>Total</td> <td>2,940</td> <td>2,650</td> <td>2,493</td> <td>2,697</td> <td>2,179</td> </tr> </tbody> </table>		2016	2017	2018	2019	2020	Single Family	2,124	1,984	1,870	1,947	1,870	Multi-Family	315	239	244	369	154	Other (commercial, mixed use, etc.)	501	427	379	381	285	Total	2,940	2,650	2,493	2,697	2,179
	2016	2017	2018	2019	2020																										
Single Family	2,124	1,984	1,870	1,947	1,870																										
Multi-Family	315	239	244	369	154																										
Other (commercial, mixed use, etc.)	501	427	379	381	285																										
Total	2,940	2,650	2,493	2,697	2,179																										
<p>Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.</p>	<ul style="list-style-type: none"> Special Flood Hazard Areas: 75 Landslide: 274 High Liquefaction Areas: 132 Tsunami Inundation Area: 0 Wildfire Risk Areas: 9,934 																														
<p>Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.</p>	<p>Currently, the City does not have an inventory of buildable lands. There is a theoretical residential capacity for the City of 81,124 dwelling units based on an evaluation of 1996 General Plan land use map governed by Measure E. This maximum capacity does not consider constraints that may result in less buildable area. Based on SCAG's 2020 Regional Transportation Plan/Sustainable Communities Strategy growth projections out to 2045, Thousand Oaks population will increase by 15,229, households will increase by 5,269 and employment will increase 9,897. The City is currently undergoing a General Plan Update and the Environmental Impact Report will evaluate new growth projections based on the revised land use map and economic analysis. The anticipated adoption date of the General Plan is in FY 2022-23.</p>																														

10.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were

identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 10-3.
- Development and permitting capabilities are presented in Table 10-4.
- An assessment of fiscal capabilities is presented in Table 10-5.
- An assessment of administrative and technical capabilities is presented in Table 10-6.
- An assessment of education and outreach capabilities is presented in Table 10-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 10-8.
- Classifications under various community mitigation programs are presented in Table 10-9.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 10-10.

Table 10-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment:</i> TOMC Title 8 Ch.1 Building Code amended to reflect 2019 California Building Code	Yes	Yes	Yes	Yes
Zoning Code <i>Comment:</i> TOMC Title 9 Chapter 1 Flood Control requires building permit fees for Ventura County flood control facilities TOMC Title 9 Chapter 4 Zoning and Chapter 5 Environmental Impact Assessment	Yes	Yes	Yes	No
Subdivisions <i>Comment:</i> TOMC Title 9 Chapter 3 Subdivisions. Article 14 Environmental Impact and Grading and Erosion Control	Yes	Yes	Yes	No
Stormwater Management <i>Comment:</i> TOMC 4-7 (Public Safety, Flood Damage Prevention)	Yes	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment:</i> The City Emergency Operations Plan was adopted on February 25, 2020, which includes a section on Disaster Recovery.	Yes	Yes	Yes	Yes
Real Estate Disclosure <i>Comment:</i> The Community Development Department Building Division prepares residential re-sale disclosure reports per TOMC Title 8 Chapter 12.	No	Yes	No	No
Growth Management <i>Comment:</i> Measure E requires voter approval for any amendment to the Land Use Element of the City's General Plan that: increases residential land use density beyond the City's General Plan of November 5, 1996 or increases the amount of commercial acreage beyond the City's General Plan of November 5, 1996. City Council Ordinance No. 1280-NS	Yes	Yes	Yes	Yes
Site Plan Review <i>Comment:</i> The Community Development Department Planning Division and Public Works Engineering Division reviews land use entitlements and subdivisions. County Fire and Police Departments also review projects.	Yes	Yes	Yes	Yes
Environmental Protection <i>Comment:</i> The result of a completed Visioning 2064 process was the development of a Climate and Environmental Action Plan that is expected to be adopted in FY 2022-23 . The Plan is for the City to be an environmental leader and promote climate change adaptation, zero waste, zero net energy usage, reduced water use, and greenhouse gas reduction, including allocation of the necessary resources. New development is subject to environmental review in accordance with CEQA.	Yes	Yes	Yes	Yes

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Flood Damage Prevention	Yes	Yes	Yes	Yes
<i>Comment:</i> The City's Water Emergency Operations Plan was adopted in June 2021, which includes a section on Flood Damage Prevention. The City and County of Ventura Public Works also developed a Flood Prevention & Preparedness manual that is posted on the City website. The Flood Damage Prevention Ordinance comprises the TOMC 4-7 (Public Safety, Flood Damage Prevention).				
Emergency Management	Yes	Yes	Yes	Yes
<i>Comment:</i> The City completed a Risk and Resiliency Assessment as part of America's Water Infrastructure Act (2018) that was submitted to the EPA in December 2020. The City's Water Emergency Operations Plan was certified through the EPA in June 2021. . Thousand Oaks Municipal Code Title 4 Section 404.01 describes the City emergency organization, functions and authorities.				
Climate Change	Yes	Yes	Yes	Yes
<i>Comment:</i> An anticipated City goal is to reduce greenhouse gas by a minimum of 40 percent by 2030 and 80 percent by 2050 to match or exceed the State goals. The City's Climate and Environmental Action Plan is expected to be adopted in FY 2022-23				
Planning Documents				
City General Plan	Yes	Yes	Yes	Yes
<i>Is the City's plan compliant with Assembly Bill 2140?</i> Yes				
<i>Comment:</i> The Thousand Oaks City General Plan is being updated and is expected to be adopted in FY 2022-23.				
Capital Improvement Plan	Yes	Yes	No	No
<i>How often is the plan updated?</i>				
<i>Comment:</i> The City's Capital Improvement Plan is part of the City Budget process and is updated every two years.				
Disaster Debris Management Plan	Yes	Yes	Yes	Yes
<i>Comment:</i> The City has a Disaster Debris Management procedure in its adopted EOP, which is complimentary to the County's Disaster Debris Management Plan.				
Floodplain Plan	Yes	Yes	Yes	Yes
<i>Comment:</i> In January 2010, the FEMA National Flood Insurance Program mapped the City's 100-year "Areas of Special Flood Hazard" (floodplains). The City's Capital Improvement Plan does not directly address a strategized approach to reducing or eliminating 100-year floodplains.				
Stormwater Plan	Yes	Yes	Yes	Yes
<i>Comment:</i> The City is participating in a Watershed Management Program and the Countywide Stormwater Quality Management Program that are being developed and implemented in compliance with the new State Regional Board Municipal Stormwater Permit.				
Urban Water Management Plan	Yes	Yes	Yes	Yes
<i>Comment:</i> In June 2021, the City adopted the 1) 2020 Urban Water Management Plan, 2) 2020 Water Shortage Contingency Plan, and 3) Addendum to the 2015 Urban Water Management Plan. Included in the 2020 UWMP are past, present, and projected water use data through 2045: a description of current and future water supply sources and allocations, information on the City's water conservation program, and background information on the City water system and service area.				
Habitat Conservation Plan	No	No	No	No
<i>Comment:</i> The City does not have a Habitat Conservation Plan but relies on policies within the Conservation Element of the General Plan. State and Federal agencies are involved as part CEQA review and permitting process. The Conejo Open Space Conservancy Agency (COSCA), a joint-powers authority between the City and the Conejo Recreation and Park District that implements conservation projects and manages habitat lands.				
Economic Development Plan	Yes	Yes	No	No
<i>Comment:</i> The City Council adopted its Economic Development Plan on November 7, 2017				
Shoreline Management Plan	No	No	No	No
<i>Comment:</i> Thousand Oaks is inland and does not have a shoreline.				
Community Wildfire Protection Plan	Yes	Yes	Yes	Yes
<i>Comment:</i> Wildfire protection is described in the City's EOP in addition to fire protection services provided by the Ventura County Fire Protection District. The City's Water Emergency Operations Plan and Risk and Resiliency Assessment addresses wildfire zones, specifically within the City's water infrastructure.				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Forest Management Plan <i>Comment:</i> The City Forestry Master Plan was adopted in 2017 and applies to City-maintained plantings and provides historical background, design and management and community participation.	Yes	Yes	Yes	Yes
Climate Action Plan <i>Comment:</i> One of the City Council goals is to consider a plan to reduce greenhouse gas by a minimum of 40 percent by 2030 and 80 percent by 2050 to meet or exceed the state goals. The City's Climate and Environmental Action Plan is expected to be considered in FY 2022-23.	Yes	Yes	Yes	Yes
Emergency Management Planning <i>Comment:</i> The City's Water Emergency Operations Plan was adopted in June 2021. Thousand Oaks Municipal Code Title 4 Section 404.01 describes the City emergency organization, functions and authorities.	Yes	Yes	Yes	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment:</i> In December 2017 the City contracted for the completion of a City facilities security for the two City Theaters. In September 2019, a similar assessment was completed for the Civic Arts Plaza/City Hall, both libraries, Municipal Service Center and the Hill Canyon Treatment Plant. The City completed a Risk and Resiliency Assessment in December 2020.	Yes	No	No	No
Post-Disaster Recovery Plan <i>Comment:</i> The City's Water Emergency Operations Plan was adopted in June 2021, which includes a section on Disaster Recovery	Yes	Yes	Yes	No
Continuity of Operations Plan <i>Comment:</i> The City's Water Emergency Operations Plan was adopted in June 2021 which includes a section on Continuity of Operations.	Yes	Yes	Yes	No
Public Health Planning <i>Comment:</i> The City's Water Emergency Operations Plan was adopted in June 2021, which includes a section on public health which as managed by the Ventura County Public Health Department.	No	Yes	Yes	No

Table 10-4. Development and Permitting Capability

Criterion	Response
Does the City issue development permits? <i>If no, who does? If yes, which department?</i>	Yes Public Works Department, Community Development Department
Does the City have the ability to track permits by hazard area?	Yes
Does the City have a buildable lands inventory?	No

Table 10-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes- City Council approval of application/acceptance and award by U.S. Department of Housing and Urban Development
Capital Improvements Project Funding	Yes-City Council approval.
Authority to Levy Taxes for Specific Purposes	Yes-City Council and voter approval.
User Fees for Water, Sewer, Gas or Electric Service	Yes City Council approval and Proposition 218 protest ballot.
Incur Debt through General Obligation Bonds	Yes City Council and voter approval.
Incur Debt through Special Tax Bonds	Yes City Council and voter approval.
Incur Debt through Private Activity Bonds	Yes City Council approval.
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes City Council approval of application/acceptance and award by State
Development Impact Fees for Homebuyers or Developers	Yes City Council approval.

Financial Resource	Accessible or Eligible to Use?
Other	Yes
<i>If yes, specify:</i> Incur debt through Lease Revenue Bonds with City Council approval. Public-Private Partnerships with City Council approval.	

Table 10-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Community Development Department & Public Works Department. Senior Planners, Senior Engineers and Division Managers.	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Community Development Department, Building and Safety Division plan checkers and inspectors	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Community Development Department and Public Works Department. Senior Planners, Senior Engineers and Division Managers.	Yes
City staff with training in benefit-cost analysis	Yes
Surveyors <i>If Yes, Department /Position:</i> Public Works Department, Engineering Services Division	Yes
City personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Public Works Department and Finance Department, IT Division	Yes
Scientist familiar with natural hazards in local area	No
Emergency Services Manager <i>If Yes, Department /Position:</i> Public Works Department, Emergency Services Manager.	Yes
Grant writers <i>If Yes, Department /Position:</i> Public Works, Community Development, Finance & Library Departments—The City has several staff in multiple departments that are skilled in writing and administering state and federal grant funded programs.	Yes

Table 10-7. Education and Outreach Capability

Criterion	Response
Does City have a public information officer or communications office?	Yes
Does City have personnel skilled or trained in website development?	Yes
Does City have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> Hazard mitigation is part of the City's Emergency Management Program administered by the Public Works Department, which includes the posting of the City's current Hazard Mitigation Plan	Yes
Does City use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> The City utilizes several electronic community newsletters as well as Social Media for Facebook, Instagram, LinkedIn and Twitter.	Yes
Does City have any citizen boards or commissions that address issues related to hazard mitigation?	No
Does City have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> Social media posts, newsletters and the City website	Yes
Does City have any established warning systems for hazard events? <i>If yes, briefly describe:</i> The Cities and County of Ventura all subscribe to VC Alert, a mass notification system for local and statewide emergency warnings, incidents and hazards.	Yes

Table 10-8. National Flood Insurance Program Compliance

Criterion	Response
What City I department is responsible for floodplain management?	Public Works Department
Who is your City floodplain administrator? (department/position)	Jim Taylor, Senior Civil Engineer, Public Works
Are any certified floodplain managers on staff for your City?	Yes; Jim Taylor, Senior Civil Engineer
What is the date that your flood damage prevention ordinance was last amended?	February 11, 2010
Does the City floodplain management program meet or exceed minimum requirements? <i>If exceeds, in what ways?</i>	Exceeds Pursuant to Thousand Oaks Municipal Code Ordinance (TOMC) 1995-20, the City ensures newly-developed building pads are protected from a 100-year flooding event, regardless of whether the location is within a FEMA NFIP-designated floodplain
When was the most recent Community Assistance Visit or Community Assistance Contact? Salomon Miranda, California DWR	April 24, 2018
Does the City have any outstanding NFIP compliance violations that need to be addressed?	No
Are any Risk MAP projects currently underway in your jurisdiction?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	Yes
Does the City floodplain management staff need any assistance or training to support its floodplain management program?	No
Does the City participate in the Community Rating System (CRS)? <i>If no, is your jurisdiction interested in joining the CRS program?</i>	No No
How many flood insurance policies are in force in the City? ^a <i>What is the insurance in force?</i> \$109,948,800 <i>What is the premium in force?</i> \$253,564	336
How many total loss claims have been filed in the City? ^a <i>What were the total payments for losses?</i> \$341,390	62

a. According to FEMA statistics as of March 31, 2021

Table 10-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	95-2367314	N/A
DUNS No.	Yes	055751937	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection (VCFPD)	Yes	03/3X	12/21/18
Storm Ready	Yes	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 10-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
City-level understanding of potential climate change impacts <i>Comment:</i> Staff and City Council are aware of potential climate change impacts and actions to address these issues will be included in the General Plan update and the City's Climate and Environmental Action Plan.	Medium
City -level monitoring of climate change impacts <i>Comment:</i> Staff and the City Council are aware of potential climate change impacts and actions to address these issues will be included in the General Plan update and Climate and Environmental Action Plan.	Medium
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i> The City has capacity internally and the ability to engage consultants for specialized tasks.	High
City -level capacity for development of greenhouse gas (GHG) emissions inventory <i>Comment:</i> The City has an internally developed GHG inventory.	High
Capital planning and land use decisions informed by potential climate impacts <i>Comment:</i> The City's General Plan will include Sustainability components throughout the document and is being developed in coordination with the City's Climate & Environmental Action Plan	Medium
Participation in regional groups addressing climate risks <i>Comment:</i> The City is a member of the Ventura County Regional Energy Alliance which addresses climate change issues within Thousand Oaks and Ventura County.	Medium
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment:</i> On January 12, 2021 the City Council meeting directed staff to develop a Climate and Environmental Action Plan that exceeds the state goals. Concurrently, the General Plan is being updated to include strategies and recommendations related to climate change mitigation.	Medium
Identified strategies for greenhouse gas mitigation efforts <i>Comment:</i> Staff has drafted green-house gas mitigation strategies after hosting four stakeholder meetings and additional community events to receive recommendations and input from the public.	Medium
Identified strategies for adaptation to impacts <i>Comment:</i> Staff has drafted the strategies now after hosting four stakeholder meetings and additional community events to receive recommendations and input from the public.	Medium
Champions for climate action in local government departments <i>Comment:</i> The City Public Works Department established an internal green team of employees from City departments to assist in the development and rollout of internal green policies.	Medium
Political support for implementing climate change adaptation strategies <i>Comment:</i> The City Council adopts goals annually and environmental leadership is always included as shown by the following goal. "Provide and enhance essential infrastructure to ensure the goals and policies of the City's General Plan are carried out and the City retains its role and reputation as a leader in protecting the environment and preserving limited natural resources." The City Council also approved participation in the Clean Power Alliance at the 100% renewable level which dramatically lowered GHG emissions.	Medium
Financial resources devoted to climate change adaptation <i>Comment:</i> The City is supportive of cost-effective environmental initiatives.	Medium
Local authority over sectors likely to be negative impacted <i>Comment:</i> The City has local authority over housing, water resources and land use issues.	Low

Criterion	Jurisdiction Rating ^a
Public Capacity	
Local resident’s knowledge of and understanding of climate risk <i>Comment:</i> Thousand Oaks residents and business owners are knowledgeable and engaged.	Medium
Local resident’s support of adaptation efforts <i>Comment:</i> Thousand Oaks residents are informed and active on climate and environmental issues.	Medium
Local resident’s capacity to adapt to climate impacts <i>Comment:</i> The City’s Climate & Environmental Action Plan documents residents’ interests and priorities.	Medium
Local economy current capacity to adapt to climate impacts <i>Comment:</i> Many residents have the resources to make GHG reduction and resiliency reduction measures at home. However, Thousand Oaks also has an aging population with many seniors on a fixed income and unable to complete home improvements on their own.	Medium
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Unsure

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

10.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

10.5.1 Existing Integration

Integration has been established between local hazard mitigation planning and the following local plans and programs:

- **City Emergency Operations Plan**—Adopted in 2020, this Plan describes the City’s preparedness, response, mitigation and recovery from local and national emergency incidents
- **City General Plan**—Scheduled for adoption in FY 2022-23, this Plan describes the long-term goals, policies and development of Thousand Oaks, including a Safety Element that addresses hazard mitigation.
- **City Climate & Environmental Action Plan**—Scheduled for adoption in FY 2022-23, this Plan describes the City’s on-term strategies for reducing greenhouse gas emissions, reduce air pollution and improve public health.
- **Building Code**—The City routinely updates the Thousand Oaks Municipal Code (TOMC) and as part of a review of the hazard mitigation in the Building Section of the TOMC.
- **Stormwater Management**—The City is part of a Countywide Stormwater Pollution Management Plan and when possible the Cities and County of Ventura collaborate upon local stormwater management with hazard mitigation policies.

- **Post-Disaster Recovery**—The City addresses disaster recovery in its Emergency Operations Plan (EOP), which includes hazard mitigation as part of the Plan.
- **Growth Management**—The General Plan addresses future growth in Thousand Oaks and during the update, hazard mitigation is incorporated into the final Plan.
- **Site Plan Review**—The Community Development Department and the Public Works Department jointly consider hazard mitigation issues as part of each project review.
- **Environmental Protection**—Hazard mitigation is part of the City’s review of programs, policies and projects as they relate to land, air, water and waste.
- **Flood Damage Protection**—All existing and proposed development projects are reviewed to address existing and future hazards.
- **Disaster Debris Plan**—The County has a Disaster Debris Plan and the City addresses’ disaster debris in its Emergency Operations Plan in addition to hazard mitigation.
- **Floodplain Management**— The City EOP addresses flooding as well as the TOMC which is updated routinely
- **Urban Watershed Plan**—As part of a 2021 update, urban watershed policies and the City’s program was updated, and hazard mitigation issues are part of that review.
- **Wildfire Protection Plan**— The City’s EOP includes a wildfire protection element that includes hazard mitigation.
- **Forest Management Plan**—The 2017 adopted plan addresses City-maintained plantings, background, design and management. Hazard mitigation will continue to be part of the Plan.

10.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Countywide Stormwater Pollution Control Plan**—This Plan describes how the Cities and County of Ventura will reduce pollution of local waterways. The integration of this Plan with hazard mitigation includes a review of policies and programs of both plans to ensure consistency and compliance.
- **Urban Water Management Plan** -This Plan describes the City’s long-term water resource and planning principles for reducing water use. The integration of this Plan with hazard mitigation includes a review of policies and programs of both plans to ensure consistency and compliance.
- **Economic Development Strategic Plan**—This Plan was developed as a policy guide for guiding the City’s short, medium and long-term economic development planning. The integration of this Plan with hazard mitigation includes a review of policies and programs of both plans to ensure consistency and compliance.

Acting to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

10.6 RISK ASSESSMENT

10.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 10-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Type of Event	FEMA Disaster #	Date	Damage Assessment
Wind/PSPS Event	N/A	1/20	\$2 million
Hill Fire	DR 4407	11/8/18 - 11/9/18	\$1 million
Woolsey Fire	DR 4407	11/8/18-11/9/18	\$8 million
Borderline Active Shooter	N/A	11/18/18	\$5 million
Winter Storm Event	DR 4353	12/4/17- 1/31/18	\$2 million
Springs Fire	DR 5024	5/2/13 – 5/11/13	\$10 million
Wildwood I Fire	N/A	1995	\$ 500,000
Northridge Earthquake	DR 1008	1/17/94	\$6 million
Green Meadow Fire	N/A	10/26/93 – 11/3/93	\$12 million
Sherwood Fire	N/A	1985	\$ 1 million
Dayton Canyon Fire	N/A	10/25/82	\$4 million
Winter Storm Event	N/A	2/21/80	\$2 million
Winter Storm Event	N/A	2/15/78	\$1.5 million
Winter Storm Event	N/A	1/26/69	\$200,000
Winter Storm Event	N/A	12/7/65	\$100,000
Wind/PSPS Event	N/A	1/20	\$2 million

10.6.2 Hazard Risk Ranking

Table 10-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions primarily target hazards with high and medium rankings.

Rank	Hazard	Risk Ranking Score	Risk Category
1	Landslide	51	High
2	Wildfire	36	High
3	Earthquake	32	Medium
4	Severe Storm	24	Medium
5	Severe Weather	24	Medium
6	Flooding	18	Medium
7	Dam Failure	12	Low
8	Drought	9	Low

10.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for Thousand Oaks. Available Thousand Oaks-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 5
- Number of FEMA-identified Severe-Repetitive-Loss Properties: N/A
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties mitigated: N/A

Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- **Urban Area Flooding**—Urban area flooding of specific neighborhoods in Thousand Oaks is an ongoing hazard that continues to be addressed through the City’s Capital Improvement Program. The Public Works Department has identified hazard priorities and through City, State and Federal funding resources, many of the known hazards are being mitigated. Each project includes a public outreach component before, during and after the completion of each project.
- **Power Outages**—Scheduled and un-scheduled SCE power outages continue to be a hazard in Thousand Oaks, especially during excessive heat and wind. The Public Works Department has implemented a Red Flag-PSPS Policy that includes the use of permanent and portable back-up generators at critical City facilities. The City also encourages residents and business owners to secure back-up power.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

10.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 10-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

10.8 HAZARD MITIGATION ACTION PLAN

Table 10-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 10-15 identifies the priority for each action. Table 10-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 10-13. Status of Previous Plan Actions

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>TO 1—Develop a water conservation public outreach program to increase awareness about the drought, fines and penalties for overuse and methods for conserving water.</p> <p>Comment: The Public Works Department developed a public outreach program over the last decade that includes a monthly e-newsletter to over 10,500 recipients and use of Facebook, Instagram and Twitter. The Sustainability Division in the Public Works Department maintains the City’s Water webpage which provides updates related to drought conditions, fines and penalties for overuse and strategies for conserving water. The City finished its Automatic Meter Reader Upgrade in June 2021 which provides customer access to water consumption data and monitoring of customer water leaks. The City’s annual Arbor/Earth Day event includes water conservation booths from all three local water purveyors. During periods of significant water shortage, the City hosts monthly meetings with the three local water purveyors to coordinate programs and messaging. The City is also a member of the California Data Collaborative and has access to a dashboard that identifies high water users in Thousand Oaks that have accepted water rebates. Currently the City is preparing a Climate and Environmental Action Plan, which includes a water conservation component. The plan is being developed in conjunction with an update to the City’s General Plan and it will be CEQA qualified. Several stakeholder meetings were held in 2021 and the Plan is expected to be considered by the City Council in 2023.</p>	✓			
<p>TO 2—Adopt emergency water conservation measures and/or water conservation ordinance to reduce irrigation.</p> <p>Comment: The City’s Urban Water Management Plan (UWMP) was adopted by City Council in June 2021. Municipal code update conservation measures (3 tier to 6 tier) November 2021. Update of water conservation levels from 3 to 6 tiers with Water Shortage Contingency Plan and municipal code updates.</p>	✓			
<p>TO 3—Evaluate City bridges for structural, seismic, functional, and safety adequacy.</p> <p>Comment: Caltrans performs biennial evaluation of all City and State’s bridges for structural, seismic, functional and safety adequacy. Caltrans provides inspection reports and repair and maintenance recommendations for each bridge that was inspected. In November 2020 Caltrans inspected City of Thousand Oaks bridges and rated them to indicate deficiencies, structural adequacy, safe load carrying capacity and general condition.</p>	✓			
<p>TO 4—Update Supervisory Control and Data Acquisition (SCADA) Master Plan with seismic improvements, including design, integration of new Programmable Logic Controllers and communication systems at City pump stations, reservoirs, and turnouts.</p> <p>Comment: CI 5284 SCADA Upgrades—New SCADA program, update of seismic equipment programmable logic controllers and programing. New communications system. Project completion target date: June 2022.</p>	✓			
<p>TO 5—Remove and/or repair the interior of reservoir tanks and perform analysis, identify causes, and mitigate hazards to ensure tanks achieve seismic standards.</p> <p>Comment: Water reservoirs are inspected and cleaned every 5 years and rehabilitated every 20-25 years. Rehabilitation project priorities include 2019 Lang Ranch Reservoir, 2020 Tara Reservoir Seismic upgrades, ventilation and structural safety were addressed at these sites and all reservoir rehabilitation projects. As part of CIP 5284, SCADA Upgrades</p>	✓			

Table 10-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action CTO-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or located in high- or medium-risk hazard areas.						
<u>Hazards Mitigated:</u> Landslides, Wildfire, Earthquake, Severe Storms, Severe Weather, Flooding, Dam Failure						
New & Existing	4, 6, 8, 9, 10, 11, 19	City Public Works Department	City Community Development Department	High	Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Ongoing
Action CTO-2 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including Urban Water Management Plan, General Plan Update, Climate & Environmental Action Plan						
<u>Hazards Mitigated:</u> Flooding, Earthquakes, Climate Change						
New & Existing	4, 8, 9, 11, 19	City Public Works Department	City Community Development Department	Low	Staff Time, General Fund	Ongoing
Action CTO-3 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<u>Hazards Mitigated:</u> Landslides, Wildfire, Earthquake, Severe Storms, Severe Weather, Flooding, Dam Failure, Drought						
New & Existing	9, 10, 11	City Public Works Department	City Community Development Department	Low	Staff Time, General Fund	Short-term
Action CTO-4 —Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements that include enforcing the City flood damage prevention ordinance, participate in floodplain identification and mapping updates, and provide public assistance/information on floodplain requirements and impacts.						
<u>Hazards Mitigated:</u> Flooding						
New & Existing	8, 9, 10, 13, 14, 15, 19	Public Works	Ventura County Water Protection District	Low	Staff Time, General Fund	Ongoing
Action CTO-5 —Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following projects:						
<ul style="list-style-type: none"> • CI 5395, Groundwater Utilization Project—Alternative source of water. • CI 5450, Emergency Water Interconnects—2 new interconnects with California American Water Service (Adrian Drive & Avenida de los Arboles). 						
<u>Hazards Mitigated:</u> Drought, Earthquake						
New & Existing	1, 13, 14, 19	City Public Works Department		Low	Staff Time, General Fund	Short-term
Action CTO-6 —Purchase generators for critical facilities and infrastructure that lack adequate backup power, including the following projects:						
<ul style="list-style-type: none"> • CI 5292, La Granada Reservoir Improvements—Redundant supply pumps, emergency fire pump (Pump #3) and emergency backup generator installed at La Granada Reservoir. • CI 5454, Pressure Reducing Stations—1 new PRS & existing upgrade. Water supply redundancy, reduced pumping. • CI 5452, Lone Oak Emergency Generator—Install new generator at Lone Oak Pump Station with an automatic transfer switch and connection to SCADA System. • CI 5520, Site Improvements at Reservoir and Pump Stations—Erbes Road Emergency backup generator. 						
<u>Hazards Mitigated:</u> Dam Failure, Earthquakes, Flooding, Landslide, Severe Weather, Wildfires						
New and Existing	2, 8, 10, 19	City Public Works Department	Community Development Department		Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
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Action CTO-7—Maintain wildfire hazard fuel reduction program for areas that have been identified with overgrown or dead brush, trees and weeds to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program. (Coordinates with Ventura County Fire Protection District Action VFP-6 and Conejo Recreation and Parks District Action CRP-1)

<i>Hazards Mitigated:</i> Wildfire						
New & Existing	2, 4, 5, 6, 8, 10, 11, 13, 14, 15, 18, 19	VCFPD	City of Thousand Oaks, COSCA (Conejo Open Space Conservancy Agency), Conejo Recreation and Parks District (CRPD), CAL FIRE & USDA	Medium	Grant Funding- FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing

Action CTO-8—The City is developing plans to install two City Hall emergency power battery backup systems. Two other emergency backup power systems include the Erbes Road Pump Station Battery Back-Up Project and the Pederson Battery Back Up Project. Both projects are funded by state HMGP funding.

<i>Hazards Mitigated:</i> Landslides, Wildfire, Earthquake, Severe Storms, Severe Weather, Flooding, Dam Failure						
New and Existing	1, 6, 11, 19	City Public Works Department	VCPWA-WP	Low	Grant Funding- FEMA HMA (BRIC, FMA, HMGP) and General Fund	Short-term

Action CTO-9— The Lake Eleanor (Banning) Dam was built in 1889 is operated by COSCA and is 37 feet high and has a storage capacity of 128-acre-feet. Dam failure would be a flood risk for the Westlake community and has a sentiment load that cannot be released downstream. The reduction of water storage volume would help mitigate the hazard potential of the Dam.

<i>Hazards Mitigated:</i> Dam Failure, Earthquakes, Flooding, Severe Weather						
New and existing	4, 5, 8, 9, 11, 14, 15, 16, 17, 19	City Public Works Department	COSCA, CRPD	Low	Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Long Term

Action CTO-10—Community outreach program for wildfire safety. Home losses associated with wildfires. COSCA contracts with the Ventura Regional Fire Safe Council to provide educational outreach and services promoting wildfire safety. These include webinars on fire safety, defensible space, and home hardening. Also offered are Home Ignition Zone assessments for homeowners in COSCA’s service area. Currently, these are funded through COSCA Board appropriations for funding from COSCA’s Woolsey Fire Recovery Fund.

<i>Hazards Mitigated:</i> Wildfire						
New and Existing	1, 5, 8, 11, 14, 17	City Community Development	COSCA, CRPD	Low	Grant Funding- FEMA HMA (BRIC, FMAP and HMGP), Cal-OES & Utility Settlement	Ongoing

Action CTO-11—Westlake Boulevard Flood Damage Mitigation. Install retaining walls and upgrade the drainage inlet along the west side of Westlake Boulevard at Cloverleaf Street to mitigate debris and mud flows from adjacent hillsides from entering the roadway.

<i>Hazards Mitigated:</i> Dam Failure, Earthquakes, Flooding, Severe Weather.						
New and Existing	4, 14, 11, 15, 16, 19	City Public Works Department	N/A	Medium	General Fund, Grant Funding- FEMA HMA (BRIC, FMAP and HMGP)	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action CTO-12- Continue implementation of City Drainage Protection Program. Positive drainage away from structures is achieved in accordance with the City's adopted building codes development discharges to be safely conveyed to stable channels and/or dispersed into natural channels via energy dissipators/rip-rap to avoid scour of unstable areas in accordance with TOMC 1995-20 Section 4 (Commercial/Industrial) and Section 5 (Residential).						
<i>Hazards Mitigated:</i> Dam Failure, Earthquake, Flooding, Severe Weather						
New and Existing	1, 11, 15, 16, 19	City Public Works Department	City Community Development Department	Low	General Fund	Ongoing
Action CTO-13— Continue to participate in Countywide FEMA Coordination by meeting quarterly to discuss program enhancements, studies, and other floodplain matters.						
<i>Hazards Mitigated:</i> Flooding						
New and Existing	1, 8, 10, 13	City Public Works Department	N/A	Low	General Fund	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 10-15. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	7	High	High	Yes	Yes	No	High	High
2	5	High	Low	Yes	No	Yes	High	Low
3	3	Medium	Medium	Yes	No	Yes	Medium	Low
4	7	High	Low	Yes	No	Yes	Low	Low
5	4	High	Medium	Yes	No	Yes	Medium	Low
6	4	High	Medium	Yes	Yes	Yes	Medium	High
7	12	High	Low	Yes	Yes	Yes	High	High
8	4	Medium	High	Yes	Yes	No	Medium	Medium
9	10	High	Low	Yes	Yes	Yes	High	High
10	6	Low	Low	Yes	Yes	Yes	Low	Medium
11	5	Medium	Low	Yes	Yes	Yes	Low	Medium
12	5	Low	Low	Yes	No	Yes	Low	Low
13	4	Low	Low	Yes	No	Yes	Low	Low

a. See the introduction to this volume for explanation of priorities.

Table 10-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building ^b
High-Risk Hazards								
Landslide	CTO-6, 11	CTO-1, 2, 6		CTO-1, 3, 5	CTO-6, 8	CTO-5, 6, 8	CTO-1, 5	CTO-3, 8
Wildfire	CTO-6, 7, 8, 10	CTO-1, 3, 6, 7, 10	CTO-7, 10	CTO-1, 7	CTO-6, 8, 10	CTO-3, 6, 7	CTO-10	CTO-3, 7, 10
Medium-Risk Hazards								
Earthquake	CTO-2, 3, 6, 8, 9	CTO-1, 2, 6, 8, 9	CTO-5, 10	CTO-1, 2, 5, 9, 11, 12	CTO-1, 2, 6, 8, 9	CTO-1, 2, 3, 8, 9, 12	CTO-5, 7, 9, 11	CTO-1, 2, 3, 8, 12
Severe Storms	CTO-3, 6, 8, 11	CTO-1, 3, 6, 8		CTO-1	CTO-8	CTO-1, 6, 8		CTO-1, 3, 6
Severe Weather	CTO-3, 6, 9, 11, 12	CTO-1, 6, 9, 11, 12	CTO-10, 13	CTO-1, 9, 12	CTO-1, 6, 8, 11	CTO-1, 6, 8, 11, 12	CTO-9	CTO-1, 3, 9, 12
Flooding	CTO-2, 3, 4	CTO-1, 2, 4, 8, 9	CTO-7, 11	CTO-1, 2, 9, 11, 12	CTO-6, 8, 11, 12	CTO-1, 2, 6, 8, 9, 11, 12	CTO-2, 9, 11, 12, 13	CTO-1, 2, 3, 4, 9, 12, 13
Low-Risk Hazards								
Dam Failure	CTO-11, 12	CTO-1, 3, 6, 8, 9, 11, 12	CTO-9	CTO-1, 8, 9	CTO-1, 6, 8	CTO-1, 6, 11, 12	CTO-8, 9	CTO-1, 3, 6, 8
Drought					CTO-5	CTO-5		CTO-3

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

10.9 PUBLIC OUTREACH

Table 10-17 lists public outreach activities for Thousand Oaks which includes citywide communications and civic engagement activities for City departments, the press, and community members. Public outreach includes:

- City Websites
- Social Media
- Emergency Communications
- Media Relations
- Citywide Branding
- Press Releases
- Community Relations
- City Newsletters
- TOTV—Government Access Television
- Community Attitude Survey

Table 10-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
City Emergency Management E-Newsletter	6/29/21	1,100 subscribers
City Sustainability E-Newsletter & Blog	6/29/21	10,400 subscribers
City Scene E-Newsletter	7/1/21	1,500 subscribers
Hazard Mitigation Description/Survey Link on City Website	7/1/21	N/A
Chamber of Commerce E-Newsletter	8/21/21	2,500 subscribers
American Public Works Association, Ventura County Chapter	8/22/21	900 subscribers

10.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **Thousand Oaks Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Emergency Operations Plan**—The EOP was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Thousand Oaks General Plan**—This plan is being updated and is scheduled to be adopted by the City in FY 2022-23. Several sections of the Plan, including the Safety Element and its relation to the Climate and Environmental Action Plan were referenced in this Hazard Mitigation Plan.
- **Climate Action & Environmental Plan**—This plan was reviewed for the full capability assessment and for identifying opportunities for action plan integration.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

10.11 ADDITIONAL COMMENTS

The City transitioned to a new solid waste hauler (Athens) on January 1, 2022. The new residential and commercial hauler provides improved collection services and has added organics collection and composting. In addition, Athens offers pickup of household hazardous waste (HHW) from residences citywide. A new service that will reduce illegal HHW disposal and improve the City's recovery of unwanted chemicals out of the waste stream and homes.

The addition of residential HHW curbside supplements the existing City HHW facility at 2010 Conejo Center Drive, which offers free drop-off of HHW to Thousand Oaks residents and unincorporated county residents every Friday 9 am – 1 pm. Small businesses also use the facility 1-3 pm and pay for the cost of disposal further reducing the illegal disposal of toxic chemicals into the waste stream.

In November 2021 the City adopted a Water Shortage Contingency Ordinance and Resolution for a 15 percent voluntary water conservation level.

Thousand Oaks

Critical Facilities (1 of 2)

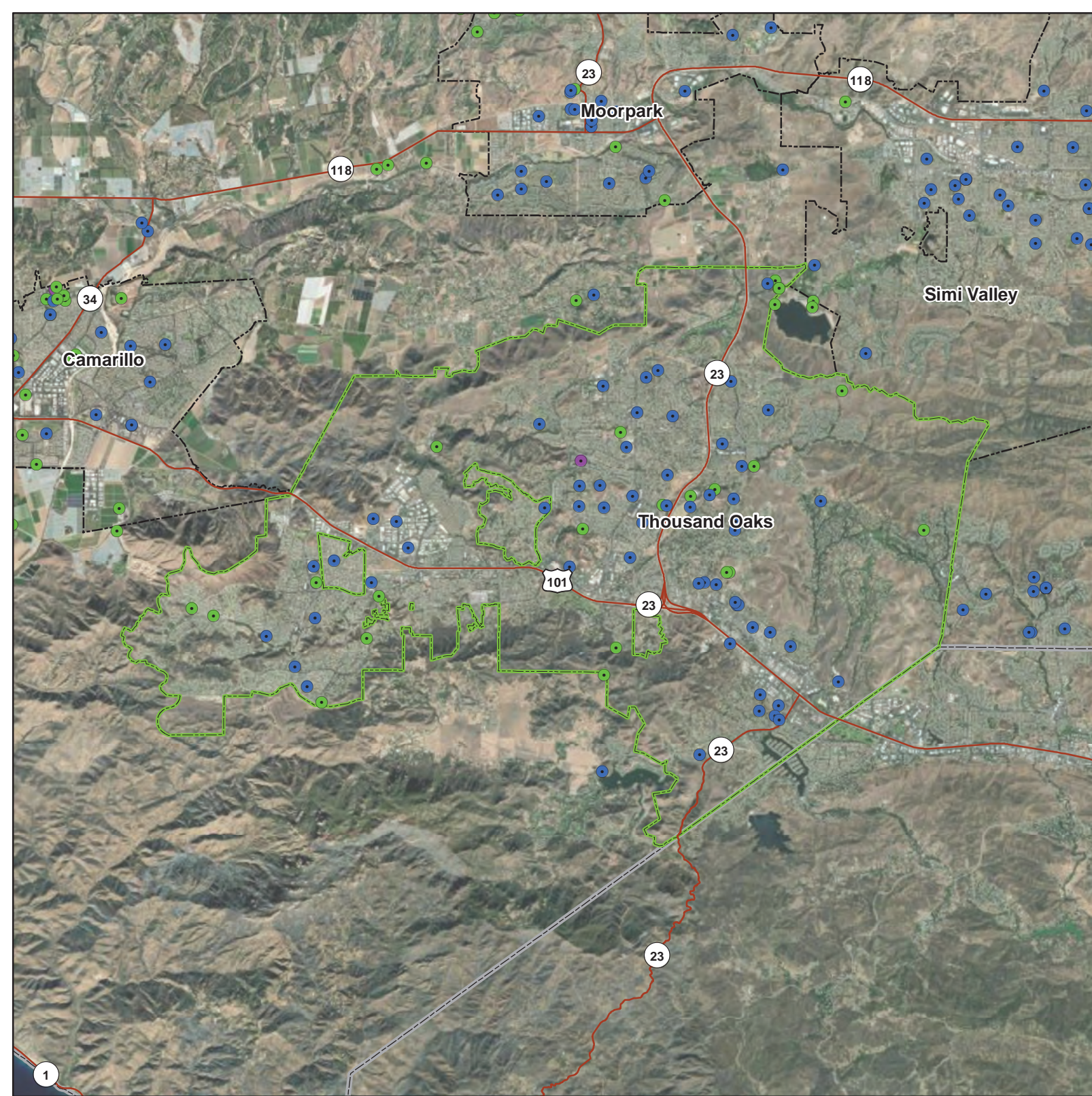
- Food, Water, Shelter
- Health and Medical
- Safety and Security

- Major Roads
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri



0 0.75 1.5 3 Miles



Thousand Oaks

Critical Facilities (1 of 2)

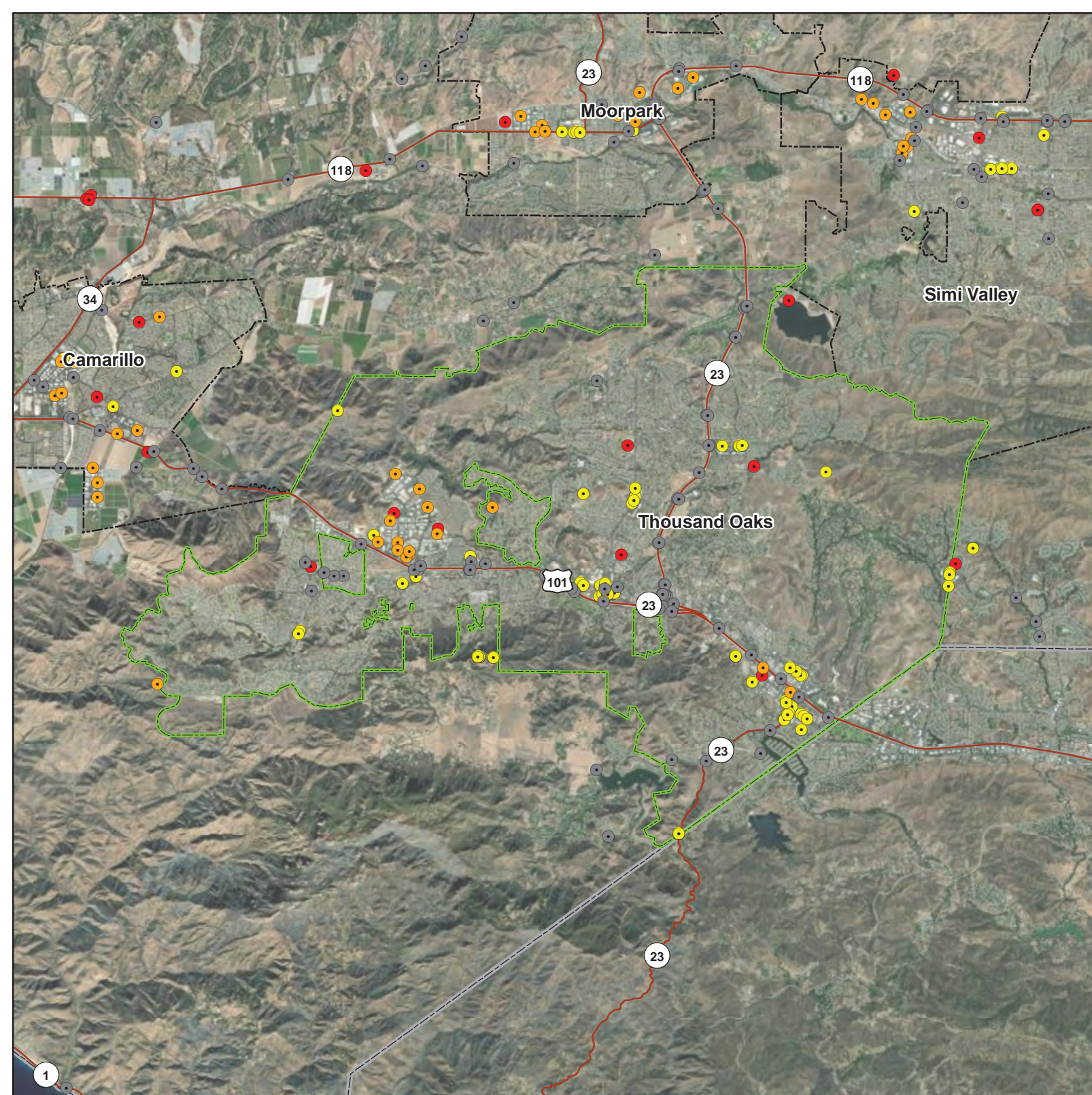
- Communications
- Energy
- Hazardous Material
- Transportation

- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri








0 0.75 1.5 3 Miles



Thousand Oaks

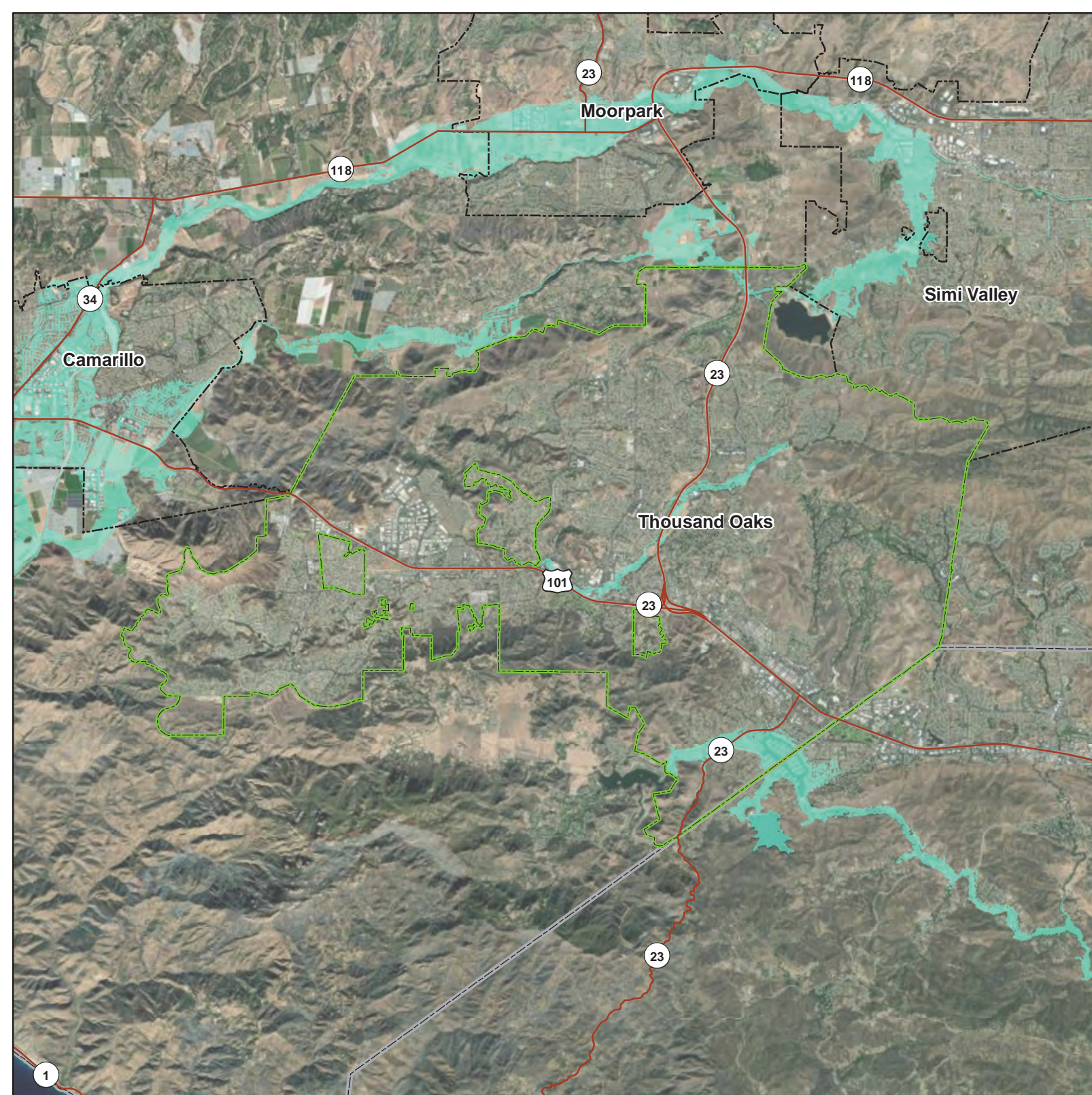
Dam Failure Inundation Areas

-  Combined Inundation Areas
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CA DWR, Esri









0 0.75 1.5 3 Miles



Thousand Oaks

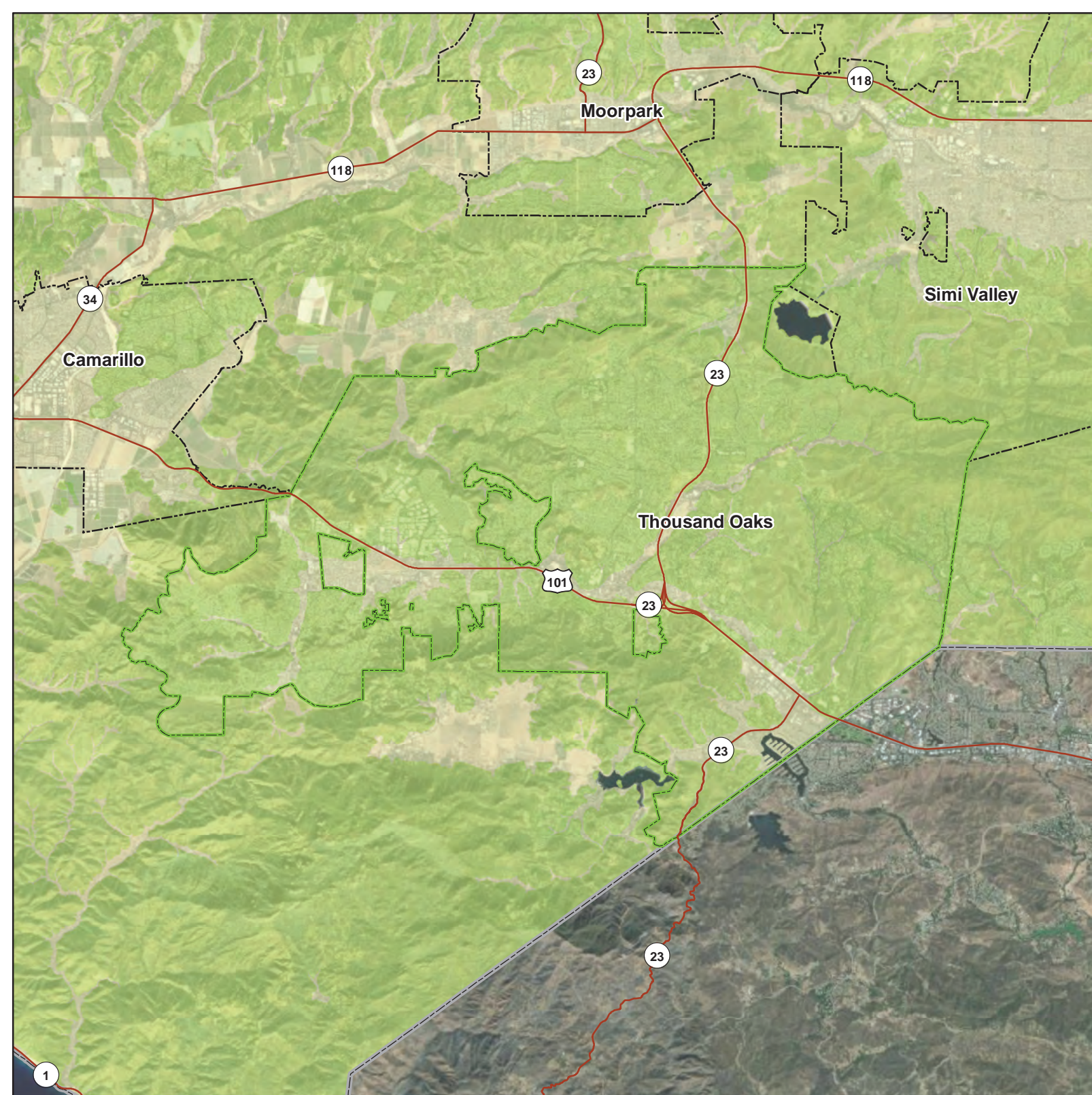
NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri








0 0.75 1.5 3 Miles



Thousand Oaks

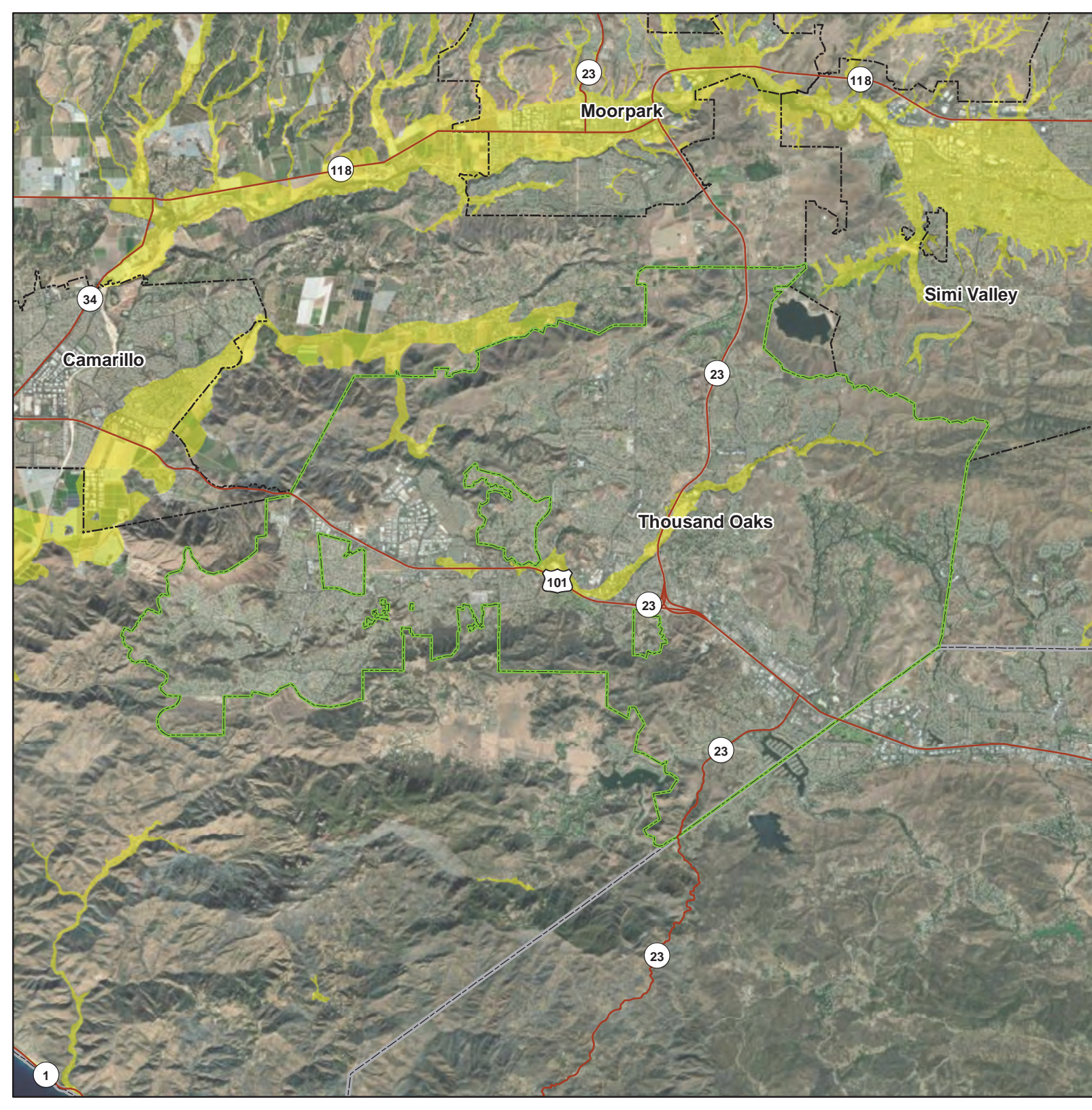
Liquefaction Susceptibility

-  Liquefaction zone
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
Esri




0 0.75 1.5 3 Miles




Thousand Oaks

100-Year Probabilistic Earthquake Scenario


Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Major Roads

 Selected City

 Incorporated Cities

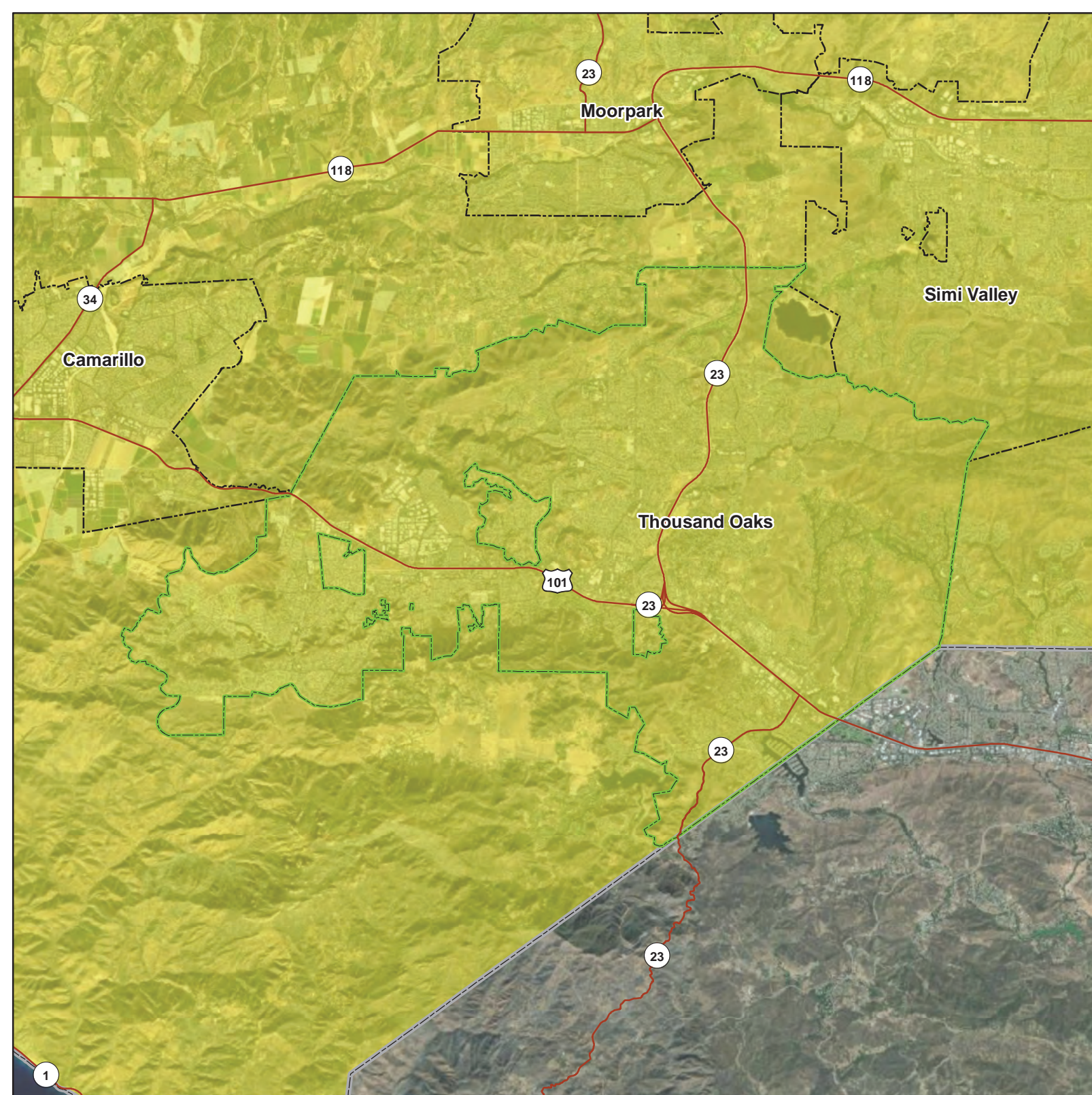
 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.75 1.5 3 Miles



Thousand Oaks

Oak Ridge M7.16 Earthquake Scenario

Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)

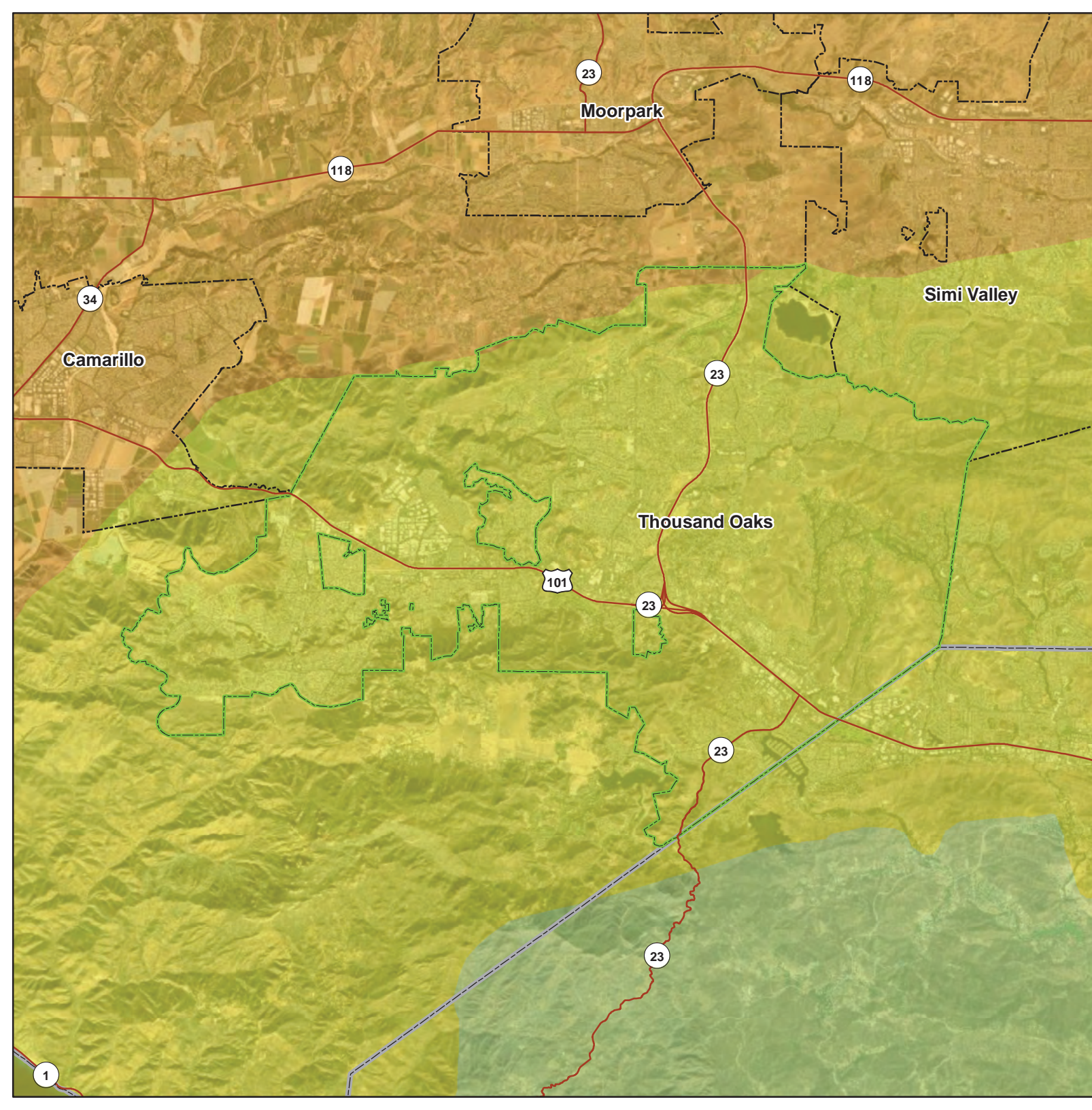
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.75 1.5 3 Miles



Thousand Oaks

Pitas Point M7.12 Earthquake Scenario

Mercalli Intensity Scale

- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)

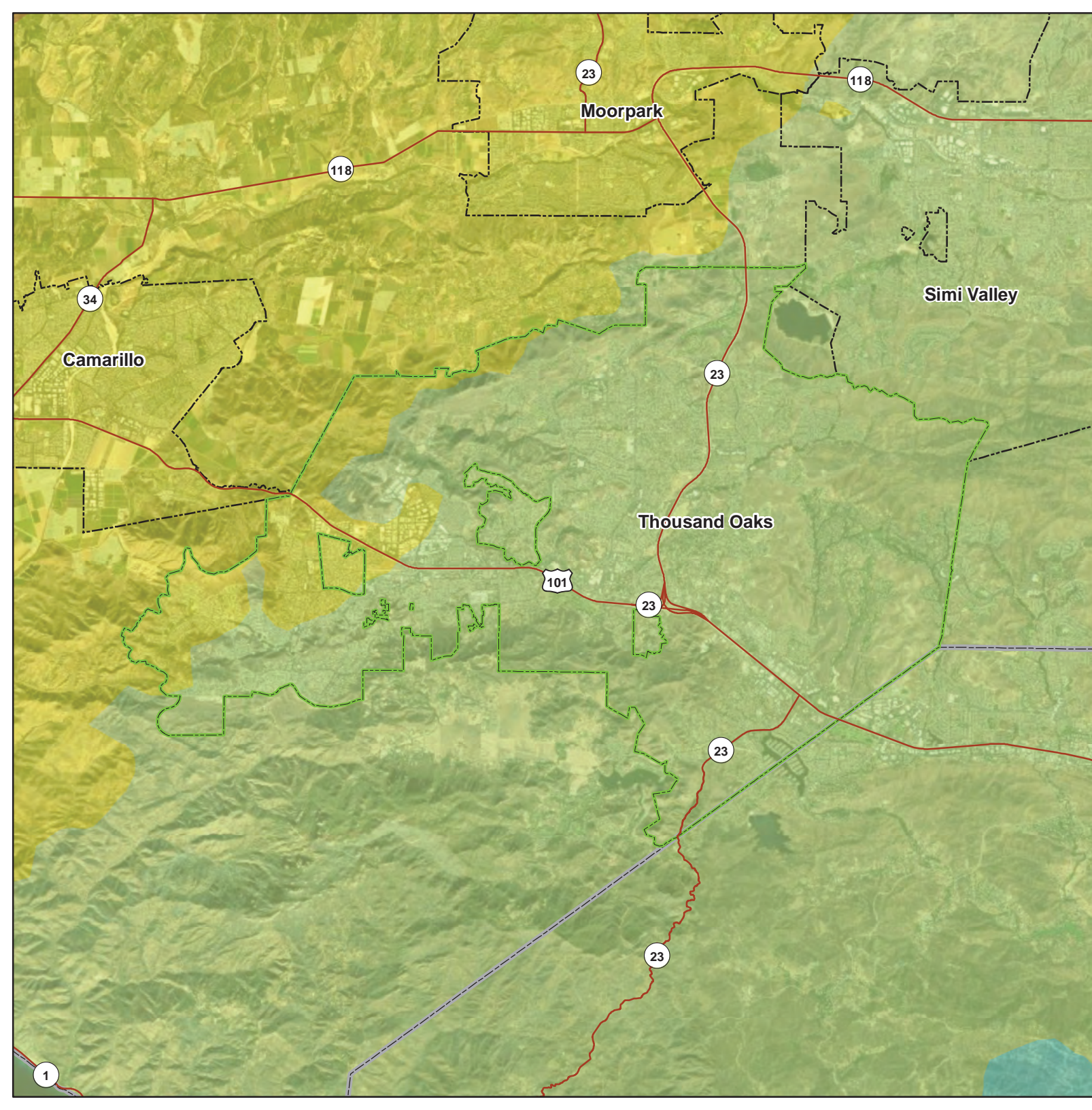
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.75 1.5 3 Miles



Thousand Oaks

San Cayetano M7.16 Earthquake Scenario

Mercalli Intensity Scale

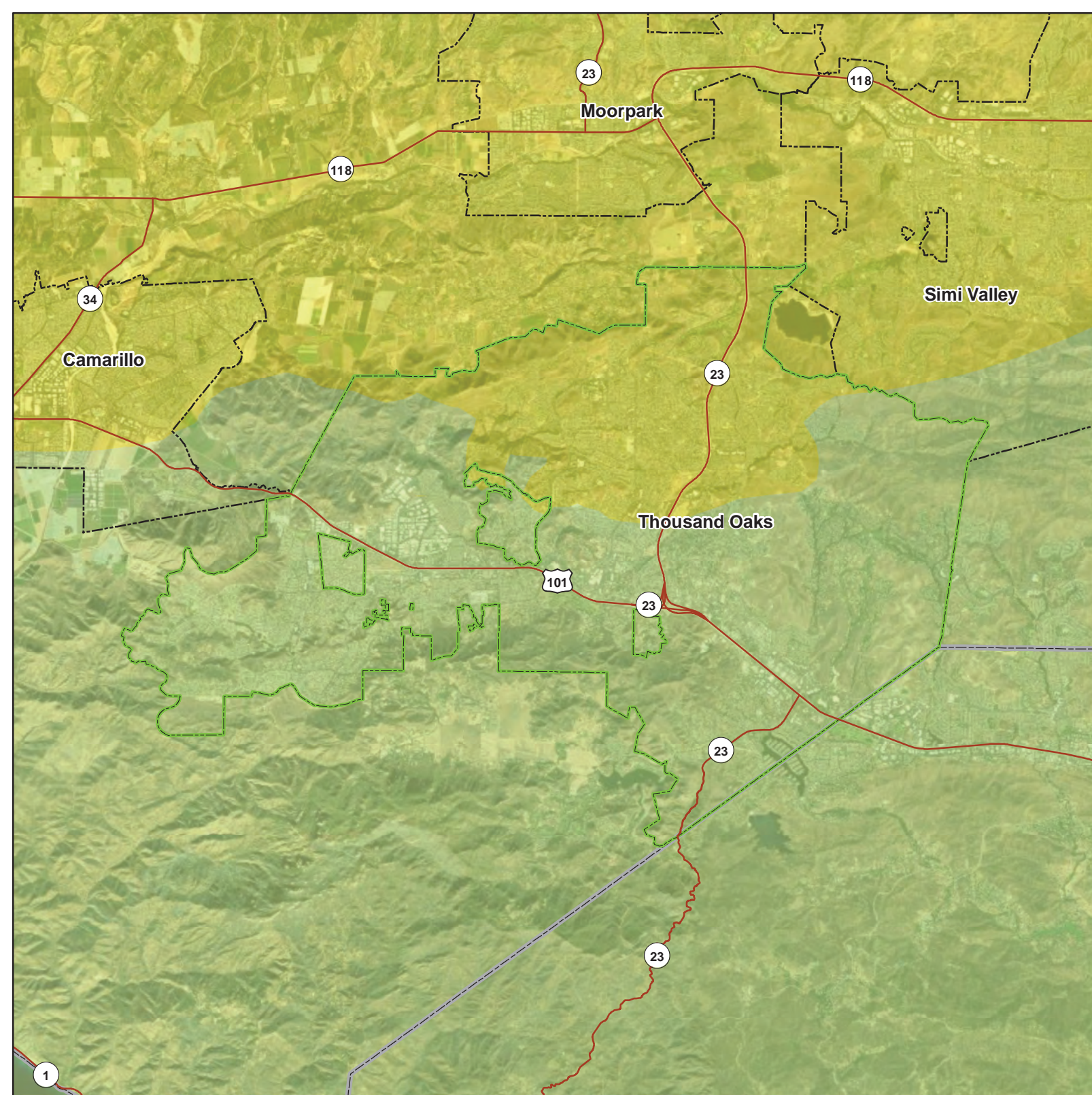
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri




0 0.75 1.5 3 Miles



Thousand Oaks

S. San Andreas M8.03 Earthquake Scenario

Mercalli Intensity Scale


 V (Moderate/Very Light)

 VI (Strong/Light)

 Major Roads

 Selected City

 Incorporated Cities

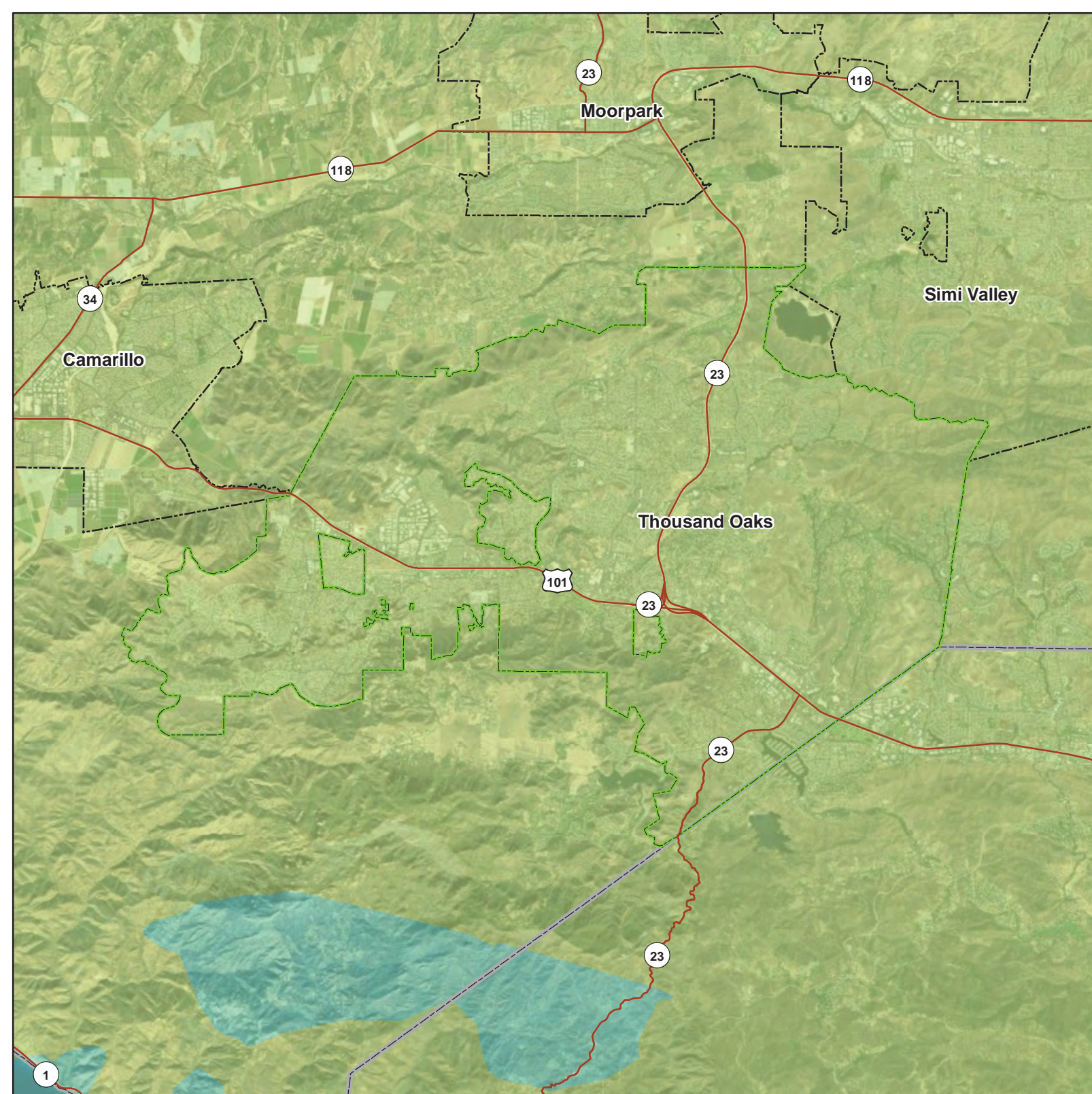
 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri









0 0.75 1.5 3 Miles



Thousand Oaks

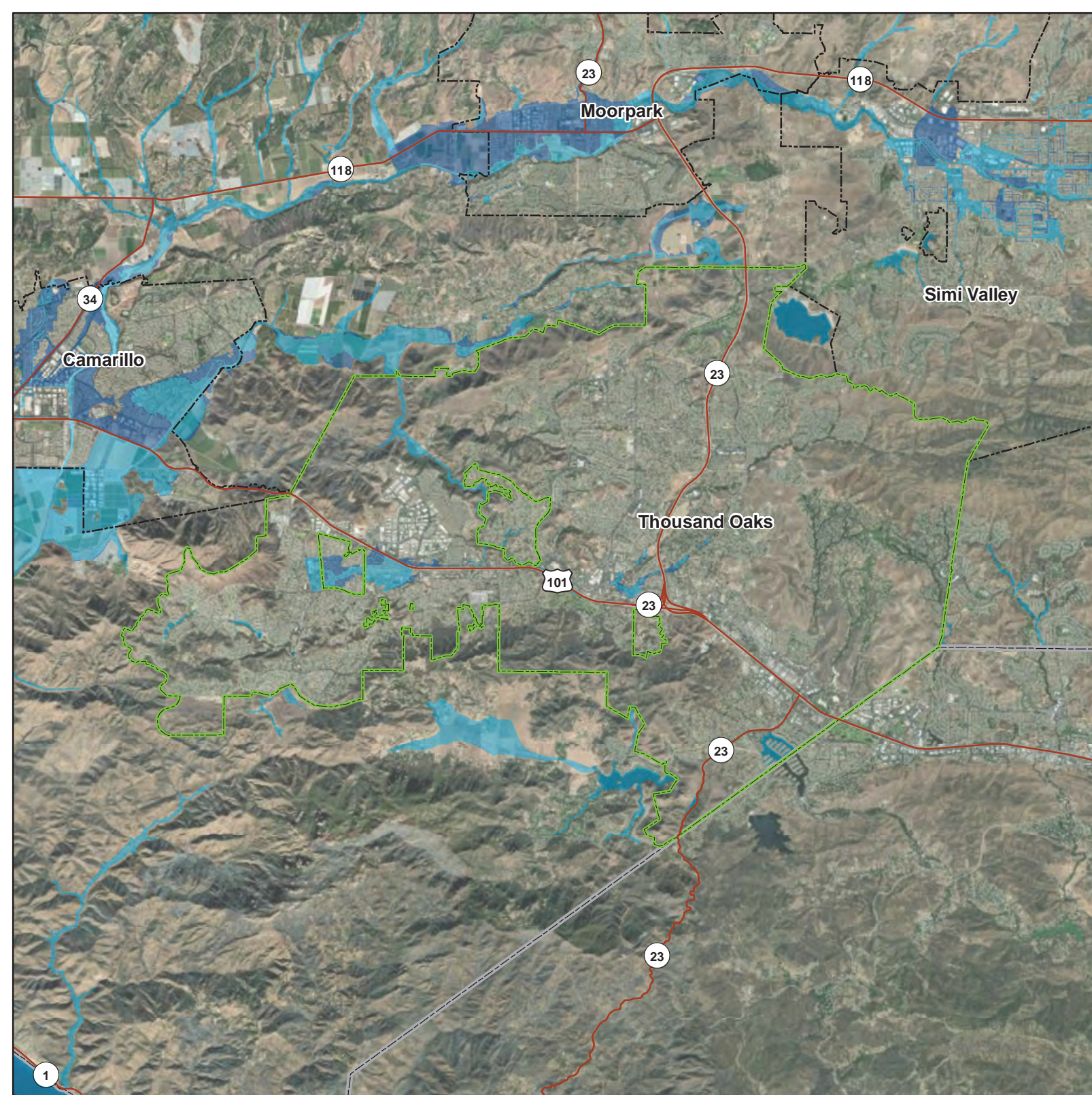
FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
FEMA, Esri

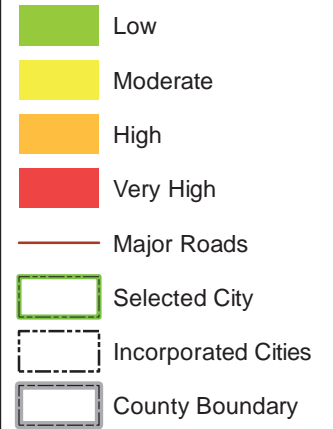


0 0.75 1.5 3 Miles

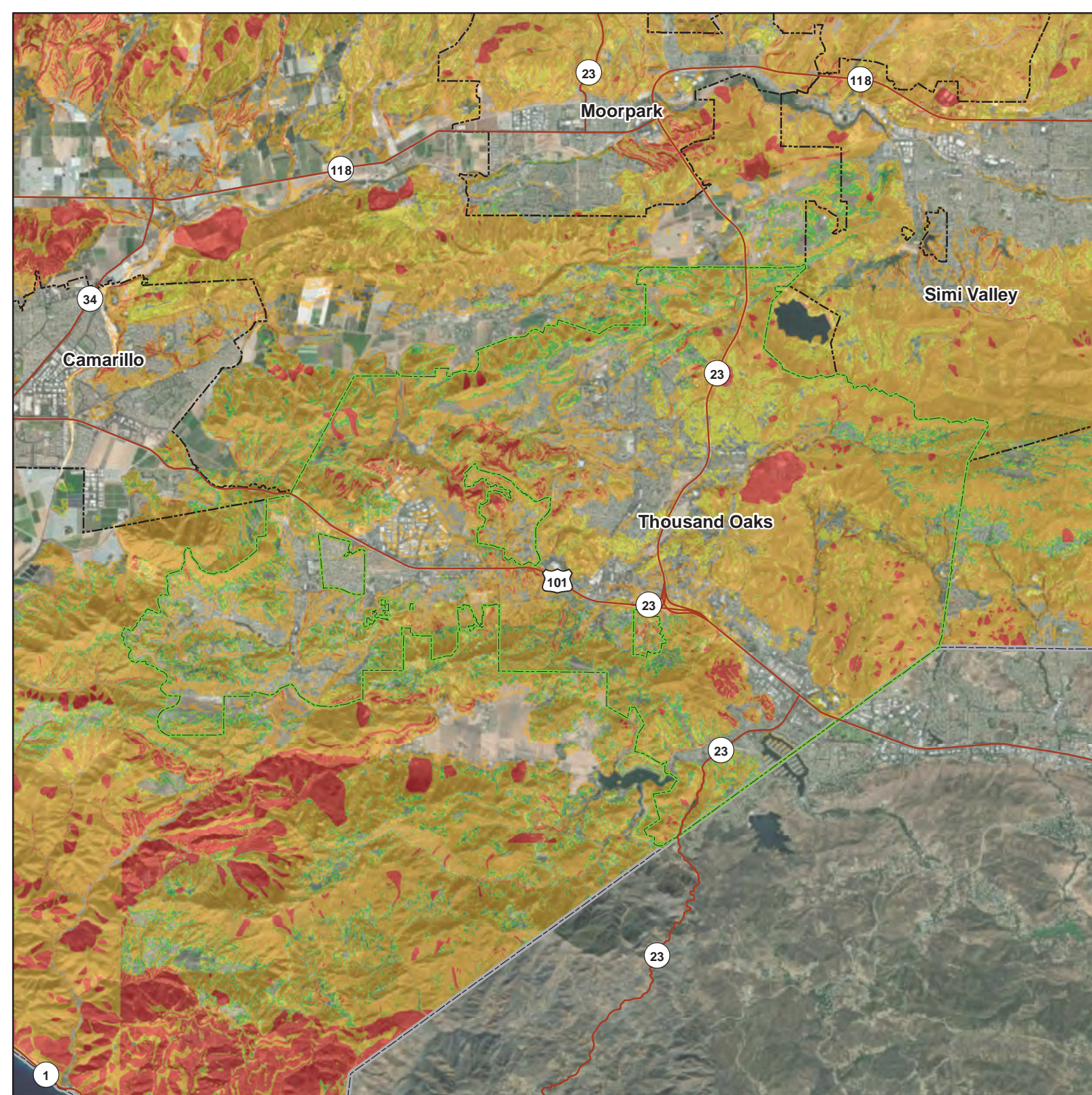


Thousand Oaks

Susceptibility to Deep-Seated Landslides

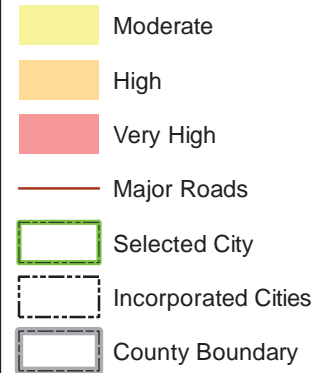


Data Sources: Ventura Co., CGS, Esri

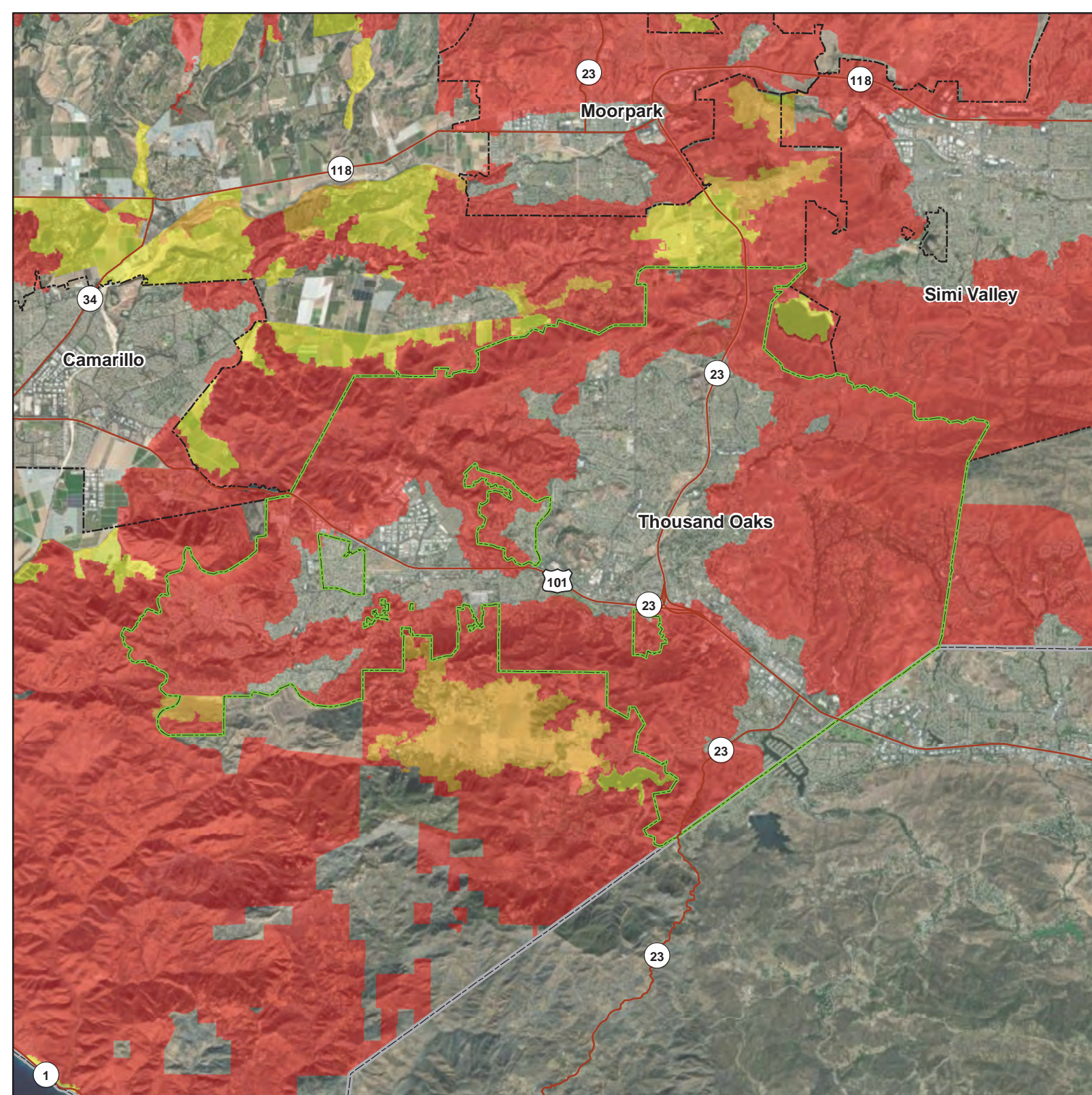


Thousand Oaks

Wildfire Hazard Severity Zones



Data Sources: Ventura Co., CAL FIRE, Esri



11. CITY OF VENTURA

11.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Daniel Wall, Emergency Services Manager
501 Poli St.
Ventura, CA 93001
Telephone: 805-223-1030
email: dwall@cityofventura.ca.gov

Alternate Point of Contact

Barry Fisher, Deputy City Manager
501 Poli St.
Ventura, CA 93001
Telephone: 805-223-6873
Email: bfisher@cityofventura.ca.gov

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 11-1.

Table 11-1. Local Mitigation Planning Team Members

Name	Title
Peter Gilli	Director, Community Development
Neda Zayer	Deputy Director, Community Development
Jonathan Wood	Permit Services Manager, Planning Development
Phil Nelson	Director, Public Works
Mary Joyce Ivers	Deputy Director, Public Works
Jeff Hereford	Principal Civil Engineer
Cody Stults	Environmental
Susan Rungren	General Manager Ventura Water
Linda Sumansky	Director, Ventura Water Pure
Brett Reed	Fire Marshal, Ventura Fire Department

11.2 JURISDICTION PROFILE

11.2.1 Location and Features

The city of San Buenaventura is in Ventura County, California. The boundaries generally extend from Santa Barbara to Los Angeles along state route 101, the city, encompassing an area of 32.09 square miles. A California coastal community with its phenomenal climate, friendly people and spectacular coastline make Ventura a locale for those who appreciate and enjoy the outdoors.

11.2.2 History

Ventura is a coastal City, set against undeveloped hills and flanked by two free-flowing rivers, has been inhabited for thousands of years. Originally European explorers encountered the Chumash, while traveling along the Pacific coast. They witnessed the ocean navigation skill of the native people and their use of the abundant local resources from sea and land. In 1782, the eponymous Mission San Buenaventura was founded nearby, where it benefitted from the water of the Ventura River. The town grew around the mission compound and incorporated in 1866. The development of nearby oil fields began in the 1920s during which many designated landmark buildings were constructed. The mission and these buildings are at the center of a downtown that have become a cultural, retail, and residential district and visitor destination.

11.2.3 Governing Body Format

There are 7 members of the Ventura City Council, each serving a four-year term. Starting with the 2018 Election, four (4) Councilmembers were elected by Districts with the remaining three (3) Councilmembers elected by Districts in 2020. While elected by Districts, each member represents the interests of the City as a whole. The Ventura City Council assumes responsibility for the adoption of this plan; City Administration will oversee its implementation.

11.3 CURRENT TRENDS

11.3.1 Population

According to the California Department of Finance, the population of Ventura as of January 2020 was 106,276. Since 2010, the population has decreased at an average annual rate of 0.09 percent.

11.3.2 Development

Development trends in the City of Ventura are focused on infill development, versus new land/hillside development. The City is looking towards main corridors for increased density and mixed-use development to accommodate the balance of residential and commercial needs. Adaptive reuse of industrial properties is also being considered for last mile distribution centers. Increase housing demands with available property will likely result in more multi-family projects. More flexible zoning will increase commercial and industrial development.

Table 11-2 summarizes development trends in the period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

11.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Table 11-2. Recent and Expected Future Development Trends

Criterion	Response																														
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?	No																														
Is your jurisdiction expected to annex any areas during the performance period of this plan? If yes, describe land areas and dominant uses.	Yes A 25.37-acre property located at the western terminus of Thille Street, just east of the Highway 101/ Highway 126 interchange and 75-acre property adjacent to Valentine road.																														
If yes, who currently has permitting authority over these areas?	County of Ventura																														
Are any areas targeted for development or major redevelopment in the next five years? If yes, briefly describe, including whether any of the areas are in known hazard risk areas	Yes Most of the redevelopment is occurring within the downtown area and the major corridors such as Main Street and Thompson Blvd. The projects are occurring on infill sites that are building multi-story mixed use or residential projects. Some of the development in the downtown area is close to fault lines. Most of the redevelopment areas are generally outside of the high fire areas.																														
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?																															
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	<table border="1"> <thead> <tr> <th></th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td>56</td> <td>255</td> <td>60</td> <td>7</td> <td>4</td> </tr> <tr> <td>Multi-Family</td> <td>31</td> <td>59</td> <td>11</td> <td>14</td> <td>36</td> </tr> <tr> <td>Other (commercial, mixed use, etc.)</td> <td>1</td> <td>1</td> <td>5</td> <td>0</td> <td>4</td> </tr> <tr> <td>Total</td> <td>88</td> <td>315</td> <td>76</td> <td>21</td> <td>44</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Special Flood Hazard Areas: 36 • Landslide: 12 • High Liquefaction Areas: 62 • Tsunami Inundation Area: 21 • Wildfire Risk Areas: 398 		2016	2017	2018	2019	2020	Single Family	56	255	60	7	4	Multi-Family	31	59	11	14	36	Other (commercial, mixed use, etc.)	1	1	5	0	4	Total	88	315	76	21	44
	2016	2017	2018	2019	2020																										
Single Family	56	255	60	7	4																										
Multi-Family	31	59	11	14	36																										
Other (commercial, mixed use, etc.)	1	1	5	0	4																										
Total	88	315	76	21	44																										
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	Development trends in the City of Ventura are focused on infill development, (versus new land/hillside development). Looking towards main corridors for increased density and mixed-use development to accommodate to balance residential and commercial needs. Adaptative reuse of industrial properties for last mile distribution. Increase housing demands with available property will likely result in more multi-family projects. More flexible zoning will increase commercial and industrial development.																														

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions.

The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 11-3.
- Development and permitting capabilities are presented in Table 11-4.
- An assessment of fiscal capabilities is presented in Table 11-5.

- An assessment of administrative and technical capabilities is presented in Table 11-6.
- An assessment of education and outreach capabilities is presented in Table 11-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 11-8.
- Classifications under various community mitigation programs are presented in Table 11-9.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 11-10.

Table 11-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: Sec. 12.115.010, Adoption of California Building Code, 2019 Edition. (Ord. No. 2019-011, § 2, 10-7-19)</i>	Yes	Yes	Yes	Yes
Zoning Code <i>Comment: Division 24 of the Municipal Code (Code 1971, updated numerous times, last updated Ord. No. 2020-021, § 1, 8-3-2020)</i>	Yes	Yes	Yes	Yes
Subdivisions <i>Comment: Division 26 of the Municipal Code (Code 1971, § 8211 through 8231.18, updated numerous times, last updated Ord. No. 2015-006, 6-8-15)</i>	Yes	Yes	Yes	Yes
Stormwater Management <i>Comment: Chapter 8.600, Stormwater Quality Management Ordinance 99-1 adopted 1-11-99</i>	Yes	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment: Emergency Management Sec. 2.370.080., Emergency response May 2021</i>	Yes	Yes	Yes	Yes
Real Estate Disclosure <i>Comment: Division 24 of the Municipal Code (Code 1971, updated numerous times, last updated Ord. No. 2020-021, § 1, 8-3-2020)</i>	Yes	No	Yes	Yes
Growth Management <i>Comment: Save Open Space and Agricultural Resources initiative adopted 1995. Sec. 24.550.010 (Code 1971, § 15.850.010)</i>	Yes	No	No	Yes
Site Plan Review <i>Comment: Division 24 of the Municipal Code (Code 1971, updated numerous times, last updated Ord. No. 2020-021, § 1, 8-3-2020)</i>	Yes	No	No	Yes
Environmental Protection <i>Comment: Sec. 2R.450.750 (Res. No. 2002-57, § 4, 9-9-02)</i>	Yes	Yes	Yes	Yes
Flood Damage Prevention <i>Comment: Floodplain Regulations, Municipal Code Part 4 Chapter 12.430 (Ord. No. 2021-001, § 1, 1-11-21)</i>	Yes	Yes	Yes	Yes
Emergency Management <i>Comment: Emergency Management Sec. 2.370.080, Emergency response May 2021</i>	Yes	Yes	Yes	Yes
Climate Change <i>Comment: None</i>	No	No	No	Yes
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? No</i> <i>Comment: Undergoing comprehensive General Plan that will bring the Plan into compliance with AB 2140</i>	Yes	No	Yes	Yes
Capital Improvement Plan <i>How often is the plan updated? Annually</i> <i>Comment: Current plan covers 6-year period from 2020-2026</i>	Yes	No	Yes	Yes

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Disaster Debris Management Plan <i>Comment: Ventura County Disaster Recovery Plan, Adopted by BOS in April 2019</i>	No	Yes	Yes	Yes
Floodplain or Watershed Plan <i>Comment: The Ventura County Watershed Protection creates and maintains countywide plans</i>	No	Yes	Yes	Yes
Stormwater Plan <i>Comment: The City of Ventura has joined other jurisdictions to form the Ventura Countywide Stormwater Quality Management Program and is named as a co-permittee under a revised countywide municipal National Pollutant Discharge Elimination System permit for stormwater discharges issued by the Regional Water Quality Control Board in 2010 (Order R4-2010-0108)</i>	Yes	Yes	Yes	Yes
Urban Water Management Plan <i>Comment: 2020 Urban Water Management Plan approved June 14, 2021</i>	Yes	No	Yes	Yes
Habitat Conservation Plan <i>Comment: The city does not have an existing habitat plan</i>	Yes	Yes	No	Yes
Economic Development Plan <i>Comment: Existing Gap plan developed 2018, funded Econ Dev plan request for proposals anticipated 2022 Spring</i>	Yes	No	No	Yes
Shoreline Management Plan <i>Comment: General Plan. Surfers Point Managed Retreat Project Chapter 24.310, Coastal Protection (CP) Overlay Zone</i>	Yes	Yes	Yes	Yes
Community Wildfire Protection Plan <i>Comment: Current effort to develop a plan due Jan 2022</i>	Yes	No	Yes	Yes
Urban Forest Management Plan <i>Comment: City of San Buenaventura Master Tree Plan, November 9, 2020</i>	Yes	No	No	Yes
Climate Action Plan <i>Comment: Preparation and adoption of a Climate Action Plan is part of the comprehensive General Plan update that is scheduled to be adopted in 2023.</i>	Yes	No	No	No
Comprehensive Emergency Management Plan <i>Comment: Emergency Operations Plan was published and approved May 10, 2021</i>	Yes	No	Yes	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: The city does not have a complete THIRA.</i>	Yes	No	No	Yes
Post-Disaster Recovery Plan <i>Comment: Incorporated into the EOP May 2021</i>	Yes	No	Yes	Yes
Continuity of Operations Plan <i>Comment: Incorporated into the EOP June 2021</i>	Yes	No	Yes	Yes
Public Health Plan <i>Comment: County of Ventura Health Care Agency Public Health Emergency Response Plan (ERP), 2019</i>	No	Yes	Yes	Yes
Other—Tsunami Plan <i>Comment: The County of Ventura has an existing plan that describes each City role and has been adopted locally. A revision of this document is required within the coming year 2022.</i>	No	Yes	Yes	Yes

Table 11-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i>	Yes Community Development
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	No

Table 11-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service <i>If yes, specify:</i> Water, Sewer, Electrical Services fees for new construction	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

Table 11-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Community Development / Chief Building Official and Public Works / Principal Civil Engineer	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Public Works/ Principal Civil Engineer, Community Development/Planner/inspector	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Public Works/ Principal Civil Engineer, Community Development/Planner/inspector	Yes
Staff with training in benefit-cost analysis <i>If Yes, Department /Position:</i> Finance / Finance Director	Yes
Surveyors <i>If Yes, Department /Position:</i> Public Works/ Surveyor	Yes
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Finance and Technology Department GIS/ Senior GIS Analyst	Yes
Scientist familiar with natural hazards in local area	No
Emergency manager <i>If Yes, Department /Position:</i> City Manager's Office, Emergency Services Manager	Yes
Grant writers <i>If Yes, Department /Position:</i> City Manager's Office and Multiple other departments	Yes

Table 11-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> On our website, there are references to the County OES website wherein centralized training and outreach can be found related to hazard mitigation education.	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> On our website, there are references to the County OES website wherein centralized training and outreach can be found related to hazard mitigation education.	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i> The city of Ventura is currently developing a CERT team	Yes
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> VCALERT, EVERBRIDGE, Email, Mail and Door Knocking	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> VCALERT, Emergency Notification System, VCSOES, WEA system	Yes

Table 11-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Public Works/Senior Engineer
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your flood damage prevention ordinance was last amended?	January 11, 2021
Does your floodplain management program meet or exceed minimum requirements?	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	12-4-17 Thomas Fire
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Are any Risk MAP projects currently underway in your jurisdiction? <i>If so, state what they are.</i> FEMA has notified us that they will be studying the Ventura and Santa Clara River flooding	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If no, is your jurisdiction interested in joining the CRS program?</i> No	No
How many flood insurance policies are in force in your jurisdiction? ^a <i>What is the insurance in force?</i> \$161,828,500 <i>What is the premium in force?</i> \$374,421	471
How many total loss claims have been filed in your jurisdiction? <i>What were the total payments for losses?</i> \$660,191	62

a. According to FEMA statistics as of March 31, 2021

Table 11-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	00611165042	N/A
DUNS #	Yes	039974761	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	Yes	ISO3	2019
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	Yes	N/A	2012

Table 11-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Ratings
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment:</i>	Low
Jurisdiction-level monitoring of climate change impacts <i>Comment:</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: City of Ventura has a current Greenhouse Gas inventory.</i>	Medium
Capital planning and land use decisions informed by potential climate impacts <i>Comment: Community Development/Public Works</i>	Medium
Participation in regional groups addressing climate risks <i>Comment: Public Works / Environmental Sustainability—The City has partnerships with a number of regional organizations that support greenhouse gas reduction efforts, including the Ventura County Regional Energy Alliance, Clean Power Alliance, and Tri-County Regional Energy Network (3CRen). The City has also partnered with the Beach Erosion Authority for Clean Oceans and Nourishment (BEACON), Surfrider and other organizations to complete the Surfers Point Managed Retreat Project.</i>	Medium
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment:</i>	Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment: Draft Energy Action Plan completed in July 2021</i>	Low
Identified strategies for adaptation to impacts <i>Comment: The current update to the General plan has addressed strategies for adaptation to impacts.</i>	Medium
Champions for climate action in local government departments <i>Comment: Environmental Sustainability leads the effort on behalf of the city.</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment: City of Ventura city council is supportive as well as local community-based organizations and environmental organizations.</i>	Low
Financial resources devoted to climate change adaptation <i>Comment:</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment:</i>	Unsure

Criterion	Jurisdiction Ratings
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment:</i>	Low
Local residents' support of adaptation efforts <i>Comment: Residents are supportive of adaptation efforts, but when implementation become restrictive, they are reticent to advance the course of action.</i>	Medium
Local residents' capacity to adapt to climate impacts <i>Comment: The vulnerable populations within the city may not be able to relocate out of a flood-prone area (homeless encampments), but residents with more resources may be more able to rebuild, retrofit, or otherwise protect their home.</i>	Medium
Local economy current capacity to adapt to climate impacts <i>Comment: The City has water shortage surcharge rates in addition to the base water rates. These surcharges help to fund the water budget during drought stages.</i>	Medium
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

11.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

11.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- City of Ventura: General Plan
- City of Ventura: Emergency Operations Plan (EOP)
- Ventura County: Operational Area Emergency Operations Plan

11.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **City of Ventura: General Plan**—This comprehensive effort is underway and will be integrated into this effort to be compliant with AB2140.
- **City of Ventura: Evacuation plan**—This comprehensive effort is predicated on grant funds and will be initiated in FY20/21 and will encompass a multi-hazard perspective and routes with appropriate stakeholder/community input.
- **Visit Ventura: Tourist and Visitor disaster plan**—This effort will be a collaboration between the following: Visit Ventura, Chamber of Commerce, Hoteliers and City Emergency Management.
- **City of Ventura: Citizen Emergency Response Team (CERT)**—This effort will be a collaboration between the following: CERT volunteers, City staff, community-based organizations, with the existing DRAFT CERT team manual.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

11.6 RISK ASSESSMENT

11.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 11-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 11-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Wind Event	N/A	January 19, 2021	Strong surface high pressure in the Great Basin helped to generate a moderate Santa Ana wind event across Southern California.
Wildfire	N/A	2020	Strong surface high pressure building in the Great Basin generated strong and gusty Santa Ana winds across sections of Ventura and Los Angeles counties.
COVID-19	DR-4482	January 20, 2020. Continuing	Ongoing
High Wind	N/A	2020	Strong surface high pressure in the Great Basin along with strong north to northeast flow aloft generated strong Santa Ana winds across Ventura and Los Angeles counties. North to northeast wind gusts up to 83 mph were reported in the mountains while gusts to 59 mph were reported across the coastal plain.
Wildfire	N/A	2019	Strong surface high pressure building in the Great Basin generated strong and gusty Santa Ana winds across sections of Ventura and Los Angeles counties.
Wind Event	N/A	2018	Strong surface high pressure building in the Great Basin generated strong and gusty Santa Ana winds across sections of Ventura and Los Angeles counties.

Type of Event	FEMA Disaster #	Date	Damage Assessment
Winter Storm	N/A	2018	Strong surface high pressure in the Great Basin helped to generate a moderate Santa Ana wind event across Southern California. Strong northeast winds were reported across the mountains and valleys of Ventura and Los Angeles Counties.
Tornado	N/A	2018	A powerful winter storm brought significant rain, snow and wind to the area. Rainfall totals ranged from 1 to 2 inches across coastal and valleys areas with 2 to 4 inches in the foothills and mountains. With snow levels dropping to between 2500 and 3500 feet, significant snowfall was reported in the mountains (up to 1 to 2 feet) and even the Antelope Valley (4 to 8 inches). Numerous road closures due to winter storm conditions were reported, including Interstate 5 through the Grapevine as well as Highways 14 and 138. Additionally, thunderstorms generated a waterspout over the coastal waters as well as a very weak tornado over Ventura Harbor.
Flash Flood	N/A	2018	High pressure over the four-corners region resulted in an extended monsoonal flow pattern across Southern California. For several days, strong thunderstorms produced heavy rain, flash flooding and large hail across parts of Southern California.
Debris Flow	N/A	2018	A powerful early-season winter storm moves across Southwestern California on Halloween night. The storm produced some significant rainfall with amounts in the coastal areas ranging from 0.25 to 1.50 while the mountains received up to 2.00. In the Camarillo area, near the Springs burn scar, a mud/debris flow occurred. Otherwise just some minor nuisance flooding was reported.
Wildfires, Flooding, Mudflows, and Debris Flows	DR-4353	December 4, 2017- January 31, 2018	Strong surface high pressure building in the Great Basin generated strong and gusty Santa Ana winds across sections of Ventura and Los Angeles counties. North to northeast wind gusts up to 73 mph were reported. During this event, the Thomas Fire ignited across Ventura County, eventually spreading into Santa Barbara County. The Thomas Fire burned 500+ homes in the City of Ventura and destroyed infrastructure including roads, utilities, and utility distribution networks including telecom.
Thunderstorm	N/A	2017	A powerful winter storm brought heavy rain and snow, flash flooding and gusty winds to the area. Rainfall totals from this storm generally ranged between 2 and 6 inches with locally higher amounts in some foothill areas. With such rainfall amounts, there was significant snowfall totals in the local mountains with up to 28 inches of snow reported at the resort level. Additionally, the heavy rain did generate several flash flooding events including several mud and debris flows.
Severe Storm	DR-1267	January 7 – 11, 2005	Flooding and debris flows
Northridge Earthquake	DR-1008	January 17 – November 30, 1994	Power and communications disruptions, damage to structures

11.6.2 Hazard Risk Ranking

Table 11-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions primarily target hazards with high and medium rankings.

Table 11-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Landslide	33	High
2	Earthquake	32	Medium
3	Severe Storm	24	Medium
4	Severe Weather	24	Medium
5	Flooding	18	Medium
6	Wildfire	18	Medium
7	Dam Failure	12	Low
8	Sea Level Rise	12	Low
9	Tsunami	10	Low
10	Drought	9	Low

11.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 4
- Number of FEMA-identified Severe-Repetitive-Loss Properties: N/A
- Number of Repetitive-Loss or Severe-Repetitive-Loss Properties that have been mitigated: N/A

Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- **Unreinforced Masonry and Soft Story Structures**—Ventura has several unreinforced masonry buildings and Soft Story buildings within the city limits. These buildings are subject to severe damage or structural collapse during a moderate to severe earthquake.
- **Street and Urban Flooding**—There are numerous areas of the city that flood to varying degrees during periods of high rain. The effects of this flooding range from street closures to damage to property, vehicles and buildings.
- **Power Outages/Emergency Power**—Local power outages including public safety power shutoffs (PSPS) have resulted from high winds and storm conditions as well as from the effects of wildland fire in the region. Many key city buildings including the Main City Hall and Council Chambers buildings have no back-up power or emergency generators.
- **Debris Flows**—Following heavy rains and winter storms, substantial debris flows have occurred in the Santa Clara River, Ventura River, as well as other local streams and culverts. Debris flows following wildland fires are particularly bad and can require removal of material from streams, streets, culverts and beaches.

- **Liquefaction Potential**—Nearly the entire City of Ventura is in a “Liquefaction Zone”. The effects and damage caused by seismic activities can be amplified resulting in increased damage to buildings and infrastructure.
- **Homeless Population**—A significant number of persons commonly defined as “Homeless” live in the Santa Clara River and other undeveloped areas. During wildland fires, storms, and flooding these individuals are at great risk.
- **Tsunami Awareness and Notification**—Ventura has a large visitor and tourist population who may not be aware of the tsunami risk.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

11.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 11-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 11-13. Status of Previous Plan Actions

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>OA 4—Relocate or reinforce bike trails, parking lots and other beach access amenities away from the shoreline to restore the beach/shoreline in sea-level rise/coastal erosion areas.</p> <p>Comment: The Surfers Point Managed Retreat Project Phase 1 has been completed. The Phase 2 design and permitting is nearly complete. The City is pursuing grants for construction. Seaside Wastewater Transfer Station relocation in exploratory phase.</p>			✓	VEN-1
<p>OA 9—Identify potentially vulnerable public and private utility systems including electric, gas, oil, water, sewer and communication. Upgrade vulnerable systems to ensure the operation and timely restoration of essential systems to reasonable levels of service.</p> <p>Comment: City of Ventura has multiple projects that meet criteria Southern California Edison has identified and is in the process of hardening their utility infrastructure. SoCalGas is also upgrading their facilities in the city. Water and Wastewater utilities are assessed through current Master Plan evaluations and projects developed for City CIP to address vulnerabilities.</p>			✓	VEN-11
<p>OA 11—Develop and implement plans to increase the building owner’s general knowledge of and appreciation for the value of seismic upgrading of the building’s structural and nonstructural elements.</p> <p>Comment: Due to staffing changes this action was not performed</p>			✓	VEN-22
<p>OA 19—Maintain vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes.</p> <p>Comment: Due to limited funding this initiative was not completed.</p>			✓	VEN-17

11.8 HAZARD MITIGATION ACTION PLAN

Table 11-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 11-15 identifies the priority for each action. Table 11-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 11-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
<p>Action VEN-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.</p> <p><u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storm, Severe Weather, Flooding, Wildfire, Dam Failure, Sea Level Rise, Tsunami</p>						
New & Existing	1, 4, 6, 9, 10, 11, 16	Public Works		High	Grant Funding-FEMA HMA (BRIC, FMA, HMGP)	Long Term
<p>Action VEN-2—Incorporate consideration of the FEMA 100-year tide and sea level rise, and climate change-driven extreme storms, into land use planning, shoreline development and dredging. This includes new policies by local jurisdictions, and County and City actions regarding their General Plans, visit Ventura tourist plan, Climate-related Plans, and the development applications.</p> <p><u>Hazards Mitigated:</u> Severe Storm, Flooding, Sea Level Rise</p>						
New & Existing	1, 2, 3, 4, 6, 10, 15, 17, 19	Community Development	Public Works	Medium	Staff Time, General Funds	Ongoing
<p>Action VEN-3—Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including Emergency Operations Plan, Community Climate Action plan, downtown specific plan, Citywide Evacuation Plan, General Plan, and ongoing plan maintenance</p> <p><u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storm, Severe Weather, Flooding, Wildfire, Dam Failure, Sea Level Rise, Tsunami, Drought</p>						
New & Existing	1, 2, 10, 11, 12, 15, 16, 19	Community Development	City Manager	Low	Staff Time, General Funds	Ongoing
<p>Action VEN-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: Enforce the flood damage prevention ordinance, participate in floodplain identification and mapping updates, and provide public assistance/information on floodplain requirements and impacts.</p> <p><u>Hazards Mitigated:</u> Severe Storm, Severe Weather, Flooding, Dam Failure, Sea Level Rise, Tsunami</p>						
New & Existing	1, 2, 4, 6, 9, 10, 11, 13, 14, 15, 17, 18, 19	Public works		Low	Staff Time, General Funds	Ongoing
<p>Action VEN-5—Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:</p> <ul style="list-style-type: none"> • Adopt a Climate Action Plan to reflect new State legislation, changing priorities, and environmental sustainability and greenhouse gas (GHG) reduction policies and goals. • Adopt modifications to existing plans and procedures to meet climate change issues and impacts. <p><u>Hazards Mitigated:</u> Severe Storm, Severe Weather, Flooding, Wildfire, Sea Level Rise, Drought</p>						
New & Existing	1, 3, 4, 9, 10, 13, 14, 15, 16, 17, 19	Community Development (for the Climate Action Plan) Public Works	Ventura Water	Medium	Water and Sanitation Funds	Short Term
<p>Action VEN-6—Advance long-term resilience to the population (including homeless individuals) to sea level rise and extreme storms for the communities and critical assets adjacent to San Buenaventura Beach, Santa Clara River, Ventura River, and nearby areas of the shoreline, as well as provide environmental, recreation, community/connectivity enhancements where possible.</p> <p><u>Hazards Mitigated:</u> Landslide, Severe Storm, Severe Weather, Flooding, Sea Level Rise, Tsunami</p>						
Existing	1, 3, 4, 9, 10, 13, 14, 15, 16, 17, 19	City Manager office		Medium	General Funds, Grant Funding-FEMA HMA (BRIC, FMA, HMGP)	Long Term
<p>Action VEN-7—City Energy, Power, and Communication Systems Reliability. Ensure adequate emergency power and fuel at critical City facilities, including communications equipment, for continuity of government and services. Reliability will include but is not limited to purchasing stationary generators for critical facilities.</p> <p><u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storm, Severe Weather, Flooding, Wildfire, Dam Failure, Tsunami</p>						
New & Existing	1, 2, 7, 10, 19	City Manager		Medium	EMPG, DHS, Grant Funding-FEMA HMA (BRIC, HMGP), CDBG Mitigation, General Funds	Short Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
Action VEN-8 —Identify appropriate facility/location for of the City's Emergency Operations Center to ensure state of readiness and designate a back-up Emergency Operations Center and associated systems. This should include the rebuilding or replacement of the current facility to maintain the Emergency Operations Capacity.						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storm, Severe Weather, Flooding, Wildfire, Dam Failure, Tsunami						
New & Existing	1, 8, 12, 17, 19	City Manager	N/A	Low	EMPG, DHS, BRIC, CDBG Mitigation, General Funds	Short Term
Action VEN-9 —Consider participation in incentive-based programs such as Tree City, TsunamiReady, and StormReady.						
<u>Hazards Mitigated:</u> Severe Storm, Severe Weather, Flooding, Wildfire, Tsunami						
New	1, 2, 19	City Manager	N/A	Low	Staff Time, General Funds	Short Term
Action VEN-10 —Develop and implement a program to capture perishable data after significant events (e.g., high water marks, preliminary damage estimates, damage photos, snapshot in time status) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storm, Severe Weather, Flooding, Wildfire, Dam Failure, Tsunami						
New	1, 2, 4, 6, 8, 10, 11, 14, 15, 16, 17, 18, 19	City Manager	NA	Medium	EM Budget, Staff Time	Short Term
Action VEN-11 —Identify and upgrade potentially vulnerable public and private utility systems, including electric, gas, oil, sewer, and communication, to ensure the operation and timely restoration of essential systems to reasonable levels of service. Including equipment, and critical facilities, (e.g. pump stations, generators, tide gates, stream gages, open channel, and culvert/pipeline infrastructure), to Improve community resilience and response to emergencies.						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storm, Severe Weather, Flooding, Wildfire, Dam Failure, Tsunami						
New & Existing	9, 10, 11, 13	Public Works	NA	Medium	Grant Funding-FEMA HMA (BRIC, HMGP), City Capital Project Funding	Long-term
Action VEN-12 —Support green infrastructure projects that enhance resiliency to natural disasters and incorporate green design elements into hazard mitigation projects where feasible.						
<u>Hazards Mitigated:</u> Severe Storm, Severe Weather, Flooding, Wildfire, Sea Level Rise, Drought						
New & Existing	1, 5, 13, 14, 15, 17	Public Works	N/A	Medium	DHS, EMPG, General Funds, Clean California, Grant Funding-FEMA HMA (BRIC, FMA, HMGP)	Short Term
Action VEN-13 —CIP Complete construction and oversee ongoing operation, maintenance, and mitigation efforts for the Ventura Water Pure Program, which will result in the Identification of strategies to enhance potable reuse infrastructure planning/implementation.						
<u>Hazards Mitigated:</u> Drought						
New & Existing	1, 2, 3, 4, 9, 13, 15	Ventura Water	Community Development	Medium	General Funds, Water Grants, Grant Funding-FEMA HMA (BRIC, HMGP)	Long term
Action VEN-14 —CIP Complete permitting and construction of the Hall Canyon Channel, Drainage Basin Improvement Project, which will address storm-related flooding.						
<u>Hazards Mitigated:</u> Severe Storm, Severe Weather, Flooding						
New & Existing	6, 9, 10, 11, 13, 14, 15	Public Works	N/A	Medium	General Funds, Grant Funding-FEMA HMA (BRIC, FMA, HMGP)	Long Term
Action VEN-15 —CIP Emergency Egress. Main Street Bridge replacement project, Olivas Park drive extension and associated infrastructure. Existing bridge is not up to current seismic standards.						
<u>Hazards Mitigated:</u> Earthquake						
New & Existing	6, 9, 10, 11, 13, 14, 15	Public Works	N/A	High	General Funds, Staff Time, Grant Funding-FEMA HMA (BRIC, HMGP)	Long Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
Action VEN-16 —CIP Continue to Identify and plan upgrades to existing and potential water wells and resources.						
<i>Hazards Mitigated:</i> Landslide, Earthquake, Severe Storm, Severe Weather, Flooding, Wildfire, Dam Failure, Sea Level Rise, Tsunami, Drought						
New & Existing	3, 9, 10, 13	Ventura Water	N/A	High	Water Grants, State Grants, General Funds, Grant Funding-FEMA HMA (BRIC, FMA, HMGP)	Long Term
Action VEN-17 —Develop a targeted wildfire awareness public information program for property owners, including managing potential fuel sources on their privately owned property. (e.g. Developing a program that assists elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes)						
<i>Hazards Mitigated:</i> Wildfire						
New & Existing	2, 4, 5, 8, 10, 12	Fire	Parks	Medium	General Funds, Clean California Grant	Short Term
Action VEN-18 —Impose mitigation measures on developers. Increase efforts to reduce landslides and erosion in existing and future development through continuing education of design professionals on mitigation strategies.						
<ul style="list-style-type: none"> Educating design professionals and developers on mitigation strategies for existing development in identified hazard areas. Adopting codes and standards to limit new development in areas identified as high-risk for landslides or erosion. 						
<i>Hazards Mitigated:</i> Landslide, Severe Storm, Flooding, Sea Level Rise, Tsunami						
New & Existing	16, 17, 19	Community Development	Public Works	Low	Staff Time, General Funds, Grant Funding-FEMA HMA (BRIC, FMA, HMGP)	Short Term
Action VEN-19 —Mutual Aid, Participate in general mutual-aid agreements with adjoining jurisdictions for cooperative response to fires, floods, earthquakes, and other disasters						
<i>Hazards Mitigated:</i> Landslide, Earthquake, Severe Storm, Flooding, Wildfire, Dam Failure, Tsunami						
New & Existing	1, 2, 3, 8, 12, 19	Fire	N/A	Low	Staff Time	Short Term
Action VEN-20 —Through the City’s Joint Powers Authority Fire/Rescue provider, the City of Ventura Fire Department, adopt the most current California codes and local regulations, conduct annual inspections of mandated occupancies including multi-family dwellings (i.e. apartments, condos), hotels/motels, and schools to ensure compliance with fire/life safety and hazardous materials requirements, and including inspections of residential care facilities done as requested by of the Department of Social Services. Additionally, perform hazardous materials annual or three-year inspections of sites containing hazardous materials over specified thresholds as a Participating Agency in the California Unified Program Agency in compliance with applicable state laws.						
<i>Hazards Mitigated:</i> Wildfire						
New & Existing	1, 2, 12, 16, 17, 19	Fire	N/A	High	General Funds, Grant Funding-FEMA HMA (BRIC, HMGP), DHS, Fire funds	Long Term
Action VEN-21 —Retrofit Fire Facilities in accordance with identified gaps found in the Fire Department facilities Structural Analysis, which shows each City fire facility and its associated compliance-related deficits related to local regulations and industry standards.						
<i>Hazards Mitigated:</i> Landslide, Earthquake, Severe Storm, Severe Weather, Flooding, Wildfire, Dam Failure, Sea Level Rise, Tsunami						
New & Existing	1, 2, 12, 16, 17, 19	Fire	N/A	High	Fire Budget, General Fund, Grant Funding-FEMA HMA (BRIC, HMGP), DHS grants	Short Term
Action VEN-22 —Study the City’s existing infrastructure, identify sources of potential funding to upgrade its older facilities, Unreinforced masonry , and soft story building, and install new infrastructure to the latest seismic standards under its Seismic Improvement Plan including but not limited to unreinforced masonry buildings.						
<i>Hazards Mitigated:</i> Earthquake						
New & Existing	1, 4, 6, 9, 10, 11, 19	Community Development	Public Works	High	General Funds, Grant Funding-FEMA HMA (BRIC, HMGP), DHS, Fire funds	Short Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
Action VEN-23 —Improve Tsunami Awareness and Notification capacity within population and visitors to the City of Ventura.						
<i>Hazards Mitigated:</i> Earthquake, Tsunami						
New & Existing	1, 4, 6, 9, 10, 11, 19	City Manager		High	General Funds, Grant Funding-FEMA HMA (BRIC, HMGP), DHS, Fire funds	Short Term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 11-15. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
VEN-1	7	High	High	Yes	Yes	No	Low	Medium
VEN-2	9	Medium	Medium	Yes	No	No	Medium	Low
VEN-3	8	Medium	Low	Yes	No	Yes	High	Low
VEN-4	13	Medium	Low	Yes	No	Yes	High	Low
VEN-5	11	Medium	Medium	Yes	No	No	Medium	Low
VEN-6	11	Medium	Medium	Yes	Yes	No	Low	Medium
VEN-7	5	High	Medium	Yes	Yes	No	Medium	High
VEN-8	5	High	Medium	Yes	Yes	Yes	Medium	High
VEN-9	3	Medium	Low	Yes	No	Yes	High	Low
VEN-10	13	Medium	Medium	Yes	No	No	Medium	Low
VEN-11	4	High	Medium	Yes	Yes	No	Low	Medium
VEN-12	6	Medium	Medium	Yes	Yes	No	Medium	Medium
VEN-13	7	High	Medium	Yes	Yes	No	Low	Medium
VEN-14	7	High	Medium	Yes	Yes	No	Low	Medium
VEN-15	7	High	High	Yes	Yes	No	Low	Medium
VEN-16	4	High	High	Yes	Yes	No	Low	Medium
VEN-17	6	Low	Medium	No	Yes	No	Low	Medium
VEN-18	3	Medium	Low	Yes	Yes	Yes	High	Medium
VEN-19	6	Medium	Low	Yes	No	Yes	High	Low
VEN-20	6	Medium	High	No	Yes	No	Low	Medium
VEN-21	6	High	High	Yes	Yes	No	Medium	High
VEN-22	6	High	High	Yes	Yes	No	Low	High
VEN-23	3	High	High	Yes	Yes	No	Low	High

a. See the introduction to this volume for explanation of priorities.

Table 11-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building ^b
High-Risk Hazards								
Landslide	VEN-18	VEN-1, 6, 11, 21	VEN-6, 18		VEN-7, 8, 19		VEN-16	VEN-3, 10
Medium-Risk Hazards								
Earthquake		VEN-1, 11, 15, 21, 22	VEN-23		VEN-7, 8, 19		VEN-16	VEN-3, 10, 22, 23
Severe Storms	VEN-4, 18	VEN-1, 6, 11, 21	VEN-6, 18	VEN-12	VEN-7, 8, 19	VEN-14	VEN-12, 16	VEN-2, 3, 5, 9, 10
Severe Weather	VEN-4, 18	VEN-1, 6, 11, 21	VEN-6, 18	VEN-12	VEN-7, 8, 19	VEN-14	VEN-12, 16	VEN-3, 5, 9, 10
Flooding	VEN-4	VEN-1, 6, 11, 21	VEN-6, 18	VEN-12	VEN-7, 8, 19	VEN-14	VEN-12, 16	VEN-2, 3, 5, 9, 10
Wildfire	VEN-20	VEN-1, 11, 21	VEN-17	VEN-12	VEN-7, 8, 19		VEN-12, 16	VEN-3, 5, 9, 10
Low-Risk Hazards								
Dam Failure	VEN-4	VEN-1, 11, 21			VEN-7, 8, 19		VEN-16	VEN-3, 10
Sea Level Rise	VEN-4, 18	VEN-1, 6, 21	VEN-6, 18	VEN-12			VEN-12, 16	VEN-2, 3, 5
Tsunami	VEN-4, 18	VEN-1, 6, 11, 21	VEN-6, 18, 23		VEN-7, 8, 19	VEN-13		VEN-3, 9, 10, 23
Drought				VEN-12			VEN-12, 16	VEN-3, 5

- a. See the introduction to this volume for explanation of mitigation types.
- b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

11.9 PUBLIC OUTREACH

Table 11-17 lists public outreach activities in connection with this hazard mitigation plan update for this jurisdiction.

Table 11-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Social media link and website outreach for the public survey	9-28	118

11.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **City of San Buenaventura General Plan**—The General plan is under revision and has been aligned to be compliant with AB2140.
- **City of San Buenaventura Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.

- **Health and Safety Code Section 13146**—Specifies the inspections the Fire Department is mandated by state law to perform annually.
- **California Code of Regulations Title 27**—Specifies hazardous materials regulations enforced by the Ventura Fire Department as a Participating Agency in the statewide Certified Unified Program.
- **California Government Code 51179-82**—Specifies fire defensible requirements around structures.
- **California, Amending Division 12, Part 4, of the San Buenaventura Municipal Code, entitled “Floodplain Regulations”** to comply with FEMA revisions to those regulations to meet the FEMA Model Ordinance in conjunction with the new California Coastal Analysis and Mapping Project that provides new maps for the coastal communities in Southern California that will be adopted by FEMA on January 29, 2021
- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

11.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

The City of Ventura will perform a Threat and Hazard Identification and Risk Assessment (THIRA) process to help the community understand the normal set of risks it faces. By identifying and prioritizing those threats, a community can then prioritize revisions and realignment of actions in this plan over time.

11.12 ADDITIONAL COMMENTS

The City of Ventura intends to continuously review and adjust this document annually.

San Buenaventura

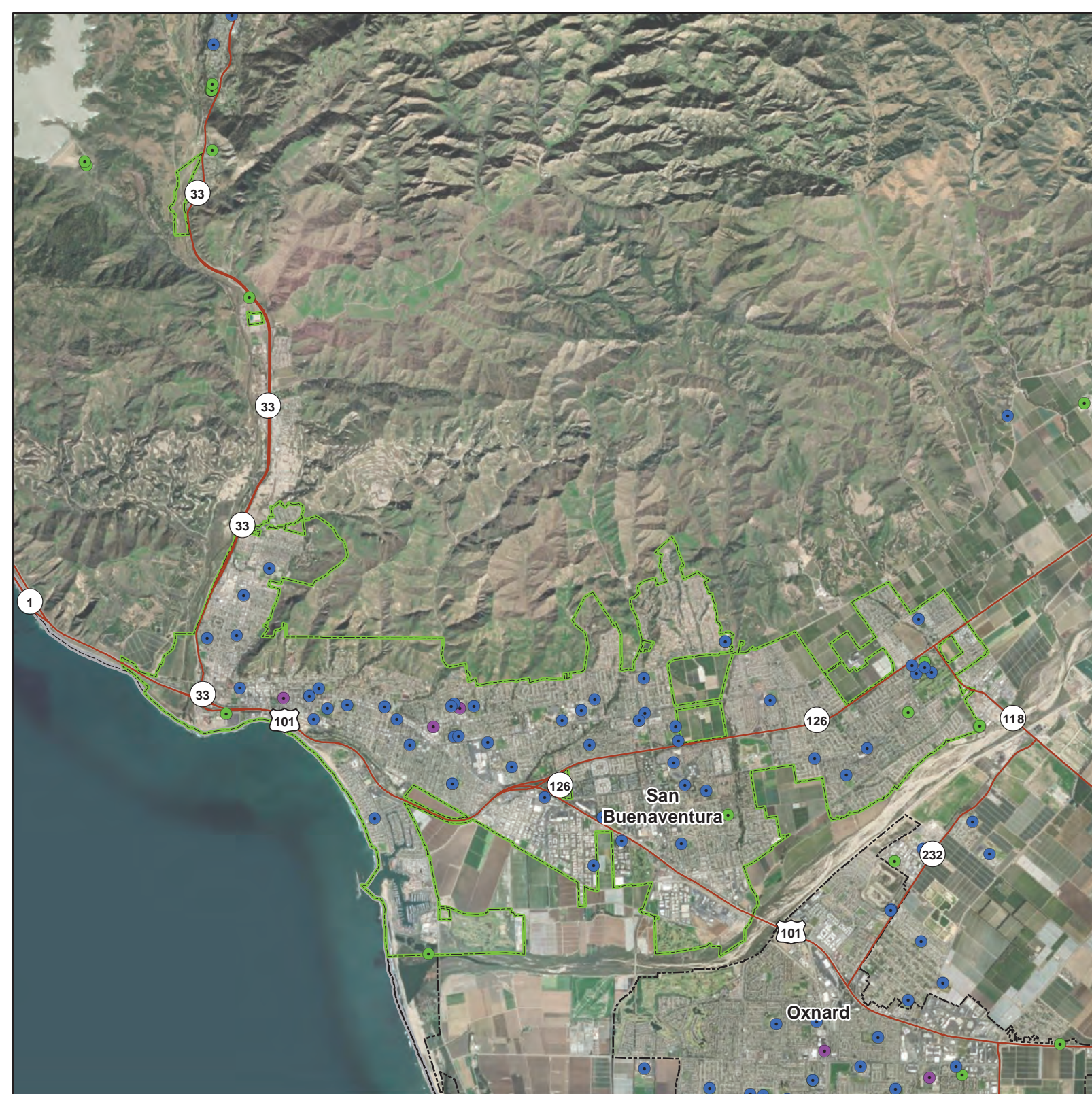
Critical Facilities (1 of 2)

- Food, Water, Shelter
- Health and Medical
- Safety and Security
- Major Roads
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri



0 0.5 1 2 Miles



San Buenaventura

Critical Facilities (1 of 2)

- Communications
- Energy
- Hazardous Material
- Transportation

- Major Roads
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary

Data Sources: Ventura Co., VCFD, Casitas MWD, Calleguas MWD, City of Camarillo, CA Energy Commission, Cal Trans, EPA, HIFLD, Esri








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San Buenaventura

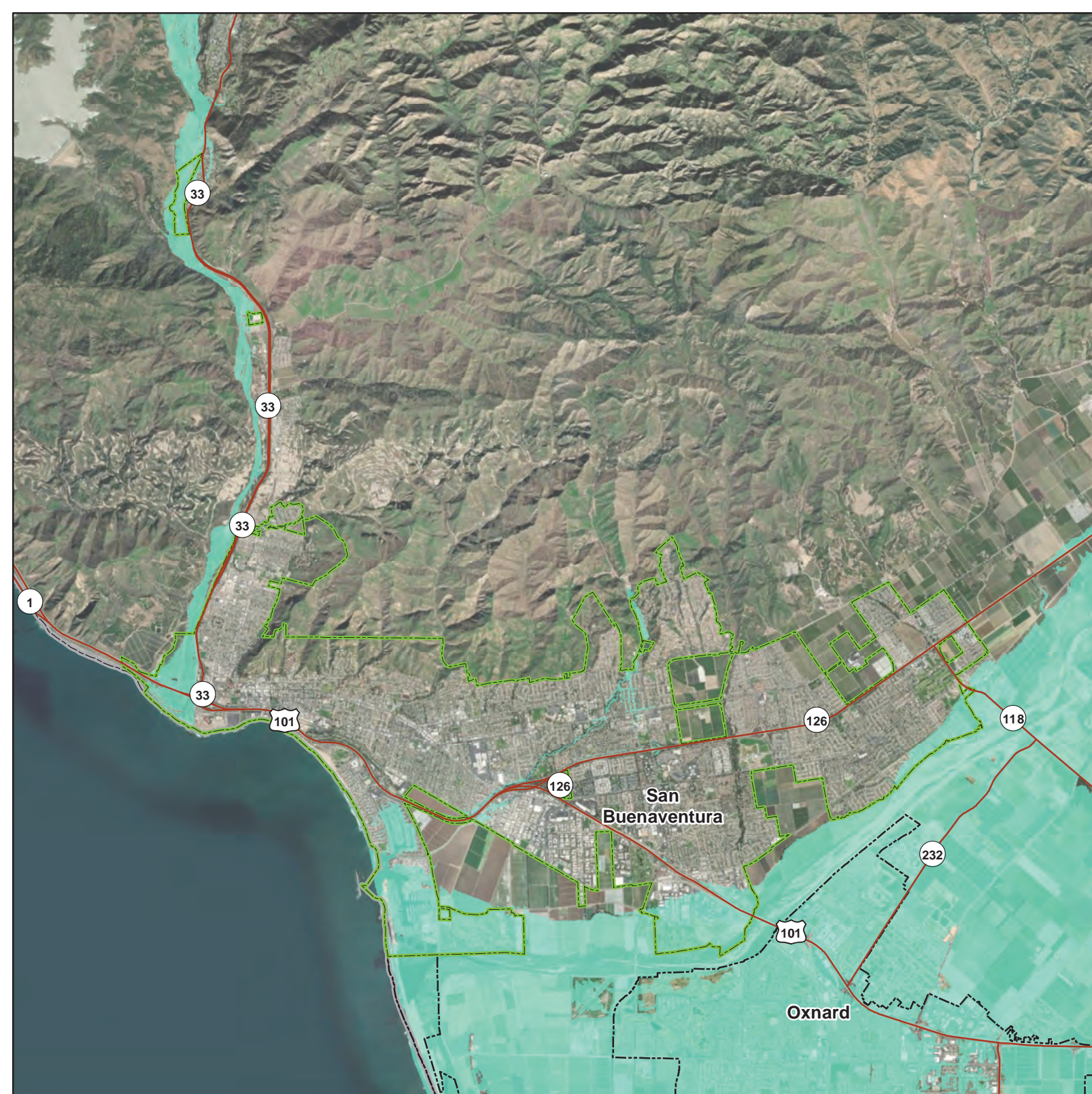
Dam Failure Inundation Areas

-  Combined Inundation Areas
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CA DWR, Esri










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San Buenaventura

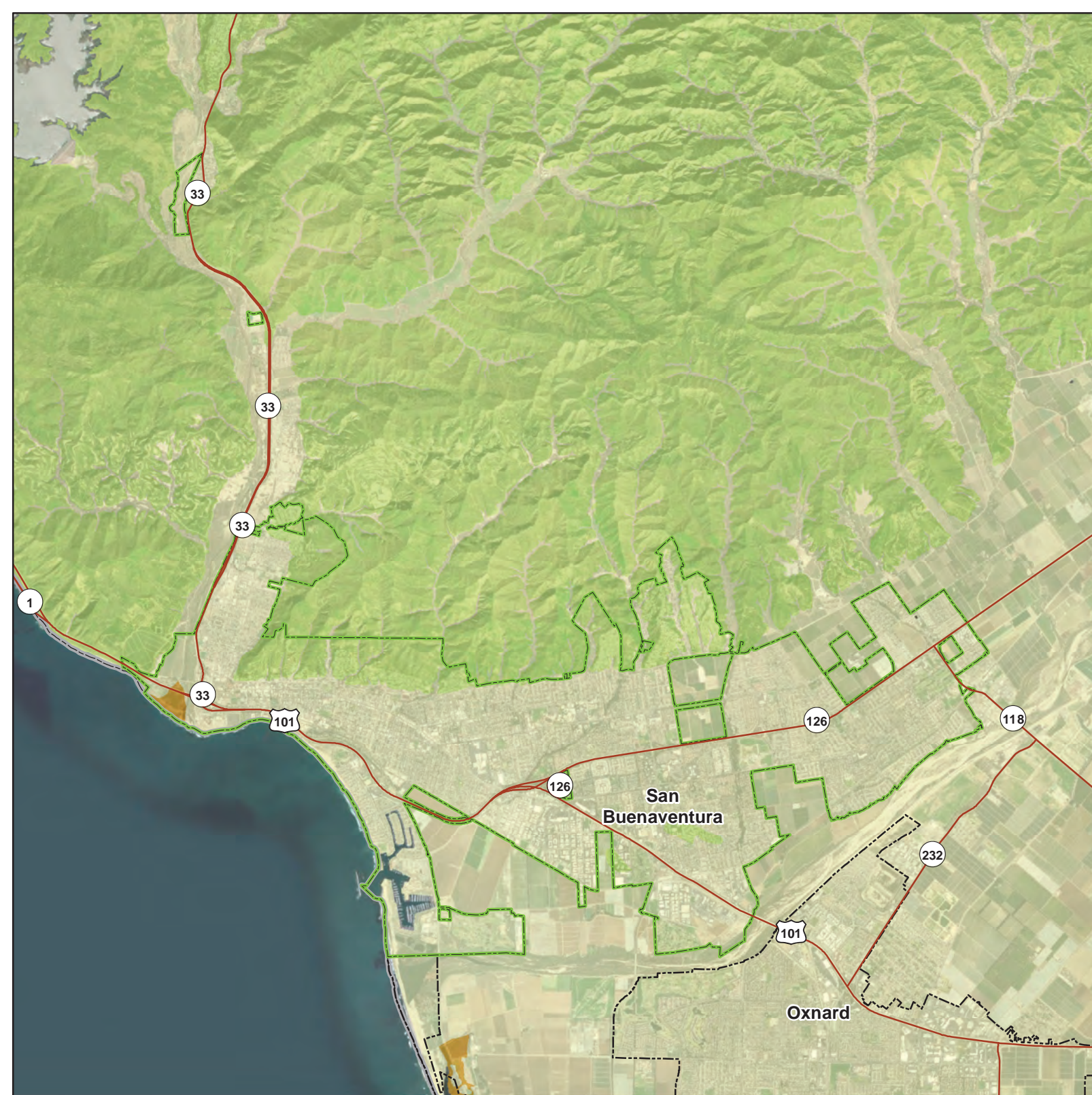
NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  E (Soft clay)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri








0 0.5 1 2 Miles



San Buenaventura

Liquefaction Susceptibility

-  Liquefaction zone
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
Esri



0 0.5 1 2 Miles



San Buenaventura

100-Year Probabilistic Earthquake Scenario


Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Major Roads

 Selected City

 Incorporated Cities

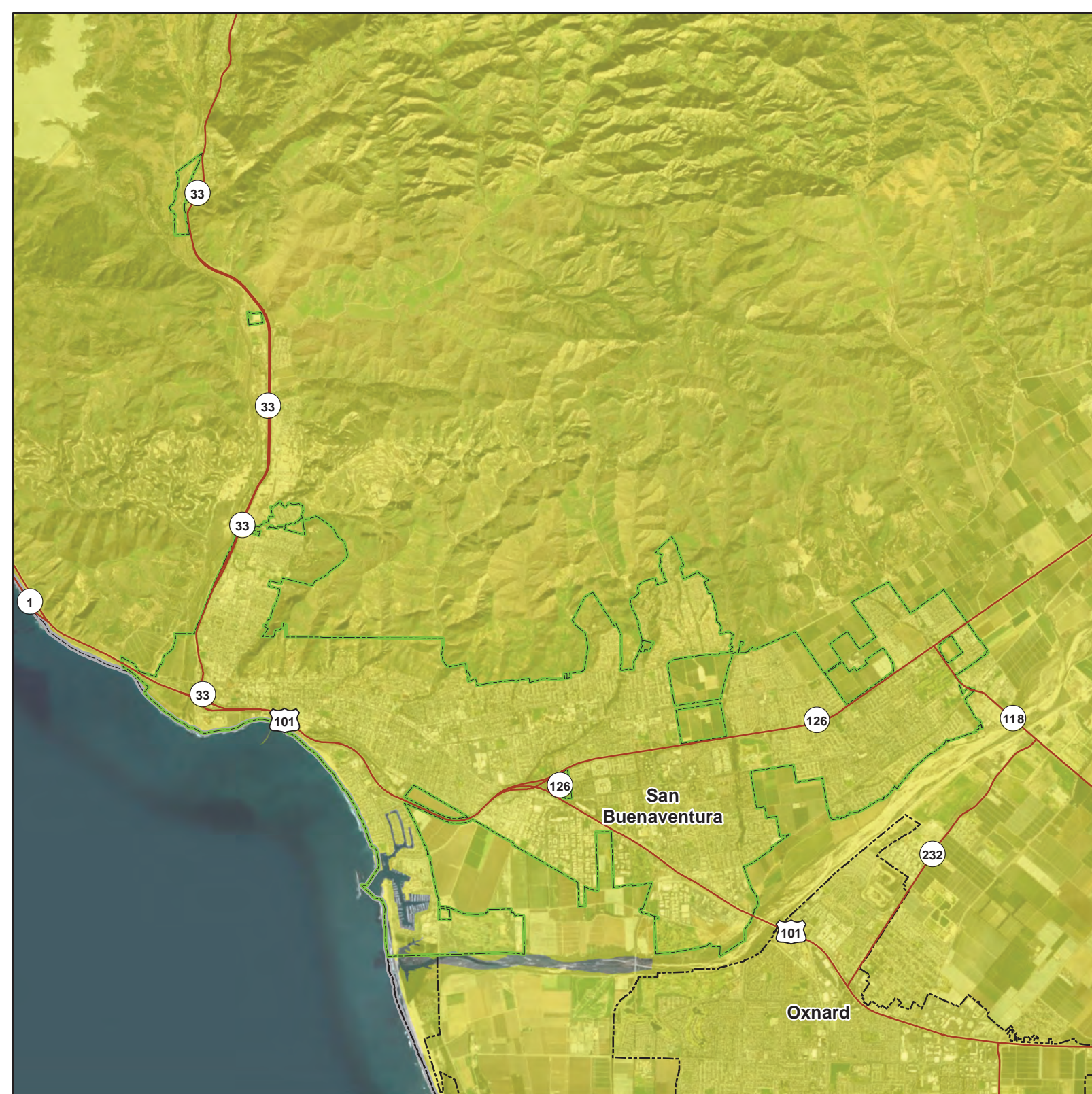
 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.5 1 2 Miles



San Buenaventura

Oak Ridge M7.16 Earthquake Scenario

Mercalli Intensity Scale

- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)

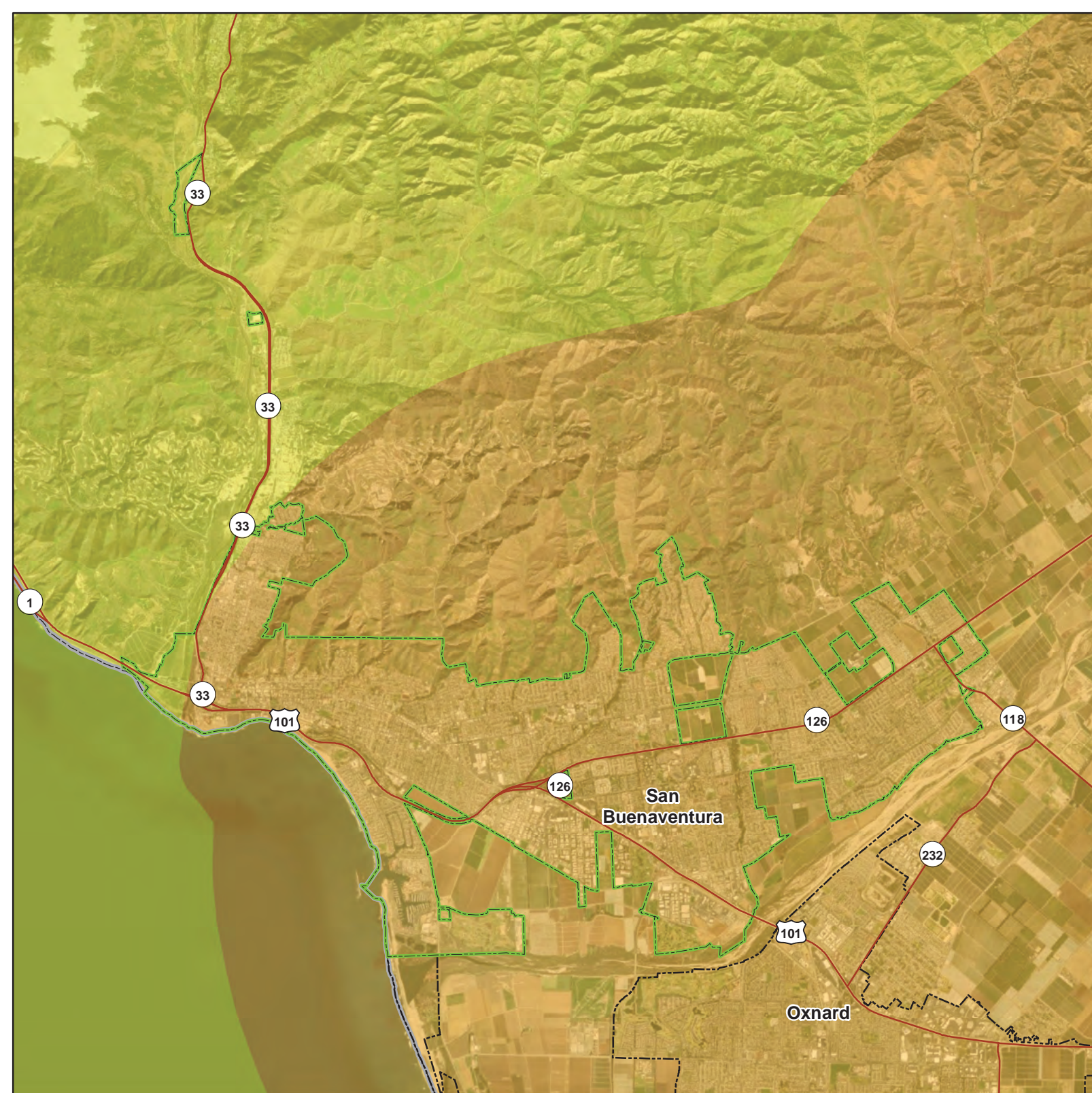
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.5 1 2 Miles



San Buenaventura

Pitas Point M7.12 Earthquake Scenario

Mercalli Intensity Scale

- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)

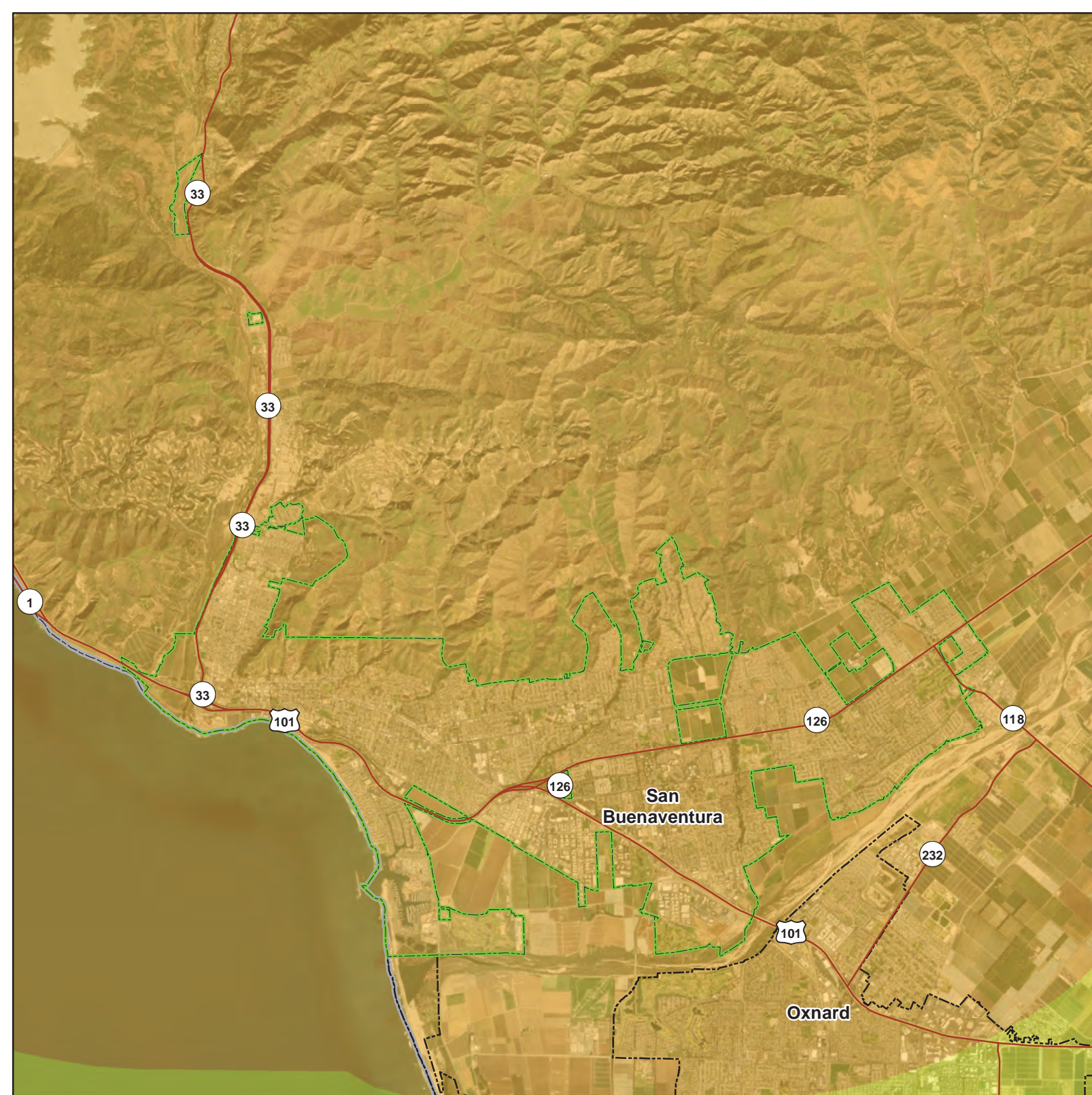
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



0 0.5 1 2 Miles



San Buenaventura

San Cayetano M7.16 Earthquake Scenario

Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)

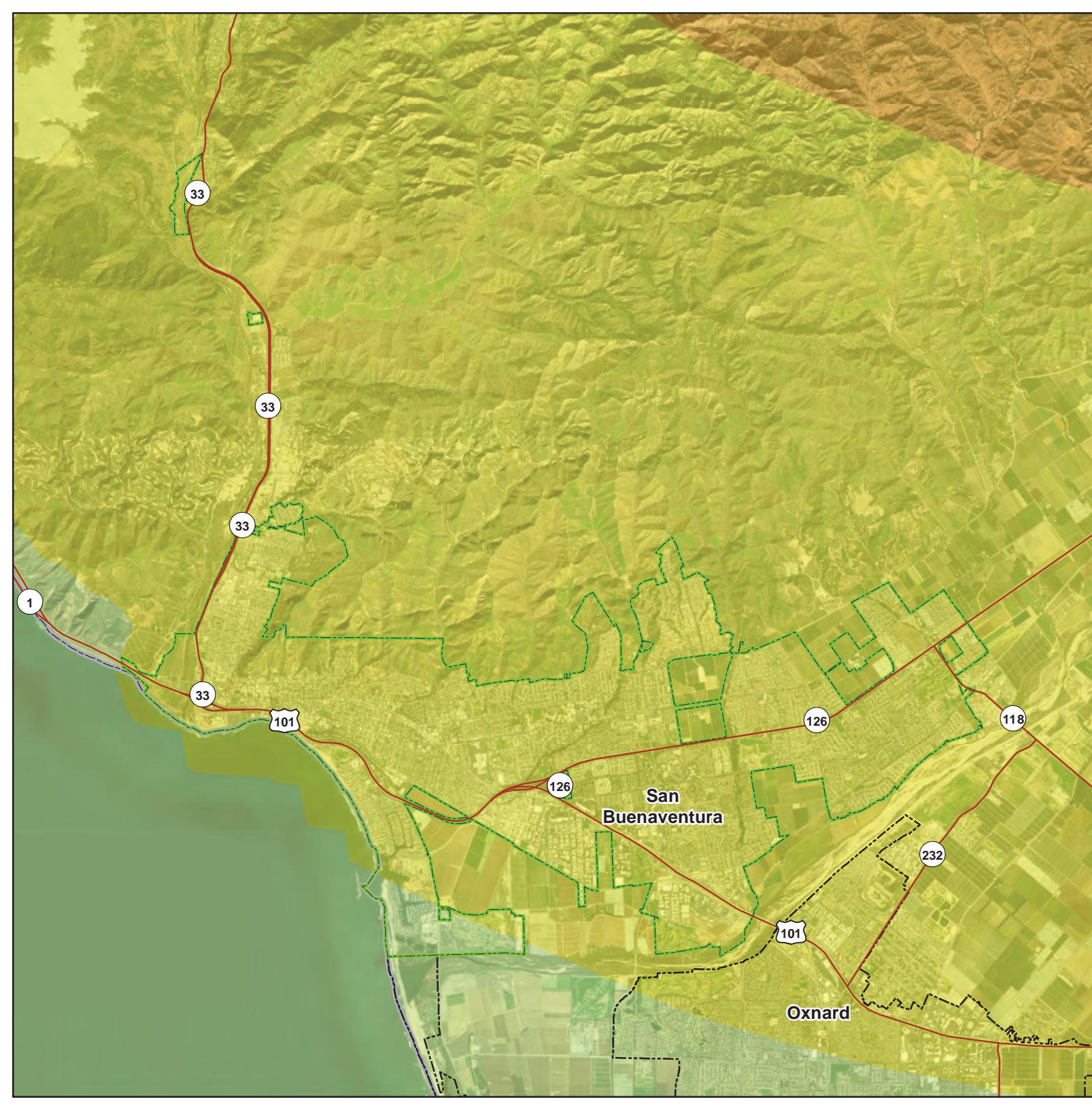
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri



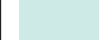
0 0.5 1 2 Miles



San Buenaventura

S. San Andreas M8.03 Earthquake Scenario


Mercalli Intensity Scale


 V (Moderate/Very Light)

 VI (Strong/Light)

 Major Roads

 Selected City

 Incorporated Cities

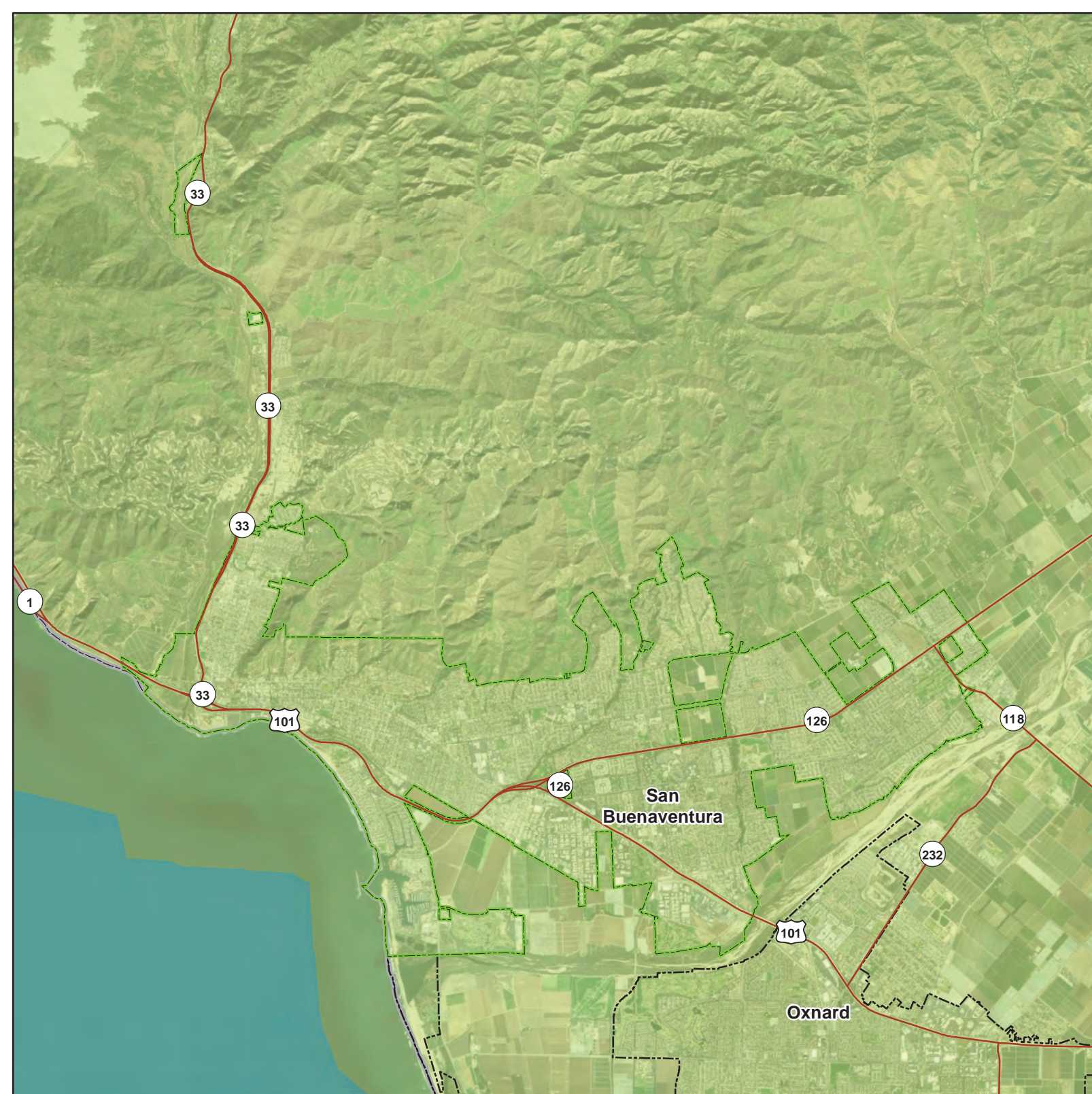
 County Boundary

Intensity scale described as:
(perceived shaking / potential damage)

Data Sources: Ventura Co.,
USGS, Esri









0 0.5 1 2
 Miles



San Buenaventura

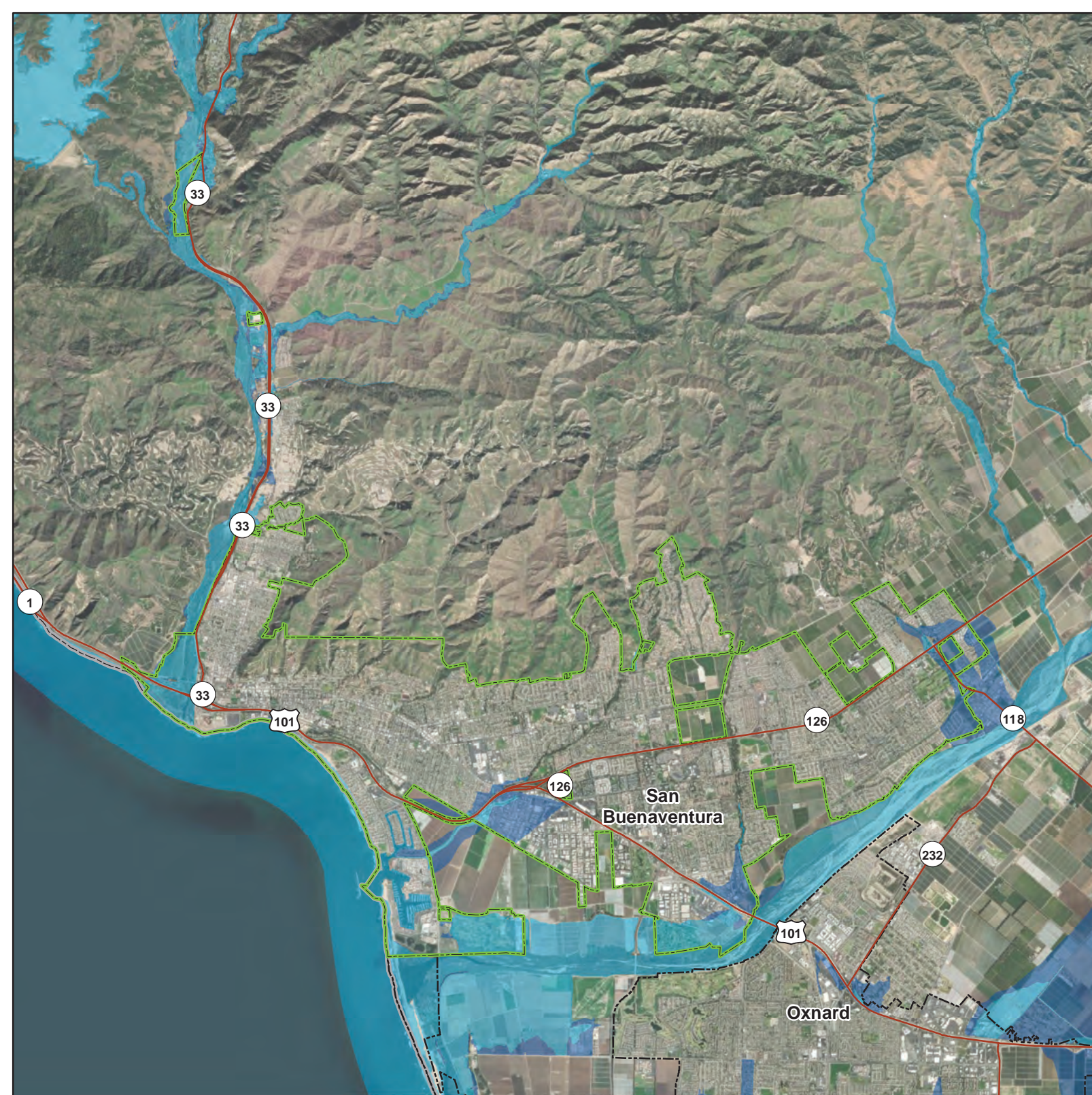
FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
FEMA, Esri

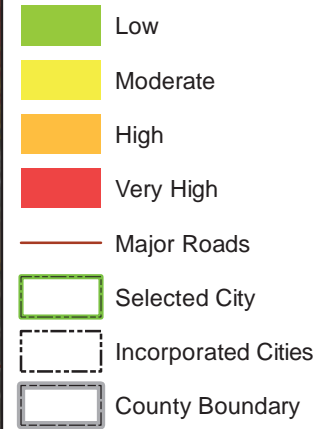


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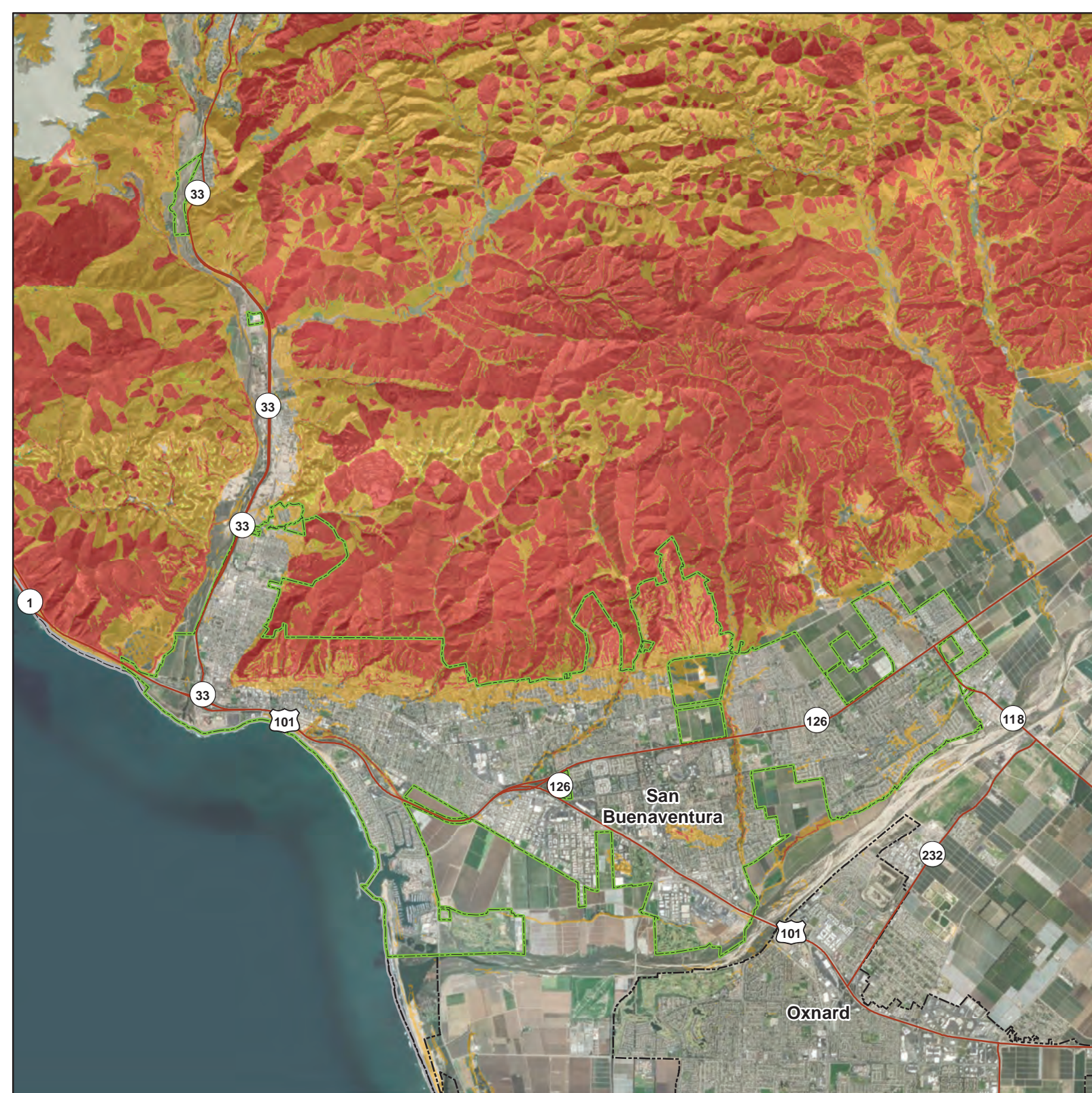


San Buenaventura

Susceptibility to Deep-Seated Landslides



Data Sources: Ventura Co., CGS, Esri



San Buenaventura

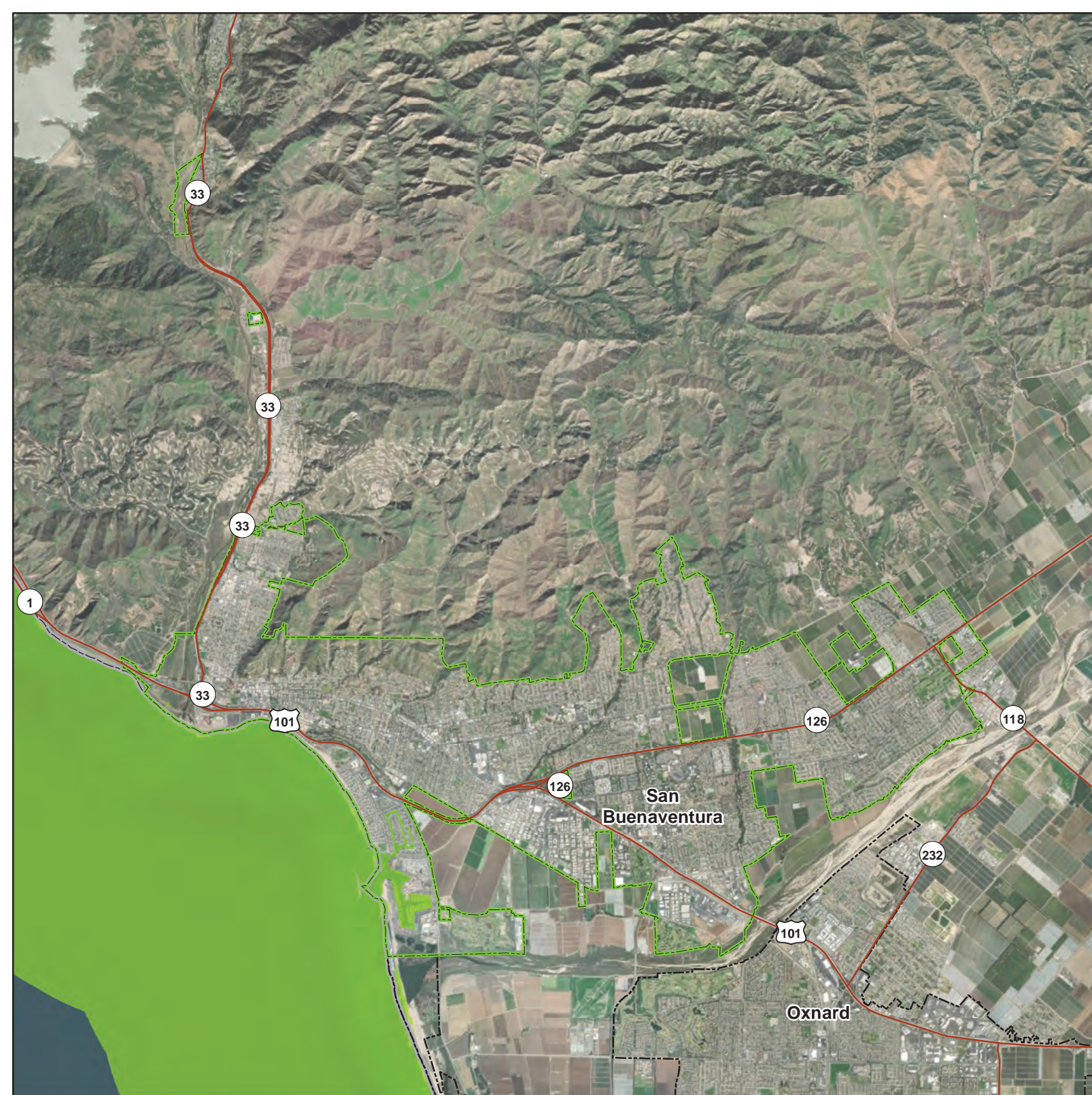
Sea Level Rise
of 25 cm (9.8 in.)

- Sea Level Rise Inundation Area
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary

Data Sources: Ventura Co.,
OCOF, Esri



0 0.5 1 2 Miles



San Buenaventura

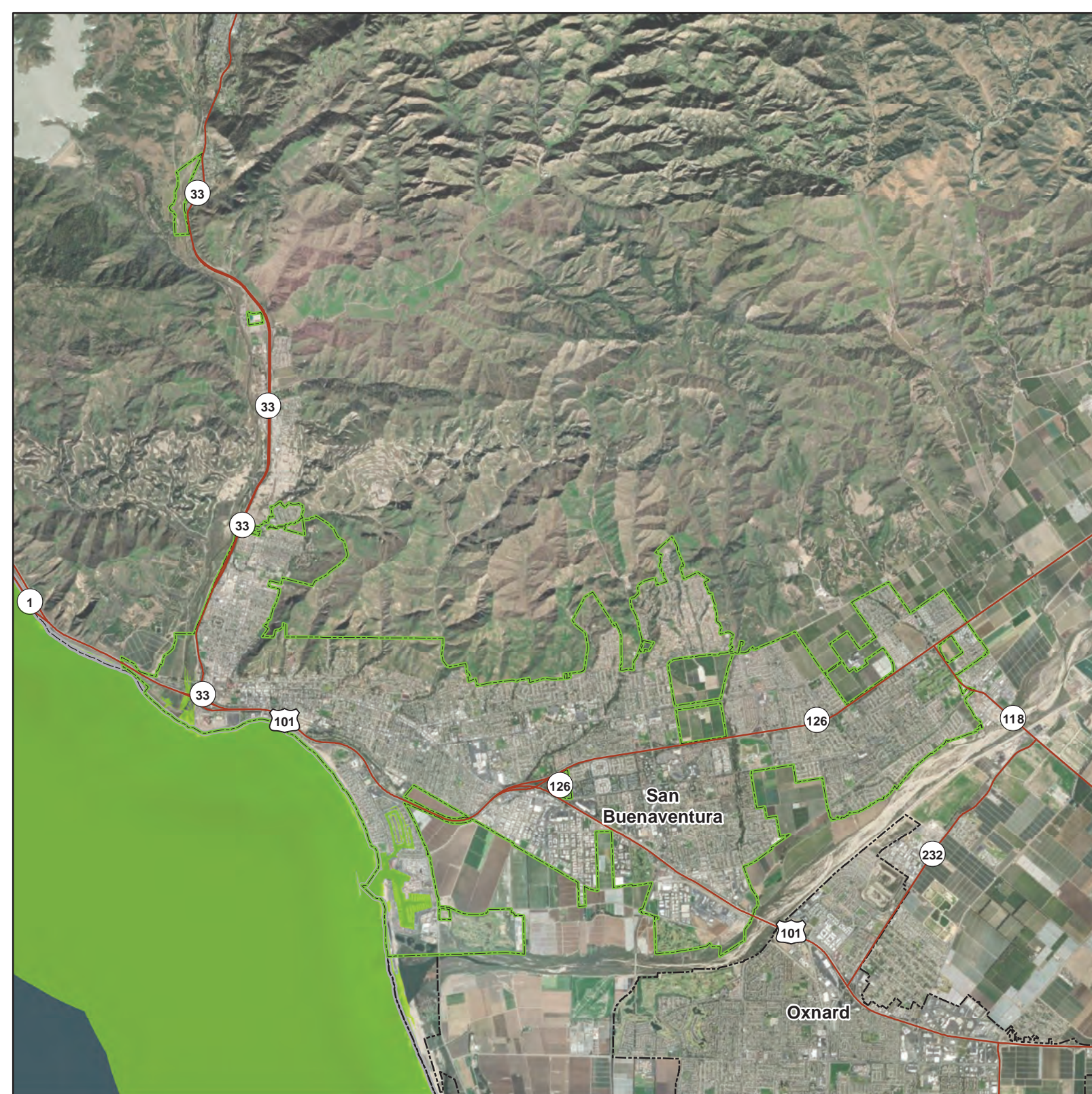
Sea Level Rise of 100 cm (39.4 in.)

- Sea Level Rise Inundation Area
- Major Roads
- Selected City
- Incorporated Cities
- County Boundary






Data Sources: Ventura Co.,
OCOF, Esri



0 0.5 1 2 Miles



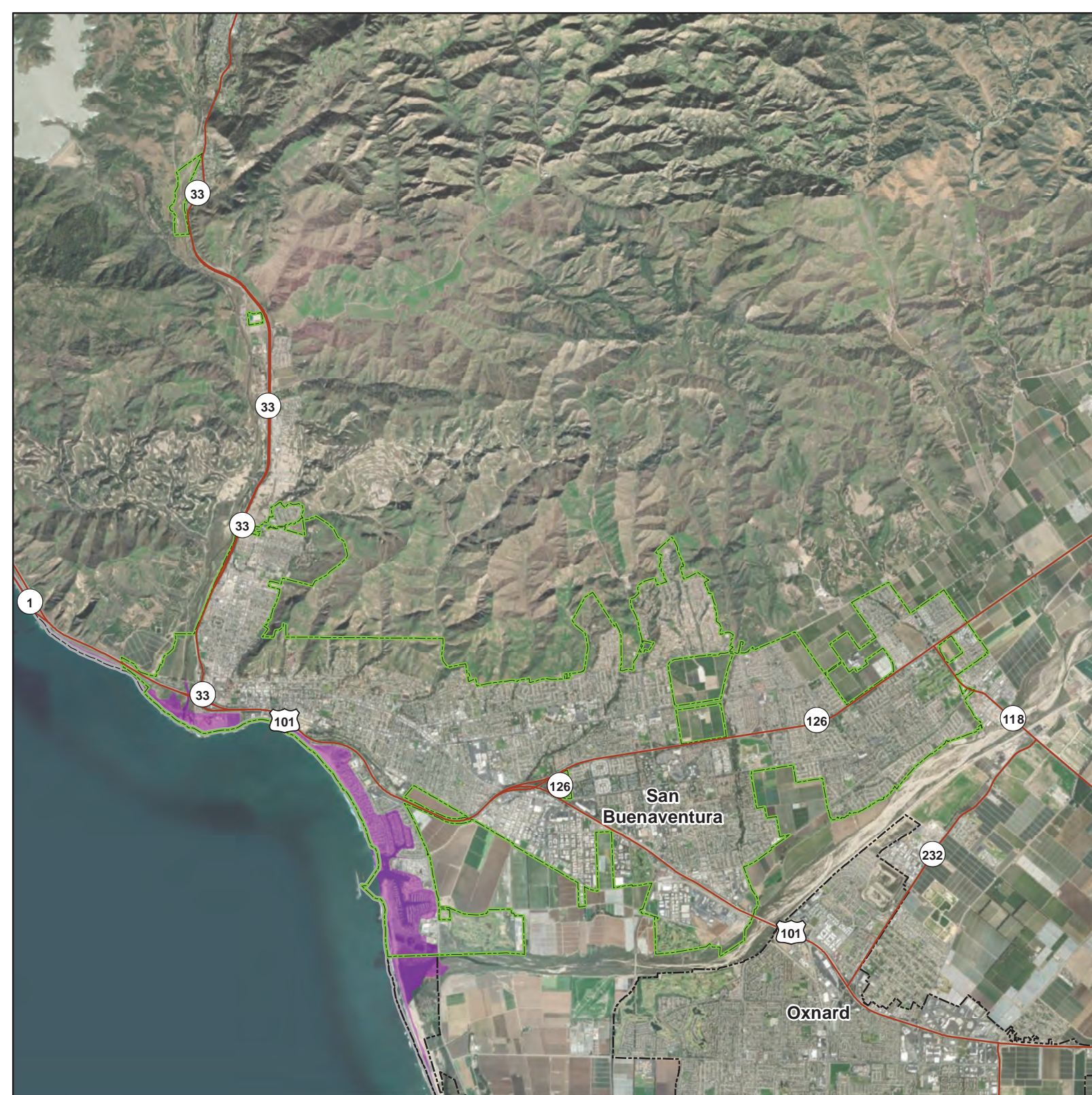
San Buenaventura Tsunami Inundation Zones

-  Inundation Zones
-  Major Roads
-  Selected City
-  Incorporated Cities
-  County Boundary

Data Sources: Ventura Co.,
CGS, Esri

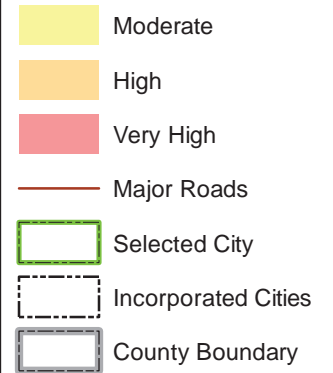


0 0.5 1 2 Miles

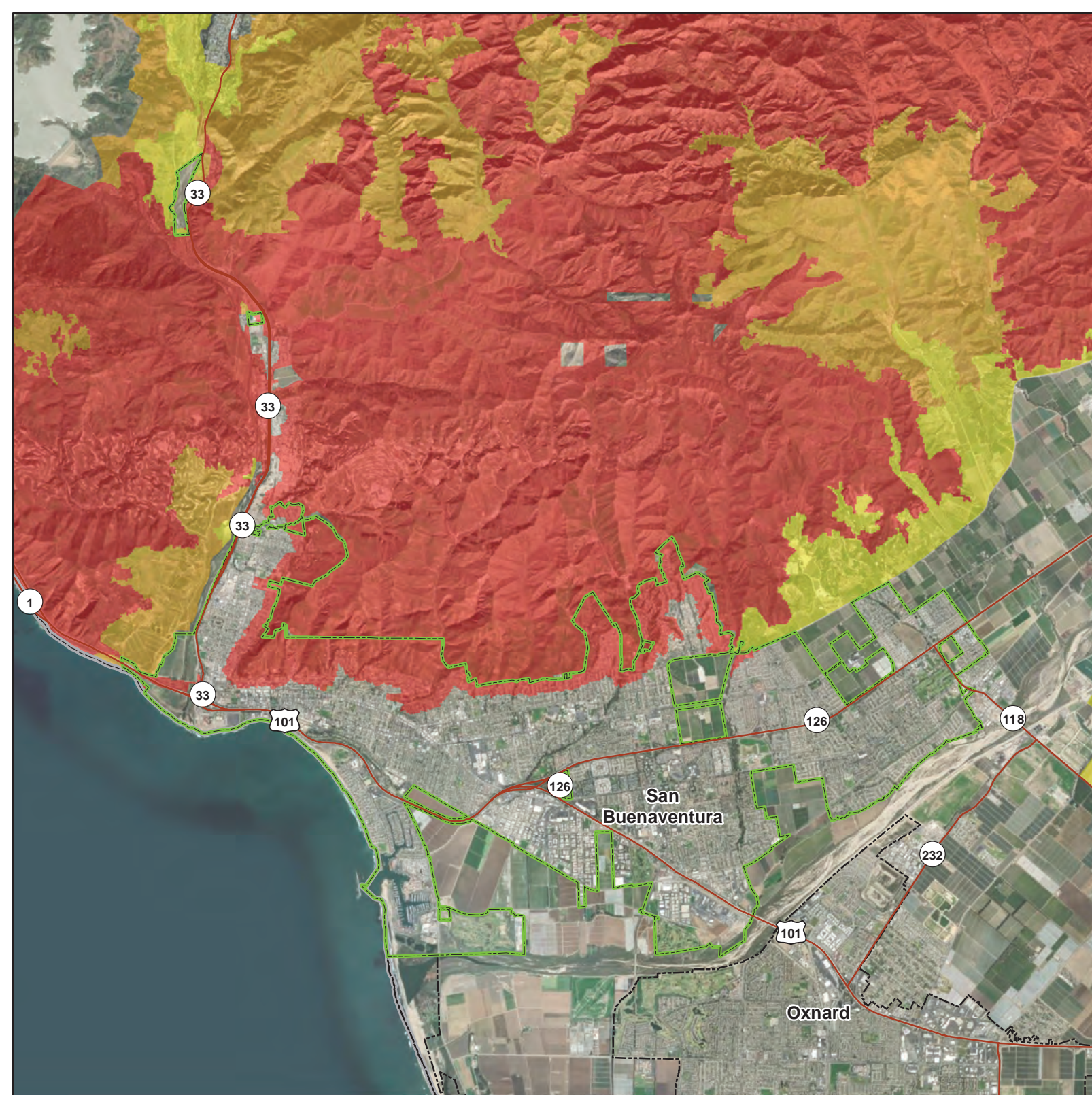


San Buenaventura

Wildfire Hazard Severity Zones



Data Sources: Ventura Co., CAL FIRE, Esri



12. CALIFORNIA STATE UNIVERSITY, CHANNEL ISLANDS

12.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Maggie Tougas, CSUCI Emergency Manager
One University Drive
Camarillo, CA 93012
Telephone: 805-415-0020
e-mail Address: Margaret.federico@csuci.edu

Alternate Point of Contact

David Carlson
One University Drive
Camarillo, CA 93012
Telephone: 805-437-8472
e-mail Address: david.carlson@csuci.edu

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 12-1.

Table 12-1. Local Hazard Mitigation Planning Team Members

Name	Title
Maggie Tougas	Emergency Manager
Tom Hunt	Assistant Vice President Facilities Services
Joyce Spencer	Director, Environmental Health and Safety
Wesley Cooper	Senior Director, Facilities Services
Roxanne Coryell-Biegel	Sustainability and Energy Manager
Terry Tarr	Assoc. Architect
Carlos Miranda	Assoc. Director Information Security
Dave Carlson	Planning Design & Construction

12.2 JURISDICTION PROFILE

12.2.1 Overview

The California State University Channel Islands (CSUCI) is a public university in Ventura County, California. CSUCI opened in 2002 as the 23rd campus in the California State University system. CSUCI is located midway between Santa Barbara and Los Angeles near Camarillo, at the intersection of the Oxnard Plain and northernmost edge of the Santa Monica Mountains range. The Channel Islands are nearby where the university operates a scientific research station on Santa Rosa Island.

The campus is located about two miles south of the city of Camarillo, at the base of Long Grade Canyon. The school is set on rich agricultural land at the edge of the Oxnard Plain bordered by farms and nestled into the base of the Santa Monica Mountains. The flat site is marked by a lone peak called

Round Mountain (the Chumash name is Sathwiwa). The campus is situated on land historically inhabited by the Chumash.

The site was originally a state hospital and operated from 1936 to 1997. The state hospital was built in a remote area so roads were improved to provide for the campus traffic. The university developed a bus transit network to serve the campus with VISTA buses providing access to Gold Coast Transit in Oxnard and the Camarillo train station. After gaining official possession of the land in 1998, improvements began in 1999 on the 634-acre existing campus-style facility, primarily one to two-story buildings organized around three primary quads. In 2007, the campus acquired an additional 153 acres. Many of the buildings are in the Mission Revival and Spanish Colonial Revival architectural styles, although there are a few “modern” buildings. The campus is split into two primary sections: North Quad and South Quad. In 2012, Del Norte and Madera halls were opened in the North Quad; some of the buildings in the North Quad are still uninhabited and unsafe due to age, which became CSU Channel Islands University Park located adjacent to the campus. The university is a Hispanic-serving institution. Channel Islands offers 54 types of Bachelor’s degrees, 6 different graduate (Master’s) degrees, 19 teaching credentials, and an Ed.D degree. In the fall of 2018, the university enrolled the largest number of students in its history with 7,095 undergraduate and postgraduate students. Since its establishment, the university has awarded over 11,000 students with degrees.

CSUCI is the only four-year public university in Ventura County and in 2010 it received Hispanic Serving Institution status (HSI). The university achieved this status by moving past the threshold of having at least a 25 percent Hispanic student population. The Hispanic/Latino student population was 50% as of the fall of 2017.

Planning for the University began in 1965, when State Senator Robert J. Lagomarsino co-authored Senate Bill 288 calling for establishment of a four-year public college in Ventura County, and Governor Pat Brown signed a bill authorizing a study for a state college for the county. In 1974, Dr. Joyce Kennedy established the UC/CSU Ventura Learning Center in Ventura as a partnership between UC Santa Barbara and California State University, Northridge. The Ventura Learning Center became the CSU Northridge Ventura Campus in 1988.

In 1996, J Handel began as the campus planning president to begin development of a public four-year university for the region. In 1997 the CSU Board of Trustees voted to accept the former Camarillo State hospital site for the purpose of transforming it into the CSU’s 23rd campus. At this time the hospital closed. In August 1999, the Ventura Learning Center moved to the Camarillo site as a CSU Northridge satellite facility.

In 2001, the CSU Board of Trustees appointed Richard R. Rush, Ph.D., as Founding President of California State University Channel Islands. While establishing the University structures, Dr. Rush has overseen and participated in the hiring of faculty and the university’s senior staff. On August 16, 2002, CSUCI opened to upper division transfer students and in the fall of 2003, accepted its first freshman class.

The CSUCI Campus President assumes responsibility for the adoption of this plan; Public Safety Staff will oversee its implementation.

12.2.2 Service Area

The District service area covers 1.85 square miles serving a population of approximately 7,000 combined students, faculty, and staff.

12.2.3 Assets

Table 12-2 summarizes the assets of the District and their value.

Asset	Value
Property	
1,187 acres of land	Unknown
Equipment	
2014 Chevrolet Impala, 1417560	\$40,150
2012 Ford Crown Victoria, 139072	\$6,000
2014 Chevrolet Tahoe, 1322719	\$14,250
2015 Chevrolet Tahoe, 1463257	\$65,000
2017 Chevrolet Tahoe, 1506693	\$65,000
2017 Chevrolet Tahoe, 1526913	\$65,000
2018 Chevrolet Tahoe, 1561135	\$65,000
2011 Ford Crown Victoria, 1362925	\$6,000
2018 Chevrolet Impala, 1551846	\$48,550
2005 4 Seat GEM Cart 1172160	\$4,000
2014 Chevrolet 2500, 1417575 Admin EOC Parking	\$62,000
2016 Chevrolet Colorado, 14698 PSO	\$37,050
Critical Facilities (all default to 1 University Drive, Camarillo)	
Aliso Hall (Science/Lab), West of Central Mall	\$8,636,406
Anacapa Village (Student Housing A, B, C, Pool House), East of Petrero Road	\$28,350,319
Arroyo Hall (Gym)	\$6,121,457
Bell Tower Central (Education), West of South Quad	\$27,368,019
Bell Tower East (Office of Dean Pena), East of South Quad	\$7,276,728
Bell Tower West (Office of the Provost), West of South Quad	\$6,531,890
Broome Library (Library/Classrooms), East of Central Mall	\$60,337,738
Carden School, Camarillo Street	Unknown
Central Plant (HVAC/Facilities), Rear of Ironwood Hall	\$2,778,517
Chaparral Hall (General)	\$813,354
CI Power (Cogen), South of Central Plant	\$15,905,657
Del Norte Hall (Fiscal Resources), South End of North Quad	\$27,651,627
El Dorado Hall (Recreation Center)	\$1,818,956
Ironwood Hall (Facilities Services), East of Central Plant	\$6,300,580
Islands Cafe (Food Service), North of Topanga Hall	\$3,172,669
Lindero Hall (Administration)	\$2,490,846
Malibu Hall (General)	\$4,769,335
Manzanita Hall (General)	\$1,636,032
Martin V. Smith Decision Center (Lecture Hall, Conference Rooms)	\$1,596,020
Modoc Hall (Science Labs, Classrooms)	\$880,258

Asset	Value
Napa Hall (Administrative Office)	\$5,055,083
Ojai Hall (Data/Tech/EOC), North of Bell Tower	Unknown
OPC Shops (Corp Yard)	\$2,084,347
Placer Hall (General)	\$3,421,414
PD and Dispatch, Placer Hall	Unknown
Sage Hall (General)	\$8,014,973
Santa Cruz Village (Student Housing D, E, F) West of South Quad	\$32,250,010
Santa Rosa Village (Student Housing), East of South Quad	\$60,122,800
Sierra Hall (Science/Lab), East of Central Mall	\$33,254,128
Solano Hall (HR/Employment), West of North Quad	\$5,427,456
Student Union (Food/Recreation), North of Bell Tower West	\$11,312,460
Topanga Hall (Art Studio)	\$2,548,247
Town Center (Housing/Food Service), East of Broome Library	Unknown
University Hall (Office of the President), North of Central Mall	\$6,027,735
Water Storage Tank, Channel Islands Drive/Camarillo Street	Unknown
Yuba Hall (Student Health Services), South of Rincon Drive	Unknown
Total:	\$383,955,061

12.3 CURRENT TRENDS

The campus is under continuing construction to accommodate the projected growth of the university. While there are about 7,000 registered students, projected enrollment for the year 2025 is 15,000 full-time students.

12.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 12-3.

- An assessment of fiscal capabilities is presented in Table 12-4.

- An assessment of administrative and technical capabilities is presented in Table 12-5.

- An assessment of education and outreach capabilities is presented in Table 12-6.

- Classifications under various community mitigation programs are presented in Table 12-7.

- The community’s adaptive capacity for the impacts of climate change is presented in Table 12-8.

Table 12-3. Planning and Regulatory Capability

Plan, Study or Program	Most Recent Update	Comment
Executive Order 987	2019	Building Operations and Maintenance
California Building Code	2019	Building design standards
Policy Number: FA.32.003 Strategic Risk Management	2019	Identifies and Assesses risks to the campus
Communicable Disease Response Plan	2020	Addresses communicable disease management.
CSU Channel Islands Exterior Building Management Plan	2014	Exterior buildings management; stormwater management.
Executive Order 1039	2017	Policy on Occupational Safety
Emergency Operations Plan	2018	Preparation, Response and Recovery.
Executive Order 1014	2017	Business Continuity Plan

Table 12-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

Table 12-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Facilities services, use consultants from Chancellor's Office	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Engineering consultants, Facilities Services Director. Enter Response	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Facilities Services, consultants.	Yes
Staff with training in benefit-cost analysis <i>If Yes, Department /Position:</i> Dept. of Business and Finance, Assistant Vice President Budget and Planning	Yes
Surveyors	No
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Facilities Services, Environmental Health and Safety	Yes
Scientist familiar with natural hazards in local area <i>If Yes, Department /Position:</i> Facilities Services, Environmental Health and Safety, CSUCI Faculty ESRM	Yes
Emergency Manager <i>If Yes, Department /Position:</i> Public Safety	Yes
Grant writers <i>If Yes, Department /Position:</i> Academic Affairs	Yes
Other <i>If Yes, Department /Position:</i> Facilities Services Environmental Impacts 2004	Yes

Table 12-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> COVID prevention and mitigation, Evacuation Plan	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> Facebook, Twitter, and Instagram for emergency preparedness activities	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> Public Safety Fair, Flood and Fire Prevention	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> Informacast, CI Alert Notification Systems	No

Table 12-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	No	N/A	N/A
DUNS#	Yes	796879943	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	Yes	N/A	September 19, 2019
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 12-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Climate change is taught in ESRM and biology classes, faculty have been doing research in climate change for a number of years, utilization of solar lighting, electric carts and buses, a climate change action plan is in process.</i>	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment: Faculty and staff are conducting research and continue to monitor and address impacts</i>	Medium
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: CI consistently conduits inventory for GH emissions . The CSU requires the campus to exceed California Green Building Code standards.</i>	High
Capital planning and land use decisions informed by potential climate impacts <i>Comment: Continued implementation of solar lighting, generators and batteries</i>	Medium
Participation in regional groups addressing climate risks <i>Comment: CI holds meetings discussing climate issues once a month, conducts research with the National Park 'Service and State parks, Dept. of Fish and Game</i>	Medium

Criterion	Jurisdiction Rating ^a
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: There is a system-wide goal to reduce greenhouse gas emissions. Currently working on a plan. More classes will be offered on this subject in ESRM and biology.</i>	Medium
Identified strategies for greenhouse gas mitigation efforts <i>Comment: There is a system-wide goal to reduce greenhouse gas emissions. Currently working on a plan. More classes will be offered on this subject in ESRM and biology.</i>	Medium
Identified strategies for adaptation to impacts <i>Comment:</i>	Low
Champions for climate action in local government departments <i>Comment:</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment:</i>	Low
Financial resources devoted to climate change adaptation <i>Comment: We have no budget for this at CI.</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment:</i>	Low
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: Conducted presentations on climate impact to faculty, staff and students</i>	Medium
Local residents' support of adaptation efforts <i>Comment: N/A</i>	Low
Local residents' capacity to adapt to climate impacts <i>Comment: Unknown</i>	Low
Local economy current capacity to adapt to climate impacts <i>Comment: Unknown</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment: Unknown</i>	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

12.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

12.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **CSU Channel Islands Capital Improvement Plan, Facilities Plan**—Incorporate new and updated hazards information relevant to the CSUCI Campus sand University Glen Neighborhood. The hazard mitigation plan may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment.
- **CSUCI Emergency Operations Plan (EOP), 2018 (pending approval)**—Hazard Summary for the campus needs updating. Hazards referenced in the Ventura County Multi-Hazard Mitigation Plan for more specific information.
- **Wildfire Reduction and Preparedness Plan**—Year round recommendations for defensible space remediation and smoke intrusion into campus buildings.
- **Capital Improvement Plan**—The capital improvement plan includes projects that can help mitigate potential hazards.
- **Exterior Building Management Plan**—CSU Channel Islands property maintains a comprehensive exterior and hardscape management plan, using as a guideline, the standards developed by the US Green Building’s Council’s LEED program. The plan incorporates best management practices which significantly reduce the use of harmful chemicals, energy waste, water waste, air pollution, solid waste and/or chemical runoff as compared to traditional practices

12.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Climate Action Plan**—Adopting a formal plan indicates the institution’s commitment to reducing its global warming impact. Since multiple facets of an institution’s operations can help reduce emissions, developing a climate action strategy can help an institution realize its sustainability goals as well as climate targets. Currently, the Campus is in the process of writing a Climate Action Plan.
- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard risks and provide mitigation recommendations as a means of evaluating project prioritization.
- **Post-Disaster Recovery Plan**—The campus addresses recovery and is part of the Ventura County Long Term Recovery Group and Ventura County VOAD (Voluntary Organizations Active in Disaster). The campus utilizes the specific goals, objectives and processes from the Long-Term Recovery Group and VC VOAD. The campus will also utilize particular aspects that are included in the Ventura County EOP.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

12.6 RISK ASSESSMENT

12.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 12-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 12-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4482	January 20, 2020 and continuing	The campus did not experience any property damages from COVID19 just emergency protective measures response related costs, telecommuting costs, testing, workplace safety inserts (plexiglass, HVAC upgrades) total approximately \$5,000,000.00
Maria Fire	FM-5302	November 1, 2019	Campus was not directly impacted by this fire, however, The Arc of Ventura County opened a community shelter at the Camarillo Community Center.
Hill/Woolsey Fire		November 2018	Campus directly affected, Fire approached campus, campus impacted by smoke. Campus was closed for numerous days.
Wildfires, Flooding, Mudflows, and Debris Flows (Thomas Fire)	DR-4353	December 4, 2017- January 31, 2018	Although this fire burned 281,893 acres in both Ventura County and Santa Barbara County, the campus was only indirectly impacted by smoke, however, faculty, staff and students were unable to go to work or class due to the compromised 101 corridor in Montecito.
Flooding		February 18, 2017	Localized flooding of the campus due to a severe storm closed the campus for several days.
Springs Fire	FM-5024	May 2 – 11, 2013	24,251 acres burned; The campus was surrounded by fire, lots of smoke damage, melted cell towers and irrigation lines, one outbuilding destroyed and several buildings damaged. Campus was closed for numerous days.
Wildfires, Flooding, Mudflows, and Debris Flows; Springs Fire		December 14, 2014	Camarillo Springs near campus had a significant mudslide. Campus had moderate flooding on the roads in and out of campus.
Wildfires, Flooding, Mudflows, and Debris Flows	DR-1731	October 21 – March 31, 2008	Although Ventura County was impacted by the Ranch Fire, the campus was not directly impacted except for heavy smoke.
Shekell Fire	FM-2681	December 3 – 6, 2006	This fire burned in Fillmore and Moorpark. The campus had no direct impacts from the fire only indirectly from smoke.
Day Fire	FM-2677	September 25 – 30, 2006	The campus was not directly impacted except for heavy smoke.
Topanga Fire	FM-2583	September 28 – October 10, 2005	The campus was not directly impacted except for smoke.
Severe Storms, Flooding, Landslides, and Mud and Debris Flows	DR-1585	February 16 – 23, 2005	City experienced localized flooding. No significant losses were documented. The campus was affected due to road closures.

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Storms, Flooding, Debris Flows, and Mudslides	DR-1577	December 27, 2004 – January 11, 2005	Water and mudslides damaged structures in the city.
Wildfires, Flooding, Mudflow and Debris Flow	DR-1498	October 21, 2003 – March 31, 2004	The campus was not directly impacted from the fires in Piru and Fillmore except for heavy smoke
CSUCI opened in 2002. Therefore, damage prior to 2002 affected the area now known as CSUCI.			
Severe Winter Storms and Flooding	DR-1203	February 2 – April 30, 1998	Backed up storm drains caused flooding.
Severe Winter Storms, Flooding, Landslides, Mud Flows	DR-1046	February 13 – April 19, 1995	Localized flooding and clogged storm drains.
Severe Winter Storms, Flooding, Landslides, Mud Flows	DR-1044	January 3 – February, 1995	Localized flooding and clogged storm drains.
Northridge Earthquake	DR-1008	January 17 – November 30, 1994	Structure and infrastructure damages.
Fires, Mud & Landslides, Soil Erosion, Flooding	DR-1005	October 26 – April 22, 1994	Multiple fires around Ventura County and subsequent flooding. Smoke and flooding impacts
Severe Storm, Winter Storm, Mud & Landslides, Flooding	DR-979	January 5 – March 20, 1993	Localized street flooding.
Snow Storm, Heavy Rain, High Winds, Flooding, Mudslide	DR-935	February 10 – 19, 1992	City experienced localized street flooding.
Severe Freeze	DR-894	December 19, 1990 – January 3, 1991	Countywide damages.
Grass, Wildlands, Forest Fires	DR-739	June 26 – July 19, 1985	Area was not directly impacted except for heavy smoke.
Coastal Storms, Floods, Slides, Tornadoes	DR-677	January 21 – March 30, 1983	Flooding
Severe Storms, Mudslides, Flooding	DR-615	January 8, 1980	Flooding countywide.

12.6.2 Hazard Risk Ranking

Table 12-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Table 12-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Earthquake	32	Medium
2	Severe Storms	24	Medium
2	Severe Weather	24	Medium
4	Dam Failure	22	Medium
5	Flooding	18	Medium
5	Landslide	18	Medium
7	Wildfire	12	Medium
8	Drought	9	Low

12.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Wildfire frequently affects the campus. Campus structures and communication towers have been burned or been damaged. Smoke damage is the most frequent event.
- Flooding regularly occurs during periods of heavy rainfall. One campus dormitory regularly floods.
- Climate Change amplified in the future.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

12.7 HAZARD MITIGATION ACTION PLAN

Table 12-11 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 12-12 identifies the priority for each action. Table 12-13 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 12-11. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action CSU-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<i>Hazards Mitigated:</i> Earthquake, Flooding, Severe Storms, Landslide						
Existing	9, 10, 11	Facilities Services		High	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short-term
Action CSU-2 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> All hazards						
New & Existing	8, 19	Public Safety		Low	Staff Time, General Funds	Short-term
Action CSU-3 —Purchase solar back up batteries and solar panels to sustain adequate power in campus buildings.						
<i>Hazards Mitigated:</i> All hazards						
New & Existing	2, 6	Facilities Services	Chancellor's Office	Medium	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action CSU-4 —Harden earthen dam by way of debris basin infrastructure and spillway located above University Glen community and student housing in Town Center.						
<i>Hazards Mitigated:</i> Flooding, Severe Storms						
Existing	2, 9, 10, 11, 14, 15	Facilities Services		High	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short-term
Action CSU-5 —Replace undersized reclaimed water lines to increase capacity, create sustainability and mitigate flooding.						
<i>Hazards Mitigated:</i> Flooding, Severe Weather, Drought						
Existing	6, 9, 10, 11, 14	Facilities Services		High	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short Term
Action CSU-6 —Harden infrastructure of two bridges on campus. Bridges are compromised during storm events and rip rap is eroding at the base of the bridges.						
<i>Hazards Mitigated:</i> Flooding, Severe Weather						
Existing	6, 9, 10, 11, 15	Facilities Services		Medium	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short Term
Action CSU-7 —Create and maintain defensible space around structures and other infrastructure to coordinate with existing Emergency Operations Plan actions.						
<i>Hazards Mitigated:</i> Wildfire						
New & Existing	5, 6, 9	Facilities Services	Cal Fire, Chancellor's Office	Low	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, FMAP and HMGP)	Short Term
Action CSU-8 —Retrofit Modoc Hall by replacing windows with energy-efficient tempered glass that will not shatter during seismic activity or severe windstorms, and will reduce energy loss from heating and air conditioning.						
<i>Hazards Mitigated:</i> Earthquake, Severe Storms						
Existing	6, 9, 11	Facilities Services		High	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, HMGP)	Short Term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date
 Acronyms used here are defined at the beginning of this volume.

Table 12-12. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	3	High	High	Yes	Yes	No	Medium	High
2	2	Medium	Low	Yes	No	Yes	High	Low
3	2	High	Medium	Yes	Yes	No	Medium	High
4	6	High	High	Yes	Yes	No	Medium	High
5	5	High	High	Yes	Yes	No	Medium	High
6	5	High	Medium	Yes	Yes	No	Medium	High
7	3	High	Low	Yes	Yes	No	Medium	High
8	3	High	High	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

Table 12-13. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building ^b
Medium-Risk Hazards								
Earthquake		CSU-1, 8	CSU-2	CSU-3	CSU-3			CSU-2
Severe Storms		CSU-1, 8	CSU-2	CSU-3	CSU-3	CSU-4		CSU-2
Severe Weather		CSU-6	CSU-2	CSU-3, 5	CSU-3	CSU-5	CSU-5	CSU-2
Dam Failure			CSU-2	CSU-3	CSU-3			CSU-2
Flooding		CSU-1, 6	CSU-2	CSU-3, 5	CSU-3	CSU-4, 5	CSU-5	CSU-2
Landslide		CSU-1	CSU-2	CSU-3	CSU-3			CSU-2
Wildfire			CSU-2	CSU-3, 7	CSU-3			CSU-2, 7
Low-Risk Hazards								
Drought			CSU-2	CSU-3, 5	CSU-3	CSU-5	CSU-5	CSU-2

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of technical and administrative or financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

12.8 PUBLIC OUTREACH

Table 12-14 lists public outreach activities for this jurisdiction.

Table 12-14. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
VC VOAD General Membership Meeting	June 17, 2021	40
VC VOAD Executive Board Meeting	June 9, 2021	7
VC VOAD General Membership Meeting	September 16, 2021	50
Postings on Facebook, Twitter	July 2021-September 2021	400+

12.9 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **Executive Order 987, Building Operations and Maintenance**—Reviewed for the capabilities assessment and action plan development.
- **Policy Number: FA.32.003 Strategic Risk Management**—Reviewed for the capabilities assessment.
- **Communicable Disease Response Plan**—Reviewed for the capabilities assessment.
- **CSU Channel Islands Exterior Building Management Plan**—Reviewed for the capabilities assessment and action plan development.
- **Executive Order, Policy on Occupational Safety**—Reviewed for the capabilities assessment.

- **Emergency Operations Plan**—Reviewed for the capabilities assessment and action plan development.
- **Executive Order, Business Continuity Plan**—Reviewed for the capabilities assessment.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- **Ventura County Hazard Mitigation Plan 2015**—The previous hazard mitigation plan was reviewed when developing mitigation actions.
- **Cal OES Hazard Mitigation Plan 2018**—The state hazard mitigation plan was reviewed when developing mitigation actions.

12.10 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

- Workshops, training and education for the campus community.
- Develop and strengthen a campus Hazard Mitigation Planning Team.
- Hire a Risk Manager for the campus.

13. CALLEGUAS MUNICIPAL WATER DISTRICT

13.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Daniel Cohen, Emergency Response Coordinator
2100 E. Olsen Road
Thousand Oaks, CA 91360
Telephone: 805-579-7134
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Alternate Point of Contact

Rob Peters, Manager of Operations and Maintenance
2100 E. Olsen Road
Thousand Oaks, CA 91360
Telephone: 805-579-7136
e-mail Address: rpeters@calleguas.com

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 13-1.

Table 13-1. Local Hazard Mitigation Planning Team Members

Name	Title
Daniel Cohen	Emergency Response Coordinator
Rob Peters	Manager of Operations and Maintenance
Kristine McCaffrey	Manager of Engineering
Dan Drugan	Manager of Resources
Sue Taylor	Accounting Supervisor
Julio Reyes	Operations Supervisor

13.2 JURISDICTION PROFILE

13.2.1 Overview

The Calleguas Municipal Water District (Calleguas, District) was formed in 1953 as voters in southern Ventura County were faced with limited local water supplies, recurring droughts, and an expanding population and economy. In 1960, Calleguas joined the Metropolitan Water District of Southern California (Metropolitan) as a way of securing water from the state water system. The District's mission is to provide its service area with a reliable supplemental supply of regional and locally developed water in an environmentally and economically responsible manner.

Calleguas is an independent special district with 70 employees who work in Administrative Services, Engineering, Operations and Maintenance, and Resources divisions. The District operates on funding that comes primarily through operating revenues and water rates, and is supplemented by non-operating revenues and investment earnings.

Calleguas is governed by an elected five-member Board of Directors, which assumes responsibility for the adoption of this plan. The General Manager will oversee the plan’s implementation.

13.2.2 Service Area

Calleguas is a wholesale water provider that imports and distributes water from Metropolitan through the State Water Project. A majority of the District’s water supply is treated at Metropolitan’s Jensen Treatment Facility in Granada Hills and conveyed into Calleguas’ distribution system. Calleguas does not deliver water directly to consumers, but serves high quality drinking water to 19 retail purveyors within its service area that then deliver water to residents and municipal and agricultural customers.

The District serves an area of approximately 366 square miles in southeast Ventura County and an estimated 635,000 residents, or roughly three quarters of Ventura County’s population. Communities served by Calleguas include the cities of Camarillo, Moorpark, Oxnard, Port Hueneme, Simi Valley, and Thousand Oaks; and the unincorporated areas of Bell Canyon, Camarillo Estates, Camarillo Heights, Lake Sherwood, Naval Base Ventura County, Oak Park, Santa Rosa Valley, and Somis.

Calleguas’ distribution system is made up of 140 miles of large diameter transmission pipelines, 12 potable water reservoirs, 6 potable water pump stations, 5 hydroelectric generators, 20 pressure regulating stations, and 91 service connections (turnouts). The District also owns and operates Lake Bard, an earthen open-surface reservoir, and associated water filtration plant, as well as an aquifer storage and recovery (ASR) project with 18 ASR wells and an associated disinfection facility.

13.2.3 Assets

Table 13-2 summarizes the assets of the District and their value.

Asset	Value
<i>Property</i>	
887 acres	Unknown
<i>Equipment</i>	
Calleguas Conduit Surge Relief Facility	\$267,749
Conejo Generating Station	\$1,627,029
Conejo Mobile Standby Generators	Unknown
Conejo Standby Generators	\$3,337,558
Crestview Interconnection	\$1,560,585
Distribution System Pipelines: 140 miles, various diameters (14"-78")	Unknown
East Portal Standby Generator	\$71,822
Emergency Pipe Yard	\$1,759,356
Fairview Standby Generator	Unknown
Grandsen Generating Station	\$1,166,850
Grandsen Standby Generators	\$2,908,577
Grandsen Surge Tank	\$612,825
Mesa Pressure Relief Station	\$2,187,000
Pressure Regulating Station 1	\$35,034

Asset	Value
Pressure Regulating Station 1A	\$35,034
Pressure Regulating Station 2	\$219,790
Pressure Regulating Station 3	\$42,621
Pressure Regulating Station 4	\$69,781
Pressure Regulating Station 5	\$42,621
Pressure Regulating Station 6	\$133,355
Pressure Regulating Station 6A	\$42,621
Pressure Regulating Station 7	\$42,621
Pressure Regulating Station 8	\$42,621
Pressure Regulating Station 9	\$52,286
Reg Station 6 Standby Generator	\$9,965
Reg Station 9 Standby Generator	Unknown
Santa Rosa Generating Station	\$952,557
Santa Susana Tunnel	Unknown
Salinity Management Pipeline (SMP) Phase 1A	\$13,579,369
SMP Phase 1B	\$13,617,662
SMP Phase 1C	\$8,978,601
SMP Phase 1D	\$4,858,495
SMP Phase 1E	\$32,756,801
SMP Phase 2A	\$8,636,675
SMP Phase 2B	\$13,260,190
SMP Phase 2C	\$5,743,806
SMP Phase 2D	\$4,939,862
SMP Hueneme Outfall	\$21,352,277
Springville Flow Control Facility	\$1,440,415
Springville Generating Station	\$3,053,878
Springville Standby Generators	Unknown
Vehicle Fleet	Unknown
Well 1	\$777,480
Well 2	\$777,480
Well 3	\$777,480
Well 4	\$777,480
Well 5	\$773,964
Well 6	\$1,143,577
Well 7	\$1,141,924
Well 8	\$836,705
Well 9	\$1,154,833
Well 10	\$881,306
Well 11	\$768,269
Well 12	\$773,964
Well 13	\$774,560
Well 14	\$836,705
Well 15	\$1,066,882

Asset	Value
Well 16	\$1,066,883
Well 17	\$806,428
Well 18	\$814,091
Wellfield Standby Generators	Unknown
Total:	\$165,388,300
Critical Facilities	
Calleguas Administration Building	\$4,909,768
Conejo Pump Station	\$4,225,361
Conejo Reservoir	Unknown
East Portal	\$3,513,041
Fairview Pump Station	\$1,584,922
Grandsen Pump Station 1	\$5,344,699
Grandsen Pump Station 2	\$2,486,828
Grimes Canyon Disinfection Facility	\$3,235,725
Lake Bard	\$2,795,730
Lake Bard Water Filtration Plant	\$14,377,027
Lake Sherwood Pump Station	Unknown
Lake Sherwood Reservoir	\$1,503,910
Lindero Pump Station	\$2,526,679
Lindero Reservoir	\$3,198,563
Newbury Park Reservoir	\$1,900,000
SMP Control Tank	\$3,708,277
Springville Reservoir A	\$1,109,000
Springville Reservoir B	\$4,139,655
Thousand Oaks Reservoir	\$12,980,000
TOD Pump Station	\$2,064,923
West Portal Overflow Structure	\$1,463,000
Westlake Reservoir	\$12,745,905
Wood Ranch Dam	Unknown
Total:	\$89,813,013

13.3 CURRENT TRENDS

When Calleguas joined Metropolitan in 1960, its service area was approximately 270 square miles. The Calleguas service area reached 366 square miles in 2010. Since 2000, the frequency and size of annexations into Calleguas' service boundary have slowed considerably. Future annexations are anticipated to continue at a relatively small size and rate, and Calleguas has no plans to significantly expand its service area.

13.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 13-3.
- An assessment of fiscal capabilities is presented in Table 13-4.
- An assessment of administrative and technical capabilities is presented in Table 13-5.
- An assessment of education and outreach capabilities is presented in Table 13-6.
- Classifications under various community mitigation programs are presented in Table 13-7.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 13-8.

Table 13-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
Capital Improvement Program	2021	Updated at least annually, covers a 5-year timeframe.
Emergency Action Plan & Inundation Maps for Wood Ranch Dam	2020-21	Updated at least every 10 years in accordance with California Water Code 6160-6161.
Emergency Response Plan	2020	Updated regularly and self-certified with EPA at least every 5 years in accordance with America’s Water Infrastructure Act of 2018.
Master Plan	2017	Updated as needed.
Risk and Resilience Assessment	2020	Updated and self-certified with EPA every 5 years in accordance with America’s Water Infrastructure Act of 2018.
Urban Water Management Plan	2021	Updated every 5 years in accordance with the Urban Water Management Planning Act.
Water Supply Alternatives Study	Ongoing	Evaluation of potential approaches to meet water supply needs during a 6-month outage of imported water.

Table 13-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	No
<i>If yes, specify:</i> Calleguas does not directly provide water to homes or businesses, therefore customer user fees are not directly collected. User fees are collected by the District’s purveyors, which ultimately contribute to funding sources used by those purveyors to purchase water from Calleguas.	
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No

Table 13-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> This resource is available through contract support.	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Engineering Department / Manager of Engineering, Project Managers, and Inspectors.	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Engineering Department / Manager of Engineering, Project Managers, and Inspectors.	Yes
Staff with training in benefit-cost analysis <i>If Yes, Department /Position:</i> This resource is available through contract support.	Yes
Surveyors <i>If Yes, Department /Position:</i> This resource is available through contract support.	Yes
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Administrative Services Department / Information Technology Specialist.	Yes
Scientist familiar with natural hazards in local area <i>If Yes, Department /Position:</i> This resource is available through contract support.	Yes
Emergency manager <i>If Yes, Department /Position:</i> Operations & Maintenance Department / Emergency Response Coordinator.	Yes
Grant writers <i>If Yes, Department /Position:</i> Engineering Department / Manager of Engineering.	Yes
Procurement Services and Management <i>If Yes, Department /Position:</i> Administrative Services Department, Operations & Maintenance Department / General Services Division.	Yes

Table 13-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> Information is available regarding specific plans and capital projects that relate to specific hazard mitigation activities.	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> Public education through social media is focused on drought mitigation and water conservation.	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> Calleguas organizes a banner distribution program and displays signage related to drought mitigation in coordination with water purveyors throughout Ventura County.	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> Public warning notification procedures are established for potential safety incidents involving a dam breach or failure, as well as hazards not included in this HMP.	Yes

Table 13-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	No	N/A	N/A
DUNS#	Yes	010726883	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 13-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Calleguas' elected officials and managerial staff understand that climate change is real and requires planned actions to mitigate its impacts.</i>	High
Jurisdiction-level monitoring of climate change impacts <i>Comment: Calleguas regularly monitors climate change impacts on snowpack, water supply conditions, drought, and wildfires.</i>	High
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: Calleguas has organized and participated in plans and programs that assess mitigation strategies, in addition to utilizing contract support.</i>	High
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: The Calleguas distribution system is primarily a gravity-fed system that generates more power than it uses on an annual basis.</i>	High
Capital planning and land use decisions informed by potential climate impacts <i>Comment: Calleguas complies with the California Environmental Quality Act (CEQA) for projects, which includes an evaluation of climate impacts.</i>	High
Participation in regional groups addressing climate risks <i>Comment: Calleguas Directors and staff actively participate in multiple groups focused on addressing climate risks and impacts, including the Watersheds Coalition of Ventura County and the Ventura County Regional Energy Alliance.</i>	High
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: Processes in CEQA require climate change impacts to be considered.</i>	High
Identified strategies for greenhouse gas mitigation efforts <i>Comment: Strategies to mitigate greenhouse gas emissions have been identified and continue to be explored, including additional hydroelectric power generation, water use efficiency programs, and eventual transition of the District's fleet to electric vehicles.</i>	High
Identified strategies for adaptation to impacts <i>Comment: Calleguas actively participates in integrated water resource planning and local water resource development to increase local resilience and reduce reliability on imported water.</i>	High
Champions for climate action in local government departments <i>Comment: Water resources personnel at Calleguas actively organize and coordinate water conservation efforts with local cities, utilities, special districts, and the public across Ventura County.</i>	High

Criterion	Jurisdiction Rating ^a
Political support for implementing climate change adaptation strategies <i>Comment: The District's elected officials actively support strategies that direct preparedness and support measures that encourage adaptability to climate change impacts. Additionally, state and federal representatives serving regions in the District's service area traditionally support legislation intended to mitigate impacts created by climate change.</i>	High
Financial resources devoted to climate change adaptation <i>Comment: Water use efficiency programs financially incentivize efforts to conserve water. Financial resources are also dedicated to capital improvement planning projects, such as development of local water resources and resiliency of water system components, that may be impacted by climate change.</i>	High
Local authority over sectors likely to be negative impacted <i>Comment: Calleguas has jurisdiction over its water supply.</i>	High
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: Public capacity is measured in accordance with municipalities and unincorporated areas of Ventura County located in the District's service area.</i>	Medium
Local residents' support of adaptation efforts <i>Comment: Public capacity is measured in accordance with municipalities and unincorporated areas of Ventura County located in the District's service area.</i>	Medium
Local residents' capacity to adapt to climate impacts <i>Comment: Public capacity is measured in accordance with municipalities and unincorporated areas of Ventura County located in the District's service area.</i>	Medium
Local economy current capacity to adapt to climate impacts <i>Comment: Public capacity is measured in accordance with municipalities and unincorporated areas of Ventura County located in the District's service area.</i>	Medium
Local ecosystems capacity to adapt to climate impacts <i>Comment: Public capacity is measured in accordance with municipalities and unincorporated areas of Ventura County located in the District's service area.</i>	Medium

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

13.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

13.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- Capital Improvement Program—The Capital Improvement Program includes projects that can help mitigate potential hazards, as well as address the potential impacts of those hazards on operations and water supply. The District will act to ensure consistency between the HMP and

the current and future capital improvement program. The HMP may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment.

- **Emergency Response Plan**—The Emergency Response Plan describes procedures and operations to be executed by Calleguas staff in the event of various types of disasters or emergency situations. Response procedures and action plans, specifically for natural hazards, incorporate mitigation planning efforts recognized in the HMP in order to minimize the impacts to District facilities, infrastructure, equipment, staff, and the public.
- **Master Plan**—The Master Plan includes projects that can help address the potential impacts of hazards on operations and water supply. The District will act to ensure consistency between the HMP and the Master Plan.
- **Risk and Resilience Assessment**—The Risk and Resilience Assessment identifies and evaluates hazards that present the highest risk to the District’s infrastructure and measures the resiliency of the District’s system against those hazards, including natural hazards. Countermeasures that mitigate impacts and vulnerabilities associated with high-risk hazards are evaluated, including potential mitigation actions that are also recognized and described in the HMP.
- **Urban Water Management Plan**—The Urban Water Management Plan outlines and assesses long-term water resource planning as local and state supplies continually experience highly variable hydrology and impacts of climate change. Water service reliability, water use efficiency efforts, and contingency planning aspects of the Urban Water Management Plan integrate the HMP by incorporating potential mitigation actions.
- **Water Supply Alternatives Study**—The Water Supply Alternatives Study includes projects that can help address the potential impacts of hazards on operations and water supply. The District will act to ensure consistency between the HMP and Water Supply Alternatives Study.

13.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Business Continuity Plan**—The District may assess its existing Business Continuity Plan to expand the plan and update it in accordance with the HMP.
- **Post-Disaster Recovery Plan**—The District may consider preparing a Post-Disaster Recovery Plan that would emphasize the planning goals and strategies identified in the HMP during long-term recovery efforts.
- **Power Outage Response Plan**—The District plans to develop an action plan specifically for responding to various types of power outages, including Public Safety Power Shutoffs (PSPS) and extended blackouts. This plan will incorporate mitigation objectives and other measures identified in the HMP.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

13.6 RISK ASSESSMENT

13.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 13-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 13-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4482	01/20/2020	Ongoing.
Easy Fire	FM-5298	10/30/2019	The Easy Fire occurred just north of the District's main facility, interrupting normal operations and requiring most staff to evacuate the property. Although no District facilities were directly impacted, the District's water supply was used for firefighting efforts via distribution pipelines and aerial surface water dips in Lake Bard.
2018 Fires	DR-4407	11/08/2018	The Hill and Woolsey Fires both occurred inside separate areas of the District's service territory. Although no District facilities were directly impacted, the District's water supply was used for firefighting efforts via distribution pipelines and aerial surface water dips in Lake Bard. Power outages caused by the fire also created operational challenges and complications.
Thomas Fire	FM-5224	12/04/2017	District staff provided mutual aid and support to water agencies impacted by this fire, including staffing the water infrastructure liaison position in the County EOC.
Springs Fire	FM-5024	05/02/2013	The District's water supply was used for firefighting efforts.
Guiberson Fire	FM-2839	09/22/2009	The District's water supply was used for firefighting efforts.
Shekell Fire	FM-2681	12/03/2006	The Shekell Fire burned through the District's Wellfield facility but caused minimal damage to equipment and infrastructure. The District's water supply was used for firefighting efforts.
Topanga Fire	FM-2583	09/28/2005	The District's water supply was used for firefighting efforts.
Severe Storms	DR-1577	12/27/2004	\$121,296.45
Simi Fire	DR-1498	10/21/2003	The District's water supply was used for firefighting efforts.
Northridge Earthquake	DR-1008	01/17/1994	The District incurred multiple significant pipeline failures and suffered damages on other components related to the distribution system, reaching costs totaling several hundreds of thousands of dollars to repair or replace assets.

13.6.2 Hazard Risk Ranking

Table 13-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on

people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Table 13-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Earthquake	32	High
1	Wildfire	32	High
3	Drought	31	High
4	Severe Weather	24	Medium
4	Severe Storms	24	Medium
6	Dam Failure	21	Medium
7	Landslide	18	Medium
8	Flooding	15	Low
9	Sea Level Rise	2	Low
9	Tsunami	2	Low

13.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Strong to severe ground shaking and liquefaction produced by an earthquake on one of many nearby faults could result in significant simultaneous damages to several assets and critical facilities across the District's service area.
- Numerous District assets and critical facilities are located in a very high wildfire severity zone, including multiple pump stations, reservoirs, and water treatment facilities containing hazardous materials.
- Long-term statewide and regional drought could impact the District's imported water supply and strain local water resources and emergency reserves.
- The Santa Susana Tunnel conveys imported water from Metropolitan Water District into the Calleguas distribution system. An impact to the tunnel caused by an earthquake or other natural hazard could completely cut off imported water until the tunnel is repaired or temporary infrastructure is installed.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

13.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 13-11 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 13-11. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>OA 9—Identify potentially vulnerable public and private utility systems including electric, gas, oil, water, sewer and communication. Upgrade vulnerable systems to ensure the operation and timely restoration of essential systems to reasonable levels of service.</p> <p><i>Comment:</i> Although Calleguas has completed several projects to mitigate earthquake hazards, this action item is evergreen and will always remain relevant to Calleguas.</p>			✓	CAL-6
<p>OA 16—Implement landslide stabilization and/or protection measures. Stabilization measures include grading the unstable portion of the slope to a lower gradient, construction of rock buttresses and retaining walls, and drainage improvements. Protection measures include containment and/or diversion of the moving debris, such as walls, berms, ditches and catchment basins.</p> <p><i>Comment:</i> Calleguas has completed several efforts to mitigate hazards related to erosion and drainage. However, this action item will always remain relevant to Calleguas.</p>			✓	CAL-7
<p>OA 21—Maintain hazards fuel treatment program for areas that have been identified with overgrown/dead brush/trees to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program.</p> <p><i>Comment:</i> Calleguas maintains a brush clearing and defensible space program to mitigate wildfire risks. These mitigation efforts are completed regularly and will always remain relevant to Calleguas.</p>			✓	CAL-8

13.8 HAZARD MITIGATION ACTION PLAN

Table 13-12 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 13-13 identifies the priority for each action. Table 13-14 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 13-12. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action CAL-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.</p> <p><i>Hazards Mitigated:</i> Earthquake, Wildfire, Dam Failure, Landslide, Flooding</p>						
Existing	2, 6, 9, 18	Calleguas MWD	Various	TBD	CIP Funds, HMGP/BRIC Grant Funding	Long-term
<p>Action CAL-2—Improve imported water supply reliability by seismically upgrading Calleguas’ Santa Susana Tunnel, which was constructed in the early 1960s.</p> <p><i>Hazards Mitigated:</i> Earthquake</p>						
Existing	2, 6, 9, 18	Calleguas MWD	N/A	\$4M	CIP Funds, HMGP/BRIC Grant Funding	Long-term
<p>CAL-3—Improve water supply reliability and reduce risk of critical pipeline failure during an earthquake by rehabilitating and/or strengthening segments of Prestressed Concrete Cylinder Pipe (PCCP) in the District’s distribution system that are vulnerable to “broken back” failures.</p> <p><i>Hazards Mitigated:</i> Earthquake</p>						
Existing	2, 6, 9, 18	Calleguas MWD	N/A	\$10M	CIP Funds, HMGP/BRIC Grant Funding	Short and long-term (phased project)

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action CAL-4 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> All Hazards						
New/Existing	1, 4, 6, 8, 19	Calleguas MWD	N/A	Low	Staff Time, General Funds	Short-term
Action CAL-5 —Purchase generators for critical facilities and infrastructure that lack adequate backup power as listed below.						
<i>Hazards Mitigated:</i> Earthquake, Wildfire, Severe Weather, Severe Storms, Dam Failure, Landslide, Flooding						
Existing, Lindero Pump Station	2, 6, 18	Calleguas MWD	N/A	\$1.3M	CIP Funds, BRIC Grant Funding (pending)	Short-term
Existing, Lake Sherwood Pump Station	2, 6, 18	Calleguas MWD	N/A	\$340,000	CIP Funds, HMGP/BRIC Grant Funding	Short-term
Action CAL-6 —Identify potentially vulnerable public water utility systems. Upgrade vulnerable systems under the District's authority to ensure the operation and timely restoration of essential systems to reasonable levels of service.						
<i>Hazards Mitigated:</i> All Hazards						
New/Existing	2, 6, 9	Calleguas MWD	N/A	Medium	General Funds, HMGP/BRIC Grant Funding	Ongoing
Action CAL-7 —Implement landslide stabilization and/or protection measures. Stabilization measures include grading the unstable portion of the slope to a lower gradient, construction of rock buttresses and retaining walls, and drainage improvements. Protection measures include containment and/or diversion of the moving debris, such as walls, berms, ditches and catchment basins.						
<i>Hazards Mitigated:</i> Landslide						
New/Existing	2, 6, 9	Calleguas MWD	N/A	Medium	CIP Funds, HMGP/BRIC Grant Funding	Ongoing
Action CAL-8 —Maintain wildfire hazard fuel reduction program for areas that have been identified with overgrown or dead brush, trees and weeds to reduce the potential for tree-to-tree ignition. Ensure that a "maintenance now" component to provide continued fire resistance is part of the program. (Coordinates with Ventura County Fire Protection District Action VFP-6)						
<i>Hazards Mitigated:</i> Wildfire						
Existing	5, 13, 14	Calleguas MWD	N/A	Low	General Funds, HMGP/BRIC Grant Funding	Ongoing
Action CAL-9 —Implement projects to help address water supply needs during a 6-month imported water outage.						
<i>Hazards Mitigated:</i> Earthquake, Drought						
New	2, 6, 18	Calleguas MWD	Various	TBD	CIP Funds, IRWM/HMGP/ BRIC Grant Funding	Long-term
Action CAL-10 —The Las Virgenes-Calleguas Interconnection is a cost-effective, mutually beneficial pipeline that can deliver water between agencies if one were to experience a complete or partial water supply interruption that did not significantly affect the other agency.						
<i>Hazards Mitigated:</i> Earthquake						
New	2, 3, 6, 8, 18	Calleguas MWD	Las Virgenes Municipal Water District	\$30M	CIP Funds, Proposition 1 IRWM Grant Funding	Short-term
Action CAL-11 —The Calleguas-Ventura Interconnection is a cost-effective, mutually beneficial pipeline that will be utilized to improve water system reliability for both agencies during water supply shortages that may not significantly affect both jurisdictions at the same time.						
<i>Hazards Mitigated:</i> Earthquake, Drought						
New	2, 3, 6, 8, 18	Calleguas MWD	City of Ventura	\$21M	CIP Funds, IRWM/HMGP/ BRIC Grant Funding	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action CAL-12 —The Crestview Well No.8 project involves construction and installation of a new groundwater well, associated components and system connections necessary to deliver water from Crestview Mutual Water Company to Calleguas during an imported water outage.						
<i>Hazards Mitigated:</i> Earthquake						
New	2, 6, 8, 18	Crestview Mutual Water Company	Calleguas MWD	\$2.4M	CIP Funds	Short-term
Action CAL-13 —Lake Bard Pump Station will enable the treatment of approximately 30% of water in Lake Bard that cannot currently be treated by the Lake Bard Water Filtration Plant due to insufficient hydraulic head by pumping that water through the treatment process. This water would likely only need to be treated during a major imported water outage, which could be caused by an earthquake.						
<i>Hazards Mitigated:</i> Earthquake						
New	2, 6, 18	Calleguas MWD	N/A	\$6M	CIP Funds	Short-term
Action CAL-14 —Fairview Well Rehabilitation will help the District meet demands during imported water outages by rehabilitating and performing upgrades on system components to enable operation of Fairview Well, an aquifer storage and recovery well that has not operated since 1998.						
<i>Hazards Mitigated:</i> Earthquake						
New	2, 6, 18	Calleguas MWD	N/A	\$2M	CIP Funds, HMGP/BRIC Grant Funding	Short-term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date; Acronyms used here are defined at the beginning of this volume.

Table 13-13. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
CAL-1	4	High	Medium	Yes	Yes	No	Medium	High
CAL-2	4	High	Medium	Yes	Yes	Yes	High	High
CAL-3	4	High	Medium	Yes	Yes	Yes	High	High
CAL-4	5	Medium	Low	Yes	No	Yes	High	Low
CAL-5	3	High	Low	Yes	Yes	Yes	High	High
CAL-6	3	High	Medium	Yes	Yes	No	Medium	High
CAL-7	3	High	Medium	Yes	Yes	No	Medium	High
CAL-8	3	High	Low	Yes	Yes	Yes	High	High
CAL-9	3	High	Medium	Yes	Yes	No	Medium	High
CAL-10	5	High	Medium	Yes	Yes	Yes	High	High
CAL-11	5	High	Medium	Yes	Yes	Yes	High	High
CAL-12	4	High	Medium	Yes	Yes	Yes	High	High
CAL-13	3	High	Medium	Yes	Yes	Yes	High	High
CAL-14	3	High	Medium	Yes	Yes	Yes	High	High

a. See the introduction to this volume for explanation of priorities.

Table 13-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building ^b
High-Risk Hazards								
Earthquake	CAL-9	CAL-1, 2, 3, 9	CAL-4		CAL-5, 6	CAL-1, 9, 10, 11, 12, 13		CAL-4, 6, 9, 10, 11, 12, 13, 14
Wildfire	CAL-8	CAL-1, 8	CAL-4	CAL-8	CAL-5, 6, 8	CAL-1		CAL-4, 6, 8
Drought	CAL-9		CAL-4			CAL-9, 11	CAL-9, 11	CAL-4, 6, 9, 11
Medium-Risk Hazards								
Severe Weather			CAL-4		CAL-5, 6			CAL-4, 6
Severe Storms			CAL-4		CAL-5, 6			CAL-4, 6
Dam Failure		CAL-1	CAL-4		CAL-5, 6	CAL-1		CAL-4, 6
Landslide		CAL-1, 7	CAL-4	CAL-7	CAL-5, 6	CAL-1, 7		CAL-4, 6, 7
Low-Risk Hazards								
Flooding		CAL-1			CAL-5, 6	CAL-1		CAL-4, 6
Sea Level Rise								CAL-4, 6
Tsunami								CAL-4, 6

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

13.9 PUBLIC OUTREACH

Table 13-15 lists public outreach activities for this jurisdiction.

Table 13-15. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Calleguas board resolution calling for water conservation to reduce demand by 15%	11/17/2021	15
Los Angeles Department of Water and Power (to shift-off state water project supplies), Metropolitan, Las Virgenes, and Calleguas drought press release	10/05/2021	15
Calleguas social media blast promoting public participation in the multi-hazard mitigation plan update	08/02/2021	N/A
Calleguas board adoption of stage 2 drought condition	08/18/2021	15
Calleguas board adoption of stage 4 drought condition—implementation of mandatory conservation	04/15/2015	15
Calleguas board resolution calling for increased water use efficiency	02/05/2014	25

13.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **Capital Improvement Program**—The Capital Improvement Program prioritizes projects that have been identified to improve District facilities, infrastructure, and equipment, including

potential mitigation projects. The Capital Improvement Program was used as a source of information while preparing this annex.

- **Emergency Response Plan**—The District’s Emergency Response Plan provides response procedures to various emergency incidents, including natural disasters. Several emergency response procedures and operations are intended to mitigate impacts of the incident. This information was reviewed and supported the development of this annex.
- **Master Plan**—The District’s Master Plan includes projects that could mitigate the impacts of natural hazards on the water supply and distribution system. This information was referenced during the development of this annex.
- **Risk and Resilience Assessment**—The Risk and Resilience Assessment identifies the natural hazards that pose the largest risk to the District’s water supply and infrastructure. Additionally, potential countermeasures to prevent or mitigate risks are included in the assessment. These aspects of the Risk and Resilience Assessment supported the development of this annex.
- **Urban Water Management Plan**—The Urban Water Management Plan provides information on water supplies, demands, and strategies to conserve water and mitigate impacts from natural hazards that could impact the distribution system. Information from the Urban Water Management Plan was utilized to support this annex.
- **Water Supply Alternatives Study**—The Water Supply Alternatives Study focuses on potential projects that could improve the District’s water supply portfolio and ultimately increase local resiliency. Ideas in the Water Supply Alternatives Study were used to assist in the creation of this annex.

The following outside resources and references were reviewed:

- **California State Hazard Mitigation Plan (SHMP)**—The 2018 SHMP was referenced in order to understand the state’s focus, objectives, and strategies related to hazard mitigation. The SHMP also includes an overview of disaster history, statewide risks, successful mitigation actions, and best practices.
- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, risk ranking, and the development of the mitigation action plan.
- **Integrated Water Resources Plan (IRP) developed by Metropolitan Water District of Southern California**—The 2020 IRP was prepared in concert with Metropolitan’s Urban Water Management Plan and addresses the complexity of developing, maintaining, and delivering water to meet changing demands in face of uncertainties that the Southern California region faces. Climate change experts were consulted throughout the creation of the 2020 IRP, which creates multiple scenarios that could foreseeably occur due to climate change and other factors affecting water resources and demands. The IRP was referenced during development of this annex.
- **Projected Changes in Ventura County Climate**—The 2019 climate change report directed by the Watersheds Coalition of Ventura County projects local climate change impacts from 2021-2040. Climate factors that were assessed include projected changes in temperature, projected changes in precipitation, projected changes in evaporative demand, and considerations regarding atmospheric rivers, projected snowpack, drought, and wildfire. Calleguas participated in the development of the 2019 report as a wholesale water agency, and referenced the report during the development of this annex in the HMP.

- **Ventura County Emergency Operations Plan (EOP)**—The Ventura County EOP identifies countywide procedures for response to a largescale disaster or emergency incident. The County EOP was used as a resource throughout preparation of this annex.
- **Water Surplus and Drought Management Plan (WSDM Plan)**—Metropolitan Water District’s WSDM Plan provides principles, goals, and potential actions to manage various water supply conditions. The WSDM Plan was used as a supporting document during development of this annex.

14. CASITAS MUNICIPAL WATER DISTRICT

14.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Julia Aranda, PE, Engineering Manager
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Alternate Point of Contact

Greg Romey, Safety Officer
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This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 14-1.

Table 14-1. Local Hazard Mitigation Planning Team Members

Name	Title
Julia Aranda	Engineering Manager
Greg Romey	Safety Officer
Kelley Dyer	Assistant General Manager

14.2 JURISDICTION PROFILE

14.2.1 Overview

The Casitas Municipal Water District was formed in 1952 (as the Ventura River Municipal Water District). In 1956, the Ventura River Project was authorized by Congress, which included the Robles Diversion facility on the Ventura River, the Robles Canal, and the Casitas Dam. The District is governed by a five-member Board of Directors. Funding is primarily from water rates and revenue bonds.

The Casitas Board of Directors assumes responsibility for the adoption of this plan; Casitas Municipal Water District will oversee its implementation.

14.2.2 Service Area

Casitas provides wholesale and retail water service to western Ventura County and is governed by a five-member elected Board of Directors. Communities served include the City of Ojai, Upper Ojai, the Ventura River Valley area, the City of Ventura (west of Mills Road) and the beach communities of Solimar, La Conchita, and Rincon. Originally named the Ventura River Municipal Water District in 1952,

Casitas was formed to provide supplemental water to the agricultural communities in its service area. The service area also includes residential, commercial, and industrial uses. Wholesale customers include the City of Ventura and several special districts and mutual water companies. Casitas has 60 full-time employees, not including those employed at the Lake Casitas Recreation Area.

Casitas' service area covers 136 square miles of land (177 square miles including ocean area). As of December 31, 2020, Casitas had 6,130 service connections. In 2017, Casitas acquired the Ojai Water System from Golden State Water Company (GSWC); this did not increase the service area as GSWC was a wholesale customer of Casitas.

14.2.3 Assets

Table 14-2 summarizes the assets of the District and their value. Many of the District's facilities are on land owned by the United States of America as they were acquired by the US Bureau of Reclamation; these parcels are not included in the table. Casitas operates and maintains the facilities (tanks, pump plants, etc.) on this land.

Table 14-2. Special-Purpose District Assets

Asset	Value
Property	
98.28 acres of land (\$750,000/acre)	\$73,710,000
Equipment	
163.52 miles of pipeline (\$1.25M/mile)	\$204,400,000
28.19 million gallons of storage tanks (\$3/gal)	\$84,570,000
16 pump plants (PP) (75,075 gpm total capacity x \$1,000 per gpm)	\$75,075,000
Generators	\$972,000
Vehicles/Heavy Equipment	\$3,000,000
Total:	\$441,727,000
Critical Facilities	
Avenue No. 1 PP	\$17,950,000
Gardens PP	\$80,000
Avenue No. 2 PP	\$18,800,000
Fairview PP	\$4,670,000
4M PP	\$5,300,000
Grand Avenue PP	\$1,120,000
Upper Ojai PP	\$4,850,000
3M PP	\$1,425,000
Ojai Valley PP	\$10,800,000
Rincon PP	\$5,150,000
Fortress PP	\$400,000
San Antonio PP	\$3,000,000
Signal PP	\$200,000
Arbolada PP	\$390,000
Valley View PP	\$700,000
Heidelberger PP	\$240,000
Oak View Tank	\$21,000,000

Asset	Value
Gardens Tank	\$33,000
Villanova Tank	\$19,500,000
Fairview Tank	\$6,000,000
4M Tank	\$6,000,000
Upper Ojai Tank	\$5,400,000
3M Tank	\$3,000,000
Ojai East Tank	\$9,000,000
Rincon Control Tank	\$750,000
Rincon Balancing Tank	\$7,500,000
Fortress	\$405,000
San Antonio Forebay	\$1,500,000
Signal Tank	\$900,000
Arbolada Tank	\$3,000,000
Running Ridge Tank	\$282,000
Heidelberger Tank	\$300,000
Marion Walker Water Treatment Facility	\$15,000,000
San Antonio Wellfield Treatment Facility	\$5,000,000
District Office	\$5,000,000
Robles Diversion and Fish Passage Facility	\$20,000,000
San Antonio Plant Generator (500 kW)	\$500,000
Marion Walker Water Treatment Plan Generator (350 kW)	\$350,000
Robles Diversion Facility Generator (60 kW)	\$60,000
Heidelberger PP Booster Generator (37 kW)	\$37,000
Signal PP Booster Generator (25 kW)	\$25,000
Vehicles and Heavy Equipment	\$3,000,000
Total:	\$208,617,000

14.3 CURRENT TRENDS

Population is not expected to significantly increase over the next ten years and the District has no plans to expand its service area.

14.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions.

The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 14-3.
- An assessment of fiscal capabilities is presented in Table 14-4.
- An assessment of administrative and technical capabilities is presented in Table 14-5.
- An assessment of education and outreach capabilities is presented in Table 14-6.
- Classifications under various community mitigation programs are presented in Table 14-7.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 14-8.

Table 14-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
Emergency Action Plan	2021	Prepared by USBR for Casitas Dam
Standard Specifications and Details	2021	Prepared by District
Emergency Response Plan	2021	Prepared by District
Standard Operating Procedures	2007	Prepared by USBR for Casitas Dam
10 Year Capital Improvement Program	2021	Updated annually by District

Table 14-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service <i>If yes, specify: Water</i>	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No

Table 14-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position: Engineering/Manager</i>	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position: Engineering/Manager</i>	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position: Engineering/Manager</i>	Yes
Staff with training in benefit/cost analysis	Yes

Staff/Personnel Resource	Available?
<i>If Yes, Department /Position:</i> Administration/Chief Financial Officer	
Surveyors	Yes
<i>If Yes, Department /Position:</i> Through Contract	
Personnel skilled or trained in GIS applications	Yes
<i>If Yes, Department /Position:</i> Engineering/GIS Technician	
Scientist familiar with natural hazards in local area	Yes
<i>If Yes, Department /Position:</i> Engineering/Manager	
Emergency manager	Yes
<i>If Yes, Department /Position:</i> Management/General Manager	
Grant writers	Yes
<i>If Yes, Department /Position:</i> Through Contract	
Other	Yes (Operations and Maintenance/Manager)

Table 14-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	No
Do you use social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs in place that could be used to communicate hazard-related information?	Yes
<i>If yes, briefly describe: Casitas uses our website to post emergency information related to interruptions in service caused by disasters.</i>	
Do you have any established warning systems for hazard events?	No

Table 14-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	No	N/A	N/A
DUNS#	Yes	072927973	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 14-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Casitas understands climate change impacts on local, regional, and Statewide water supplies</i>	High
Jurisdiction-level monitoring of climate change impacts <i>Comment: Casitas monitors local surface water flows, evaporation rates, and water demands regularly</i>	High
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: Casitas engages consultants for assistance with water supply alternatives as needed</i>	Medium
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: Casitas staff has this capacity</i>	High
Capital planning and land use decisions informed by potential climate impacts <i>Comment: Casitas manages its own capital planning; Casitas does not have jurisdiction over land use</i>	Medium
Participation in regional groups addressing climate risks <i>Comment: Casitas participates in Upper Ventura River Groundwater Agency, Ojai GMA, and Watersheds Coalition of Ventura County</i>	Medium
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: The Board of Directors considers climate change impacts during environmental review of projects under their jurisdiction.</i>	High
Identified strategies for greenhouse gas mitigation efforts <i>Comment: GGs have not been a priority for Casitas</i>	Low
Identified strategies for adaptation to impacts <i>Comment: Casitas uses its Water Efficiency Allocation Program to implement water conservation requirements based on lake level</i>	Medium
Champions for climate action in local government departments <i>Comment: The Board participates in regional organizations advocating groundwater management, drought mitigation, and water resources.</i>	Medium
Political support for implementing climate change adaptation strategies <i>Comment: Casitas' Board considers climate change in planning efforts.</i>	Medium
Financial resources devoted to climate change adaptation <i>Comment: Casitas' funds for capital projects are limited</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment: Casitas is a wholesale and retail agency. The Water Efficiency Allocation Program allows Casitas to impose conservation and penalties.</i>	High
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: Residents seem to be informed of climate change and impacts to water supply</i>	Medium
Local residents' support of adaptation efforts <i>Comment: Residents are very vocal about the need for additional water supplies</i>	High
Local residents' capacity to adapt to climate impacts <i>Comment: The majority of customers have surpassed conservation goals</i>	High
Local economy current capacity to adapt to climate impacts <i>Comment: Agricultural customers may have difficulty adapting to climate change impacts to water supply</i>	Medium
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Unsure

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

14.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

14.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **10-year Capital Improvement Plan (CIP)**—Mitigation projects are identified and included in the 10-year CIP. Funding may not be available each year to implement mitigation.
- **Emergency Response Plan (ERP)**—Casitas’ ERP identifies all vulnerable facilities and includes response actions to hazards such as earthquake, wildfire, etc.
- **Emergency Action Plan (EAP)**—The EAP prepared by the US Bureau of Reclamation is updated annually and exercises are held on a regular basis with local emergency response agencies.
- **Urban Water Management Plan (UWMP)**—The UWMP describes the District’s water supplies and demands, and identifies water supply projects to mitigate drought
- **Water Efficiency Allocation Program**—The Water Efficiency Allocation Program includes implementation of water conservation goals depending on the level of Lake Casitas to assist with drought mitigation.

14.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization.
- **Post-Disaster Recovery Plan**—The District does not have a recovery plan and intends to develop one as a mitigation planning action during the next five years. The plan will build on the mitigation goals and objectives identified in the mitigation plan.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

14.6 RISK ASSESSMENT

14.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 14-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 14-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
California COVID-19	4482	2020	Ongoing
Thomas Fire	FM-5224	2017	\$692,821
Severe Storms, Flooding, Debris Flows, and Mudslides	DR-1577	2005	\$454,822
Severe Winter Storms and Flooding	DR-1203	1998	\$200,493
Severe Winter Storms, Flooding, Landslides, Mud Flows	DR-1044	1995	\$298,414
Grass, Wildlands, Forest Fires	DR-739	1985	\$43,230
Coastal Storms, Floods, Slides, Tornadoes	DR-677	1983	\$211,950
Severe Storms, Mudslides, Flooding	DR-615	1980	\$186,619
Coastal Storms, Mudslides, Flooding	DR-547	1978	\$1,078,867
Severe Storms, High Tides, Flooding	DR-364	1973	\$97,341
Severe Storms, Flooding	DR-253	1969	\$245,005

14.6.2 Hazard Risk Ranking

Table 14-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Table 14-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Landslide	39	High
2	Severe Storms	35	High
3	Earthquake	32	High
4	Drought	30	High
4	Severe Weather	30	High
6	Wildfire	24	Medium
7	Flooding	18	Medium
8	Dam Failure	12	Low
9	Sea Level Rise	8	Low
10	Tsunami	7	Low

To develop the Risk Ranking Score for Casitas, first the scores for each category for City of Ojai, City of Ventura, and Unincorporated Ventura County were averaged. Next, for categories for which Casitas has specific experience and damages, the scores were adjusted to be more representative for Casitas’

service area and facilities. This specifically applies to the scores for Dam Failure, Drought, Severe Storms, and Severe Weather for the following reasons:

- **Dam Failure**—The average score was 16 and was adjusted to 12. Casitas Dam is owned by the US Bureau of Reclamation. The original dam was constructed in 1959 and a seismic stability berm was constructed in 1998. The dam is monitored regularly and has an extremely low chance of failure.
- **Drought**—The average score was 9 and was adjusted to 30. Casitas is particularly vulnerable to drought as all water sources are local and dependent on weather. As of October 25, 2021, Lake Casitas is at 33% capacity. If no inflows are received, this represents approximately five years of supply for customer demands. Casitas is currently in Stage 3 of its Water Efficiency Allocation Program and will reevaluate this stage after the 2021/22 winter season. In the event lake capacity is reduced to 30% or less, Casitas would implement Stage 4 of the Water Efficiency Allocation Program.
- **Severe Storms**—The average score was 24 and was adjusted to 35. Due to the topography and geographic location of District facilities, specifically pipelines in canyons and the Robles Diversion Facility adjacent to the Ventura River, damage from severe storms has been significant.
- **Severe Weather**—The average score was 24 and was adjusted to 30. Severe rain causes erosion and landslides where District pipelines are located. Severe hot weather increases evaporation at Lake Casitas as well as customer water demands.

14.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Over the past 60 years, the Rincon 2(M) Main, an 18-inch pipeline through mountainous terrain serving the coastal communities, has been washed out by severe storms/landslides, requiring multiple replacement and relocation projects.
- The District's Marion Walker Pressure Filtration Plant, Administration Building/Operations Center and 19 water storage tanks are in need of seismic assessment and potential retrofits.
- Lake Casitas relies on local water sources and is at 33% capacity as of October 2021. The ongoing drought has strained both surface water diversions and groundwater supplies.
- The Robles Diversion Facility has required several rehabilitation projects due to severe flooding along the Ventura River in 1969, 1973, 1978, 1980, 1995, and 1998 and was damaged in the Thomas Fire.
- The Thomas Fire impacted multiple District facilities resulting in a nearly \$700,000 FEMA claim. Rented mobile generators were used to power pump plants when electrical lines burned.
- The Marion Walker Pressure Filtration Plant, located at the base of Casitas Dam, is at risk of flooding from Coyote Creek, which would impact potable water treatment to all 65,000 District customers.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

14.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 14-11 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 14-11. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
CMWD-3—Replace and relocate pipes in vulnerable areas. <i>Comment: Rincon Main at Ayers Creek relocated in 2020. Additional vulnerable pipelines remain.</i>			✓	CAS-1
CMWD-4—Seismic retrofit of Ojai East and Rincon Control Reservoirs. <i>Comment: Incomplete pending completion of Casitas Master Plan.</i>			✓	CAS-4

14.8 HAZARD MITIGATION ACTION PLAN

Table 14-12 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 14-13 identifies the priority for each action. Table 14-14 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 14-12. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action CAS-1 —Replace and relocate pipes in vulnerable areas. (previously CMWD-3)						
<i>Hazards Mitigated:</i> Landslide, Severe Storms, Severe Weather						
Existing	9, 10, 11	Casitas Municipal Water District	NA	High	Grant Funding- FEMA HMA (BRIC, FMA, HMGP), General Funds	Short-term
Action CAS-2 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> Landslide, Severe Storms, Earthquake, Drought, Severe Weather, Wildfire, Flooding, Dam Failure, Sea Level Rise, Tsunami						
New & Existing	2, 7, 8, 11, 18, 19	County of Ventura	Casitas Municipal Water District	Low	Staff Time, General Funds	Short-term
Action CAS-3 —Purchase generators for critical facilities and infrastructure that lack adequate backup power, including Administration Building/Operations Center and pump plants						
<i>Hazards Mitigated:</i> Earthquake, Severe Weather, Wildfire						
Existing	2, 6	Casitas Municipal Water District	NA	Medium	Grant Funding- FEMA HMA (BRIC, FMA, HMGP), General Funds	Short-term
Action CAS-4 —Seismic evaluation and potential retrofit of Marion Walker Pressure Filtration Plant, Administration Building/Operations Center, District reservoirs (previously CMWD-4 Seismic Retrofit of Ojai East and Rincon Control Reservoirs)						
<i>Hazards Mitigated:</i> Earthquake						
Existing	2, 6, 9, 18	Casitas Municipal Water District	NA	High	Grant Funding- FEMA HMA (BRIC, FMA, HMGP), General Funds	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action CAS-5 —Ventura-Santa Barbara Counties Intertie which will allow Casitas access to 2,000 acre-feet per year of its State Water Project allocation (through facilities owned and operated by Carpinteria Valley Water District) and provides a means to supply water across County lines in the event of an emergency in the event of a supply interruption that did not significantly affect the other agency.						
<u>Hazards Mitigated:</u> Drought, Wildfire, Landslide						
New	2, 6, 8, 18	Casitas Municipal Water District	NA	High	Grant Funding (USBR, DWR), General Funds	Short-term
Action CAS-6 —Marion Walker Pressure Filtration Plant Flood Protection						
<u>Hazards Mitigated:</u> Flood, Severe Storms						
Existing	2, 6, 9, 18	Casitas Municipal Water District	NA	High	Grant Funding- FEMA HMA (BRIC, FMA, HMGP), General Funds	Short-term
Action CAS-7 —Lake Casitas Recreation Area Vegetation Management						
<u>Hazards Mitigated:</u> Wildfire						
Existing	5, 13, 14, 18	Casitas Municipal Water District	US Bureau of Reclamation	Medium	Grant Funding- FEMA HMA (BRIC, FMAP and HMGP), General Funds	Short-term
Action CAS-8 —Add a mitigation page to the Casitas website that references the Ventura County Local Hazard Mitigation Plan and provide applicable updates on action status						
<u>Hazards Mitigated:</u> Landslide, Severe Storms, Earthquake, Drought, Severe Weather, Wildfire, Flooding, Dam Failure, Sea Level Rise, Tsunami						
Existing	17, 19	Casitas Municipal Water District	NA	Low	General Funds	Short-term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date
 Acronyms used here are defined at the beginning of this volume.

Table 14-13. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
CAS-1	3	Medium	High	No	Yes	No	Low	Medium
CAS-2	6	Medium	Low	Yes	No	Yes	High	Low
CAS-3	2	Medium	Medium	Yes	Yes	No	Medium	Medium
CAS-4	4	Medium	High	No	Yes	No	Low	Medium
CAS-5	4	Medium	High	No	Yes	Yes	Low	Medium
CAS-6	4	Medium	High	No	Yes	No	Low	Medium
CAS-7	4	Medium	Medium	Yes	Yes	No	Medium	Medium
CAS-8	2	Medium	Low	Yes	No	Yes	Low	Low

a. See the introduction to this volume for explanation of priorities.

Table 14-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building ^b
High-Risk Hazards								
Landslide	CAS-1	CAS-1	CAS-8				CAS-1, 5	CAS-2, 5, 8
Severe Storms	CAS-1	CAS-1	CAS-8			CAS-6	CAS-1, 6	CAS-2, 6, 8
Earthquake		CAS-3, CAS-4	CAS-8		CAS-3	CAS-3, CAS-4		CAS-2, 4, 8
Drought			CAS-8				CAS-5	CAS-2, 5, 8
Severe Weather	CAS-1	CAS-1	CAS-8		CAS-3		CAS-1	CAS-2, 8
Medium-Risk Hazards								
Wildfire	CAS-7	CAS-7	CAS-8	CAS-7	CAS-3		CAS-5, 7	CAS-2, 5, 8
Flooding		CAS-6	CAS-8			CAS-6	CAS-6	CAS-2, 8
Low-Risk Hazards								
Dam Failure			CAS-8					CAS-2, 8
Sea Level Rise			CAS-8					CAS-2, 8
Tsunami			CAS-8					CAS-2, 8

- a. See the introduction to this volume for explanation of mitigation types.
- b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

14.9 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **2020 Urban Water Management Plan**—This plan was used to inform the capability assessment.
- **CMWD Emergency Response Plan**—This plan was used to inform the capability assessment.
- **USBR Emergency Action Plan**—This plan was used to inform the capability assessment.
- **CMWD 10-Year Capital Improvement Plan**—This plan was used to inform the capability assessment and develop the action plan.
- **CMWD Standard Specifications and Details**—This plan was used to inform the capability assessment.
- **Casitas Dam Standard Operating Procedures**—This plan was used to inform the capability assessment.
- **Water Efficiency and Allocation Program**—This plan was used to inform the capability assessment.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

14.10 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

- Seismic Analysis of Administration Building/Operations Center, Marion Walker Pressure Filtration Plant, and District reservoirs
- Technical and permitting assistance to scope flood protection improvements at Marion Walker Pressure Filtration Plant

15. CHANNEL ISLANDS BEACH COMMUNITY SERVICES DISTRICT

15.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Peter Martinez, General Manager
353 Santa Monica Dr
Oxnard, CA 93035
(805) 985-6021
pmartinez@cibcsd.com

Alternate Point of Contact

Jesus Navarro, Operations Manager
353 Santa Monica Dr
Oxnard, CA 93035
(805) 985-6021
jnavarro@cibcsd.com

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 15-1.

Table 15-1. Local Hazard Mitigation Planning Team Members

Name	Title
Peter Martinez	General Manager
Jesus Navarro	Operations Manager
CJ Dillon	Office Manager
Erika Davis	Clerk of the Board

15.2 JURISDICTION PROFILE

15.2.1 Overview

Channel Islands Beach Community Services District (CIBCSO) was created on December 13, 1982, as a result of the demand of the citizens of the beach community for an independent governmental entity to provide solutions to their need for various services, including but not limited to water, sewer, and trash services. A five member elected board governs the District. The District currently employs a staff of 8. Funding comes primarily through water, sewer, and trash rates.

The Channel Islands Beach Community Services District Board of Directors assumes responsibility for the adoption of this plan; the General Manager for CIBCSO will oversee its implementation.

15.2.2 Service Area

The Channel Islands Beach Community Services District serves the unincorporated areas of Ventura County southwest of Port Hueneme and the beach communities south of Oxnard, including the Silverstrand, Hollywood Beach, Hollywood by the Sea, and Channel Islands Harbor. The total current service area is approximately 1 square mile and serves about 10,000 customers via approximately 2,240 service connections.

15.2.3 Assets

Table 15-2 summarizes the assets of the District and their value.

Asset	Value
Property	
43 acres of land, District owns 9 lots at estimated \$400,000 each	\$3,600,000 (estimated)
Equipment	
Backhoe	\$40,000
Wach's Valve Turning Trailer	\$50,000
Ford 350 Crane Truck	\$25,000
4 light work trucks 2008-2015 in age	\$32,000
Large Generator	\$18,000
Total:	\$165,000
Critical Facilities	
Well House & Pumping Station 4200 W. Baracuda Way	\$165,000
Sewer Lift Station 529 Ocean Drive & Corner Panama/Highland	\$116,000
Sewer Lift Station 1729 Ocean Drive & 3384 Ocean Drive	\$116,000
Pump Station A-Corner Highland/Roosevelt	\$121,489.00
Pump Station B- 3765 Ocean Drive	\$121,489.00
Pump Station H- Channel Islands Blvd. and Peninsula Rd	\$79,857.00
Total:	\$719,835.00

15.3 CURRENT TRENDS

The population within the Channel Islands Beach Community Services District boundaries is not expected to significantly increase over the next five years and the District has no plans to expand its service area.

The District is legally authorized, but not obligated to provide street maintenance and improvement, street lighting, undergrounding of overhead utilities, fire protection, and police protection. The District does not provide these additional services at this time as the District does not have sufficient revenues for any of these services. The ability of the District to provide these services in the future will depend on upon available revenues and decisions by the Board of Directors and the District electors. These additional services are currently provided by the County of Ventura in the unincorporated areas of the District and by the City of Oxnard within its boundaries.

15.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

An assessment of planning and regulatory capabilities is presented in Table 15-3.

An assessment of fiscal capabilities is presented in Table 15-4.

An assessment of administrative and technical capabilities is presented in Table 15-5.

An assessment of education and outreach capabilities is presented in Table 15-6.

Classifications under various community mitigation programs are presented in Table 15-7.

The community’s adaptive capacity for the impacts of climate change is presented in Table 15-8.

Table 15-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
Capital Improvement Plan	FY 2021-2022	Through FYE 2026
Emergency Response Plan	December 2021	
Urban Water Management Plan	Adopted June 2021	In coordination with Port Hueneme Water Agency
Sewer System Management Plan	2019	

Table 15-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service <i>If yes, specify: Water, Sewer, Refuse Collection</i>	Yes
Incur Debt through Wasterwater Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Cap fees for water and sewer

Table 15-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Contracted	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Contracted	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Contracted	Yes
Staff with training in benefit/cost analysis <i>If Yes, Department /Position:</i> Contracted	Yes
Surveyors <i>If Yes, Department /Position:</i> Contracted	Yes
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Contracted	Yes
Scientist familiar with natural hazards in local area	No
Emergency manager <i>If Yes, Department /Position:</i> General Manager	Yes
Grant writers <i>If Yes, Department /Position:</i> Contracted	Yes

Table 15-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> Drought information, Tsunami information, VC Resilient Coastal Adaptation Project	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> NextDoor	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i> The Channel Islands Beach Emergency Response Team operates under the Channel Islands Beach Community Services District (CIBCSO). The team is made up of concerned residents who have completed the basic CERT training.	Yes
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> Mobile electronic message board, bulletin boards	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> NextDoor, Website, Reverse 911	Yes

Table 15-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	N/A	N/A	N/A
DUNS#	Yes	085392637	N/A
Community Rating System	N/A	N/A	N/A
Building Code Effectiveness Grading Schedule	N/A	N/A	N/A
Public Protection	N/A	N/A	N/A
Storm Ready	N/A	N/A	N/A
Firewise	N/A	N/A	N/A
Tsunami Ready	N/A	N/A	N/A

Table 15-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment:</i>	Low
Jurisdiction-level monitoring of climate change impacts <i>Comment:</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment:</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment:</i>	Low
Participation in regional groups addressing climate risks <i>Comment:</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment:</i>	Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment:</i>	Low
Identified strategies for adaptation to impacts <i>Comment: CIP addresses strategies</i>	Medium
Champions for climate action in local government departments <i>Comment: Regularly discussed in board meetings</i>	Medium
Political support for implementing climate change adaptation strategies <i>Comment:</i>	Unsure
Financial resources devoted to climate change adaptation <i>Comment: Designated rate fees for construction projects</i>	Medium
Local authority over sectors likely to be negative impacted <i>Comment:</i>	Low
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: Often shared in board meetings</i>	High
Local residents' support of adaptation efforts <i>Comment: Support voluntary water use reduction</i>	High
Local residents' capacity to adapt to climate impacts <i>Comment:</i>	Low
Local economy current capacity to adapt to climate impacts <i>Comment:</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

15.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

15.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

Capital Improvement Plan—The capital improvement plan includes projects that can help mitigate potential hazards. The District will act to ensure consistency between the hazard mitigation plan and the current and future capital improvement plans. The hazard mitigation plan may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment.

Urban Water Management Plan—The Urban Water Management Plan addresses risks also addressed in this hazard mitigation plan including water reliability in drought years and following regional power outages and earthquakes.

15.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization.
- **Emergency Response Plan**—The results of the risk assessment may be used in the next update of the emergency response plan.
- **Sewer System Management Plan**—The results of the risk assessment may be used in the next update of the sewer system management plan as it relates to infrastructure upgrades to protect against seismic activity and coastal hazards.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

15.6 RISK ASSESSMENT

15.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 15-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 15-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Rain and High Wind Event		January 19, 2021	Trees down, road closures, power outages, damage to structures
COVID-19	DR-4482	January 20, 2020 Continuing	Ongoing
Atmospheric River Storm System	CA Disaster 109	January/February 2019	Local stream and street flooding, trees down, power outages
Wildfires, Flooding, Mudflows, and Debris Flows	DR-4353	December 4, 2017- January 31, 2018	Post Thomas Fire debris flows in local rivers, large deposits of debris on local beaches, road closures
Thomas Fire	DR-4224	December 4, 2017	Public Health issues due to smoke, power outages, sewage spill due to power outage
February Winter Storm	CA Disaster 77.1	February 2017	Local stream and street flooding, trees down, power outages, debris deposits in local stream and on beaches
January Winter Storm	CA Disaster 77	January 2017	Local stream and street flooding, trees down, power outages, debris deposits in local stream and on beaches
Extreme Wind Storm		February 2016	Trees down, power outages, street closures, damage to structures, debris
Erratic Weather (frost, heat, drought)		Winter 2013	Economic loss
Tsunami (7.1 earthquake in Japan)		March 11, 2011	Damage to local harbors, marinas and docks
Tsunami (8.8 earthquake in Chile)		February 27, 2010	Damage to local harbors, marinas and docks
Storm and Flood		January 18 – 22, 2010.	Local stream and street flooding, trees down, power outages
Wildfires, Flooding, Mudflows, and Debris Flows	DR-1731	October 21 – March 31, 2008	Post burn, flooding, debris and mud flows.
Severe Storm	DR-1267	January 7 – 11, 2005	Flooding and debris flows
“El Nino” Storm and Flood		February 1998	Street and stream flooding, debris flows
Storms and Floods		January and March, 1995	Unknown
Northridge Earthquake	DR-1008	January 17 – November 30, 1994	Power and communications disruptions, damage to structures
Storm and Flood		February 10-15, 1992	Street and stream flooding, debris flows
Earthquake (Whittier Narrows Earthquake)		October 1, 1987	Unknown
Storm and Flood		February 25-March 3, 1983	Street and stream flooding, debris flows
Storm and Flood		February 13-22, 1980	Street and stream flooding, debris flows
Tsunami (9.5 earthquake in Chile)		May 24, 1960	Damage to docks and ships in Port Hueneme
St Francis Dam Disaster		March 12, 1928	\$7 Million (1928)—Inundation of nearly the entire area, flooding, debris flows, destruction of infrastructure, high loss of life

15.6.2 Hazard Risk Ranking

Table 15-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Table 15-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Dam Failure	36	High
2	Earthquake	32	High
3	Drought	9	High
4	Severe Storm	24	Medium
5	Severe Weather	24	Medium
6	Flooding	18	Medium
7	Landslide	18	Medium
8	Sea Level Rise	18	Medium
9	Tsunami	12	Low
10	Wildfire	0	Low

15.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Tsunami—The highest elevation in the service area is about 30 feet above sea level and the district operations facility is only about 20 feet above sea level.
- Erosion—Coastal erosion impacts the district service area especially during severe storm events. Impacts are expected to increase as the sea level rises and climate change produces stronger or more frequent coastal storms.
- Earthquake and Liquefaction Zone—Asbestos cement pipe infrastructure is known to have moderate to high vulnerability, especially in liquefaction areas. In order for the infrastructure to be more resilient to seismic activity in the liquefaction zone, it needs to be replaced with PVC C900 pipes, which have a lower vulnerability rating.
- Drought—80 percent of the water distributed by the district is pumped from wells. Only 20 percent is imported.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

15.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 15-11 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 15-11. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>OA 9—Identify potentially vulnerable public and private utility systems including electric, gas, oil, water, sewer and communication. Upgrade vulnerable systems to ensure the operation and timely restoration of essential systems to reasonable levels of service.</p> <p><i>Comment:</i> Closed circuit TV assessments done in 2018, but need to continue every 5 years. The district does not have current authority over electric, gas, oil or communication utilities.</p>			✓	CIB-2 CIB-3
<p>OA 18—Continue to participate in the NWS TsunamiReady Program through continued implementation of Guideline 4: Community Preparedness measures, including public outreach material and curriculum.</p> <p><i>Comment:</i> Public outreach component is part of the CERT outreach and is an ongoing action that needs to be carried forward.</p>			✓	CIB-8
<p>CIBCSD 1—Replace and relocate pipes in vulnerable areas.</p> <p><i>Comment:</i> Sewer line replacement is an ongoing action and needs to be carried forward.</p>			✓	CIB-2 CIB-3

15.8 HAZARD MITIGATION ACTION PLAN

Table 15-12 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 15-13 identifies the priority for each action. Table 15-14 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 15-12. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action CIB-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.</p> <p><i>Hazards Mitigated:</i> Dam Failure, Earthquake, Severe Storm, Severe Weather, Flooding, Landslide, Sea Level Rise, Tsunami</p>						
Existing	2, 6, 9, 11, 19	CIBCSD		High	General Funds, Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short-term
<p>Action CIB-2—Assess and address the vulnerability of critical sewer infrastructure through the capital improvement plan process, including, but not limited to:</p> <ul style="list-style-type: none"> • Inflow and Infiltration Reduction • Sewer Lift Station and Pump Station Rehabilitation • Sewer Improvement Projects • Pump Station B Replacement • Oxnard Wastewater Plant Improvements <p><i>Hazards Mitigated:</i> Dam Failure, Earthquake, Severe Storm, Severe Weather, Flooding, Landslide, Sea Level Rise, Tsunami</p>						
Existing	2, 6, 9, 11, 19	CIBCSD		High	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short-term and Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action CIB-3 —Assess and address the vulnerability of critical water infrastructure through the capital improvement plan process, including, but not limited to: <ul style="list-style-type: none"> • Easement Risk Mitigation Projects • Port Hueneme Water Agency Improvements • Water Distribution Improvements • Valve Replacement • Water Supply Upgrades • Fire Flow Improvements 						
<u>Hazards Mitigated:</u> Dam Failure, Earthquake, Drought, Severe Storm, Severe Weather, Flooding, Landslide, Sea Level Rise, Tsunami						
Existing	2, 6, 9, 11, 19	CIBCSD		High	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short-term and Ongoing
Action CIB-4 —Replace or renovate the Administration & Operations Facility to meet current seismic and Americans with Disabilities Act standards						
<u>Hazards Mitigated:</u> Dam Failure, Earthquake, Severe Storm, Severe Weather, Flooding, Landslide, Sea Level Rise, Tsunami						
Existing	2, 6, 9, 11, 19	CIBCSD		High	General Funds, Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short-term
Action CIB-5 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<u>Hazards Mitigated:</u> Dam Failure, Earthquake, Drought, Severe Storm, Severe Weather, Flooding, Landslide, Sea Level Rise, Tsunami, Wildfire						
New & Existing	2, 8, 17, 19	CIBCSD		Low	Staff Time, General Funds	Short-term
Action CIB-6 —Purchase generators for critical facilities and infrastructure that lack adequate backup power.						
<u>Hazards Mitigated:</u> Dam Failure, Earthquake, Severe Storm, Severe Weather, Flooding, Landslide, Tsunami, Wildfire						
Existing	2, 6	CIBCSD		High	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, HMGP)	Short-term
Action CIB-7 —Study the feasibility of using green energy, such as solar power, for emergency backup power at pump stations and other critical locations. Determine if space requirements can be met with current or new green energy technology.						
<u>Hazards Mitigated:</u> Dam Failure, Earthquake, Severe Storm, Severe Weather, Flooding, Landslide, Tsunami						
Existing	1, 15, 19	CIBCSD		Low	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short-term
Action CIB-8 —Continue to participate in the NWS TsunamiReady Program through continued implementation of Guideline 4: Community Preparedness measures, including public outreach material and curriculum.						
<u>Hazards Mitigated:</u> Tsunami						
New & Existing	2, 7, 8, 17	CIBCSD		Low	Staff Time, General Funds	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date
 Acronyms used here are defined at the beginning of this volume.

Table 15-13. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	5	High	High	Yes	Yes	No	Medium	High
2	5	Medium	High	No	Yes	Yes	Low	Medium
3	5	Medium	High	No	Yes	Yes	Low	Medium
4	5	High	High	Yes	Yes	Yes	High	High
5	4	Medium	Low	Yes	No	Yes	High	Low
6	2	High	High	Yes	Yes	No	Medium	High
7	3	Low	Low	Yes	Yes	Yes	High	Medium
8	4	Medium	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 15-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building ^b
High-Risk Hazards								
Dam Failure	CIB-2, 3	CIB-1, 2, 3, 4	CIB-5	CIB-7	CIB-6	CIB-2	CIB-7	CIB-5, 7
Earthquake	CIB-2, 3	CIB-1, 2, 3, 4	CIB-5	CIB-7	CIB-6	CIB-2	CIB-7	CIB-5, 7
Drought	CIB-3	CIB-3	CIB-5					CIB-5
Medium-Risk Hazards								
Severe Storm	CIB-2, 3	CIB-1, 2, 3, 4	CIB-5	CIB-7	CIB-6	CIB-2	CIB-7	CIB-5, 7
Severe Weather	CIB-2, 3	CIB-1, 2, 3, 4	CIB-5	CIB-7	CIB-6	CIB-2	CIB-7	CIB-5, 7
Flooding	CIB-2, 3	CIB-1, 2, 3, 4	CIB-5	CIB-7	CIB-6	CIB-2	CIB-7	CIB-5, 7
Landslide	CIB-2, 3	CIB-1, 2, 3, 4	CIB-5	CIB-7	CIB-6	CIB-2	CIB-7	CIB-5, 7
Sea Level Rise	CIB-2, 3	CIB-1, 2, 3, 4	CIB-5	CIB-7				CIB-5
Low-Risk Hazards								
Tsunami	CIB-2, 3	CIB-1, 2, 3, 4	CIB-5	CIB-7	CIB-6	CIB-2	CIB-7	CIB-5, 7, 8
Wildfire					CIB-6			CIB-5

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

15.9 PUBLIC OUTREACH

Table 15-15 lists public outreach activities for this jurisdiction.

Table 15-15. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Channel Islands Beach Emergency Response Team Meetings	Monthly, every third Tuesday	Average attendance 8
Website—tsunami evacuation and emergency preparedness outreach	Updated as needed	About 10,000 customers

15.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **Capital Improvement Plan**—The CIP was reviewed for the capabilities assessment, plan integration analysis, and in the development of mitigation actions.
- **Port Hueneme Water Agency 2020 Urban Water Management Plan**—The urban water management plan was used for the capabilities assessment, plan integration analysis, and in the development of mitigation actions.
- **Emergency Response Plan**—The Emergency Response Plan was reviewed for the capabilities assessment.
- **Sewer System Management Plan**—The Sewer System Management Plan was reviewed for the capabilities assessment.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- **Environmental Protection Agency (EPA) Earthquake Resilience Guide for Water and Wastewater Utilities, March 2018**—Reviewed for the development of the mitigation action plan.

15.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Groundwater Sustainability Plan will require groundwater pumping cutbacks by 50% over the next 20 years.

16. CONEJO RECREATION & PARK DISTRICT

16.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Bill Palermo, Park Operations Analyst
403 West Hillcrest Drive
Thousand Oaks, CA 91360
Telephone: 805-381-1201
e-mail Address: bpalermo@crpd.org

Alternate Point of Contact

Andrew Mooney, Senior Planner
403 West Hillcrest Drive
Thousand Oaks, CA 91360
Telephone: 805-495-6471
e-mail Address: amooney@crpd.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 16-1.

Table 16-1. Local Hazard Mitigation Planning Team Members

Name	Title
James Friedl	General Manager
Bill Palermo	Park Operations Analyst
Andrew Mooney	Senior Park Planner

16.2 JURISDICTION PROFILE

16.2.1 Overview

The Conejo Recreation and Park District (CRPD) is a special district created in 1963 to provide park and recreational services and facilities for the residents of the Conejo Valley. A five-member elected Board of Directors governs the District. The Board will assume responsibility for the adoption of this plan; the General Manager will oversee its implementation. The District currently employs a full-time staff of 94. Funding is obtained through property taxes, State revenue bonds, developer fees, and assessment districts.

The City of Thousand Oaks and CRPD formed the Conejo Open Space Conservation Agency (COSCA) by a Joint Powers Agreement in 1977. This agreement enables the combined agency to conserve natural open space lands and assures the coordination of local land use and resource management decisions that support the goals of the City of Thousand Oaks General Plan and the CRPD Master Plan. Additional agreements between the City of Thousand Oaks, COSCA, and CRPD provide for an extensive equestrian/hiking trail system and a citywide bicycle trail system. In cooperation with the National Park Service, the Mountains Recreation and Conservation Authority,

COSCA, CRPD, and CTO, over 15,000 acres of open space are available for public enjoyment. COSCA, CRPD, and the City of Thousand Oaks maintain approximately 13,215 acres of this amount and a 140-mile multi-use trail system.

16.2.2 Service Area and Trends

The District covers 62 square miles, and serves more than 136,000 residents of Thousand Oaks, Newbury Park, and the Ventura County portion of Westlake Village. Assets

Table 16-2 summarizes the assets of the District and their value.

Table 16-2. Special-Purpose District Assets

Asset	Value
Property	
3,254.1 acres of land	\$ unknown
Equipment	
Vehicles, Blanket	\$1,563,000
Equipment Blanket	\$2,500,000
Total:	\$4,063,000
Critical Facilities	
Borchard Community Center—190 Reino Road, Thousand Oaks, CA 91320	\$2,619,000
Conejo Community Center—1175 Hendrix Avenue, Thousand Oaks, CA 91360	\$3,571,486
Dos Vientos Community Center—4801 Borchard Road, Thousand Oaks, CA 91320	\$4,935,548
Thousand Oaks Community Center—2525 N. Moorpark Rd, Thousand Oaks, CA 91360	\$6,483,858
Old Meadows Center—1600 Marview Drive, Thousand Oaks, CA 91362	\$1,349,914
Hillcrest Center—403 West Hillcrest Drive, Thousand Oaks, CA 91360	\$1,088,921 (contents only)
Conejo Creek South Park	\$1,402,928
<i>Total: (value of all facilities on Property Schedule: \$60,684,717)</i>	\$21,451,655

16.3 CURRENT TRENDS

Recent updates to the City’s General Plan project a build-out population of over 145,000 by 2045. CRPD faces two distinct funding challenges. The first is the high cost of funding new facilities, and the second, the funding of ongoing maintenance and operation of new and existing facilities. Coordination with the City and updates to the District’s Master Plan will enable the District to meet the projected service needs of the community.

16.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation

Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

An assessment of planning and regulatory capabilities is presented in Table 16-3.

An assessment of fiscal capabilities is presented in Table 16-4.

An assessment of administrative and technical capabilities is presented in Table 16-5.

An assessment of education and outreach capabilities is presented in Table 16-6.

Classifications under various community mitigation programs are presented in Table 16-7.

The community’s adaptive capacity for the impacts of climate change is presented in Table 16-8.

Table 16-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
CRPD Administration Public Policies and Documents	Continually updated	Public Policies and Documents: Finance & Audit; Forms and Documents
Memorandum of Understanding for Emergency Care and Shelter Services	5/12/20	
American Red Cross Agreement	5/12/20	
County of Ventura Mass Care Shelter Annex	3/12/19	
CRPD Disaster Management Plan	5/07/20	Internal document not formally approved

Table 16-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

Table 16-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Andrew Mooney, Senior Planner; Bill Palermo, Park Operations Analyst	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Andrew Mooney, Senior Planner; Joe Tornero, Facility Maintenance Supervisor	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Andrew Mooney, Senior Planner; Matt Kouba, Park Superintendent;	Yes
Staff with training in benefit/cost analysis <i>If Yes, Department /Position:</i> Andrew Mooney, Senior Planner; Bill Palermo, Park Operation Analyst	Yes
Surveyors	No
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Bill Palermo, Park Operations Analyst	Yes
Scientist familiar with natural hazards in local area	No
Emergency manager <i>If Yes, Department /Position:</i> Matt Kouba, Park Superintendent	Yes
Grant writers <i>If Yes, Department /Position:</i> Bill Palermo, Park Operations Analyst	Yes

Table 16-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	No
Do you have personnel skilled or trained in website development? (consultant developed; staff maintained)	Yes
Do you have hazard mitigation information available on your website? <i>If Yes, briefly describe:</i> Information posted as needed during an event (i.e., emergency shelters; cooling centers)	Yes
Do you use social media for hazard mitigation education and outreach? <i>If Yes, briefly describe:</i> Information posted as needed during an event (i.e., emergency shelters; cooling centers)	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs in place that could be used to communicate hazard-related information?	No
Do you have any established warning systems for hazard events?	No

Table 16-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code:	No	N/A	N/A
DUNS#:	Yes	798289708	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 16-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment:</i>	Low
Jurisdiction-level monitoring of climate change impacts <i>Comment:</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment:</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment:</i>	Low
Participation in regional groups addressing climate risks <i>Comment:</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: Processes in CEQA require climate change impacts to be considered.</i>	Medium
Identified strategies for greenhouse gas mitigation efforts <i>Comment:</i>	Low
Identified strategies for adaptation to impacts <i>Comment: Strategies include, but not limited to, capturing electrical power through solar carport, emergency backup generators, removal of non-essential turf, LED construction practices, fuel modification, fire resiliency projects, stormwater management, bioswales and planting of vegetation on slopes. An existing agreement with American Red Cross and pending shelter agreement with the County of Ventura aid in providing public assistance during a climate event.</i>	Medium
Champions for climate action in local government departments <i>Comment: Planning of development and capital improvement projects include aforementioned strategies in addressing the negative impacts of climate change. Capital improvement project proposals take into consideration hazard mitigation potential as a means of evaluating project prioritization.</i>	Medium
Political support for implementing climate change adaptation strategies <i>Comment: CRPD Board of Directors and other elected City officials support strategies for implementation of climate change adaptation.</i>	Medium
Financial resources devoted to climate change adaptation <i>Comment: Funding for climate change adaptation is available through the District's General Fund and Capital Improvement Projects budget.</i>	Medium
Local authority over sectors likely to be negative impacted <i>Comment: CRPD works closely with the Ventura County Fire Protection District to eliminate potential risks of wildfire. Fuel modification is managed through an annual weed abatement contract and brush clearance easements.</i>	Medium
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment:</i>	Low
Local residents' support of adaptation efforts <i>Comment:</i>	Low
Local residents' capacity to adapt to climate impacts <i>Comment:</i>	Low
Local economy current capacity to adapt to climate impacts <i>Comment:</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

16.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

16.5.1 Existing Integration

Conejo Recreation and Park District continually integrates hazard mitigation information and strategies during planning sessions related to capital improvement projects. This includes projects of new development and those related to the major repair of existing facilities (see FY 2021-2023 Adopted Budget via ‘CRPD Administration Public Policies and Documents’ link, Finance and Audit Section, in Table 16-3 above).

The development of internal documents, such as the ‘CRPD Disaster Management Plan’, which outlines a disaster response protocol, including training, and procedures for deployment of resources during an event, is another example of this integration. The District has included, in its two-year budget, portable emergency backup generators and electrical plug-in retrofits for these units. Other examples of integration include sustainable building practices, reduction of non-essential turf in response to the ongoing drought and the adoption of facility use agreements with coordinating agencies, such as the City of Thousand Oaks and American Red Cross.

16.5.2 Opportunities for Future Integration

The capability assessment has not identified any plans or programs for future integration with hazard mitigation information.

16.6 RISK ASSESSMENT

16.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 16-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 16-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19	DR-4482-CA	3/2020	\$150,000; ongoing
Woolsey / Hill Fires	DR-4407-CA	11/2018	\$712,000; mutual aid provided in fire response
Active Shooter, Borderline Shooting	N/A	11/2018	support role; no cost damages
Sesnon Fire	CA-LAC-08246455	10/2008	\$ 45,970, mutual aid provided in fire response
California Wildfires	DR-1731-CA	10/2007	\$ 21,982; mutual aid provided in fire response
California Severe Storms	DR-1577-CA	1/2005	\$131,602; flooding, power outages, debris from winds

Type of Event	FEMA Disaster #	Date	Damage Assessment
Fire Mitigation	DR-1498-CA	10/2003	\$115,950; mutual aid provided in fire response
Wildfire	N/A	12/2000	Gusty winds fueled wildfire, 600-acres burned; mutual aid
Severe Winter Storms, El Niño	DR-1203-CA	2/1998	\$398,984; flooding, power outages; debris from winds
Winter Storms (Aggregate)	N/A	1996, 1997	Flooding, power outages; debris from heavy winds
Northridge-Simi Earthquake	DR-1008-CA	1/1994	no cost damages
California Fires	DR-1005-CA	10/1993	\$27,288; mutual aid provided in fire response

16.6.2 Hazard Risk Ranking

Table 16-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Table 16-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Landslide	51	High
2	Wildfire	36	High
3	Earthquake	32	High
4	Severe Storms	24	Medium
4	Severe Weather	24	Medium
5	Flooding	18	Medium
6	Dam Failure	12	Low
7	Drought	9	Low
8	Sea Level Rise; Coastal Erosion	0	Low
8	Tsunami	0	Low

16.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern.

Irrespective of the risk ranking above, the principal hazards affecting Conejo Recreation and Park District are wildfire, severe storms and weather, and drought. The following hazard mitigation action plan will address vulnerabilities through flood and erosion control, soil stabilization, defensible space, ignition-resistant construction and infrastructure retrofits. Through independent solutions, public facilities and neighboring properties will have increased protection and full capacity of use.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

16.7 HAZARD MITIGATION ACTION PLAN

Table 16-11 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 16-12 identifies the priority for each action. Table 16-13 summarizes the actions by hazard of concern and type.

Table 16-11. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action CRP-1—Maintain wildfire hazard fuel reduction program for areas that have been identified with overgrown or dead brush, trees and weeds to reduce the potential for tree-to-tree ignition. Ensure that a "maintenance now" component to provide continued fire resistance is part of the program. (Coordinates with Ventura County Fire Protection District Action VFP-6 and City of Thousand Oaks Action CTO-7)</p> <p><u>Hazards Mitigated:</u> Wildfire</p>						
New & Existing	2, 4, 5, 6, 8, 10, 11, 13, 14, 15, 18, 19	Ventura County Fire Protection District	CAL FIRE, USDA, Conejo Recreation & Park District, City of Thousand Oaks	Low	General Fund, Grant Funding- FEMA HMA (BRIC, HMGP and FMAP)	Ongoing
<p>Action CRP-2—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.</p> <p><u>Hazards Mitigated:</u> Landslide, Wildfire, Earthquake, Severe Storms, Severe Weather, Flooding, Dam Failure, Drought</p>						
New & Existing	4, 5, 6, 8, 19	County of Ventura	CRPD	Low	Staff Time, General Funds	Short-term
<p>Action CRP-3—Purchase generators for critical facilities and infrastructure that lack adequate backup power. Install transfer switches to allow temporary power connections during emergencies. (Several CRPD community centers serve as evacuation shelters or cooling centers during a disaster or hazard event.)</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire</p>						
Existing	2, 6, 7, 8	Conejo Recreation & Park District	N/A	Medium	Capital Improvement Project Budget, Staff Time, Grant Funding- FEMA HMA (BRIC, HMGP)	Short-term
<p>Action CRP-4—Major removal of vegetation and sediment debris, flood control capacity improvement to existing drainage infrastructure in conjunction with soil stabilization and erosion control measures Districtwide, at key locations within 26 parks.</p> <p><u>Hazards Mitigated:</u> Flooding, Wildfire, Severe Weather</p>						
Existing	2, 5, 7, 8	Conejo Recreation & Park District	N/A	Medium	General Fund, Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short-term
<p>Action CRP-5—Retrofit irrigation system components with bubblers, low-angle directional spray heads, and smart controllers to reduce water consumption and runoff.</p> <p><u>Hazards Mitigated:</u> Drought</p>						
New & Existing	5, 8, 19	Conejo Recreation & Park District	N/A	Medium	General Fund	Ongoing
<p>Action CRP-6—Remove non-essential turf and install drought-tolerant plants with mulch ground cover. Irrigation modifications as necessary. All new development will incorporate this action into the design of each park.</p> <p><u>Hazards Mitigated:</u> Drought</p>						
New & Existing	5, 8, 19	Conejo Recreation & Park District	N/A	Medium	General Fund	Ongoing
<p>Action CRP-7—Track future hazard events and impacts to inform decisions on future development and provide public outreach opportunities for hazard awareness.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Severe Storms, Tsunami, Wildfire</p>						
New & Existing	1, 2, 5, 6, 8, 17	Conejo Recreation & Park District	N/A	Low	General Fund	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Table 16-12. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	12	High	Low	Yes	Yes	Yes	High	High
2	5	Medium	Low	Yes	No	No	Low	Low
3	4	High	Medium	Yes	Yes	No	Medium	Medium
4	4	Medium	Medium	Yes	Yes	No	Medium	Medium
5	3	Medium	Medium	Yes	No	Yes	High	Low
6	3	Medium	Medium	Yes	No	No	Low	Low
7	6	Low	Low	Yes	No	No	Low	Low

a. See the introduction to this volume for explanation of priorities

Table 16-13. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building ^b
High-Risk Hazards								
Landslide	CRP-7	CRP-4	CRP-2, 7		CRP-3			CRP-2, 3, 7
Wildfire	CRP-1, 7	CRP-1, 4	CRP-1, 2, 7	CRP-1, 4, 6	CRP-3		CRP-4	CRP-2, 3, 7
Earthquake	CRP-7	CRP-4	CRP-2, 7	CRP-6	CRP-3			CRP-2, 3, 7
Medium-Risk Hazards								
Severe Storms	CRP-7	CRP-4	CRP-2, 7		CRP-3			CRP-2, 3, 7
Severe Weather	CRP-7	CRP-4	CRP-2, 7	CRP-4	CRP-3		CRP-4	CRP-2, 3, 7
Flood	CRP-7		CRP-7		CRP-3		CRP-4	CRP-2, 3, 7
Low-Risk Hazards								
Dam Failure	CRP-7				CRP-3			CRP-2, 3, 7
Drought			CRP-2, 7	CRP-1, 5, 6	CRP-3		CRP-5, 6	CRP-2, 3, 7

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

16.8 PUBLIC OUTREACH

Table 16-14 lists public outreach activities for this jurisdiction.

Table 16-14. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Information posted on District website and social media	Ongoing	130,000

16.9 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **American Red Cross Shelter Agreement**—Reviewed for capabilities and integration.
- **Center Emergency Action Plan**—Reviewed for capabilities
- **Memorandum of Understanding for Emergency Care and Shelter Services**—Reviewed for capabilities and integration
- **County of Ventura Mass Care Shelter Annex**—Reviewed for capabilities and integration
- **CRPD Capri Property Schedule**—Used to list district assets

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

16.10 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

The District will study and consider options to increasingly develop projects to reduce risk/vulnerability through climate resilient mitigation activities including, floodplain and stream restoration, green infrastructure methods, and flood diversion and storage.

17. OJAI VALLEY SANITARY DISTRICT

17.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Jeff Palmer, General Manager
1072 Tico Road
Ojai, California 93023
Telephone: 805-646-5548
e-mail Address: jeff.palmer@ojaisan.org

Alternate Point of Contact

Alison Young, Administrative Officer
1072 Tico Road
Ojai, California 93023
Telephone: 805-646-5548
e-mail Address: alison.young@ojaisan.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 17-1.

Table 17-1. Local Hazard Mitigation Planning Team Members

Name	Title
Jeff Palmer	General Manager
Alison Young	Administrative Officer

17.2 JURISDICTION PROFILE

17.2.1 Overview

The Ojai Valley Sanitary District was established in 1985 as the result of a consolidation of the Ventura Avenue, Oak View, and Meiners Oaks sanitary districts and the Sanitation Department of the City of Ojai. It collects and transports wastewater for treatment at the Ojai Valley Treatment Plant and disposes of effluent and sludge.

The district is a public agency organized under the Sanitary District Act of 1923 and is governed by an elected seven-member board.

The Board of Directors assumes responsibility for the adoption of this plan; Staff will oversee its implementation.

17.2.2 Service Area

The District provides sanitary sewer service for about 20,000 residents of the City of Ojai and the unincorporated Ojai Valley. The District's collection system consists of approximately 120 miles of trunk and main sewer lines.

17.2.3 Assets

Table 17-2 summarizes the assets of the District and their value.

Asset	Value
Property	
0 acres of land	N/A
Equipment	
Vehicles	\$1.5 million
<i>Total:</i>	<i>\$1.5 million</i>
Critical Facilities	
Tico Administration Office—1072 Tico Road, Ojai CA 93023	\$2.5 million
Santa Ana Lift Station—Santa Ana Rd, Oak View CA 93022	\$5 million
Little Santa Ana Lift Station—Santa Ana Rd, Oak View CA 93022	\$1.5 million
Orchard Lift Station—Ojai Ca 93023	\$5 million
Wastewater Treatment Plant—6363 N Ventura Ave, Ventura CA 93001	\$27 Million
Collection System—various areas, Ojai Valley, Ventura CA	\$22.8 million
<i>Total:</i>	<i>\$63.8 Million</i>

17.3 CURRENT TRENDS

Flows have been steady for years with little new growth.

17.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 17-3.
- An assessment of fiscal capabilities is presented in Table 17-4.
- An assessment of administrative and technical capabilities is presented in Table 17-5.
- An assessment of education and outreach capabilities is presented in Table 17-6.
- Classifications under various community mitigation programs are presented in Table 17-7.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 17-8.

Table 17-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
Budget	7/2021	Annual Budget Adoption
CIP	7/2021	Reviewed Monthly
Disaster Operations Plan		
District Code of Regulations	6/2021	Updated through Ordinance No. OVSD-83
Infiltration & Inflow Master Plan	2014	
Sewer System Management Plan	9/2019	

Table 17-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service <i>If yes, specify:</i> Sewer Service Fees	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No

Table 17-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Operations Manager and General Manager	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Operations Manager and General Manager	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Operations Manager and General Manager	Yes
Staff with training in benefit/cost analysis <i>If Yes, Department /Position:</i> Operations Manager and General Manager	Yes
Surveyors	No
Personnel skilled or trained in GIS applications	No
Scientist familiar with natural hazards in local area	No
Emergency manager <i>If Yes, Department /Position:</i> Operations Manager and General Manager	Yes
Grant writers <i>If Yes, Department /Position:</i> Operations Manager and General Manager	Yes

Table 17-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	Yes
Do you use social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs in place that could be used to communicate hazard-related information?	No
Do you have any established warning systems for hazard events?	No

Table 17-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	No	N/A	N/A
DUNS#	Yes	081077164	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 17-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment:</i> OVSD has engineering staff to track and record flow & loading as it changes over time. Real time data is available to make operational decisions	High
Jurisdiction-level monitoring of climate change impacts <i>Comment:</i> OVSD has engineering staff to track and record flow & loading as it changes over time. Real time data is available to make operational decisions	High
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment:</i> OVSD has engineering staff to track and record flow & loading as it changes over time. Real time data is available to make operational decisions	High
Capital planning and land use decisions informed by potential climate impacts <i>Comment:</i>	Low
Participation in regional groups addressing climate risks <i>Comment:</i>	Low

Criterion	Jurisdiction Rating ^a
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: OVSD has capability to make operational decisions to address flow conditions</i>	Medium
Identified strategies for greenhouse gas mitigation efforts <i>Comment:</i>	Low
Identified strategies for adaptation to impacts <i>Comment: OVSD has capability to make operational decisions to address flow conditions</i>	Medium
Champions for climate action in local government departments <i>Comment:</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment:</i>	Low
Financial resources devoted to climate change adaptation <i>Comment:</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment:</i>	Low
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: Climate risks studied by County of Ventura & City of Ojai</i>	High
Local residents' support of adaptation efforts <i>Comment: Climate risks studied by County of Ventura & City of Ojai</i>	High
Local residents' capacity to adapt to climate impacts <i>Comment:</i>	Low
Local economy current capacity to adapt to climate impacts <i>Comment:</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

17.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

17.5.1 Existing Integration

No level of integration has already been established between local hazard mitigation planning and other local plans and programs.

17.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment did not identify any plans or programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future.

17.6 RISK ASSESSMENT

17.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 17-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 17-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4482	January 20, 2020 and continuing	District administrative operations were impacted due to stay-at-home orders
Thomas Fire	FM-5224-CA	12/4/2017	\$90,000
Wolf Fire	N/A	6/1/2002	This event impacted the Ojai area, but damages specific to the district are unknown.
Flash Flood	N/A	2/20/2000	Heavy rain, totaling 2 to 6 inches produced flash flooding in Ventura County, but damages specific to the district are unknown.

17.6.2 Hazard Risk Ranking

Table 17-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Table 17-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Landslide	33	High
2	Earthquake	32	Medium
3	Severe Storms	24	Medium
4	Severe Weather	24	Medium
5	Wildfire	18	Medium
6	Flooding	18	Medium
7	Dam Failure	12	Low
8	Drought	9	Low

17.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- OVSD has had a direct wildfire impact in the form of damages done by the Thomas Fire. Increased drought conditions make us susceptible to a similar occurrence.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

17.7 STATUS OF PREVIOUS PLAN ACTIONS

The District began to participate in the previous plan, but did not complete participation and therefore does not have a previous action plan.

17.8 HAZARD MITIGATION ACTION PLAN

Table 17-11 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 17-12 identifies the priority for each action. Table 17-13 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 17-11. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action OVS-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storms, Severe Weather, Wildfire, Flooding, Dam Failure						
Existing	2, 6, 9, 11	OVSD	None	High	FEMA HMA (BRIC, FMA, HMGP)	Short-term
Action OVS-2 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storms, Severe Weather, Wildfire, Flooding, Dam Failure, Drought						
New & Existing	2, 8, 11, 19	OVSD	None	Low	Staff Time, General Funds	Short-term
Action OVS-3 —Purchase generators for all critical facilities and infrastructure that lack adequate backup power.						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storms, Severe Weather, Wildfire, Flooding, Dam Failure						
Existing	2, 7, 8	OVSD	None	High	Grant Funding- FEMA HMA (BRIC, HMGP)	Short-term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 17-12. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	4	High	High	Yes	Yes	No	Medium	High
2	4	Medium	Low	Yes	No	Yes	High	Low
3	3	High	High	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

Table 17-13. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building ^b
High-Risk Hazards								
Landslide		OVS-1, 3	OVS-2		OVS-3			OVS-2
Medium-Risk Hazards								
Earthquake		OVS-1, 3	OVS-2		OVS-3			OVS-2
Severe Storms		OVS-1, 3	OVS-2		OVS-3			OVS-2
Severe Weather		OVS-1, 3	OVS-2		OVS-3			OVS-2
Wildfire		OVS-1, 3	OVS-2		OVS-3			OVS-2
Flooding		OVS-1, 3	OVS-2		OVS-3			OVS-2
Low-Risk Hazards								
Dam Failure		OVS-1, 3	OVS-2		OVS-3			OVS-2
Drought			OVS-2					OVS-2

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of administrative and technical or financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

17.9 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **Budget**—as a financial reference point and pre-planning operationally and major expenditures through reserves
- **CIP**—Summary and tracking of Construction Projects in progress
- **Disaster Operations Plan**—Guide to disaster preparedness and navigation

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

18. PLEASANT VALLEY RECREATION & PARK DISTRICT

18.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

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This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 18-1.

Table 18-1. Local Hazard Mitigation Planning Team Members

Name	Title
Mary Otten	General Manager
Leonore Young	Administrative Services Manager
Bob Cerasuolo	Park Services Manager
Dylan Gunning	Administrative Analyst
Jessica Puckett	Administrative Analyst
Nick Marienthal	Park Supervisor

18.2 JURISDICTION PROFILE

18.2.1 Overview

The Pleasant Valley Recreation and Park District is a Special District created in 1962 to provide recreation services and programs and to maintain park space which encompasses the city of Camarillo (“City”) and surrounding areas. A five-member elected Board of Directors governs the District. The Board assumes responsibility for the adoption of this plan: the General Manager will oversee its implementation. The District currently employs a staff of 48. Funding comes primarily through property taxes and fees charged for District classes and programs.

18.2.2 Service Area

The Pleasant Valley Recreation and Park District serves the City of Camarillo and the unincorporated areas outside the City of Camarillo city limits to include California State University Channel Island. The

District service area covers 45 square miles with 256 acres of park land, serving a population over 78,936 (as of the latest census).

18.2.3 Assets

Table 18-2 summarizes the assets of the District and their value.

Table 18-2. Special-Purpose District Assets	
Asset	Value
Property	
256.5 Acres of Land	\$22,732,253
Adolfo Park 3601 N. Adolfo, Camarillo CA 93010 (3.0 Acres)	
Arneill Ranch Park 1301 Sweetwater, Camarillo CA 93010 (5.0 Acres)	
Birchview Park 5564 Laurel Ridge Lane, Camarillo CA 93012 (0.7 Acres)	
Calleguas Creek Park 675 Avenida Valencia, Camarillo CA 93012 (3.0 Acres)	
Camarillo Oak Grove Park 6968 Camarillo Springs Rd, Camarillo CA 93012 (24.55 Acres)	
Carmenita Park 1506 Sevilla Camarillo CA 93010 (1.0 Acre)	
Charter Oak Park 2500 Charter Oak Drive Camarillo CA 93010 (5.7 Acres)	
Community Center Park 1605 E. Burnley Street Camarillo CA 93010 (12.9 Acres)	
Dos Camino Park 2198 N. Ponderosa Lane Camarillo CA 93010 (4.4 Acres)	
Encanto Park 5300 Encanto Camarillo CA 93012 (3.0 Acres)	
Foothill Park 1501 Cranbrook Street Camarillo CA 93010 (2.3Acres)	
Freedom Park 275 E. Pleasant Valley Road Camarillo CA 93010 (33.9 Acres)	
Heritage Park 1630 Heritage Trail Camarillo CA 93012 (9.0 Acres)	
Las Posas Equestrian Park 2084 Via Veneto Camarillo CA 93010 (2.0 Acres)	
Laurelwood Park 2127 Dexter Camarillo CA 93010 (1.5 Acres)	
Lokker Park 848 Vista Coto Verde Camarillo CA 93010 (7.0 Acres)	
Mel Vincent Park 668 Calistoga Road Camarillo CA 93010 (5.0 Acres)	
Mission Oaks Park 5501 Mission Oaks Blvd Camarillo CA 930102 (20.2 Acres)	
Nancy Bush Park 1150 Bradford Camarillo CA 93010 (3.4 Acres)	
Pitts Ranch Park 1400 Flynn Road Camarillo CA 93012 (10.0 Acres)	
Bob Kildee Community Park 1030 Temple Ave Camarillo CA 93010 (13.0 Acres)	
Quito Park 7073 Quito Court Camarillo CA 93012 (5.0 Acres)	
Springville Park 801 Via Zamora Camarillo CA 93010 (5.0 Ares)	
Trailside Park 5462 Cherry Ridge Drive Camarillo CA 93012 (0.5 Acres)	
Valle Lindo Park 889 Aileen Street Camarillo CA 93010 (10.0 Acres)	
Pleasant Valley Fields 3777 Village at the Park Drive Camarillo CA 93010 (55.0 Acres)	
Woodcreek Park 1200 Woodcreek Road Camarillo CA 93012 (5.0 Acres)	
Woodside Park 247 Japonica Avenue Camarillo CA 93012 (5.0 Acres)	
Equipment	
20 Parks Vehicles	\$805,000
4 Tractors	\$140,000
3 Generators	\$15,000
1-200 Gallon Portable Water Tank	\$500
2-250 Portable Water Tanks	\$1,500
11 Trailers	\$11,000
Total:	\$973,000

Asset	Value
Critical Facilities	
Community Center (Admin Office, Auditorium, Classrooms and Senior Center) 1605 E. Burnely St. Camarillo 93010	
Freedom Park 275 E. Pleasant Valley Road Camarillo CA 93010	
Pleasant Valley Aquatic Center 1030 Temple Ave Camarillo CA 93010	
Pleasant Valley Recreation and Parks Operation Building 480 Skyway Dr. Camarillo CA 93010	
Pleasant Valley Recreation and Parks Shop & Yard 380 Skyway Camarillo CA 93010	
<i>Total:</i>	<i>\$8,712,616</i>

18.3 CURRENT TRENDS

Pleasant Valley Recreation and Park District has a population of 78,936 (2020 Census) and is located in Ventura County, and encompasses the City of Camarillo and surrounding areas. The City of Camarillo is currently growing at a rate of 1.42% annually. (<https://worldpopulationreview.com>). Slated for future development, multiple new housing projects within the boundaries of the District will increase the population, impacting the capacity of existing parks and facilities the District operates. The future growth of facilities within the District includes new sports fields, new parks, pickleball courts, and a new Senior and Community Center.

Emergency services use district parks and facilities as staging locations for natural disasters, including wildfires within the region. Additionally, the District facilities are used as evacuation centers where that District staff monitor emergency operations.

18.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 18-3.
- An assessment of fiscal capabilities is presented in Table 18-4.
- An assessment of administrative and technical capabilities is presented in Table 18-5.
- An assessment of education and outreach capabilities is presented in Table 18-6.
- Classifications under various community mitigation programs are presented in Table 18-7.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 18-8.

Table 18-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
Capital Improvement Plan	6/5/2013	Plan is for 2013-2018
Strategic Plan	5/5/2021	Plan is for 2021-2026
Americans with Disabilities Act Compliance Plan		Plan being devised starting Sept 2021
Fiscal Year Budget	7/7/2021	Updated Annually
Reserve Policy	9/1/2021	Reviewed every three to five years

Table 18-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes, through the City of Camarillo
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes

If yes, specify: Quimby Fees

Table 18-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	No
Engineers or professionals trained in building or infrastructure construction practices	No
Planners or engineers with an understanding of natural hazards	No
Staff with training in benefit-cost analysis	Yes
<i>If Yes, Department /Position:</i> Administration Dept./Admin Services Manager, Administrative Analyst	
Surveyors	No
Personnel skilled or trained in GIS applications	No
Scientist familiar with natural hazards in local area	No
Emergency manager	No
Grant writers	Yes
<i>If Yes, Department /Position:</i> Various staff dependent upon specific grant	

Table 18-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	No
Do you use social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs in place that could be used to communicate hazard-related information?	No
Do you have any established warning systems for hazard events?	No

Table 18-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	N/A		N/A
DUNS#	Yes	077230183	N/A
Community Rating System	N/A		N/A
Building Code Effectiveness Grading Schedule	N/A		N/A
Public Protection	N/A		N/A
Storm Ready	N/A		N/A
Firewise	N/A		N/A
Tsunami Ready	N/A		N/A

Table 18-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Water, Electricity</i>	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment: Water, Electricity, Tankless Water heaters</i>	Medium
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment:</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment:</i>	Low
Participation in regional groups addressing climate risks <i>Comment:</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: Water, Electricity, Vehicle</i>	Medium
Identified strategies for greenhouse gas mitigation efforts <i>Comment: Water, Vehicle, Urban Forest</i>	Medium

Criterion	Jurisdiction Rating ^a
Identified strategies for adaptation to impacts <i>Comment: Turf reduction</i>	Medium
Champions for climate action in local government departments <i>Comment:</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment:</i>	Low
Financial resources devoted to climate change adaptation <i>Comment: Turf Mitigation, LED funding</i>	Medium
Local authority over sectors likely to be negative impacted <i>Comment:</i>	Low
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment:</i>	Low
Local residents' support of adaptation efforts <i>Comment:</i>	Low
Local residents' capacity to adapt to climate impacts <i>Comment:</i>	Low
Local economy current capacity to adapt to climate impacts <i>Comment:</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Low

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

18.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

18.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- The Strategic Plan contains goals that align with hazard mitigation including green initiatives and sustainability, increased use of technology for hazard awareness and public outreach, and retrofits to facilities to meet new design standards.

- Grid Pruning—Certified arborist hired by the District has put a grid pruning schedule together to ensure trees are maintained in the event of high winds, branches are secure, not weak, diseased or dead.
- Long term plan in place to mitigate Charter Oaks windrow Eucalyptus trees (approx. 220 trees).
- Annually clear brush at Las Posas Equestrian Park and trail as well as Camarillo Grove Park.
- Annually clear and prep storm drains prior to winter storms.
- Parks Mow/Water Schedule—The district has over 256 acres of parkland that is maintained with regular maintenance. Should a disaster occur, District parks have the capability to react quickly if they are needed for emergency usage.
- Aquatics Maintenance—Showers at the aquatics center are fully maintained. If an emergency event occurred, the showers in the aquatics center could be used either for emergency personnel or citizens who have been displaced during the event.
- Community Center Auditorium/Freedom Center—Community Center and Freedom Center is available to either house emergency personnel or citizens who have been displaced. Community Center and Freedom Center is maintained at all times.
- District electronic marquee sign has the capability to display emergency situations and weather conditions.

18.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- The District does not have a generator for any of its sites. Placing a generator at the Community Center location would enable the district to provide shelter/housing for emergency personnel or citizens who have become displaced due to an emergency event
- The District does not currently have a recovery plan, but could partner with the City of Camarillo to offer resources and staffing in the event of an emergency. The District could build a Post-Disaster Recovery Plan partnering with the City of Camarillo to help lay out policies, operational strategies and roles and responsibilities that would help guide the decisions and actions of community leaders relative to long-term recovery and redevelopment following a major catastrophic disaster.
- Future Capital Improvement Projects could take hazard mitigation into consideration when evaluating project prioritization.
- Send selected staff to a Community Emergency Response Team (CERT) class.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

18.6 RISK ASSESSMENT

18.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 18-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 18-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
California COVID-19	DR-4482	March 22, 2020	Ongoing
California COVID-19	EM-3428	March 13, 2020	Ongoing
Wildfire	795861	November 8, 2018	The Woolsey Fire burned 96,949 acres in Ventura and Los Angeles county. In total, the Woolsey Fire destroyed 1,643 structures, damaged an additional 364 structures. Three deaths.
Wildfire	795860	November 8, 2018	The Woolsey Fire burned 96,949 acres in Ventura and Los Angeles county. In total, the Woolsey Fire destroyed 1,643 structures, damaged an additional 364 structures. Three deaths.
Wildfire	729837	December 4, 2017	In all, the Thomas Fire burned 281,893 acres, making it the largest recorded fire in the state of California. One firefighter died.
Flash Flood	553273	December 12, 2014	Intense rainfall over the Springs Fire burn scar generated flash flooding as well as mud and debris flow in the community of Camarillo Springs. A wall of mud and debris severely damaged ten homes.
Debris Flow	544619	October 31, 2014	Two homes were damaged by mud. The debris flow occurred near the burn scar of the Springs Fire.
Wildfire	439713	May 2, 2013	The Springs Fire burned 24,251 acres. Six commercial properties were damaged and 10 firefighter injuries were reported.
Wildfire	439712	May 2, 2013	The Springs Fire burned 24,251 acres. Six commercial properties were damaged and 10 firefighter injuries were reported.
Flood	5688228	March 25, 1999	N/A
Tornado	5640770	May 13, 1998	Weak tornado. No damage reported.

18.6.2 Hazard Risk Ranking

Table 18-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Table 18-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Landslide	33	High
2	Earthquake	32	High
3	Severe Storms	24	Medium
4	Severe Weather	24	Medium
5	Dam Failure	22	Medium
6	Flooding	18	Medium
7	Wildfire	12	Low
8	Drought	9	Low

18.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- The jurisdiction has experienced increasingly intense wildfires that threaten District land and property. The District provides emergency personnel staging areas and public evacuation locations.
- The jurisdiction has seen landslides in correlation to the burn areas loss of vegetation
- Severe storms and weather
- The jurisdiction has experience landslides due to wildfires destroying vegetation.
- One significant District asset is not equipped with a generator.
- The jurisdiction has experienced severe storms resulting in flash flooding threatening District property.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

18.7 HAZARD MITIGATION ACTION PLAN

Table 18-11 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 18-12 identifies the priority for each action. Table 18-13 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 18-11. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action PLV-1 —Where appropriate, provide earthquake retrofitting for hardening and to build resilience to critical infrastructure. Armor/retrofit critical infrastructure from the impact of landslides.						
<i>Hazards Mitigated:</i> Earthquake, Landslide						
Existing	1, 2, 5, 6, 8, 9, 11, 13, 14, 15	PVRPD	None	High	HMGP, BRIC, FMA, General Fund	Long-Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action PLV-2 —Actively participate in plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Wildfire, Drought						
New & Existing	1, 4, 6, 8, 19	PVRPD	None	Low	General Funds	Short-term
Action PLV-3 —Purchase generators for critical facilities and infrastructure that lack adequate backup power, included but not limited to the Camarillo Community Center.						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Wildfire, Drought						
Existing	2, 6, 18	PVRPD	None	High	HMGP, BRIC, General Funds	Short-term
Action PLV-4 —Develop a recovery plan, partner with the City of Camarillo to offer resources and staffing in the event of an emergency.						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Wildfire, Drought						
New	2, 8, 19	PVRPD	City of Camarillo	Low	HMGP, General Funds	Short-term
Action PLV-5 —Identify features and amenities with the existing facilities to be updated or improved (Fire Codes, Americans with Disabilities Act, etc.)						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Wildfire, Drought						
New & Existing	2, 4, 9	PVRPD	None	High	HMGP, BRIC, FMA, General Fund, Quimby	Long-Term
Action PLV-6 —Enhance technology to engage the community by sharing information more effectively and efficiently across the organization and with the community.						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Wildfire, Drought						
New & Existing	1, 7, 8, 17	PVRPD	None	Low	FMA, General Fund	Short-Term
Action PLV-7 —Develop a drought contingency plan incorporating utilizing drought-resistant landscapes on District-owned facilities.						
<u>Hazards Mitigated:</u> Drought						
New & Existing	4, 5, 11, 13, 14, 15, 19	PVRPD	None	Low	HMGP, BRIC, FMA, General Fund	Short-Term
Action PLV-8 —Train emergency responders and develop a strategy to take advantage of pre- and post-disaster opportunities. Educate employees and elected officials on the potential hazard exposures and emergency response protocol.						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Wildfire, Drought						
New & Existing	1, 4, 8	PVRPD	None	Medium	HMGP, BRIC, FMA, General Funds	Short-term
Action PLV-9 —Create and maintain defensible space around District structures and infrastructure.						
<u>Hazards Mitigated:</u> Wildfire, Landslide						
New & Existing	4, 5, 11, 13	PVRPD	None	Medium	HMGP, BRIC, General Funds	Short-term
Action PLV-10 —Use performance metrics and data to evaluate and monitor impacts of climate change and natural hazard risk reduction strategies on public health and social equity						
<u>Hazards Mitigated:</u> Landslide, Earthquake, Severe Storms, Severe Weather, Dam Failure, Flooding, Wildfire, Drought						
New	1, 2, 4, 15, 19	PVRPD	None	Low	HMGP, BRIC, FMA, General Fund	Short-Term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 18-12. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	10	High	High	Yes	Yes	No	Medium	High
2	5	Medium	Low	Yes	No	Yes	High	Low
3	3	High	High	Yes	Yes	No	Medium	High
4	3	Medium	Low	Yes	Yes	Yes	High	Medium
5	3	Medium	High	No	Yes	No	Low	Medium
6	4	Low	Low	Yes	Yes	No	Medium	Medium
7	7	Medium	Low	Yes	Yes	Yes	High	Medium
8	3	Medium	Medium	Yes	Yes	Yes	High	Medium
9	4	High	Medium	Yes	Yes	Yes	High	High
10	5	Low	Low	Yes	Yes	Yes	High	Medium

a. See the introduction to this volume for explanation of priorities.

Table 18-13. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building ^b
High-Risk Hazards								
Landslide	PLV-2, 4, 5, 10	PLV-1, 2, 4, 5, 10	PLV-6, 8, 9, 10	PLV-2, 5, 7, 9, 10	PLV-3, 4, 6, 8, 10	PLV-1, 2, 5, 9, 10	PLV-2, 7, 10	PLV-2, 4, 6, 8, 10
Earthquake	PLV-2, 4, 5, 10	PLV-1, 2, 4, 5, 10	PLV-6, 8, 10	PLV-2, 5, 10	PLV-3, 4, 6, 8, 10	PLV-1, 2, 5, 10	PLV-2, 7, 10	PLV-2, 4, 6, 8, 10
Medium-Risk Hazards								
Severe Storms	PLV-2, 4, 5, 10	PLV-2, 4, 5, 10	PLV-6, 8, 10	PLV-2, 5, 10	PLV-3, 4, 6, 8, 10	PLV-2, 5, 10	PLV-2, 7, 10	PLV-2, 4, 6, 8, 10
Severe Weather	PLV-2, 4, 5, 10	PLV-2, 4, 5, 10	PLV-6, 8, 10	PLV-2, 5, 10	PLV-3, 4, 6, 8, 10	PLV-2, 5, 10	PLV-2, 7, 10	PLV-2, 4, 6, 8, 10
Dam Failure	PLV-2, 4, 5, 10	PLV-2, 4, 5, 10	PLV-6, 8, 10	PLV-2, 5, 10	PLV-3, 4, 6, 8, 10	PLV-2, 5, 10	PLV-2, 7, 10	PLV-2, 4, 6, 8, 10
Flooding	PLV-2, 4, 5, 10	PLV-2, 4, 5, 10	PLV-6, 8, 10	PLV-2, 5, 10	PLV-3, 4, 6, 8, 10	PLV-2, 5, 10	PLV-2, 7, 10	PLV-2, 4, 6, 8, 10
Low-Risk Hazards								
Wildfire	PLV-2, 4, 5, 7, 10	PLV-2, 4, 5, 7, 10	PLV-6, 8, 9, 10	PLV-2, 5, 7, 9, 10	PLV-3, 4, 6, 8, 10	PLV-2, 5, 9, 10	PLV-2, 7, 10	PLV-2, 4, 6, 8, 10
Drought	PLV-2, 4, 5, 10	PLV-2, 4, 5, 10	PLV-6, 8, 9, 10	PLV-2, 5, 7, 10	PLV-3, 4, 6, 8, 10	PLV-2, 5, 9, 10	PLV-2, 7, 10	PLV-2, 4, 6, 7, 8, 10

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

18.8 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **PVRPD Fee Schedule**—Fee schedule is used to determine the pricing for District indoor and outdoor facilities.
- **PVRPD Capital Improvement Plan**—Capital Improvement Plan is used to plan projects as the community grows and changes. The plan can also be adapted to include projects to mitigate hazards if needed. It was reviewed while developing the action plan for this annex.
- **PVRPD American with Disabilities Act Transition Plan**—Americans with Disabilities Act Plan is part of the FY21-22 budget. Plan will help District identify and correct barriers that limit access to programs, services, and activities by persons with disabilities. It was reviewed while developing the action plan for this annex.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

19. SATICOY SANITARY DISTRICT

19.1 LOCAL HAZARD MITIGATION PLANNING TEAM

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This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 19-1.

Table 19-1. Local Hazard Mitigation Planning Team Members

Name	Title
Tim Doyle	Engineering Analyst
Mark Norris	General Manager
Richard Jones	Operations Manager
Alvertina Rivera	Director of Finance

19.2 JURISDICTION PROFILE

19.2.1 Overview

The Saticoy Sanitary District is a special district created in 1941 to provide wastewater (sewer) service. A five-member elected Board of Directors governs the District. The Board assumes responsibility for the adoption of this plan; the General Manager will oversee its implementation. The District currently has no employees and contracts via Ventura Regional Sanitation District for its administrative and operational work with direct contracts for the General Manager and Engineering Analyst services. Funding comes primarily through sewer service rates.

19.2.2 Service Area

The Saticoy Sanitary District serves an unincorporated area of the County of Ventura with the City of Ventura to the west. The current total service area is 0.35 square miles. As of May 30, 2021, the District serves approximately 3,600 wastewater customers through 292 parcels located within the District.

19.2.3 Assets

Table 19-2 summarizes the assets of the District and their value.

Asset	Value
Property	
4.88 acres of land	\$390,500
Equipment	
Total length of WW pipe—4.4 miles (\$2.11M/mile, includes varied sizes 6"-16" and manholes)	\$9,292,800
Emergency Diesel Generator	\$40,000
Three high-capacity wastewater pumps	\$30,000
Four 3-hp blower/pump motors	\$20,000
<i>Total:</i>	<i>\$9,382,800</i>
Critical Facilities	
WW Treatment Plant—1419 Lirio St.	\$5,223,400
<i>Total:</i>	<i>\$5,223,400</i>

19.3 CURRENT TRENDS

The District only serves the unincorporated community of Saticoy. Population within the service has remained stable over the past 5 years and there have been no new developments within the District. There are 45 vacant parcels that could have dwelling units built there but the District has no information on any future plans. There is no potential expansion of the District’s boundaries.

19.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 19-3.
- An assessment of fiscal capabilities is presented in Table 19-4.
- An assessment of administrative and technical capabilities is presented in Table 19-5.
- An assessment of education and outreach capabilities is presented in Table 19-6.
- Classifications under various community mitigation programs are presented in Table 19-7.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 19-8.

Table 19-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
CA Cease and Desist Order (R4-2013-0098)	2013	
Waste Discharge Requirement (R4-2013-0092)	2013	
Emergency Response Plan	2019	
Rules and Regulations for the Sewage Collection System	1989	
Sewer System Management Plan	2015	
Ordinance SSD-14 Sewer Policy	2021	

Table 19-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service <i>If yes, specify:</i> VC Tax Rolls	Yes
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

Table 19-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Contractor	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Contractor	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Contractor	Yes
Staff with training in benefit-cost analysis <i>If Yes, Department /Position:</i> Contractor	Yes
Surveyors <i>If Yes, Department /Position:</i> Contractor	Yes
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Contractor	Yes
Scientist familiar with natural hazards in local area <i>If Yes, Department /Position:</i> Contractor	Yes
Emergency manager <i>If Yes, Department /Position:</i> General Manager or Operations Manager	Yes
Grant writers <i>If Yes, Department /Position:</i> Contractor	Yes

Table 19-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	No
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website?	No
Do you use social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs in place that could be used to communicate hazard-related information?	No
Do you have any established warning systems for hazard events?	No

Table 19-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	No	N/A	N/A
DUNS#	Yes	149532686	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 19-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment:</i>	Low
Jurisdiction-level monitoring of climate change impacts <i>Comment:</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment:</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment:</i>	Low
Participation in regional groups addressing climate risks <i>Comment:</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment:</i>	Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment:</i>	Low

Criterion	Jurisdiction Rating ^a
Identified strategies for adaptation to impacts <i>Comment:</i>	Low
Champions for climate action in local government departments <i>Comment:</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment:</i>	Low
Financial resources devoted to climate change adaptation <i>Comment: None</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment:</i>	Low
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment:</i>	Low
Local residents' support of adaptation efforts <i>Comment:</i>	Low
Local residents' capacity to adapt to climate impacts <i>Comment: Unknown given the demographics but likely minimal</i>	Low
Local economy current capacity to adapt to climate impacts <i>Comment: Minimal since Saticoy is a severely disadvantaged community</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

19.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

19.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Capital Improvement Plan**—The capital improvement plan includes projects that can help mitigate potential hazards through rehabilitating key components. The District will act to ensure consistency between the hazard mitigation plan and the current and future capital improvement plans. The hazard mitigation plan may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment. Currently, the District utilizes the Department of Housing and Urban

Development CDBG program and is in the design phase for the State of California Prop1-TA Bond Program.

- **Emergency Response Plan**—The results of a risk assessment were used in the development of the emergency response plan and are so noted in the plan.

19.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization. But the critical criteria remains the risk assessment and needs prioritization coupled with funding availability.
- **Post-Disaster Recovery Plan**—The District does not have a recovery plan and intends to develop one as a mitigation planning action during the next five years. The plan will build on the mitigation goals and objectives identified in the mitigation plan.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

19.6 RISK ASSESSMENT

19.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 19-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 19-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19	DR-4482	January 20, 2020 Continuing	Ongoing
Atmospheric River Storm System	CA Disaster 109	January/February 2019	N/A
Wildfires, Flooding, Mudflows, and Debris Flows	DR-4353	December 4, 2017- January 31, 2018	N/A
Thomas Fire	4224-DR-CA	December 4, 2017	N/A
February Winter Storm	CA Disaster 77.1	February 2017	N/A
January Winter Storm	CA Disaster 77	January 2017	N/A
Tsunami (7.1 earthquake in Japan)		March 11, 2011	N/A
Tsunami (8.8 Quake in Chile)		February 27, 2010	N/A
Storm and Flood		January 18 – 22, 2010.	Unknown
Wildfires, Flooding, Mudflows, and Debris Flows	DR-1731	October 21 – March 31, 2008	Unknown

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Storm	DR-1267	January 7 – 11, 2005	Unknown
Severe Storms/Flooding	DR-1577	January 2005	Unknown
“El Nino” Storm and Flood		February 1998	Unknown
Storms and Floods		January and March, 1995	Unknown
Northridge Earthquake	DR-1008	January 17 – November 30, 1994	Unknown
Storm and Flood		February 10-15, 1992	Unknown
Storm and Flood		February 25-March 3, 1983	Unknown
Storm and Flood		February 13-22, 1980	Unknown
Sespe Creek Flood		March 4, 1978	Unknown
Storms and Floods (Calleguas Creek Flood)		February 28-March 5, 1978	Unknown
Severe Storms/Flooding	DR-211	January 1969	Unknown

19.6.2 Hazard Risk Ranking

Table 19-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Table 19-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Earthquake	36	High
1	Flooding	36	High
2	Landslide	24	Medium
2	Dam Failure	24	Medium
2	Severe Weather	24	Medium
2	Severe Storms	24	Medium
3	Wildfire	15	Low
3	Sea Level Rise	15	Low
3	Tsunami	15	Low
4	Drought	9	Low

19.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- With 80% of the District’s facilities underground (wastewater pipelines, storage tanks), the Risk Ranking Score for earthquake was elevated from the County level of 24 to 36.
- Structural stability for the above ground facilities and piping to retard flooding damage.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

19.7 HAZARD MITIGATION ACTION PLAN

Table 19-11 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 19-12 identifies the priority for each action. Table 19-13 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 19-11. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action SAT-1 —Where appropriate, support retrofitting, rehabilitation, or relocation of structures located in potential hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<i>Hazards Mitigated:</i> Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Sea Level, Tsunami						
Existing	2, 6, 9, 11	Saticoy SD	N/A	High	Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short-term
Action SAT-2 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> Earthquake, Flooding, Landslide, Dam Failure, Severe Weather, Severe Storms, Wildfire, Drought						
New & Existing	2, 8, 11, 19	Saticoy SD	N/A	Low	General Funds	Short-term
Action SAT-3 —Purchase generator for treatment plant that lacks adequate backup power.						
<i>Hazards Mitigated:</i> Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Tsunami						
New & Existing	2, 7, 8	Saticoy SD	N/A	Medium	CIP & Grant Funding- FEMA HMA (BRIC, HMGP)	Short-term
Action SAT-4 —Develop a post disaster action plan that includes assistance with grant fund writing, debris removal components, and warehousing of critical infrastructure components.						
<i>Hazards Mitigated:</i> Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Sea Level, Tsunami						
Existing	2, 8, 19	Saticoy SD	N/A	Medium	General Funds & Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 19-12. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
SAT-1	4	High	High	Yes	Yes	No	Medium	High
SAT-2	4	Medium	Low	Yes	No	Yes	High	Low
SAT-3	3	High	Medium	Yes	Yes	No	Medium	High
SAT-4	3	Medium	Medium	Yes	Yes	No	Medium	Medium

a. See the introduction to this volume for explanation of priorities.

Table 19-13. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building ^b
High-Risk Hazards								
Earthquake		SAT-1	SAT-2		SAT-3, 4	SAT-1		SAT-2, 4
Flooding	SAT-1	SAT-1	SAT-2		SAT-3, 4	SAT-1		SAT-2, 4
Medium-Risk Hazards								
Landslide		SAT-1	SAT-2		SAT-3, 4	SAT-1		SAT-2, 4
Dam Failure		SAT-1	SAT-2		SAT-3, 4	SAT-1		SAT-2, 4
Severe weather/storms	SAT-1	SAT-1	SAT-2		SAT-3, 4	SAT-1		SAT-2, 4
Low-Risk Hazards								
Wildfire	SAT-1	SAT-1	SAT-2		SAT-3, 4	SAT-1		SAT-2, 4
Drought								SAT-2, 4

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

19.8 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **5-year CIP** was reviewed to determine if the risk assessment and hazard mitigation factors could be comingled and used to develop a more structured needs base.
- **The Los Angeles Regional Water Quality Control Board (RWQCB) Cease and Desist Order** was instrumental to prioritize the hazards the District faces due to certain system deficiencies caused by an aging infrastructure and vulnerabilities if not corrected.
- The District reviewed its **Waste Discharge Permit** and **Emergency Response Plan** along with the **Threat Assessment Matrix** to ensure that the incorporation of a Hazard Mitigation Plan could be achieved and implemented accordingly.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan. This will be incorporated as the District moves along in this process.

20. TRIUNFO WATER & SANITATION DISTRICT

20.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Timothy Doyle, Engineering Program Mgr.
1001 Partridge Dr., Suite 100
Ventura, CA 93003-0704
Telephone: 805-658-4606
e-mail Address: timdoyle@triunfowd.com

Alternate Point of Contact

Mark Norris, General Manager
1001 Partridge Dr., Suite 100
Ventura, CA 93003-0704
Telephone: 805-658-4621
e-mail Address: marknorris@triunfowd.com

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 20-1.

Table 20-1. Local Hazard Mitigation Planning Team Members

Name	Title
Timothy Doyle	Engineering Program Manager
Mark Norris	General Manager
Richard Jones	Operations Manager
Vickie Dragan	Director of Finance
Chi Hermann	Administrative Program Manager

20.2 JURISDICTION PROFILE

20.2.1 Overview

The Triunfo Water & Sanitation District is a special district created in 1963 to provide wastewater (sewer) service. The District expanded its service to the community in 1993 with the purchase of the Metropolitan Water Company located within the District's boundaries in Oak Park. A five-member elected Board of Directors governs the District. The Board assumes responsibility for the adoption of this plan; the General Manager will oversee its implementation. The District currently has 9 employees and contracts via Ventura Regional Sanitation District for its operational services. Funding comes primarily through potable water and sewer service rates.

20.2.2 Service Area and Trends

Covering a service area of approximately 50 square miles, the District provides wastewater collection and treatment services to more than 30,000 people in Oak Park, Lake Sherwood, Bell Canyon, and the

Westlake Village and North Ranch portions of Thousand Oaks. Triunfo also supplies potable water to more than 14,000 people in Oak Park.

20.2.3 Assets

Table 20-2 summarizes the assets of the District and their value.

Asset	Value
Property	
7.17 acres of land	\$573,900
Equipment	
Total length of PW pipe—49 miles (\$2.1M/mile, includes varied sizes 6"-30" and valves/PRVs)	\$102,900,000
Total length of WW pipe—129 miles (\$2.3M/mile, includes varied sizes 6"-18" and manholes)	\$296,700,000
Emergency Diesel Generators (7 generators with varied KVA output)	\$385,000
SCADA System	\$200,000
Total:	\$400,758,900
Critical Facilities	
Oak Canyon Reservoir 2.4 MG, 1115 Kanan Rd, 91377	\$8,100,000
Deerhill Reservoir 2.2 MG, 990-1/2 Lambourne Ct, 91377	\$2,690,000
Savoy Reservoir 1.6 MG, 322-1/2 Savoy Ct, 91377	\$1,783,000
Kilburn Reservoir 0.86 MG, 4997 Kilburn Ct, 91377	\$877,000
Deerhill Pump Station, 5000 Bishopwood Ln, 91377	\$2,700,000
Lindero Pump Station, 753 Lindero Canyon Rd, 91377	\$495,800
Savoy Pump Station, 322-1/2 Savoy Ct, 91377	\$882,000
Lambourne Booster Station, 990-1/2 Lambourne Ct, 91377	\$75,000
Smoketree Booster Station, 6613 Smoketree Ave, 91377	\$75,000
Bell Canyon Lift Station, 62-1/2 Buckskin Rd, 91307	\$532,200
Carlisle Lift Station, 2845 Calbourne Ln, 91361	\$574,000
Lakeside Lift Station, 654 Lake Sherwood Dr, 91361	\$195,000
North Ranch Lift Station, Country Valley Rd & Meadow Grove, 91362	\$170,000
Polo Lift Station, E. Potrero Rd & Polo St, 91361	\$150,000
Westlake Lift Station, Triunfo Canyon & Westshore Ln, 91361	\$150,000
Total:	\$19,449,000

20.3 CURRENT TRENDS

Population within the District’s service area has remained relatively stable over the past 5 years and there have been no new major developments within the District. Although Oak Park is basically built-out, there remain portions of Lake Sherwood, Bell Canyon, and the Westlake area that have parcels available for residential dwellings. These parcels are being slowly developed with approximately 5-7 new homes per year. In addition, there are ADU (Accessory Dwelling Unit) improvements to 2-3 parcels per year. There is no potential expansion of the District’s boundaries.

20.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 20-3.
- An assessment of fiscal capabilities is presented in Table 20-4.
- An assessment of administrative and technical capabilities is presented in Table 20-5.
- An assessment of education and outreach capabilities is presented in Table 20-6.
- Classifications under various community mitigation programs are presented in Table 20-7.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 20-8.

Table 20-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
Urban Water Management Plan	2015	2020 version pending
Emergency Response Plan	2015	2020 version pending
Rules and Regulations for the Sewage Collection System	1989	
Ordinance TSD-202 Sewer Pretreatment Policy	2021	
Sewer System Management Plan	2015	

Table 20-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	Yes
<i>If yes, specify:</i> VC Tax Rolls	
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

Table 20-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Contractor	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Administrative Dept./Contractor	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Administrative Dept./Contractor	Yes
Staff with training in benefit-cost analysis <i>If Yes, Department /Position:</i> Finance Dept.	Yes
Surveyors <i>If Yes, Department /Position:</i> Contractor	Yes
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Administrative Dept./Contractor	Yes
Scientist familiar with natural hazards in local area <i>If Yes, Department /Position:</i> Contractor	Yes
Emergency manager <i>If Yes, Department /Position:</i> General Manager or Operations Manager	Yes
Grant writers <i>If Yes, Department /Position:</i> Contractor	Yes
Other <i>If Yes, Department /Position:</i> As needed	Yes

Table 20-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	No
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> Have social media but not currently used for hazard mitigation outreach	Pending
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs in place that could be used to communicate hazard-related information?	No
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> Reverse 911/email/social media	Yes

Table 20-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	No	N/A	N/A
DUNS#	Yes	156-168205	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 20-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment:</i>	Low
Jurisdiction-level monitoring of climate change impacts <i>Comment:</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment:</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment:</i>	Low
Participation in regional groups addressing climate risks <i>Comment:</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment:</i>	Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment:</i>	Low
Identified strategies for adaptation to impacts <i>Comment:</i>	Low
Champions for climate action in local government departments <i>Comment:</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment:</i>	Low
Financial resources devoted to climate change adaptation <i>Comment:</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment:</i>	Low
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: Triunfo customers are highly educated and involved with climate risk issues</i>	Medium
Local residents' support of adaptation efforts <i>Comment: District residents are highly supportive of measures to minimize risk and address climate issues</i>	Medium
Local residents' capacity to adapt to climate impacts <i>Comment: Being supportive of necessary changes posed by the District, residents are willing to cooperate, within reason, as requested by the Agency or other government entities.</i>	Medium
Local economy current capacity to adapt to climate impacts <i>Comment: Median income level is well above the State average giving additional resources to support needed changes to address impacts</i>	Medium
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

20.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

20.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Capital Improvement Plan**—The capital improvement plan includes projects that can help mitigate potential hazards through rehabilitating key components. The District will act to ensure consistency between the hazard mitigation plan and the current and future capital improvement plans. The hazard mitigation plan may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment.
- **Emergency Response Plan**—The results of a risk assessment were used in the development of the emergency response plan and are so noted in the plan.

20.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization. But the critical criteria remains the risk assessment and needs prioritization coupled with funding availability.
- **Post-Disaster Recovery Plan**—The District does not have a completed recovery plan and intends to fully develop one as a mitigation planning action during the next five years. The plan will build on the mitigation goals and objectives identified in the mitigation plan.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

20.6 RISK ASSESSMENT

20.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 20-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 20-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19	DR-4482	January 20, 2020 Continuing	Ongoing
Hill Fire	DR 4407	11/8/18 -11/9/18	N/A
Winter Storm Event	DR 4353	12/4/17- 1/31/18	N/A
Springs Fire	DR 5024	5/2/13 – 5/11/13	N/A
Wildwood I Fire	N/A	1995	N/A
Wildfires	DR-4407	November 12, 2018	\$404,424
Northridge Earthquake	DR-1008	January 17, 1994	N/A
Green Meadow Fire	N/A	10/26/93 – 11/3/93	N/A
Sherwood Fire	N/A	1985	N/A
Dayton Canyon Fire	N/A	October 25, 1982	N/A
Winter Storm Event	N/A	February 21, 1980	N/A
Winter Storm Event	N/A	February 15, 1978	N/A
Winter Storm Event	N/A	January 26, 1969	N/A

20.6.2 Hazard Risk Ranking

Table 20-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Table 20-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Earthquake	36	High
1	Wildfire	36	High
1	Landslide	36	High
2	Dam Failure	24	Medium
2	Severe weather/storms	24	Medium
3	Flooding	18	Medium
4	Drought	9	Low

20.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- With 90% of the District’s facilities underground (water and wastewater pipelines), the Risk Ranking Score for earthquake was elevated from the County level of 24 to 36.
- The Lake Sherwood Dam poses a direct threat to District facilities downstream of its location.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

20.7 HAZARD MITIGATION ACTION PLAN

Table 20-11 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 20-12 identifies the priority for each action. Table 20-13 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 20-11. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action TRI-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<i>Hazards Mitigated:</i> Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
Existing	2, 6, 9, 11	Triunfo WSD	N/A	High	Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short-term
Action TRI-2 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> Earthquake, Wildfire, Landslide, Dam Failure, Severe Weather, Storms, Flooding, Drought						
New & Existing	2, 8, 11, 19	Triunfo WSD	N/A	Low	General Funds, Staff Time	Short-term
Action TRI-3 —Purchase generators for critical facilities that lack adequate backup power, including Savoy, Lambourne, and Smoketree Booster Stations.						
<i>Hazards Mitigated:</i> Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Wildfire						
New & Existing	2, 7, 8	Triunfo WSD	N/A	Medium	CIP & Grant Funding- FEMA HMA (BRIC, HMGP)	Ongoing
Action TRI-4 —Develop a post disaster action plan that includes grant funding, debris removal components, and warehousing of critical infrastructure components						
<i>Hazards Mitigated:</i> Dam Failure, Earthquake, Wildfire, Flooding, Landslide, Severe Weather, Severe Storms						
Existing	2, 8, 19	Triunfo WSD	N/A	Medium	General Funds & Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Ongoing
Action TRI-5 —Maintain wildfire hazard fuel reduction program for areas that have been identified with overgrown or dead brush, trees and weeds to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program. (Coordinates with Ventura County Fire Protection District Action VFP-6)						
<i>Hazards Mitigated:</i> Wildfire						
New & Existing	2, 4, 5, 6, 8, 10, 11, 13, 14, 15, 18, 19	VCFPD	Triunfo WSD, CAL FIRE & USDA	Medium	FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing
Action TRI-6 —Acquire properties in high risk areas						
<i>Hazards Mitigated:</i> Wildfire, Landslide, Severe Weather, Severe Storms						
New	5, 8, 11, 17	Triunfo WSD	N/A	Medium	Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Long-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action TRI-7 —Slope stabilization and drainage control features around water reservoirs						
<i>Hazards Mitigated:</i> Landslide, Flooding, Severe Weather						
Existing	5, 9, 11, 14	Triunfo WSD	N/A	Medium	General Funds & Grant Funding-FEMA HMA (BRIC, FMA, HMGP)	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date
 Acronyms used here are defined at the beginning of this volume.

Table 20-12. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
TRI-1	4	High	High	Yes	Yes	No	Medium	High
TRI-2	4	Medium	Low	Yes	No	Yes	High	Low
TRI-3	3	High	Medium	Yes	Yes	No	Medium	High
TRI-4	3	Medium	Medium	Yes	Yes	No	Medium	Medium
TRI-5	12	High	Low	Yes	Yes	Yes	High	High
TRI-6	4	High	Medium	Yes	Yes	No	Medium	High
TRI-7	4	High	Medium	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

Table 20-13. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building ^b
High-Risk Hazards								
Earthquake		TRI-1	TRI-2	TRI-5	TRI-3, 4			TRI-2, 4
Wildfire	TRI-5, 6	TRI-1	TRI-2, 5	TRI-5, 6	TRI-3, 4		TRI-5	TRI-2, 4, 5
Landslide	TRI-6	TRI-1	TRI-2	TRI-5, 6, 7	TRI-3, 4	TRI-7		TRI-2, 4
Medium-Risk Hazards								
Dam Failure		TRI-1	TRI-2	TRI-5	TRI-3, 4			TRI-2, 4
Severe Weather	TRI-5, 6	TRI-1	TRI-2	TRI-5, 7	TRI-3, 4			TRI-2, 4
Severe Storms	TRI-5	TRI-1	TRI-2	TRI-5	TRI-4	TRI-7		TRI-2, 4
Flooding	TRI-5, 6	TRI-1	TRI-2	TRI-5, 7	TRI-3, 4	TRI-7		TRI-2, 4
Low-Risk Hazards								
Drought			TRI-2					TRI-2

a. See the introduction to this volume for explanation of mitigation types.
 b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

20.8 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **Capital Improvement Plans**—The 5-year and 10-year CIPs were reviewed to determine if the risk assessment and hazard mitigation factors could be comingled and used to develop a more structured needs base.
- The District reviewed its **Urban Water Management Plan, Emergency Response Plan** along with the **Threat Assessment Matrix**, and **District Ordinances** to ensure that the incorporation of a Hazard Mitigation Plan could be achieved and implemented accordingly.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan. This will continue to be utilized as the District moves along in this process.

21. UNITED WATER CONSERVATION DISTRICT

21.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Brian Collins, Chief Operations Officer
3561 N. Rose Avenue
Oxnard, CA 93036
Telephone: 805-525-4431
e-mail Address: brianco@unitedwater.org

Alternate Point of Contact

Michel Kadah, Engineer
1701 N. Lombard Street, Suite 200
Oxnard, CA 93030
Telephone: 805-525-4431
e-mail Address: michelk@unitedwater.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 21-1.

Table 21-1. Local Hazard Mitigation Planning Team Members

Name	Title
Brian Collins	Chief Operations Officer
Maryam Bral	Chief Engineer
Craig Morgan	Engineering Manager
Josh Perez	Human Resources Manager
Tony Huynh	Safety and Security Program Coordinator
John Carman	O&M Program Supervisor
Michel Kadah	Engineer
Adrian Quiroz	Associate Engineer

21.2 JURISDICTION PROFILE

21.2.1 Overview

Local landowners formed the Santa Clara River Water Conservation District in 1927. As cities and agricultural areas grew, water usage increased rapidly. By 1950, the district was reorganized and renamed the United Water Conservation District (UWCD). The mission of UWCD is to manage, protect, conserve and enhance the water resources of the Santa Clara River, its tributaries and associated aquifers, in the most cost effective and environmentally balanced manner. UWCD constructed the Santa Felicia Dam, three spreading grounds, and distribution facilities, all of which were urgently needed to combat seawater intrusion.

UWCD is governed by seven members elected Board of Directors, one elected from each of the seven district divisions. UWCD administers a “basin management” program for the Santa Clara Valley and

Oxnard Plain, using the surface flow of the Santa Clara River and its tributaries for replenishment of groundwater and owns and operates a number of facilities within its service area. UWCD currently employs a staff of 64. Funding comes primarily through rates and revenue bonds.

The Board of Directors assumes responsibility for the adoption of this plan; Mr. Mauricio E. Guardado Jr. (UWCD General Manager) will oversee its implementation.

21.2.2 Service Area

UWCD operates within the Santa Clara River Valley and the Oxnard Plain and covers approximately 335 square miles in central Ventura County. UWCD owns and operates a number of facilities to recharge the groundwater basins and enhance the water supplies within UWCD boundaries including: Santa Felicia Dam and Lake Piru Reservoir; Santa Felicia Dam hydroelectric power plant; the Piru Groundwater Recharge Basins; Freeman Diversion Facility; Saticoy Groundwater Recharge Basins (Saticoy, Noble, Rose and Ferro Basins); El Rio Groundwater Recharge Facilities and Wellfield and Water Treatment Plant (El Rio); the Pleasant Valley (PV) and Pumping Trough Pipeline (PTP) (surface water deliveries in-lieu of pumping), PV and PTP reservoirs, and the Oxnard Hueneme (OH) Pipeline system which delivers domestic potable water to the City of Oxnard, Port Hueneme Water Agency, Naval Base Ventura County, several mutual water companies and the El Rio School District.

21.2.3 Assets

Table 21-2 summarizes the assets of UWCD and their value.

Asset	Value
Property	
3421 acres of land (including Lake Piru)	Unknown
Equipment	
43 UWCD owned vehicles(trucks and SUV's)	\$1,720,000
1 ten yard dump truck	\$110,089
1 2000 gallon water truck (estimated low value)	\$85,000
1 CAT 300 SLR Excavator	\$280,190
1 CAT 416C Backhoe	\$75,021
1 CAT D6R Dozer	\$279,000
1 CAT 613 Scrapper	\$193,000
1 CAT 120H Motor Grader	\$170,177
1 John Deere Skip Loader	\$110,000
1 CAT Skid Steer	\$39,000
12 Diesel Powered Emergency Generators (1 being Portable)	\$1,200,000
4 Natural Gas Backup Booster Pumps	\$1,510,000
17 water wells	\$15,000,000
8 Miles of OH Pipeline (1.2 million per mile x 8) (Estimated low value)	\$9,600,000
13 Miles of PTP Pipeline (1.2 million per mile x13) (Estimated low value)	\$15,600,000
5 Miles of PV Pipeline (1.2 million per mile x 5) (Estimated low value)	\$6,000,000
3 Miles of Lake Piru Campground Pipeline (1 million per mile estimated) (Estimated low value)	\$3,000,000
Lake Piru Water Treatment Plant	\$1,219,000

Asset	Value
	<i>Total:</i> \$56,190,477
Critical Facilities	
Headquarter Building—1701 N. Lombard Street, Suite 200, Oxnard, CA 93030	\$10,000,000
Santa Felicia Dam Hydroelectric Power Plant—3838 Piru Canyon Road, Piru, CA 93040	\$630,000
Santa Felicia Dam—3838 Piru Canyon Road, Piru, CA 93040 (estimated low value)	\$200,000,000
Freeman Diversion Facility—2641 W. Los Angeles Ave. Oxnard, CA 93036 (estimated low value)	\$30,000,000
Saticoy Groundwater Recharge Basins—2641 W. Los Angeles Ave. Oxnard, CA 93036	Unknown
El Rio Groundwater Recharge Basins– 3651 N. Rose Avenue, Oxnard, CA 93036	Unknown
Piru Groundwater Recharge Basin	Unknown
Lake Piru Reservoir	Unknown
Lake Piru Recreation Area—4780 Piru Canyon Road, Piru, CA 93040	Unknown
Pleasant Valley (PV) and Pumping Trough (PTP) irrigation pipelines –	\$21,600,000
Oxnard-Hueneme booster plant system (OH System)	\$4,527,000
	<i>Total:</i> \$266,757,000

21.3 CURRENT TRENDS

Originally formed as the Santa Clara Water Conservation District in 1927, voters approved the formation of United Water Conservation District in 1950. UWCD was formed to conserve and enhance water resources of the Santa Clara River. UWCD operates in the Santa Clara River Valley and the Oxnard Plain and covers 214,000 acres in central Ventura County that typically receives from 12 to 20 inches of rainfall each year.

Over the years, UWCD has constructed numerous facilities, pipelines, and recharge basins, including the Santa Felicia Dam, Lake Piru Reservoir and Freeman Diversion, to enhance the local water system and maintain sustainable water management. Today, UWCD diverts Santa Clara River surface water to recharge groundwater basins or for use in-lieu of groundwater pumping by agricultural operations on the Oxnard Plain and in Pleasant Valley basin. Groundwater recharged at United’s Saticoy and El Rio facilities (in the Oxnard Forebay) over the last thirty years has averaged approximately 46, 400 acre-feet per year (AFY). During the same period, surface water deliveries have averaged approximately 13, 200 AF/yr. Lake Piru receives approximately 65,000 visitors per year, with peak season between the months of April 1st to September 15. In 2021, UWCD took over operations from the previous concessionaire, and Lake Piru welcomed to date 34,600 visitors, with daily average of 1,533 guests per day since the lake re-opened from the COVID-19 closure.

21.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 21-3.
- An assessment of fiscal capabilities is presented in Table 21-4.
- An assessment of administrative and technical capabilities is presented in Table 21-5.
- An assessment of education and outreach capabilities is presented in Table 21-6.
- Classifications under various community mitigation programs are presented in Table 21-7.
- The community's adaptive capacity for the impacts of climate change is presented in Table 21-8.

Table 21-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
Santa Felicia Dam Emergency Action Plan (EAP)	July 16, 2021	Approved by Cal OES on September 2, 2021
Santa Felicia Dam Security Plan	June 30, 2021	
Oxnard Hueneme System Emergency Response Plan (per America's Water Infrastructure Act, EPA)	March 15, 2021	Submitted to the U.S. EPA and the State Water Resources Control Board, Division of Drinking Water
Aqueous Ammonia Storage, California Accidental Release Prevention Program (CalARP)	June 2019	
Chlorine & Aqueous Ammonia Treatment Systems CalARP Seismic Assessment	May 2019	
Chlorine & Aqueous Ammonia Injection System, Process Hazard Analysis Report	May 21, 2019	

Table 21-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service <i>If yes, specify:</i> Only groundwater extraction fees	Yes
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No

Table 21-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	No
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Engineering and Water Resources Department/ Engineers	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Engineering and Water Resources Department/ Engineers and Hydrogeologists	Yes
Staff with training in benefit/cost analysis <i>If Yes, Department /Position:</i> Finance Department and Engineering Department/ Accountants and Engineers	Yes
Surveyors <i>If Yes, Department /Position:</i> Engineering Department /Provided through retention of external vendors	Yes
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Engineering and Water Resources Department/ GIS Analysts	Yes
Scientist familiar with natural hazards in local area <i>If Yes, Department /Position:</i> Engineering and Water Resources Department/ Hydrogeologists	Yes
Emergency manager <i>If Yes, Department /Position:</i> Engineering/Chief Engineer Operations and Maintenance (O&M)/Chief Operations Officer Lake Piru Park Rangers/Chief Park Ranger	Yes
Grant writers <i>If Yes, Department /Position:</i> Engineering and Water Resources Department /Provided through retention of external vendors	Yes
Other: Environmental and Biologist <i>If Yes, Department /Position:</i> Environmental Services Department/ Environmental Scientists	Yes

Table 21-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development? Provided through retention of contractors	No
Do you have hazard mitigation information available on your website?	No
Do you use social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> Through the annual EAP seminars; and participation in the Association of Water Agencies Ventura County.	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> A warning siren in the town of Piru. This is used to warn the residents of dam failure incidents. The siren is tested on the first Friday of each month. UWCD utilizes the County's VC Alert (Everbridge) system, including email, text, and voice options for immediate emergency notifications to a list of stakeholders included in the Santa Felicia Dam EAP notification flow charts and follow up manual phone calls. Four dam failure scenarios are included in the SFD inundation maps.	Yes

Table 21-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	No	N/A	N/A
DUNS#	Yes	121878094	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 21-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment:</i> Wildfires, as a climate change indicator, may impact UWCD operations. Also, climate change could lead to a major storm, and the probability of having a Probable Maximum Flood (PMF) event. FEMA document titled "Selecting and Accommodating Inflow Design Floods for Dams" states that recent studies have been performed to estimate the impact of the climate change on the probable maximum precipitation and some climate models are consistent in showing increases of 10 percent every few decades that would correspond to 10 percent increases in probable maximum precipitation. The climate change (soil moisture, snowpack, temperature sequence, etc.) can influence on runoff and increase the likelihood of a large flood or Probable Maximum Flood (PMF) event. UWCD is in advancing the design of a number of modifications to the existing Santa Felicia Dam spillway to be able to safely pass the Inflow Design Flood (IDF), or the PMF determined for Santa Felicia Dam by the Department of Water Resources, Division of Safety of Dams (DSOD).	High
Jurisdiction-level monitoring of climate change impacts <i>Comment:</i> Rainfall and hydrology are monitored on regular basis, Groundwater basin management and monitoring through groundwater levels recording, evaporation monitoring, and sediment monitoring.	High
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i> Plan for drought resiliency projects and long term mitigation for climate change impacts.	High
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment:</i> Performed by contractor in a limited capacity.	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment:</i> Some of UWCD CIP projects are directly or indirectly addressing the climate change impacts.	Medium
Participation in regional groups addressing climate risks <i>Comment:</i> Member of the Watersheds Coalition of Ventura County.	Medium
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment:</i> No mandate.	Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment:</i> Fossil fuel energy optimization efficiency is in place.	Low
Identified strategies for adaptation to impacts <i>Comment:</i> Regulatory mandated mitigation, water supply resiliency, and portfolio diversification.	Medium
Champions for climate action in local government departments <i>Comment:</i> N/A	Low

Criterion	Jurisdiction Rating ^a
Political support for implementing climate change adaptation strategies <i>Comment:</i> N/A	Low
Financial resources devoted to climate change adaptation <i>Comment:</i> Construction of the drought resilience Oxnard Hueneme Iron and Manganese Treatment Plant Project in 2021/2022.	Medium
Local authority over sectors likely to be negative impacted <i>Comment:</i> UWCD boundaries.	Medium
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment:</i> N/A	Low
Local residents' support of adaptation efforts <i>Comment:</i> N/A	Low
Local residents' capacity to adapt to climate impacts <i>Comment:</i> N/A	Low
Local economy current capacity to adapt to climate impacts <i>Comment:</i> N/A	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i> N/A	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

21.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

21.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Santa Felicia Dam Emergency Action Plan (EAP):** The EAP defines the UWCD staff responsibilities and provides procedures designed to identify unusual and unlikely conditions that may endanger Santa Felicia Dam in time to take mitigation action and to notify the appropriate emergency management authorities and stakeholders of possible, impending, or actual failure of the dam. The EAP may also be used to provide notification when flood releases can create major flooding. The results of the Time-Sensitive Emergency Action Plan Assessment associated with the Santa Felicia Dam were used to develop the EAP.
- **Santa Felicia Dam Outlet Works Improvement:** The purpose of the Santa Felicia Dam Outlet Works Improvement project is to replace the existing outlet works because of concerns regarding seismic stability of the intake tower and conduit through the dam. UWCD conducted a

Seismic Deformation Analyses of Santa Felicia Dam on May 11, 2015 that indicated that the computed seismic deformations of the embankment are expected to be large enough to damage the outlet works conduit, and possibly compromise the safety of the dam. In addition, based on the 2015 and 2020 bathymetric surveys of Lake Piru Reservoir performed by UWCD, the sediment level near the existing intake was approximately only 4.1 feet below the intake sill. Based on the computed average annual rate of sediment level rise, the sediment may reach the intake sill in the near future and will become inoperable. The new outlet works system will mitigate ongoing accumulation of sediment in the reservoir and includes provisions for continued operation of the facility despite the future sediment buildup in the reservoir.

- **Santa Felicia Dam Probable Maximum Flood (PMF) Containment, Spillway Improvement Project:** The capacity of the existing spillway at Santa Felicia Dam is inadequate to pass the inflow design flood (IDF), which for the Santa Felicia Dam is the PMF. The Spillway Improvement Project includes modifications to the existing spillway to safely pass the IDF of 220,000 cfs, which is derived from hydrologic evaluations (HMR 58/59) performed by the DSOD and approved by the Federal Energy Regulatory Commission.

21.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified in the following plans and programs does not currently integrate hazard mitigation information but provides opportunities to do so in the future:

- **Coastal Brackish Groundwater Extraction and Treatment Project:** The project objectives are to combat further seawater intrusion in the Oxnard Plain and provide a local supply source that can help meet the groundwater sustainability goals of the Fox canyon Groundwater Management Agency.
- **Expansion of the Ferro Basin:** The project is to be used as a groundwater recharge basin to expand UWCD's recharge capacities.
- **Freeman Diversion Expansion:** The project allows UWCD to increase the instantaneous diversion rate to capture more water at the peak of the hydrograph. This is necessary in the respect that regulatory agencies are requiring more flow in the river on the receding limb of the hydrograph. Ultimately the expansion project will provide the opportunity to maintain historical surface water deliveries to the Oxnard Plain when available. The project is also to comply with an Endangered Species Act (ESA) settlement as well as a mitigation measure for the Multi-Species Habitat Conservation Plan.
- **Pumping Trough Pipeline (PTP) Recycled Water Connection:** A pipeline connection to UWCD's PTP system for the delivery of recycled water. The recycled water delivered to the PTP system can significantly reduce groundwater pumping in the PTP service area and Oxnard Plain.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

21.6 RISK ASSESSMENT

21.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 21-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 21-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Holser Fire	N/A	August 17, 2020	Lake Piru Recreation Area operational impact
Lime Fire	N/A	June 10, 2020	Recreation Area operational impact
Maria Fire	FM-5302	November 1, 2019	Headquarter closer and Saticoy Facility operational impact
Thomas Fire	FM-5224	December 4, 2017	Power outage at El Rio Facility and operational impact
Flood	DR-1585	February 18, 2005	Debris at the upstream of SFD and landslide at the downstream
Severe Storms, Tornadoes, High Winds and Flooding	DR-1267	December 20 – 28, 1998	Not Available
Severe Winter Storms and Flooding	DR-1203	February 2 – April 30, 1998	Not Available
Severe Winter Storms, Flooding, Landslides, Mud Flows	DR-1046	February 13 – April 19, 1995	Not Available
Severe Winter Storms, Flooding, Landslides, Mud Flows	DR-1044	January 3 – February, 1995	Not Available
Northridge Earthquake	DR-1008	January 17 – November 30, 1994	Not Available**
Fires, Mud & Landslides, Soil Erosion, Flooding	DR-1005	October 26 – April 22, 1994	Not Available
Severe Storm, Winter Storm, Mud & Landslides, Flooding	DR-979	January 5 – March 20, 1993	Not Available
Snow Storm, Heavy Rain, High Winds, Flooding, Mudslide	DR-935	February 10 – 19, 1992	Not Available
Severe Storms, High Tides, Flooding	DR-812	January 17 – 22, 1988	Not Available
Coastal Storms, Floods, Slides, Tornadoes	DR-677	January 21 – March 30, 1983	Not Available
Severe Storms, Mudslides, Flooding	DR-615	January 8, 1980	Not Available
Coastal Storms, Mudslides, Flooding	DR-547	February 15, 1978	Not Available
Severe Storms, High Tides, Flooding	DR-364	February 8, 1973	Not Available
Severe Storms, Flooding	DR-253	January 26, 1969	Not Available

** Santa Felicia Dam recorded a peak ground acceleration of 0.27g during the Northridge earthquake with no visible movements or distortion of the structure. Following the Northridge Earthquake, the Santa Felicia Dam was inspected and surveyed to determine if any changes had occurred as a result of the earthquake. The conclusion of these investigations that the dam has responded well to the motions induced by the earthquake and has not experienced any changes or exhibited any behavior that indicate a reduction in the safety of the structure.

21.6.2 Hazard Risk Ranking

Table 21-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Table 21-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Earthquake	32	High
2	Drought	31	High
3	Dam Failure	30	Medium
4	Severe Storms	24	Medium
5	Severe Weather	24	Medium
6	Wildfire	18	Medium
7	Flooding	18	Medium
8	Sea Level Rise	15	Low
9	Landslide	12	Low
10	Tsunami	11	Low

21.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Santa Felicia Dam is classified as an “Extremely High Hazard” dam by the DSOD. Two of the Dam’s largest infrastructure components, Outlet Works and Spillway, will pose a significant risk to public safety if not modernized and upgraded. Failure of these components could result in the potential loss of life for approximately 377,000 people living downstream of the Santa Felicia Dam, as well as property loss and damage from the flooding of the towns of Piru, Fillmore, Santa Paula, and Oxnard, negatively impacting the area’s \$2 billion dollar the agricultural industry as well as manufacturing, retail, hospitality, health care and military operations.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

21.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 21-11 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 21-11. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>OA 10—SFD Outlet Works Rehab—Replace the nearly buried and seismic-deficient intake tower at Santa Felicia Dam with a robust facility with higher elevation point(s) of intake. Replace the seismically marginal penstock with appropriate new materials.</p> <p><i>Comment:</i> The planned design alternative is to build a new outlet works facility on the left (east) abutment of the dam. The SFD Outlet Works improvement and retrofit is currently in the design phase. The construction is anticipated to start in 2024. The success of this project is contingent upon securing grant funding support from both state and federal sources critical for the implementation of the dam safety improvements.</p>			✓	UWC-4
<p>OA 10—SFD PMF Containment—The Probable Maximum Flood (PMF at all dams must be confined to the structure and spillway. Overtopping earthen dams will almost certainly lead to failure. UWCD will need to deepen the spillway and raise the height of the dam crest.</p> <p><i>Comment:</i> The SFD improvements of the spillway are currently in the design phase. The construction is anticipated to start in 2026. The success of this project is contingent upon securing both the state and federal grant funds.</p>			✓	UWC-5
<p>UWCD 1—UWCD will install a generator at the Saticoy Recharge Facility.</p> <p><i>Comment:</i> A new generator was installed at the Saticoy Recharge Facility in 2018.</p>	✓			
<p>UWCD 2—Part 12D Dam Safety Report—An independent consultant will be hired to perform the Federal Energy Regulatory Commission Part 12D safety inspection and review of Santa Felicia Dam. This process includes reviewing the Potential Failure Mode Analysis (completed in 2007) and the Supporting Technical Information Document; and updating the documents as necessary.</p> <p><i>Comment:</i> Part 12D Dam Safety Inspection and Report for the Santa Felicia Dam was completed in 2017. UWCD will conduct the next Part 12D Dam Safety Inspection in 2022 as the inspection is required to be conducted every 5 years.</p>	✓			
<p>UWCD 3—Evaluate and develop a public outreach program that informs and educates the public located in the inundation zone directly downstream of Santa Felicia Dam.</p> <p><i>Comment:</i> The public outreach program includes the required annual Emergency Action Plan (EAP) seminars and annual law enforcement coordination meetings, as well as frequent participation in the Piru neighborhood council monthly meetings.</p>			✓	UWC-10

21.8 HAZARD MITIGATION ACTION PLAN

Table 21-12 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 21-13 identifies the priority for each action. Table 21-14 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 21-12. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action UWC-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.</p> <p><i>Hazards Mitigated:</i> Earthquake, Drought, Dam Failure, Severe Storms, Severe Weather, Wildfire, Flooding</p>						
Existing	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14	United Water Conservation District	None	High	Local Fund, HMGP, BRIC, FMA	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action UWC-2 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> All hazards						
New & Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 16, 19	United Water Conservation District	None	Low	Staff Time, General Funds	Short-term
Action UWC-3 —Purchase generators for critical facilities and infrastructure that lack adequate backup power.						
<i>Hazards Mitigated:</i> Earthquake, Drought, Dam Failure, Severe Storms, Severe Weather, Wildfire, Flooding						
Existing	1, 2, 3, 4, 10	United Water Conservation District	None	High	Local Fund, HMGP, BRIC, FMA	Short-term
Action UWC-4 —Santa Felicia Dam Outlet Works Improvement and Retrofit. Replace the existing Santa Felicia Dam Outlet Works due to seismic deficiencies of the intake tower and conduit through the dam and to mitigate ongoing accumulation of sediment in Lake Piru reservoir that will impact operation of the outlet works in the near future with a robust facility with higher elevation point(s) of intake.						
<i>Hazards Mitigated:</i> Earthquake, Drought, Dam Failure, Severe Storms, Flooding						
New & Existing	1, 2, 3, 4, 9, 10, 11, 13, 18	United Water Conservation District	None	High	Local Fund, HMGP, BRIC, FMA, HHPD	Long-term
Action UWC-5 —Santa Felicia Dam PMF Containment, Spillway Improvement Project– The Probable Maximum Flood (PMF) at all dams must be confined to the structure and spillway. Overtopping earthen dams will almost certainly lead to failure. The existing SFD spillway is inadequate to pass the inflow design flood (IDF), which for this dam is the PMF. The existing spillway will be deepened and the dam crest will be raised to allow for safely passing the IDF.						
<i>Hazards Mitigated:</i> Dam Failure, Severe Storms, Flooding						
Existing	1, 2, 3, 4, 9, 10, 11, 13, 18	United Water Conservation District	None	High	Local Fund, HMGP, BRIC, FMA, HHPD	Long-term
Action UWC-6 —Coastal Brackish Groundwater Extraction and Treatment Project. The project objectives is to combat further seawater intrusion in the Oxnard Plain and provide a local supply source that can help meet the groundwater sustainability goals of the Fox canyon Groundwater Management Agency.						
<i>Hazards Mitigated:</i> Drought						
New	1, 2, 3, 4, 13, 14, 18	United Water Conservation District	None	High	Local Fund, HMGP, BRIC, FMA	Long-term
Action UWC-7 —Pumping Trough Pipeline (PTP) Recycled Water Connection. Potential pipeline connections to UWCD's PTP system for the delivery of recycled water. The recycled water delivered to the PTP system can significantly reduce groundwater pumping in the PTP service area and Oxnard Plain.						
<i>Hazards Mitigated:</i> Drought						
New	1, 2, 3, 4, 14, 18	United Water Conservation District	None	Medium	Local Fund, HMGP, BRIC, FMA	Long-term
Action UWC-8 —Freeman Diversion Rehab—The Freeman Diversion Dam is used to divert and efficiently manage run-off water from the Santa Clara River. The project allows UWCD to increase the instantaneous diversion rate to capture more water at the height of the hydrograph. This is necessary in the respect that regulatory agencies are requiring more flow in the river on the receding limb of the hydrograph. Ultimately the project will provide the opportunity to deliver additional surface water when available.						
<i>Hazards Mitigated:</i> Drought						
Existing	1, 2, 3, 4, 13, 14, 18	United Water Conservation District	None	High	Local Fund, HMGP, BRIC, FMA	Long-term
Action UWC-9 —Twelfth Part 12D Dam Safety Inspection—An independent consultant will be hired to perform the Federal Energy Regulatory Commission Part 12D safety inspection and review of Santa Felicia Dam. This process includes reviewing the Potential Failure Mode Analysis (completed in 2007) and the Supporting Technical Information Document; and updating the documents as necessary.						
<i>Hazards Mitigated:</i> Earthquake, Dam Failure, Severe Storms, Flooding						
Existing	1, 2, 4, 6, 9, 10, 17, 18	United Water Conservation District	None	Low	Local Fund	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action UWC-10 —UWCD will re-evaluate current public outreach efforts and develop a program to educate and inform the public within the inundation zone directly downstream of Santa Felicia Dam.						
<i>Hazards Mitigated:</i> Dam Failure, Severe Storms, Flooding						
Existing	1, 2, 4, 7, 8, 12, 17, 18	United Water Conservation District	None	Low	Local Fund	Short-term
Action UWC-11 —Implement landslide stabilization and/or protection measures. Stabilization measures include grading the unstable portion of the slope to a lower gradient, construction of rock buttresses, and drainage improvements. Protection measures include containment and construction of walls, berms, ditches, and or diversion of moving debris.						
<i>Hazards Mitigated:</i> Landslide						
Existing	1, 2, 13, 14	United Water Conservation District	None	Low	Local Fund, HMGP, BRIC, FMA	Ongoing
Action UWC-12 —Vegetation Management. Maintain vegetation management program within UWCD facilities to reduce the risk of wildfire and avoid creation of wind acceleration corridors within vegetated areas.						
<i>Hazards Mitigated:</i> Severe Weather, Wildfire						
Existing	1, 2, 5, 13, 14	United Water Conservation District	None	Low	Local Fund, HMGP, BRIC, FMAP	Ongoing
Action UWC-13 —Update Santa Felicia Dam Emergency Action Plan (EAP)						
<i>Hazards Mitigated:</i> Dam Failure, Severe Storms, Flooding						
Existing	1, 2, 4, 6, 7, 8, 10, 19	United Water Conservation District	None	Low	Local Fund, HMGP, BRIC, FMA	Ongoing

- a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date
HHPD = Rehabilitation of High Hazard Potential Dams
FMA = Flood Mitigation Assistance Grant Program
HMGP = Hazard Mitigation Grant Program
BRIC = Building Resilient Infrastructure and Communities Grant Program

Table 21-13. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	7	High	High	Yes	Yes	No	Medium	High
2	10	High	Low	Yes	Yes	Yes	Medium	High
3	7	High	High	Yes	Yes	No	Medium	High
4	5	High	High	Yes	Yes	No	Medium	High
5	3	High	High	Yes	Yes	No	Medium	High
6	2	High	High	Yes	Yes	No	Medium	High
7	1	High	Medium	Yes	Yes	No	Medium	High
8	1	High	High	Yes	Yes	No	Medium	High
9	4	Low	Low	Yes	No	Yes	High	Medium
10	3	Low	Low	Yes	No	Yes	High	Medium
11	1	High	Low	Yes	Yes	Yes	High	High
12	2	High	Low	Yes	Yes	Yes	High	High
13	3	Medium	Low	Yes	Yes	Yes	High	Medium

- a. See the introduction to this volume for explanation of priorities.

Table 21-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building ^b
High-Risk Hazards								
Earthquake	UWC-4	UWC-4				UWC-4		UWC-9
Drought	UWC-4	UWC-4, 8		UWC-6, 7, 8		UWC-4, 6, 7, 8	UWC-6	
Medium-Risk Hazards								
Dam Failure	UWC-4, 5	UWC-4, 5	UWC-10		UWC-13	UWC-4, 5	UWC-5	UWC-9, 10, 13
Severe Storms	UWC-4, 5	UWC-4, 5	UWC-10		UWC-13	UWC-4, 5	UWC-5	UWC-9, 13
Severe Weather	UWC-1, 5	UWC-3, 5	UWC-10		UWC-13	UWC-1, 3, 5	UWC-2	
Wildfire	UWC-12			UWC-12				
Flooding	UWC-4, 5	UWC-4, 5	UWC-10		UWC-13	UWC-4, 5	UWC-5	UWC-9, 13
Low-Risk Hazards								
Landslide	UWC-11			UWC-11		UWC-11		

- a. See the introduction to this volume for explanation of mitigation types.
- b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

21.9 PUBLIC OUTREACH

Table 21-15 lists public outreach activities for this jurisdiction.

Table 21-15. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Annual Emergency Action Plan seminar	December 16, 2020 October 28, 2021	31 Expected to be 30+
Monthly Board Of Director meetings	Monthly	Varies

21.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **Capital Improvement Plan:** The Capital Improvement Plan prioritizes projects that have been identified to improve District facilities, infrastructure, and equipment, including potential mitigation projects. The Capital Improvement Plan was used as a source of information while preparing this annex.
- **Santa Felicia Dam Emergency Action Plan (EAP):** Describes protocol for response activities to be conducted in the event of an emergency that threatens or damages the structural integrity of the Santa Felicia Dam. Includes procedures for training and preparedness, and notification and response actions to be conducted in the event of an emergency including procedures for

coordination with outside agencies. The EAP was reviewed during the development of the hazard mitigation action plans.

- **Time-Sensitive Emergency Action Plan Assessment:** This assessment was used to develop the Santa Felicia Dam EAP during the development of the hazard mitigation action plans.
- **Santa Felicia Dam Safety Improvement Project, Technical Memorandums (TMs) and Design Reports:** UWCD conducted and completed feasibility studies and multiple design phases for the existing outlet works improvement and retrofit project and the spillway improvement project, collectively referred to as the Santa Felicia Dam Safety Improvement Project. The TMs and design reports developed during these design phases included structural, hydraulic, and geotechnical analyses. These analyses were the basis of the development of the hazard mitigation action plans (UWC-4 and UWC-5).
- **Santa Felicia Dam 2017 Potential Failure Mode Analysis Study Report:** The purpose of the PFMA is to identify and describe potential failure modes (PFMs) at the Santa Felicia Dam and its appurtenant structures that could be failed under postulated loading conditions. Knowledge of the PFMs can be used to better understand the potential safety concerns, develop a project specific surveillance and monitoring program, and identify potential risk reduction measures. The 2017 PFMA was reviewed during the development of the hazard mitigation plan.
- **Oxnard Hueneme System Emergency Response Plan:** This plan describes protocol for response activities to be conducted in the event of an emergency that threatens or damages UWCD's El Rio Facility and the Oxnard-Hueneme Pipeline. Includes procedures for decontamination, pipeline isolation, and notification and response actions to be conducted in the event of an emergency. This document was reviewed during the development of the capability assessment.
- **Risk and Resilience Assessment:** The purpose of this assessment was to assess the risks to, and resilience of, the District's Oxnard-Hueneme system, covering: the risk of malevolent acts and natural hazards; the resilience of the pipes and constructed conveyances, physical barriers, source water, water collection and intake, pretreatment, treatment, storage and distribution facilities, electronic, computer, or other automated systems (including the security of such systems) which are utilized by the system; the monitoring practices of the system; the financial infrastructure of the system; the use, storage, or handling of various chemicals by the system; and the operation and maintenance of the system. This document was reviewed during the development of the capability assessment.
- **California Accidental Release Prevention (CalARP) Program:** As part of the program's effort in preventing and/or minimizing damage to the accidental releases of chlorine and ammonia that can cause serious harm to the public, hazard and seismic assessments were completed. The hazard assessments for chlorine and ammonia examined worst-case and alternative scenarios while the seismic assessment ensured chlorine and aqueous ammonia equipment and piping, their supports and their anchoring met CalARP seismic requirements. This document was reviewed during the development of the capability assessment.

The following outside resources and references were reviewed:

- **2015 Ventura County Multi-Hazard Mitigation Plan:** The 2015 HMP document addresses the local hazard mitigation planning requirements for Unincorporated Ventura County and other local participants. The 2015 VC HMP was reviewed and used during the development of the mitigation action plan.

- **Selecting and Accommodating Inflow Design Floods for Dams, FEMA P-94, Dated August 2013:** The main objectives of this document is to recommend appropriate procedures for selecting and accommodating the Inflow Design Flood based on current and accepted practices and to promote a reasonable degree of consistency and uniformity among state and federal agencies. Appropriate selection of the Inflow Design Flood is the first step in evaluating and designing a dam to address hydrologic potential failure modes and reduce risks to the public. This document was reviewed during the development of the capability assessment and the Adaptive Capacity for Climate Change.
- **Hydrometeorological Reports (HMR 58 and 59), California Department of Water Resources, Division of Safety of Dams (DSOD):** The Santa Felicia Dam Inflow Design Flood (IDF) of 220,000 cfs was developed using DSOD interim Hydrology Policy Modified HMR 58/59 (2012). The IDF was approved by the regulatory agencies. These reports were reviewed and used during the development of the hazard mitigation action plan (UWC-5).
- **Hazard Mitigation Plan Annex Development Toolkit:** The toolkit was used to support the identification of past hazard events and noted vulnerabilities, risk ranking, and the development of the mitigation action plan.

21.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

UWCD will update the Santa Felicia Dam Vulnerability and Risk Assessment in 2022 in accordance with the Federal Energy Regulatory Commission's dam safety requirements. The Vulnerability and Risk Assessment includes evaluation of structures and facilities to identify weaknesses and or potential single or multiple points of failures. The outcome will include recommended mitigation measures to address these concerns.

21.12 ADDITIONAL COMMENTS

UWCD is currently coordinating with the Emergency Management Agencies (EMAs) of the Santa Felicia Dam impacted jurisdictions including the Ventura County Sheriff's Office of Emergency Services (VCSOES) to determine if they need assistance in developing local evacuation plans. UWCD will offer support, including technical support, to the EMAs as needed.

22. VENTURA COUNTY FIRE PROTECTION DISTRICT

22.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Dustin Gardner, Fire Chief

165 Durley Ave

Camarillo, CA 93010

Telephone: 805-389-9704

e-mail Address: dustin.gardner@ventura.org

Alternate Point of Contact

Jeff Shea, Division Chief

165 Durley Ave

Camarillo, CA 93010

Telephone: 805-437-9400

e-mail Address: jeff.shea@ventura.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 22-1.

Table 22-1. Local Hazard Mitigation Planning Team Members

Name	Title
Dustin Gardner	Fire Chief
Chad Cook	Assistant Fire Chief
Jeff Shea	Division Chief
Gene Fong	Battalion Chief
John Spykerman	Assistant Fire Chief
Massoud Araghi	Fire Marshal
Tom Kasper	Business Services Manager
Corina Cagley	Fire Prevention Officer
Celine Moomey	Pre-Fire Specialist
Ryan Matheson	Fire Captain, Vegetation Management
David Kirby	Manager- Facilities and Construction
Debbie Conner	Management Assistant

22.2 JURISDICTION PROFILE

22.2.1 Overview

In 1928, the VCFPD was formed as a special district to provide fire protection to the county, with the exception of the four established cities. Since that time, six additional cities have become incorporated. Today, the VCFPD acts as the county fire department for unincorporated Ventura County and as the city fire department for seven cities (Camarillo, Moorpark, Ojai, Port Hueneme, Santa Paula, Thousand Oaks, and Simi Valley).

Composed of approximately 600 dedicated men and women, the Ventura County Fire Protection District is an all-hazard, full-service agency. VCFPD proudly provides fire protection, medical aid, rescue, hazardous materials response, and a variety of other services to the public. The Ventura County Board of Supervisors acts as the fire protection district’s board of directors. These five elected supervisors appoint the fire chief and task him with providing fire protection services for the district.

VCFPD responds to calls from 33 strategically placed fire stations located throughout Ventura County. VCFPD firefighters are trained to provide the highest level of firefighting, rescue, and emergency medical care. In addition to fighting fires, VCFPD responds to medical emergencies, traffic accidents, land and water rescues, hazardous materials calls, environmental hazards, and a variety of public service requests.

The Ventura County Board of Supervisors assumes responsibility for the adoption of this plan; Ventura County Office of Emergency Services will oversee its implementation.

The District participates in the Public Protection Class Rating System and currently has a rating of 5.

22.2.2 Service Area

The District service area covers 848 square miles, serving a population of 850,000.

22.2.3 Assets

Table 22-2 summarizes the assets of the District and their value.

Asset	Value
Property	
N/A acres of land	Included with Critical Facilities values below
Equipment	
Aerials 7 @ \$1,500,000.00 ea. =	\$10,500,000.00
Type 1 Pumpers 52 @ \$710,000.00 ea. =	\$36,920,000.00
Type 3 Pumpers 11 @ \$350,000.00 ea. =	\$3,850,000.00
Heavy Rescue 1 @ \$1,000,000.00 ea. =	\$1,000,000.00
Rescues 6 @ \$450,000.00 ea. =	\$2,700,000.00
Squads 4 @ \$215,000.00 ea. =	\$215,000.00
Utilities 10 @ \$70,000.00 ea. =	\$700,000.00
Total:	\$56,530,000.00
Critical Facilities	
Old Fire Station 20—12727 Santa Paula-Ojai Road, Santa Paula, CA 93060	\$1,571,908
Fire Station 20—12000 Santa Paula-Ojai Road, Ojai, CA 93023	\$6,193,994
Fire Station 21—1201 E Ojai Ave, Ojai, CA 93023	\$3,674,182
Fire Station 22—466 S La Luna Ave, Ojai, CA 93023	\$3,061,690
Fire Station 23—15 Kunkle St, Oak View, CA 93022	\$6,501,775
Fire Station 25—5674 W Pacific Coast Highway, Ventura, CA 93001	\$4,549,938
Old Fire Station 26—12391 W Telegraph Rd, Santa Paula, CA 93060	\$2,963,446

Asset	Value
Fire Station 26—536 W Main St, Santa Paula, CA 93060	\$2,034,731
Old Fire Station 27—613 Old Telegraph Rd, Fillmore, CA 93015	\$2,693,274
Fire Station 27—133 C St, Fillmore, CA 93015	\$11,565,960
Fire Station 28—513 N Church St, Piru, CA 93040	\$2,618,824
Fire Station 29—114 S 10th St, Santa Paula, CA 93060	\$2,836,803
Fire Station 30—325 W Hillcrest Dr, Thousand Oaks, CA 91360	\$7,904,826
Fire Station 31—151 Dusenberg Dr, Thousand Oaks, CA 91362	\$3,030,222
Fire Station 32—830 S Reino Rd, Newbury Park, CA 91320	\$3,199,846
Fire Station 33—33 Lake Sherwood Dr, Thousand Oaks, CA 91361	\$2,867,504
Fire Station 34—555 E Avenida de los Arboles, Thousand Oaks, CA 91360	\$2,798,426
Old Fire Station 35—2500 W Hillcrest Dr, Newbury Park, CA 91320	\$2,608,846
Fire Station 35—751 Mitchell Rd, Newbury Park, CA 91320	\$8,621,702
Fire Station 36—855 Deerhill Rd, Oak Park, CA 91377	\$3,290,415
Fire Station 37—2010 Upper Ranch Rd, Thousand Oaks, CA 91362	\$4,724,168
Fire Station 40—4185 Cedar Springs St, Moorpark, CA 93021	\$6,494,099
Fire Station 41—1910 Church St, Simi Valley, CA 93065	\$6,633,790
Fire Station 42—295 E High St, Moorpark, CA 93021	\$7,316,128
Fire Station 43—5874 E Los Angeles Ave, Simi Valley, CA 93063	\$8,554,926
Fire Station 44—1050 Country Club Dr, Simi Valley, CA 93065	\$6,098,820
Fire Station 45—790 Pacific Ave, Simi Valley, CA 93065	\$2,855,991
Fire Station 46—3265 N Tapo St, Simi Valley, CA 93063	\$2,995,683
Fire Station 47—2901 Erringer Rd, Simi Valley, CA 93065	\$5,505,516
Fire Station 50—189 S Las Posas Rd, Camarillo, CA 93010	\$10,717,068
Fire Station 51—3302 Turnout Park Circle, Oxnard, CA 93036	\$7,139,595
Fire Station 52—5353 Santa Rosa Rd, Camarillo, CA 93012	\$3,285,043
Fire Station 53—304 N Second St, Port Hueneme, CA 93041	\$4,681,186
Fire Station 54—2160 Pickwick Dr, Camarillo, CA 93010	\$6,989,158
Fire Station 55—403 Valley Vista Dr, Camarillo, CA 93010	\$2,789,216
Fire Station 56—11855 Pacific Coast Highway, Malibu, CA 90265	\$4,202,245
Fire Station 57—3356 Somis Rd, Somis, CA 93066	\$2,989,542
Fire Communications Center—160 Durley Ave, Camarillo, CA 93010	\$17,731,555
Headquarters—165 Durley Ave, Camarillo, CA 93010	\$21,716,588
Supply—2451 Latigo Ave, Oxnard, CA 93030	\$36,362,659
Training Center—102 Durley Ave, Camarillo, CA 93010	\$9,697,783
Total:	\$264,069,071

22.3 CURRENT TRENDS

The current (2021) population of Ventura County is estimated at 841,734, with a growth of -0.25% in the past year according to the most recent United States Census Data. Ventura County is the 14th largest county in California. And over the last ten-year period, Ventura County's population has seen growth of 2.02% since its 2010 population of 825,097.

22.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 22-3.
- An assessment of fiscal capabilities is presented in Table 22-4.
- An assessment of administrative and technical capabilities is presented in Table 22-5.
- An assessment of education and outreach capabilities is presented in Table 22-6.
- Classifications under various community mitigation programs are presented in Table 22-7.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 22-8.

Table 22-3. Planning and Regulatory Capability

Plan, Study or Program	Most Recent Update	Comment
The California Fire Code 2019	2019	Updated every three years at state-level
District Ordinances #29 and #31	2019	District-Specific Fire Code Amendments
Fire Hazard Reduction Program (FHRP)	continuous	Annual Program
Community Emergency Response Team (CERT) Program	continuous	Disaster Preparedness Education and Training
Ready, Set, Go! Program	continuous	Ventura County Emergency Preparedness Guide
VCFPD Regional Fire Services Standards of Cover	2017	To determine the distribution of the agency's resources
Emergency Plans—Area Command	11/23/2015	
Emergency Plans—Brush Plan	02/28/2019	
Emergency Plans—Civil Unrest	12/19/2016	
Emergency Plans—Communications Failure Plan	05/27/2010	
Emergency Plans—Department Operations Center	10/13/2015	
Emergency Plans—Earthquake	10/20/2016	
Emergency Plans—Flooding	06/14/2016	
Emergency Plans—Heat	01/14/2014	
Emergency Plans—High Surf	06/14/2016	
Emergency Plans—Pandemic Plan	03/12/2020	
Emergency Plans—Staffing	10/26/2015	
Emergency Plans—Tsunami	05/03/2017	
Emergency Plans—Unit Strategic Fire Plan	05/25/2021	Updated annually
Emergency Plans—Urban Terrorism	05/20/2016	
Operational Procedure 1002—Response Levels	11/18/2020	

Plan, Study or Program	Most Recent Update	Comment
Operational Procedure 1006—Water Tender Response Staffing	08/09/2013	
Operational Procedure 1009—Mutual Aid, Ventura Op Area	10/24/2005	
Operational Procedure 1012—Emergency Coordinators	02/01/2008	
Operational Procedure 1100—Emergency Plans 1,2,3 and 4	11/15/2006	
Operational Procedure 2001—Incident Safety	01/15/2013	
Operational Procedure 2004—Contingency Planning/Accountability	07/10/2015	
Operational Procedure 3001—Incident Command	12/28/2005	
Operational Procedure 3003—Staging	09/09/2014	
Operational Procedure 3004—Evacuation of Citizens	06/02/2008	
Operational Procedure 3003—Road Closures	09/18/2007	
Operational Procedure 3009—Cal-OSHA Notification	04/14/2017	
Operational Procedure 3010—Incident Rehabilitation	12/06/2010	
Operational Procedure 3014—Juvenile Fire Setter Advisor	01/15/2013	
Operational Procedure 3015—Critical Incident Stress Debriefing	12/05/2001	
Operational Procedure 4006—Emergency Medical Dispatch	02/11/2004	
Operational Procedure 4008—Multi-Casualty Incidents	12/19/2013	
Operational Procedure 4011—Haz-Mat Patients, Pre Hospital Care	11/13/2013	
Operational Procedure 4500—Rescue Doctrine	11/29/2005	
Operational Procedure 4510—Collapse Rescue	11/29/2005	
Operational Procedure 4520—Rope Rescue	11/29/2005	
Operational Procedure 4530—Trench Rescue	11/29/2005	
Operational Procedure 4540—Confined Space Rescue	11/29/2005	
Operational Procedure 4550—Water Rescue	11/29/2005	
Operational Procedure 4560—Geologic Incidents	02/05/2007	
Operational Procedure 5200—Wildland Fire Doctrine	06/06/2015	
Operational Procedure 5202—Wildland Fire Operations	06/09/2015	
Operational Procedure 5203—Night Flying Fire Suppression	12/16/2016	
Operational Procedure 5204—Ventura Situational Awareness Tool	08/24/2016	
Operational Procedure 5205—ECP Support Package	08/12/2014	
Operational Procedure 5206—Unmanned Aerial Systems	09/14/2016	
Operational Procedure 6000—Hazardous Materials Response Doctrine	02/05/2007	
Operational Procedure 6007—Radiological Incidents	08/25/2011	
Operational Procedure 7003—Operational Worksheets	03/26/2019	

Plan, Study or Program	Most Recent Update	Comment
Operational Procedure 7003—Appendix 2 Wildland Fire Incident Command Work Sheet	01/12/2006	
Operational Procedure 7003—Appendix 3 Confined Space Rescue Resource Assignment Sheet Work Sheet	01/12/2006	
Operational Procedure 7003—Appendix 4 Collapse Rescue Resources Assignment Sheet Work Sheet	01/12/2006	
Operational Procedure 7003—Appendix 5 Trench Rescue Resource Assignment Sheet Work Sheet	01/12/2006	
Operational Procedure 7003—Appendix 6 Surf Rescue Resource Assignment Sheet Work Sheet	01/12/2006	
Operational Procedure 7003—Appendix 7 Swiftwater Rescue Resource Assignment Sheet/Work Sheet	01/12/2006	
Operational Procedure 7003—Appendix 8 Marine Disaster Resource Assignment Sheet Work Sheet	01/12/2006	
Operational Procedure 7003—Appendix 9 Area Hospitals	09/06/2005	
Operational Procedure 7003—Appendix 13 Hazardous Materials Incident Command Work Sheet	01/12/2006	
Operational Procedure 8010—Commercial Vessel Fires	02/05/2007	
Operational Procedure 8040—Camarillo Airport Aircraft Operations	02/05/2007	
Operational Procedure 8050—Railroad Incidents	02/05/2007	
AP 10103—Records Retention Schedule	06/13/2014	
AP 10105—Daily Journal, Fire Company	10/26/2016	
AP 10106—Significant Incident Documentation	12/23/2013	
AP 10501—Computer Technology Use	10/18/2019	
AP 10503—Technical Services, Request for	08/31/2001	
AP 10504—Internet Access and Use	10/18/2019	
AP 10610—Mapping and GIS System Modifications	10/10/2013	
AP 10611—Helispots	06/09/2014	
AP 10612—Tactical Pre-Plans and Supplemental Maps	06/09/2014	
AP 11100—Uniforms, General	11/05/2020	
AP 11118—Personal Protective Equipment, Maintenance & Inspection of	04/05/2021	
AP 11126—Body Armor, Care and Inspection of	02/17/2011	
Appendix 1—Body Armor, Care and Inspection of	02/17/2011	
AP 11201—Combined Leave	11/09/2007	
AP 11202—Shift Trades	08/10/2021	
AP 11203—Summons/Subpoena	04/25/2001	
AP 11205—Sick/Bereavement Leave, Usage of	03/09/2000	
AP 11206—Family Medical Leave	02/14/1994	
AP 11301—Staffing Levels	02/05/2002	
AP 11307—Apparatus Staffing, Personal Emergencies	02/28/2001	
AP 11401—Injury and Illness Prevention Program	03/29/2016	
AP 11502—Live-Fire Training	12/19/2016	

Plan, Study or Program	Most Recent Update	Comment
AP 11504—Captain Mentoring Program	04/09/2020	
AP 11505—California Incident Command Certification System	03/04/2021	
AP 11506—Paramedic Internship Program	03/05/2021	
AP 11508—Fire District California Incident Command Certification System Mentoring Team	03/04/2021	
AP 11509—Incident Management Team Participation	03/04/2021	
AP 11510—Community Emergency Response Team (CERT) Prog.	01/07/2016	
AP 11511—Staff Rides	12/19/2018	
AP 11804—Industrial Injury/Illness	09/05/2002	
AP 11806—Physical Fitness Program	02/11/2019	
AP 11808—National Fire Academy	05/24/2018	
AP 11810—Driver License	11/20/2017	
AP 12101—Tractor-Drawn Aerial Engineer and Operator	01/31/2017	
AP 12102—Vehicles and Apparatus, Operating	04/05/2018	
AP 12103—Water Rescue Equipment	05/30/2002	
AP 12104—Flight Request, Non-Emergency Incident	11/08/2006	
AP 12302—Inventory, Apparatus	07/11/2005	
AP 12300—Inventory, Apparatus: Appendices 1 – 6	04/29/2015	Engine 1, Engine Type 3, Quint, Ladder Truck, Rescue, PM Squad
AP 12300—Inventory, Apparatus: Appendix 7	02/16/2021	BC Vehicle
AP 12300—Inventory, Apparatus: Appendices 8 – 11	04/29/2015	Water Tender, Patrol, Utility, Light and Air
AP 12300—Inventory, Apparatus: Appendix 14	08/29/2016	HazMat 50
AP 12300—Inventory, Apparatus: Appendices 15 – 18	01/03/2017	US&R 40, US&R 54, US&R 54 (Cache Trailer, US&R 154
AP 12303—Fire Hose Inventory and Configuration	10/18/2019	
AP 12405—Tools/Equipment, Fire Station	12/18/2012	
AP 12406—Emergency Food & Water Supplies	11/17/2020	
AP 12501—Controlled Substances	07/08/2020	
AP 13003—Mandatory Worksite Postings	10/27/2016	
AP 13004 –Fire District Property, Disposal of	05/08/2012	
AP 13005—Complaints	05/08/2020	
AP 13006—Security of Department Facilities	05/23/2013	
AP 13008—Department Equipment & Facilities, Use of	12/22/2016	
AP 13009—Theft, County Property	11/05/2012	
AP 13010—Libraries, Fire Station and Appendix 1 (Inventory)	02/16/2017	
AP 13014—Public Records Act Requests	05/22/2009	
AP 13015—Grant Management	02/23/2017	
AP 13103—Maintenance and Construction	10/26/2016	
AP 13105—Fire Hydrants, Inspection and Maintenance of	06/11/2001	
AP 13107—Knox Rapid Entry System	02/17/2017	
AP 13109—Fire Hydrants, Reflective Markers for	03/15/2004	

Plan, Study or Program	Most Recent Update	Comment
AP 13109—Appendix 2: Encroachment Permit Information	04/04/2016	
AP 13114—Incident Response Reporting	06/20/2013	
AP 13115—Fire Locks	08/09/2018	
AP 13202—Security of Fire Communications Center	12/04/2001	
AP 14001— Inspection Authority	09/02/2014	
AP 14002—Fire Safety Inspector Program	09/02/2014	
AP 14004—Movie Safety Officer	07/30/2001	
AP 14102—Community Service Volunteers	02/18/2016	
AP 14202— Burning Permits	04/19/2016	
AP 14301—Administrative Citation Program	07/22/2021	
AP 14302—Criminal Citations	07/22/2021	
AP 14303—Outdoor Fires for Recreation and Other Uses	03/28/2019	
AP 15008—Fire Communications Center Minimum Staffing Levels	02/06/2019	
AP 15010—Fire Communications Center Special Assignments and Training Opportunities	12/28/2017	
Fire Prevention Standards:		
501—Fire Apparatus Access	09/30/2019	Provides the minimum requirements for fire apparatus access roads. This standard also includes requirements for access road gates, fire lanes, and turnarounds/turnouts.
502—Premises Identification	10/18/2018	Provides the minimum requirements for property identification.
506—Knox Rapid Entry System	04/01/2017	Provides the minimum requirements for installation and use of the Knox Rapid Entry System.
509—Residential Fire Sprinklers	02/07/2020	Provides the minimum requirements for the design and installation of automatic fire sprinkler systems in one and two-family dwellings and manufactured homes
509C—Plan Submittal Sheet for Residential Fire Sprinklers	09/25/2020	Plan submittal sheet to be used on all residential fire sprinkler systems.
515—Defensible Space and Fuel Modification Zones	11/20/2020	Provides the minimum requirements for installation and maintenance of defensible space and fuel modification zones.
516—Composting, Mulch, and Organic Processing	02/05/2020	Provides the minimum requirements for processing, storage and application of composting, mulch and organic materials.
517—Application of Mulch and Chips in Defensible Space	11/20/2020	Provides the minimum requirements for application of mulch and wood chips within the defensible space of a structure.
518—Alternate Materials and Methods	12/21/2020	Provides requirements for filing a request for alternate materials and methods
519—Fire Watch	12/17/2020	Identifies when a fire watch is required and the minimum requirements for the fire watch.
14.5.3—Fire Hydrants	06/11/2011	Provides the minimum requirements for fire hydrants
14.6.10—Access and Water Supplies for Public Schools	05/27/2011	Provides the minimum requirements for access roads and water supply.

Plan, Study or Program	Most Recent Update	Comment
14.7.2—Installation of Commercial Fire Sprinklers	07/07/2011	Provides the minimum requirements for the design and installation of automatic fire sprinkler systems in commercial, industrial and multi-family dwellings.
14.7.3—Installation of Fire Alarms	02/23/2011	Provides the minimum requirements for the design and installation of automatic and manual fire alarm systems and fire sprinkler monitoring systems.
14.7.4—Fire Extinguishing Systems for Commercial Cooking Operations	05/13/2011	Provides the minimum requirements for the design, installation, testing and inspection of fire extinguishing systems for commercial cooking operations.
14.7.5—High-Piled Combustible Storage	03/30/2011	Provides the minimum requirements for high-piled combustible storage.
14.9.3—Fireworks Requirements	05/21/2014	Provides the minimum requirements for the public display of fireworks.
Fire Prevention Guidelines:		
401—Special Event Guideline	02/13/2020	Provides a summary of the Fire District's standard conditions for special events.
403—FHRP Abatement Assessment and Appeal Process Guideline	01/01/2020	Provides a summary of the process to file an appeal to a FHRP abatement assessment.
404—Recreational Fire Safety Guideline	02/14/2019	Provides a summary of safety guidelines for the use of recreational fires.
414—Re-Opening of Assembly Occupancies During COVID-19 Guideline	05/22/2020	Provides a summary of fire safety requirements for the re-opening of an assembly occupancy during the COVID-19 pandemic.
Crop and Orchard Warming Directive	01/29/2020	Provides a guide for the use of small warming fires during frost prevention activities. (VCFPD and Ventura County Air Pollution Control District)

Table 22-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	No
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes
<i>If yes, specify:</i> Fire Prevention Fees, Emergency Incident Reimbursement, State Contracts, Federal Grants	

Table 22-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Fire Prevention Bureau	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Fire Prevention Bureau	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Emergency Services Bureau-Wildland and Fire Prevention/Planner	Yes
Staff with training in benefit/cost analysis <i>If Yes, Department /Position:</i> Business Services Bureau	Yes
Surveyors <i>If Yes, Department /Position:</i> Damage Inspection Specialists and Managers for fire damage assessment and all hazards	Yes
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Emergency Services Bureau / GIS Specialists and Analysts	Yes
Scientist familiar with natural hazards in local area	No
Emergency manager <i>If Yes, Department /Position:</i> Fire Chief, and all VCFPD Managers	Yes
Grant writers	No
Other <i>If Yes, Department /Position:</i> IT, RNs, HR Professionals, Fiscal Staff	Yes

Table 22-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> Fire Hazard Reduction Plan is on website	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> Ready, Set, Go! Program and FHRP	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i> Ojai Valley Fire Safe Council, Ventura Regional Fire Safe Council, Bell Canyon Fire Safe Council, Ventura Park Fire Safe Council and the Ventura Resource Conservation District. Also a non-profit called the C.R.E.W has received funding from CAL FIRE California Climate Investments grants for a community chipper program. Piru Wildfire Prevention Education is another group	Yes
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> Signage Boards for FHRP Community Alerts; VC Alert and Ready, Set, Go! brochures	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> Dam Inundation Alarm at Station 28, Alert Wildfire Cameras throughout the County, and remote automated weather stations throughout the County	Yes

Table 22-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	111-91041	UNK
DUNS#	Yes	175795681	UNK
Community Rating System	No	No	N/A
Building Code Effectiveness Grading Schedule	No	No	N/A
Public Protection	Yes	03/3X	12/21/2018
Storm Ready	Yes	N/A	UNK
Firewise	Yes	N/A	UNK
Tsunami Ready	Yes	N/A	UNK

Table 22-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: We monitor fuel moistures throughout the region and we have remote automated weather stations to monitor temperatures and relative humidity, rainfall and wind.</i>	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment:</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: GIS, Wildfire Pre-Planner, Vegetation Management Planner</i>	Medium
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment:</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment:</i>	Low
Participation in regional groups addressing climate risks <i>Comment:</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment:</i>	Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment:</i>	Low
Identified strategies for adaptation to impacts <i>Comment:</i>	Low
Champions for climate action in local government departments <i>Comment:</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment:</i>	Low
Financial resources devoted to climate change adaptation <i>Comment:</i>	Low
Local authority over sectors likely to be negatively impacted <i>Comment:</i>	Low

Criterion	Jurisdiction Rating ^a
Public Capacity	
Local residents’ knowledge of and understanding of climate risk <i>Comment:</i>	Unsure
Local residents’ support of adaptation efforts <i>Comment:</i>	Unsure
Local residents’ capacity to adapt to climate impacts <i>Comment:</i>	Unsure
Local economy current capacity to adapt to climate impacts <i>Comment:</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Low

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

22.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

22.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Cal Fire Danger Rating Tiers**—Fire severity regional maps
- **Dam Inundation Plan**—Emergency Plan for response to dam failure/flooding
- **GIS-based pre-application review process**—Maintain a GIS-based (Accella) pre-application review for new construction and major remodels in hazard areas, such levee break, high and/or very high wildfire areas.
- **Integration of the 2015 HMP into current/future planning documents**—Integrate the 2015 HMP, in particular the hazard analysis and mitigation strategy sections, into local planning documents, including general plans, emergency operations plans, and capital improvement plans.
- **Fuel Reduction Program, Chipper Program**—Maintain a fuel reduction program, such as the collection and disposal of dead fuel, within open spaces and around critical facilities and residential structures located within a SRA or LRA high or very high wildfire zone
- **Post-Fire Debris Flow Treatments**—Maintain post-fire debris flow hillslope and channel treatments, such as mulching, check dams, and debris racks, as needed.

- **Fuel Modification Program, Fire Hazard Reduction Plan**—Maintain a fuel modification program, which also includes residential maintenance requirements and enforcement, plan submittal and approval process, guidelines for planting, and a listing of undesirable plant species. Require builders and developers to submit their plans, complete with proposed fuel modification zones, to the local fire department for review and approval prior to beginning construction.
- **Public Education Program, Ready, Set, Go**—Continue to develop and promote public education programs in wildland fire safety and survival for all residents adjacent to wildland areas.
- **Water Reduction and Restrictions & Public Education**—Continue to implement water reduction and restrictions at district facilities; reduced or removed landscape vegetation and replaced it with drought tolerant vegetation. Also created a public viewing area at a fire station starting with a walking tour and plant identification for the public to use while planting their own yards.
- **National Terrorism Advisory System Bulletin**—Rating level, Department of Homeland Security (DHS) for threat preparation and planning as applied for preparatory action by the Fire District.
- **MARSEC USCG (Maritime Security U.S. Coast Guard)**—Threat rating system for our local Port of Hueneme, a Maritime Transportation Security Act regulated port as applied for preparatory action by the Fire District.
- Integrate the hazard analysis and mitigation strategy into the General Plan’s Safety Element.
- Continue to participate in the NWS Tsunami Ready Program.
- Maintain a new vegetation management program that provides vegetation management services to elderly, disabled, or low- income property owners who lack the resources to remove flammable vegetation from around their homes.
- Maintain a fuel modification program for new construction by requiring builders and developers to submit their plans, complete with proposed fuel modification zones, to the local fire department for review and approval prior to beginning construction.
- Maintain a hazards fuel treatment program for areas that have been identified with overgrown/dead brush/trees to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program.
- Maintain a vegetation management program in areas within and adjacent to rights-of-way and in close proximity to critical facilities to reduce the risk of tree failure and property damage and avoid creation of wind acceleration corridors within vegetated areas.
- Continue to work with local ranchers and oil fields to identify and create additional exit corridors for employees to use in the event of a wildfire.
- Continue to implement the hazard analysis and mitigation strategy into the district’s emergency plans.
- Maintain post-fire debris flow hillslope and channel treatments, such mulching, check dams, and debris racks, as needed.

22.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **AB-38**—Applying the Wildland Fire Disclosure Act on Home Sales

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

22.6 RISK ASSESSMENT

22.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 22-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 22-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4482	January 20, 2020 – present September 30, 2021	\$181,280.00
Holser Fire		August 17, 2020	\$880,836.32 3,000 acres burned
Lime Fire		June 10, 2020	\$1,257,780.92 803 acres burned
Maria Fire	FM-5302	November 1, 2019 October 31, 2019	\$1,431,058.00 9,999 acres burned
Easy Fire	FM-5298 DR-5298	October 30, 2019	\$1,266,729.00 1,806 acres burned
Getty Fire	FM-5297	October 28, 2019	\$93,205.78
Saddleridge Fire	FM-5293	October 10, 2019	\$85,897.02
Wildfires (Hill/Woolsey)	DR-4407	November 8 – 25, 2018	\$10,718,300.00 Woolsey, LA & VC 96,949 acres
Thomas Fire	FM-5224 DR-4353	December 4, 2017	\$8,538,253.00
Springs Fire	FM-5024 DR-5024	May 2 – 11, 2013	\$369,392.00 24,251 acres burned
Guiberson Fire	FM-2839 DR-2839	September 22 – 29, 2009	\$533,819.00
Wildfires, Flooding, Mudflows, and Debris Flows (October 2007 Fires)	DR-1731	October 21 – March 31, 2008	\$81,578.00
Sesno Fire	DR-2789	October 13, 2008	\$142,434.00

Type of Event	FEMA Disaster #	Date	Damage Assessment
Shekell Fire	FM-2681 DR-2861	December 3 – 6, 2006	\$2,193,118.00 13,600 acres burned 7 structures burned
Day Fire	FM-2677 DR-2677	September 4, 2006	\$382,215.00
School Fire	FM-2586 DR-2568	November 17, 2005	\$1,013,284.30
Topanga Fire	FM-2583 DR-2583	September 28 – October 10, 2005 September 28	\$1,749,843.47 24, 175 acres burned 6 structures burned
Hurricane Katrina Evacuation	EM-3248	August 29 – October 1, 2005	\$621,740
Severe Storms, Flooding, Landslides, and Mud and Debris Flows	DR-1585	February 16 – 23, 2005	Data not available
Severe Storms, Flooding, Debris Flows, and Mudslides La Conchita	DR-1577	December 27, 2004 – January 11, 2005	\$1,828,411.00
Simi Fire		October 25, 2003	107,560 acres burned 48 structures lost
Wildfires, Flooding, Mudflow and Debris Flow	DR-1498	October 21, 2003 – March 31, 2003	Data not available
Westlake Fire		June 29, 2001	278 Acres burned
Severe Storms, Tornadoes, High Winds and Flooding	DR-1267	December 20 – 28, 1998	Data not available
Severe Winter Storms and Flooding	DR-1203	February 2 – April 30, 1998	Data not available
Severe Fires	EM-3120	October 21 – 31, 1996	Data not available
Grand Fire	Unknown	April 28, 1996	10,949 acres burned
Severe Winter Storms, Flooding, Landslides, Mud Flows	DR-1046	February 13 – April 19, 1995	Data not available
Severe Winter Storms, Flooding, Landslides, Mud Flows	DR-1044	January 3 – February, 1995	Data not available
Northridge Earthquake	DR-1008	January 17 – November 30, 1994	Data not available
Fires, Mud & Landslides, Soil Erosion, Flooding	DR-1005	October 26 – April 22, 1994	Data not available
Green Meadows Fire		October 26, 1993	38,477 acres burned 45 structures burned
Severe Storm, Winter Storm, Mud & Landslides, Flooding	DR-979	January 5 – March 20, 1993	Data not available
Snow Storm, Heavy Rain, High Winds, Flooding, Mudslide	DR-935	February 10 – 19, 1992	Data not available
Severe Freeze	DR-894	December 19, 1990 – January 3, 1991	Data not available
Bates Fire		April 4, 1989	193 acres burned
Piru Fire		January 1, 1988	12,068 acres burned
Severe Storms, High Tides, Flooding	DR-812	January 17 – 22, 1988	Data not available
Bradley Fire		November 11, 1986	9,229 acres burned
Ferndale Fire		October 14, 1985	46,809 acres burned 20 structures burned
Black Mountain Fire		July 3, 1985	1,324 acres burned
Wheeler Fire		July 1, 1985	122,724 acres burned

Type of Event	FEMA Disaster #	Date	Damage Assessment
Grass, Wildlands, Forest Fires	DR-739	June 26 – July 19, 1985	Data not available
Grimes Fire		May 7, 1984	11,164 acres burned 3,000 avocado & citrus trees burned
Coastal Storms, Floods, Slides, Tornadoes	DR-677	January 21 – March 30, 1983	Data not available
Severe Storms, Mudslides, Flooding	DR-615	January 8, 1980	Data not available
Happy Camp Fire		August 28, 1978	463 acres burned
Coastal Storms, Mudslides, Flooding	DR-547	February 15, 1978	Data not available
Carlisle Fire		November 15, 1977	1,368 acres burned
Los Robles Fire		June 22, 1976	2,245 acres burned 1 structure burned
Potrero Fire		September 26, 1973	12,297 acres burned 3 structures burned
Severe Storms, High Tides, Flooding	DR-364	February 8, 1973	Data not available
Forest, Brush Fires	DR-295	September 29, 1970	Data not available
Camarillo Heights Fire		September 26, 1970	183 acres burned 3 structures burned
Foothill Fire		September 25, 1970	4,731 acres burned 12 structures burned
Severe Storms, Flooding	DR-253	January 26, 1969	Records not kept
Timber Canyon Fire		October 16, 1967	10,841 acres burned 8 structures burned
Ditch Road Fire		October 16, 1967	1,245 acres burned 13 structures burned
Sence Ranch Fire		October 15, 1967	18,354 acres burned 76 structures burned
Devonshire-Parker Fire		October 15, 1967	23,088 acres burned 48 structures burned VC&LA Counties
Warring Canyon Fire		August 28, 1967	4,003 acres burned 1 structure burned
Heavy Rains, Flooding	DR-211	December 7, 1965	Records not kept
Polo Fire		March 7, 1964	684 acres burned
Flood ^a	DR-145	February 25, 1963	No data on file
Creek Road Fire		August 20, 1963	4,533 acres burned
Squaw Flats Fire		August 20, 1963	439 acres burned
Red Mountain Fire		January 5, 1963	1,389 acres burned
Culbert Lease Fire		December 4, 1962	5,314 acres burned 4 structures burned
Severe Storm ^a	DR-138	October 24, 1962	No data on file
Flood ^a	DR-122	March 6, 1962	No data on file
Donlon & Fletcher Fire		January 15, 1961	2,426 acres burned
Calumet Fire		October 21, 1958	17,212 acres burned 5 structures burned
Flood ^a	DR-82	April 4, 1958	No data on file
Fire ^a	DR-65	December 29, 1956	No data on file

Type of Event	FEMA Disaster #	Date	Damage Assessment
Lake Sherwood Fire		December 28, 1956	35,164 acres burned 20 structures burned
Flood ^a	DR-47	December 23, 1955	No data on file
Ventu Park Fire		November 7, 1955	13,956 acres burned 8 structures burned
Houston Fire		February 10, 1955	500 acres burned
Flood ^a	DR-15	February 5, 1954	No data on file
Wheeler Springs Fire		September 12, 1948	22,503 acres burned 17 structures burned
Thatcher Fire		June 1, 1947	44,003 acres burned 60 structures burned
Matilija Fire		September 7, 1932	220,000 acres burned

a. FEMA did not begin distinguishing declarations by county until 1964. Declarations prior to then are statewide, not county-specific.

Source: FEMA 2021

22.6.2 Hazard Risk Ranking

Table 22-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Calculations are from Unincorporated County areas and all cities, except Ventura, Oxnard, and Fillmore. Rankings were adjusted by Chief Fong with THIRA process, professional knowledge, and experience.

Table 22-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Wildfire	34	High
2	Severe Weather	24	Medium
2	Severe Storms	24	Medium
4	Flooding	23	Medium
5	Drought	22	Medium
5	Earthquake	22	Medium
5	Dam Failure	22	Medium
8	Landslide	16	Low
9	Sea Level Rise	4	Low
9	Tsunami	4	Low

22.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Wildfires—Ventura County has experienced the largest, most destructive, and longest duration wildfires in State recorded history, with 3 of the top 20 in the County according to CAL FIRE.
- Severe Weather—The extremes of climate change have induced long duration wind-events, freezing temperatures with frost kill, record high temperatures, increased lightning activity, and prolonged drought resulting in increased calls for service.
- Severe Storms—The jurisdiction has seen extreme storm systems bring the majority of precipitation in very condensed periods, which have impacted communities and infrastructure causing flooding, with associated mudslides in prior burn areas, and coastal flooding aggravated by storm surge and rising tides.

Actions addressing these issues were prioritized for consideration in the action plan in this annex.

22.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 22-11 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 22-11. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
OA 1—Integrate the hazard analysis and mitigation strategy with the General Plan’s Safety Element. <i>Comment: Hazard analysis and mitigation strategy is continuous.</i>			✓	VFP-4
OA 17—Implement post-fire debris flow hillslope and channel treatments, such as seeding, mulching, check dams, and debris racks, as needed. <i>Comment: Current programs following recent fires (Thomas Fire 2017 and Woolsey Fire, 2018) have been completed. Program will continue, following impacted wildland fire areas.</i>			✓	VFP-5
OA 21—Maintain hazards fuel treatment program for areas that have been identified with overgrown/dead brush/trees to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program. <i>Comment: Continuing program, indefinitely; as part of the VCFPD Fire Hazard Reduction Program.</i>			✓	VFP-6
OA 22—Develop a vegetation management program in areas within and adjacent to rights-of-way and in close proximity to critical facilities to reduce the risk of tree failure and property damage and avoid creation of wind acceleration corridors within vegetated areas. <i>Comment: Continuing program as areas are identified.</i>			✓	VFP-7
VCFPD 1 –Work with local ranchers and oil fields to identify and create additional exit corridors for employees to use in the event of a wildfire. <i>Comment: Continuing program.</i>			✓	VFP-8

22.8 HAZARD MITIGATION ACTION PLAN

Table 22-12 lists the actions that make up the hazard mitigation action plan for this jurisdiction.

Table 22-13 identifies the priority for each action. Table 22-14 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 22-12. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action VFP-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<i>Hazards Mitigated:</i> Wildfire, Severe Storms, Severe Weather, Landslide, Sea Level Rise, Tsunami, Earthquake, Dam Failure, Flooding						
Existing	2, 6, 9, 11	VCFPD	GSA & Public Works	High	FEMA HMA (BRIC, FMA, HMGP), Staff Time, and General Funds	Short-term
Action VFP-2 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> Wildfire, Severe Storms, Severe Weather, Landslide, Sea Level Rise, Tsunami, Drought, Earthquake, Dam Failure, Flooding						
New & Existing	1, 4, 6, 8, 19	VCFPD	GSA & Public Works	Low	Staff Time, General Funds	Short-term
Action VFP-3 —Purchase generators for critical facilities and infrastructure that lack adequate backup power, including the Vehicle Maintenance Unit, which will be installed sometime between the end of 2021 and beginning of 2022.						
<i>Hazards Mitigated:</i> Dam Failure, Earthquake, Flooding, Landslide, Severe Weather, Severe Storms, Wildfire						
Existing	2, 6, 7	VCFPD	GSA & Public Works	Low	Staff Time, General Funds, FEMA HMA (BRIC, HMGP)	Short-term
Action VFP-4 —Integrate the hazard analysis and mitigation strategy with the Ventura County General Plan's Safety Element.						
<i>Hazards Mitigated:</i> Wildfire, Severe Storms, Severe Weather, Landslide, Sea Level Rise, Tsunami, Drought, Earthquake, Dam Failure, Flooding						
New & Existing	1, 4, 6, 8, 19	VCFPD	GSA, Public Works, CAL FIRE	Medium	FEMA HMA (BRIC, FMA, HMGP), Staff Time & General Funds	Ongoing
Action VFP-5 —Implement post-fire debris flow hillslope and channel treatments, such as seeding, mulching, check dams, and debris racks, as needed.						
<i>Hazards Mitigated:</i> Earthquake, Dam Failure, Severe Storms, Severe Weather, Flooding, Wildfire, Landslide, Drought						
New & Existing	2, 4, 5, 6, 8, 10, 11, 13, 14, 15, 18	VCFPD	GSA, Public Works, CAL FIRE	Medium	FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing
Action VFP-6 —Maintain wildfire hazard fuel reduction program for areas that have been identified with overgrown or dead brush, trees and weeds to reduce the potential for tree-to-tree ignition. Ensure that a "maintenance now" component to provide continued fire resistance is part of the program.						
<i>Hazards Mitigated:</i> Wildfire						
New & Existing	2, 4, 5, 6, 8, 10, 11, 13, 14, 15, 18, 19	VCFPD	CAL FIRE & USDA	Medium	FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing
Action VFP-7 —Develop a vegetation management program in areas within and adjacent to rights-of-way and in close proximity to critical facilities to reduce the risk of tree failure and property damage and avoid creation of wind acceleration corridors within vegetated areas.						
<i>Hazards Mitigated:</i> Severe Storms, Severe Weather, Flooding, Wildfire, Landslide, Drought						
New & Existing	2, 4, 5, 6, 8, 10, 11, 13, 14, 15, 18, 19	VCFPD	CAL FIRE & USDA	Medium	FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing
Action VFP-8 —Work with local ranchers and oil fields to identify and create additional exit corridors for employees to use in the event of a wildfire.						
<i>Hazards Mitigated:</i> Wildfire						
New & Existing	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	VCFPD	CAL FIRE & USDA	Low	FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing
Action VFP-9 —At select Fire Stations in the district, continue using reclaimed water and promoting water-saving measures by maintaining drought-tolerant demonstration gardens for community education and awareness.						
<i>Hazards Mitigated:</i> Drought						
Existing	1, 2, 4, 13, 14, 15, 17, 18, 19	VCFPD	Local Water Utility Purveyors	Low	Staff Time & General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action VFP-10 —Implement a fuel modification program for new construction by requiring builders and developers to submit their plans, complete with proposed fuel modification zones, to the local fire department for review and approval prior to beginning construction.						
<i>Hazards Mitigated:</i> Wildfire						
New & Existing	1, 2, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	VCFPD	CAL FIRE & Local City Fire Depts.	Low	FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing
Action VFP-11 Develop and implement a Home Ignition Zone Assessment Program (Reference NFPA 1144) throughout the County's Fire Hazard Severity Zones.						
<i>Hazards Mitigated:</i> Wildfire						
New	1, 2, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	VCFPD	Ventura County Resource Conservation District	Medium	FEMA HMA (BRIC, FMA, HMGP), General Funds & Staff Time	Ongoing
Action VFP-12 Maintain new vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes.						
<i>Hazards Mitigated:</i> Wildfire						
New & Existing	2, 4, 5, 8, 10, 13, 14, 15, 19	VCFPD		Medium	FEMA HMA (BRIC, FMAP and HMGP), Staff Time, General Funds	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 22-13. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	4	High	High	Yes	Yes	No	Medium	High
2	5	Medium	Low	Yes	No	Yes	High	Low
3	3	High	Low	Yes	Yes	Yes	High	High
4	5	Medium	Medium	Yes	Yes	Yes	High	Medium
5	11	Medium	Medium	Yes	Yes	No	Medium	Medium
6	12	High	Medium	Yes	Yes	Yes	High	High
7	12	Medium	Medium	Yes	Yes	Yes	High	Medium
8	18	Medium	Low	Yes	Yes	Yes	High	Medium
9	9	Medium	Low	Yes	No	Yes	High	Low
10	17	Medium	Low	Yes	Yes	Yes	High	Medium
11	17	Medium	Low	Yes	Yes	Yes	High	Medium
12	9	High	Medium	Yes	Yes	Yes	High	High

a. See the introduction to this volume for explanation of priorities.

Table 22-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building ^b
High-Risk Hazards								
Wildfire	1, 2, 4, 5, 6, 7, 8, 10, 11, 12	1, 3, 5, 6, 10, 11, 12	4, 6, 11, 12	5, 6, 7, 8, 11, 12	3, 5, 6, 8, 11, 12	5	5, 6, 7, 12	2, 4, 5, 6, 7, 8, 10, 11, 12
Medium-Risk Hazards								
Dam Failure	1, 2, 4, 5	1, 3, 5	4	5	3, 5	5	5	2, 4, 5
Severe Weather	1, 2, 4, 5, 7	1, 3, 5	4	5, 7	3, 5	5	5, 7	2, 4, 5, 7
Severe Storms	VFP-1, 2, 4, 5, 7	VFP-1, 3, 5	VFP-4	VFP-5, 7	VFP-3, 5	VFP-5	VFP-5, 7	VFP-2, 4, 5, 7
Flooding	VFP-1, 2, 4, 5, 7	VFP-1, 3, 5	VFP-4	VFP-5, 7	VFP-3, 5	VFP-5	VFP-5, 7	VFP-2, 4, 5, 7
Drought	VFP-2, 4, 5, 7		VFP-4, 9	VFP-5, 7, 9	VFP-5	VFP-5	VFP-5, 7, 9	VFP-2, 4, 5, 7
Earthquake	VFP-1, 2, 4, 5	VFP-1, 3, 5	VFP-4	VFP-5	VFP-3, 5	VFP-5	VFP-5	VFP-2, 4, 5
Landslide	VFP-1, 2, 4, 5, 7	VFP-1, 3, 5	VFP-4	VFP-5, 7	VFP-3, 5	VFP-5	VFP-5, 7	VFP-2, 4, 5, 7
Low-Risk Hazards								
Sea Level Rise	VFP-1, 2, 4	VFP-1	VFP-4					VFP-2, 4
Tsunami	VFP-1, 2, 4	VFP-1	VFP-4					VFP-2, 4

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

22.9 PUBLIC OUTREACH

Table 22-15 lists public outreach activities for this jurisdiction.

Table 22-15. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Tweet about OES updating the HMP	08/05/2021	7
Retweet of OES updating the HMP	08/04/2021	23
Facebook post about OES updating the HMP	08/05/2021	4,312
Instagram post about OES updating the HMP	08/05/2021	9,656
Retweet of OES updating the HMP (English and Spanish)	08/16/2021	14
Nextdoor	08/05/2021	7,279

22.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **VCFPD Administrative Policies Manual** was used to list planning and regulatory capabilities for Table 22-3.
- **VCFPD Operational Procedures Manual** was used to list planning and regulatory capabilities for Table 22-3.

- **VCFPD Emergency Plans Manual** was used to list planning and regulatory capabilities for Table 22-3.
- **Fiscal and Facilities Records Systems** were used to list assets in Table 22-2 and damages in Table 22-8.
- **District Records on Hazards and Loss** were used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit** was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- **CAL FIRE Archives** were used to gather data for Table 22-8 Past Natural Hazard Events.

23. VENTURA COUNTY OFFICE OF EDUCATION

23.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Russ Olsen, Director of Risk Management
 Ventura County Schools Self-Funding Authority
 5189A Verdugo Way
 Camarillo, CA 93012
 Telephone: 805-383-1970
 e-mail Address: rolsen@vcoe.org

Alternate Point of Contact

Michelle Kelly, Risk Manager
 Ventura County Schools Self-Funding Authority
 5189A Verdugo Way
 Camarillo, CA 93012
 Telephone: 805-437-1504
 e-mail Address: mkelly@vcoe.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 23-1.

Table 23-1. Local Hazard Mitigation Planning Team Members

Name	Title
Eric Reynolds, Ventura Unified SD	Director of Risk Management
Julie Tedder, Moorpark Unified SD	Administrative Assistant, Business Services
Martha Corona, Fillmore Unified SD	Director of Fiscal Services
Russ Olsen, Ventura County Schools Self-Funding Authority	Director of Risk Management
Michelle Kelly, Ventura County Schools Self-Funding Authority	Risk Manager

23.2 JURISDICTION PROFILE

23.2.1 Overview

Ventura County comprises 19 public K-12 school districts, 11 public charter schools, and the Ventura County Office of Education (VCOE), collectively called local educational agencies. The VCOE provides facility planning, construction, and maintenance oversight and guidance to the other local educational agencies. VCOE also operates specialized schools in the county.

Ventura County Schools Self-Funding Authority (VCSSFA) provides insurance programs, risk management programs, and emergency management programs assistance to the public K-12 school districts, 8 charter schools, and VCOE.

The Ventura County Board of Education/Ventura County Superintendent of Schools assumes responsibility for the adoption of this plan; VCSSFA will oversee its implementation.

23.2.2 Service Area

The Ventura County public school service area covers 258 school district locations including schools, offices, maintenance facilities, warehouses and transportation facilities serving a population of 132,000 students and 12,410 staff. Local educational agencies provide educational instruction, extracurricular activities, transportation and meals to students.

23.2.3 Assets

Table 23-2 summarizes the assets of the District and their value.

Asset	Value
Property	
242 school locations and school district auxiliary locations	\$3,915,649,556
Equipment	
827 vehicles including buses, maintenance trucks, passenger cars, trailers, and mobile equipment	Unknown
Total:	Unknown
Critical Facilities	
Ventura County Office of Education, Administrative Office; 5189 Verdugo Way, Camarillo, CA 93012	\$11,602,900
Briggs Elementary School District, District Office; 12465 Foothill Road, Santa Paula, CA 93060	\$1,452,400
Conejo Valley Unified School District, Educational Center; 1400 E Janss Road, Thousand Oaks, CA 91362	\$4,835,400
Fillmore Unified School District, District Office; 627 Sespe Avenue, Fillmore, CA 93015	\$6,723,780
Hueneme Unified School District, District Office; 205 N Ventura Road, Port Hueneme, CA 93041	\$2,746,957
Mesa Union School District, District Office; 3901 N Mesa School Road, Somis, CA 93066	\$707,200
Moorpark Unified School District, District Office; 5297 Maureen Lane, Moorpark, CA 93021	\$20,800,600
Oak Park Unified School District, , District Office; 5801 Conifer Street, Oak Park, CA 91377	\$3,398,600
Ocean View School District, , District Office; 4200 Olds Road, Oxnard, CA 93033	\$3,262,300
Ojai Unified School District, , District Office; 414 East Ojai Avenue, Ojai, CA 93023	\$2,016,200
Oxnard School District, , District Office; 1051 South A Street, Oxnard, CA 93030	\$12,389,000
Oxnard Union High School District, , District Office; 1800 Solar Drive, 1 st Floor, Oxnard, CA 93036	\$15,575,317
Pleasant Valley School District, , District Office; 600 Temple Street, Camarillo, CA 93010	\$3,333,800
Rio Elementary School District, , District Office; 1800 Solar Drive, 3 rd Floor, Oxnard, CA 93036	\$7,775,983
Santa Paula Unified School District, District Office; 201 South Steckel Drive, Santa Paula, CA 93060	\$2,926,478
Simi Valley Unified School District, , District Office; 101 West Cochran Street, Simi Valley, CA 93065	\$46,598,400
Ventura Unified School District, , District Office; 255 West Stanley Avenue, Ventura, CA 93001	\$35,842,500
Total:	\$181,987,815

23.3 CURRENT TRENDS

The current (2021) population of Ventura County is estimated at 841,734, with a growth of -0.25% in the past year according to the most recent United States Census Data. Ventura County is the 14th largest county in California. And over the last ten-year period, Ventura County's population has seen growth of 2.02% since its 2010 population of 825,097.

23.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- Table 23-3 presents an assessment of planning and regulatory capabilities
- Table 23-4 presents an assessment of fiscal capabilities
- Table 23-5 presents an assessment of administrative and technical capabilities
- Table 23-6 presents an assessment of education and outreach capabilities
- Table 23-7 presents classifications under various community mitigation programs
- Table 23-8 Presents the community’s adaptive capacity for the impacts of climate change

Table 23-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
California Education Code, sections 17280 et seq.	2018	Design and approval of school buildings
California Building Code	2019	Standards for building design
Board Policy 3511	2019	Energy and Water Management
Board Policy 7110		Facilities Master Plan
Board Policy 7214		General Obligation Bonds
Emergency Operations Plan	2020	Preparation, response, recovery
California Department of General Services, Division of State Architect		Review and approval of new and modernized school buildings

Table 23-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	Yes

If yes, specify: Self-insurance program credit for safety and emergency preparation.

Table 23-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	No
Engineers or professionals trained in building or infrastructure construction practices	Yes
<i>If Yes, Department /Position:</i> Varies by local educational agency/Director of Facilities, Bond Manager	
Planners or engineers with an understanding of natural hazards	No
Staff with training in benefit/cost analysis	Yes
<i>If Yes, Department /Position:</i> VCSSFA/Risk Manager	
Surveyors	No
Personnel skilled or trained in GIS applications	No
Scientist familiar with natural hazards in local area	No
Emergency manager	Yes
<i>If Yes, Department /Position:</i> Varies by local educational agency/Risk Manager, Emergency Technician	
Grant writers	Yes
<i>If Yes, Department /Position:</i> Department and title varies by local educational agency	

Table 23-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	No
Do you use social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs in place that could be used to communicate hazard-related information?	Yes
<i>If yes, briefly describe:</i> Various mass notification systems -- telephone, text, e-mail	
Do you have any established warning systems for hazard events?	Yes
<i>If yes, briefly describe:</i> Various mass notification systems -- telephone, text, e-mail	

Table 23-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	N/A	N/A
DUNS#	Yes	078294390	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 23-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Climate change taught in some science classes, widespread use of solar panels, electric buses</i>	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment: Impact of local educational agency efforts difficult to measure or monitor</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: Such in-house resources do not exist</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: Such in-house resources do not exist</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment: Continued implementation of new solar panels, electrical storage batteries, electric buses</i>	Medium
Participation in regional groups addressing climate risks <i>Comment: Such in-house resources do not exist</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: Authority/mandate centered on education, which can include climate change taught in some science classes</i>	Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment: solar panels, electrical storage batteries, electric buses</i>	Medium
Identified strategies for adaptation to impacts <i>Comment: solar panels, electrical storage batteries, electric buses</i>	Medium
Champions for climate action in local government departments <i>Comment: Local educational agencies have had energy conservation specialists, but grants have expired.</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment: Local authority limited to school sites</i>	Low
Financial resources devoted to climate change adaptation <i>Comment: As allowed by the state or supported by grant funding.</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment: Local authority limited to students and staff on school campuses</i>	Low
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: Climate change taught in some science classes</i>	Medium
Local residents' support of adaptation efforts <i>Comment: Local educational agencies have little influence beyond school sites</i>	Low
Local residents' capacity to adapt to climate impacts <i>Comment: Local educational agencies have little influence beyond school sites</i>	Low
Local economy current capacity to adapt to climate impacts <i>Comment: Local educational agencies have little influence beyond school sites</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment: Local educational agencies study ecosystems, but have little influence beyond school grounds</i>	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

23.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

23.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Emergency Operations Plan**—A plan for preparing, responding, recovery from emergencies which includes mitigation.
- **Recommendations and Requirements for Wildfire: Preparation and Response**—Includes strategies for preventing property damage due to wildfire and strategies for preventing smoke intrusion into school buildings.

23.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Comprehensive School Safety Plan**—Includes strategies for the education, prevention and response to crime, violence and emergencies on school campuses and at school-related events.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

23.6 RISK ASSESSMENT

23.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 23-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 23-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Weather	N/A	February 28, 2021	Strong and gusty Santa Ana winds impacted the coastal valleys of Ventura county. Minor roof damage at some school sites
COVID-19 Pandemic	DR-4482	01/20/20 – continuing	N/A
Easy/Maria Fires	FM-5298/FM-5302	October 30, 2019	\$325,000
Heat Event		7/4/2018 to 7/6/2018	Extreme 2-day heat event broke records across the county.
Woolsey Fire / Hill Fire	DR-4407	November 8, 2018	\$7,932,865
Thomas Fire	DR-4353	December 4, 2017	\$12,451,877
Winter Storms	N/A	2/17/2017 to 2/18/2017	Rainfall amounts from 2 to 6 inches across coastal areas with up to around 10 inches in the local mountains produced numerous reports of flash flooding as well as mud and debris flows. Strong southerly winds with gusts up to 70 mph reported in some areas.
Springs Fire	FM-5024	May 2, 2013	Smoke damage to district buildings. 24,251 acres burned countywide.
Guiberson Fire	FM-2839	9/22/2009 to 9/29/2009	Smoke damage to district buildings. 17,500 acres burned countywide.
2007 Ranch Fire	FM-1731	October 21, 2007	Smoke damage to district buildings. 58,401 acres burned in both L.A. and eastern Ventura county near Piru
Severe Freeze Event	DR-1689	1/11/2007 to 1/17/2007	4 nights of below freezing temperatures
Shekell Complex Fire	FM-2681	12/3/2006 to 12/6/2006	Smoke damage to district buildings. 13,600 acres burned countywide.
Day Fire	FM-2677	9/4/2006 to 10/9/2006	Smoke damage to district buildings. 162,702 acres burned countywide.
Winter Storms	DR-1577	1/7/2005 to 1/11/2005	Flooding and erosion throughout the county.
Simi Fire	DR-1498/FM-2504	October 24, 2003	Smoke damage to district buildings. 108,204 acres burned countywide.
Ranch Fire	N/A	December 27, 1999	Smoke damage to district buildings. 4,372 acres burned countywide
Freeze Event	DR-1267	December 20, 1998	Unknown
Northridge Earthquake	DR-1008	January 17, 1994	Non-structural damage to a limited number of school sites in the eastern areas of the county
Sylmar Earthquake	N/A	February 9, 1971	Unknown
St. Francis Dam Failure	N/A	March 12, 1928	>530 people died; infrastructure and buildings throughout the county all eradicated in flood's path down the Santa Clara river valley to the Pacific Ocean.

23.6.2 Hazard Risk Ranking

Table 23-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Calculations are from Unincorporated County areas and all cities, then adjusted based on the location of district properties within those jurisdictions, and local experience.

Table 23-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Earthquake	33	High
2	Wildfire	24	Medium
2	Severe Storm	24	Medium
2	Severe Weather	24	Medium
5	Dam Failure	18	Medium
5	Flooding	18	Medium
7	Drought	9	Low
8	Landslide	7	Low
9	Sea Level Rise	2	Low
9	Tsunami	2	Low

23.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- School buildings are built to withstand strong earthquakes. Non-structural hazards can still cause serious injury.
- Smoke intrusion has been the biggest cleanup expense due to wildfire. A small number of schools are located near open space, making them vulnerable to burning.
- Many child nutrition storage areas are without generators to preserve food during power outages.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

23.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 23-11 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

23.8 HAZARD MITIGATION ACTION PLAN

Table 23-12 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 23-13 identifies the priority for each action. Table 23-14 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 23-11. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>OA 1—Integrate the hazard analysis and mitigation strategy with the General Plan’s Safety Element.</p> <p><i>Comment: Still needs to be implemented</i></p>			✓	VOE-5
<p>OA 8—Adopt emergency water conservation measures and/or water conservation ordinance to limit irrigation.</p> <p><i>Comment: Not adopted</i></p>		✓		
<p>OA 11—Develop and implement plans to increase the building owner’s general knowledge of and appreciation for the value of seismic upgrading of the building’s structural and nonstructural elements.</p> <p><i>Comment: School buildings are designed to withstand strong earthquakes. Efforts continue to implement and maintain non-structural earthquake safety.</i></p>			✓	VOE-6
<p>OA 21—Maintain hazards fuel treatment program for areas that have been identified with overgrown/dead brush/trees to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program.</p> <p><i>Comment: Schools adjacent to open space continue to maintain brush clearance as required by the Ventura County Fire Protection District</i></p>			✓	VOE-7
<p>VCOE 1—Convert high water volume landscape to native and other drought tolerant plants, hardscape, and synthetic turf in non-play areas.</p> <p><i>Comment: Efforts continue to implement and maintain drought tolerant plants and hardscape.</i></p>			✓	VOE-8

Table 23-12. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action VOE-1—Where appropriate, support retrofitting of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.</p> <p><i>Hazards Mitigated:</i> Earthquake, Wildfire, Severe Storm, Severe Weather, Dam Failure, Flooding, Landslide, Sea Level Rise, Tsunami</p>						
Existing	2, 6, 9, 11	Facilities		High	General Funds, FEMA HMA (BRIC, HMGP)	Short-term
<p>Action VOE-2—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.</p> <p><i>Hazards Mitigated:</i> Earthquake, Wildfire, Severe Storm, Severe Weather, Dam Failure, Flooding, Drought, Landslide, Sea Level Rise, Tsunami</p>						
New & Existing	1, 4, 6, 8, 19	Administration		Low	Staff Time, General Funds	Short-term
<p>Action VOE-3—Purchase generators for critical facilities and infrastructure that lack adequate backup power, including computer networks and child nutrition storage facilities</p> <p><i>Hazards Mitigated:</i> Dam Failure, Earthquake, Flooding, Severe Weather, Wildfire</p>						
Existing	2, 6, 11	Facilities		Medium	Staff Time, General Funds, FEMA HMA (BRIC, FMA, HMGP)	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action VOE-4 —Harden structures with secure door seals and windows to prevent smoke and ash intrusion during wildfire events.						
<i>Hazards Mitigated:</i> Wildfire						
Existing	2, 6, 9, 11	Facilities		High	Staff Time, General Funds, FEMA HMA (BRIC, FMA, HMGP), Obligation Bonds	Ongoing
Action VOE-5 —Integrate the hazard analysis and mitigation strategy with the General Plan’s Safety Element.						
<i>Hazards Mitigated:</i> Earthquake, Wildfire, Severe Storm, Severe Weather, Dam Failure, Flooding, Drought, Landslide, Sea Level Rise, Tsunami						
New & Existing	1, 4, 6, 8, 19	Administration		Low	Staff Time, General Funds	Short-term
Action VOE-6 —Continue to develop and implement plans to comply with existing seismic mandates for structural elements and increase the general knowledge, appreciation for, and implementation of seismic upgrading of the building’s nonstructural elements.						
<i>Hazards Mitigated:</i> Earthquake						
New & Existing	1, 4, 6, 19	Facilities		High	Staff Time, General Funds, FEMA HMA (BRIC HMGP)	Ongoing
Action VOE-7 —Maintain wildfire hazard fuel reduction program for areas that have been identified with overgrown or dead brush, trees and weeds to reduce the potential for tree-to-tree ignition. Ensure that a “maintenance now” component to provide continued fire resistance is part of the program. (Coordinates with Ventura County Fire Protection District Action VFP-6)						
<i>Hazards Mitigated:</i> Wildfire						
New & Existing	2, 4, 5, 6, 8, 10, 11, 13, 14, 15, 18, 19	VCFPD	Facilities, CAL FIRE & USDA	Medium	FEMA HMA (BRIC, FMAP and HMGP), Staff Time & General Funds	Ongoing
Action VOE-8 —Convert high water volume landscape to native and other drought tolerant plants, hardscape, and synthetic turf in non-play areas.						
<i>Hazards Mitigated:</i> Drought						
Existing	4, 13, 15	Facilities		Medium	Staff Time, General Funds, FEMA HMA (BRIC, HMGP)	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 23-13. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
VOE-1	4	High	High	Yes	Yes	No	Medium	High
VOE-2	5	Medium	Low	Yes	No	Yes	High	Low
VOE-3	3	High	Medium	Yes	Yes	No	Medium	High
VOE-4	4	Medium	High	No	Yes	No	Low	Medium
VOE-5	5	Medium	Low	Yes	No	Yes	High	Low
VOE-6	4	High	High	Yes	Yes	No	Medium	High
VOE-7	12	High	Medium	Yes	Yes	No	Medium	High
VOE-8	3	Low	Medium	No	Yes	Yes	Low	Medium

a. See the introduction to this volume for explanation of priorities.

Table 23-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building ^b
High-Risk Hazards								
Earthquake		VOE-1, 6	VOE-2, 5, 6		VOE-3			VOE-2, 5
Wildfire	VOE-7	VOE-1, 4, 7	VOE-2, 5, 7	VOE-7	VOE-3, 7		VOE-7	VOE-2, 3, 5, 7
Severe Storm		VOE-1	VOE-2, 5					
Severe Weather		VOE-1	VOE-2, 5		VOE-3			VOE-2, 3, 5
Dam Failure		VOE-1	VOE-2, 5		VOE-3			VOE-2, 5
Flooding		VOE-1	VOE-2, 5		VOE-3			VOE-2, 5
Drought			VOE-2, 5	VOE-8				VOE-2, 5, 8
Landslide		VOE-1	VOE-2, 5					VOE-2, 5
Sea Level Rise		VOE-1	VOE-2, 5					VOE-2, 5
Tsunami		VOE-1	VOE-2, 5					VOE-2, 5

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

23.9 PUBLIC OUTREACH

Table 23-15 lists public outreach activities for this jurisdiction.

Table 23-15. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Post VCSSFA Risk Management Committee meeting announcements at VCSSFA Office, VCOE Outdoor posting and VCSSFA website	First Monday of each month	15 to 18 representative from various school districts
Allow public to comment during meetings	First Monday of each month	No members of the public have attended meetings where hazard mitigation has been discussed

23.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **VCSSFA Statement of Values** -- a list of properties and structures including values of structures and modeled values of contents

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- **Grants Portal**—contains documents about costs in response to cleanup after recent wildfires.

24. VENTURA COUNTY PUBLIC WORKS AGENCY— WATERSHED PROTECTION

24.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Glenn Shephard, Director,
VCPWA-Watershed Protection
800 So. Victoria Avenue
Ventura, CA 93009-1610
Telephone: (805) 654-2040
e-mail Address: glenn.shephard@ventura.org

Alternate Point of Contact

Gerard Kapuscik, Mgr. SRG,
VCPWA-Watershed Protection
800 So. Victoria Avenue
Ventura, CA. 93009-1610
Telephone: (805) 648-9284
e-mail Address: gerard.kapuscik@ventura.org

This annex was developed by the local hazard mitigation planning team for Ventura County Public Works Agency—Watershed Protection (VCPWA-WP), whose members are listed in Table 24-1.

Table 24-1. Local Hazard Mitigation Planning Team Members

Name	Title
Eric Alger	Staff Services Specialist II, O&M, VCPWA-WP
Angela Bonfiglio Allen	Planner IV, ESS, WP&PD, VCPWA-WP
Deby Cisneros	Adm. Asst. II, SRG, VCPWA-WP
Masood Jilani	Eng. Mgr. II, D&CD, VCPWA-WP
Gerard Kapuscik	Mgr. SRG, VCPWA-WP
Pam Lindsey	Mgr. ESS, WP&PD, VCPWA-WP
Ewelina Mutkowska	Mgr. County Stormwater Program-VCPWA-WP
Kirk Norman	Eng. Mgr. II, D&CD, VCPWA-WP
Gabriel Ramirez	Eng. Tech IV, SRG, VCPWA-WP
Bruce Rindahl	Eng. Mgr. II, WR&TS, WP&PD, VCPWA-WP
Lara Shellenbarger	WRS III, WR, VCPWA-WP
Glenn Shephard	Director, VCPWA-WP
Yunsheng Su	Eng. IV, APS, WP&PD, VCPWA-WP
Nathan Summerville	Eng. IV, APS, WP&PD, VCPWA-WP
Martha Symes	Grants Specialist, SRG, VCPWA-WP
Mark Yaftali	Eng. III, O&MD, VCPWA-WP

24.2 JURISDICTION PROFILE

24.2.1 Overview

The VCPWA-WP, formerly known as the Ventura County Flood Control District, was initially formed on September 12, 1944, by an act of the California State Legislature. VCPWA-WP is a Dependent County Special District, governed by the Board of Supervisors, and administratively housed in the Ventura County Public Works Agency.

The mission of VCPWA-WP is to protect life, property, and community infrastructure from flood events, improve water resources management, and enhance the health and natural function of watersheds in Ventura County.

VCPWA-WP is the responsible local agency sponsor for federal flood control projects throughout Ventura County. VCPWA-WP also serves as the principal co-permittee and manages the implementation of the Ventura Countywide Stormwater Quality Management Program under the municipal National Pollutant Discharge Elimination System permit for urban stormwater runoff discharges in Ventura County. Finally, VCPWA-WP also manages FEMA’s NFIP and CRS for unincorporated Ventura County.

The Ventura County Watershed Protection Board of Supervisors assumes responsibility for the adoption of this plan, and the Ventura County Public Works Director, through his designee, Glenn Shephard, acting in his capacity as Director of VCPWA-WP, will oversee its implementation.

24.2.2 Service Area

VCPWA-WP’s service area is coterminous with boundaries of Ventura County, except for the offshore islands of Anacapa and San Nicholas. VCPWA-WP’s service area is approximately 1,800 square miles and encompasses all 10 cities and the unincorporated areas of Ventura County.

24.2.3 Assets

Table 24-2 summarizes the assets of VCPWA-WP and their estimated current replacement value.

Asset	Value
Property	
N/A	N/A
Equipment	
Flood Warning System (FWS) Equipment	\$3,454,500
<i>Total:</i>	\$3,454,500
Critical Flood Protection Infrastructure Facilities	
Dams, Debris and Detention Basins	\$244,316,058
Flood/Stormwater Conveyance Channels	\$2,057,616,000
Levees	\$371,086,917
Pump Stations	\$22,799,085
<i>Total:</i>	\$2,699,272,560

24.3 CURRENT TRENDS

The current (2021) population of Ventura County is estimated at 841,734, with a growth of -0.25% in the past year according to the most recent United States Census Data. Ventura County is the 14th largest county in California. And over the last ten-year period, Ventura County's population has seen growth of 2.02% since its 2010 population of 825,097.

24.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- Table 24-3 presents an assessment of planning and regulatory capabilities
- Table 24-4 presents an assessment of fiscal capabilities
- Table 24-5 presents an assessment of administrative and technical capabilities
- Table 24-6 presents an assessment of education and outreach capabilities
- Table 24-7 presents classifications under various community mitigation programs
- Table 24-8 Presents the community's adaptive capacity for the impacts of climate change

Table 24-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
Annual Capital Improvement Plan Project Sheet Submittals	4/31/2021	5-Year Planning Horizon (FY 22-26)
District Detention Dams and Debris Basins Update	In Progress	Evaluation of 53 Debris and Detention Basins
District Facility Design Manual	In Progress	Guidance Standards Governing Flood Protection Projects Designed and Constructed by the VCPWA-Watershed Protection
District Design Hydrology Manual	July 2017	Design Hydrology Computational Guidelines and Input Data Parameters
Emergency Operations Roles & Responsibilities Matrix	March 2017	Categorization of Employees' Emergency Operations Roles and Responsibilities
Flood Mitigation Plan for Ventura County	3/1/2005	OES Planning Grant to VCPWA-WP to Prepare County's Plan Document
Flood Safety Plan for Ventura County	March 2017	Flood Safety Plan Outlines Ventura County's planned response to flood emergencies affecting Ventura County
Dam Inundation Mapping Studies for 8 State Sized Dams	1-2-20 thru 11-11-20	State Mandated Emergency Action Plans with Inundation Maps for Emergency Preparedness
VC Watershed Protection Ordinance No. WP-2	9/10/2013	Ordinance Codifying VCPWA-WP's Statutory Authorities, Powers, and Operational Practices

Table 24-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
<i>If yes, specify: VCPWA-WP, in accordance with applicable provisions found in the Ventura County Watershed Protection Act, (California Water Code Appendix, Chapter 46) is authorized to levy and collect taxes, assessments, and fees for its statutory powers to provide for the control of the flood and storm waters of the district, and to conserve such waters for beneficial and useful purposes as stipulated in Section 7 of its enabling act.</i>	
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

Table 24-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position: VCPWA-WP Engineers I-II-II-IV Engineering Managers I-II-III Environmental Planners VCPWA-WP Director and Deputy Directors</i>	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position: VCPWA-WP Engineers I-II-III-IV Engineer Managers I-II-III Environmental Planners VCPWA-WP Director and Deputy Directors</i>	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position: VCPWA-WP Engineers I-II-III-IV Engineering Managers I-II-III Environmental Planners VCPWA-WP Director and Deputy Directors</i>	Yes
Staff with training in benefit/cost analysis <i>If Yes, Department /Position: VCPWA-WP Engineers I-II-III-IV Engineering Managers I-II-III Staff Services Manager III VCPWA-WP Director and Deputy Directors</i>	Yes

Staff/Personnel Resource	Available?
Surveyors <i>If Yes, Department /Position:</i> VCPWA-WP relies on the VCPWA-Engineering Services Department-County Surveyors Office to perform survey work required in the development of flood protection project engineering design and development efforts. Depending on County Surveyors Office workload considerations, and certain specialized survey work required by VCPWA-WP, the County Surveyors Office may perform the requested survey work utilizing in-house staff, or contract with outside survey service vendors.	Yes
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> VCPWA-WP Engineering Techs III & IV Engineers I-II-III-IV Engineering Managers I-II-III Environmental Planners VCPWA-WP Director and Deputy Directors	Yes
Scientist familiar with natural hazards in local area <i>If Yes, Department /Position:</i> VCPWA-WP Environmental Planners	Yes
Emergency manager <i>If Yes, Department /Position:</i> VCPWA-WP Pursuant to the 2010 VCPWA-WP National Incident Management System Implementation Plan, the Director of Watershed Protection is tasked to coordinate all VCPWA-WP operations during emergencies, including serving as VCPWA-WP Primary Point of Contact with the VCPWA-Duty Officer and the VCSOES Emergency Operations Center Commander and/or VCSOES Duty Officer.	Yes
Grant writers <i>If Yes, Department /Position:</i> VCPWA-WP Engineers I-II-III Engineer Managers I-II-III Environmental Planners Staff Services Specialist I Staff Services Manager III	Yes

Table 24-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office? <i>If yes, briefly describe:</i> VCPWA contracts with Consortium Communications, to help craft and disseminate public information and outreach campaigns. VCPWA-WP, as one of the 5-departments in VCPWA, regularly avails itself of Consortium's public information and outreach technical support services, including an active, vigorous, and robust VCPWA social media presence on Facebook, Twitter, and Instagram. VCPWA Online Facebook Twitter	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> VCPWA-WP was responsible for the creation and is responsible for the maintenance of the County of Ventura's Flood Information Website (vcfloodinfo.com) through the National Flood Insurance Program's Community Rating System (CRS). That website features FEMA's flood insurance rate maps which allows the public to determine if their property is affected by flood hazards, information about flood safe requirements for building in a floodplain, become better informed on how to hire a contractor, obtain information on flood insurance, and much more. Additionally, there is a link on this webpage to the 2015 Ventura County Multi-Hazard Mitigation Plan which will be updated to reflect the current Ventura County Multi-Jurisdiction Hazard Mitigation Plan, 2021 Plan Update process currently underway. (http://www.vcfloodinfo.com/resources/ventura-county-hazards-mitigation-plan)	Yes

Criterion	Response
<p>Do you use social media for hazard mitigation education and outreach?</p> <p>If yes, briefly describe:</p>	<p>Yes</p> <p>VCPWA-WP, as one of 20+ planning partners in the HMP 2021 Plan Update process, has partnered with VCISOES in ongoing, evolving, and interactive proactive social media outreach regarding hazard mitigation plan development public information and outreach initiatives. Recently, VCPWA-WP provided VCISOES with photos of the completed Fresno Canyon Diversion Project which was funded by \$5M in FEMA HMGP Grant Funding. Project photos and information in both English and Spanish, were featured in a VCISOES Twitter post this week showcasing the County's Fresno Canyon Diversion Project under the messaging theme: "Hazard Mitigation in Action!" https://twitter.com/Venturaoes/status/1427391467534704640?s=20 (English) https://twitter.com/Venturaoes/status/1427391498052505646?s=20 (Spanish) VCPWA-WP is partnering with VCISOES to develop a 4-5 minute long video, in both English and Spanish, which will provide viewers with a pithy explanation of hazard mitigation as a thought construct, provide an overview of the current hazard mitigation plan 2021 update planning process underway, including milestone timelines and progress, and highlighting key mitigation projects that have been accomplished in Ventura County with FEMA HMGP grant funding (such as the Fresno Canyon Diversion Project) to bring these planning concepts more tangible and closer to home. The video will be posted on the readyventura.org website and will be made available to planning partners for distribution via their existing social media, online, and texting messaging ecosystems.</p>
<p>Do you have any citizen boards or commissions that address issues related to hazard mitigation?</p> <p>If yes, briefly describe:</p>	<p>Yes</p> <p>VCPWA-WP actively participated in the 2015 VC HMP Plan Development process and currently is actively participating in the HMP-2021 Plan Update Process managed by the Ventura County Sheriff's Office of Emergency Services (VCISOES). VCPWA-WP's Director, Glenn Shephard, and SRG Manager Gerard Kapuscik are both members and active participants in the Core Planning Team and the Steering Committee tasked with advisory support to the team.</p>
<p>Do you have any other programs in place that could be used to communicate hazard-related information?</p> <p>If yes, briefly describe:</p>	<p>Yes</p> <p>Ventura County's VC Alert Emergency Notification System allows members of the public to send a text message to VCNOTIFY to 888777 which will allow them to receive real-time alerts and advisories directly from the County. Residents can register multiple contact methods and request to be alerted to a home phone, cell phone, business phone, e-mail and/or hearing-impaired receiving device. Residents can also register up to five different addresses such as a home address, work address, school address, or business address. Additionally, VCPWA has a similar text notification system for all Public Works Employees which can be used for similar real-time text alerts and advisories.</p>
<p>Do you have any established warning systems for hazard events?</p> <p>If yes, briefly describe:</p>	<p>Yes</p> <p>VCPWA-WP operates a Flood Warning System (FWS) composed of 90 self-reporting rain gages and 30 self-reporting stream gages countywide. The FWS also receives telemetered data for 65 additional rain gages and 23 stream gages operated by other agencies including the United States Geological Survey, Los Angeles Department of Public Works, and the California Department of Water Resources. The critical rain and stream gage information collected and reported in real time are used in the hydrologic models for determining the amount of runoff from storm events information is provided to VCISOES in real time and is an important data source utilized for potential emergency event evacuation notifications triggered by high-flow rate storm flood events.</p>

Table 24-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes	111-91042	Pre-2005
DUNS#	Yes	066691122	Unknown
Community Rating System	Yes	Class 5 Rating	5/1/2016
Building Code Effectiveness Grading Schedule	Yes	Class 3 Rating	2019
Public Protection	No	N/A	N/A
Storm Ready	Yes	N/A	2011
Firewise	No	N/A	N/A
Tsunami Ready	Yes	N/A	2012

Table 24-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	High
<i>Comment: Given the nature of the diverse interdisciplinary teams (engineers, environmental scientists, hydrologists, etc.), there is a keen situational awareness of climate change impacts on flood protection facilities and the need to mitigate those hazards. VCPWA-WP Staff contributed to the Projected Changes in Ventura County Climate Study completed in 2019 by the Western Regional Climate Center, Desert Research Institute (wrcc.dri.edu/climate/reports). VCPWA-WP also contributes to the Watersheds Coalition of Ventura County's Integrated Regional Water Management Plan updates, including the Climate Change Vulnerability Assessment and project selection process. Furthermore, VCPWA-WP has incorporated into its levee improvement process the planning for one percent annual chance (formerly 100-year) flood protection plus an additional 10 percent to address the uncertainty of climate change impacts.</i>	
Jurisdiction-level monitoring of climate change impacts	High
<i>Comment: VCPWA-WP operates and maintains a system of 100 self-reporting rain gages, 47 self-reporting stream gages, and 16 self-reporting weather gages. VCPWA-WP also receives telemetered data from 65 additional rain gages and 23 stream gages operated by other agencies including the U.S.G.S., Los Angeles Department of Public Works, and California Department of Water Resources (DWR). All the data from this system is maintained by VCPWA-WP and includes records of over 150 years. The continuing long term data sets will be used to analyze and quantify the long-term impacts of climate change on hydrologic processes.</i>	
Technical resources to assess proposed strategies for feasibility and externalities	Medium
<i>Comment: VCPWA-WP utilizes its Flood Warning System (FWS) system data to populate and continuously update its hydrologic and hydraulic modeling in support of flood control facility improvement designs.</i>	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
<i>Comment: VCPWA-WP obtains assistance from environmental consultants to evaluate the potential GHG emissions that would be associated with specific projects, both temporary and long-term impacts. These analyses are presented in the Environmental Impact Reports prepared for flood protection projects. These results inform mitigation measures needed to reduce potential GHG impacts.</i>	
Capital planning and land use decisions informed by potential climate impacts	High
<i>Comment: With respect to capital planning decisions, see answers above. With respect to land use decisions, VCPWA-WP does not have land use decision-making power. However, VCPWA-WP staff reviews applications submitted under the CEQA process for unincorporated Ventura County and all cities in the County, as well as adjoining counties. The applicants are required to evaluate their projects' flood risk impacts using the Ventura County Hydrology Manual. Based on the results, they are also required to retain storm runoff exceeding pre-project levels.</i>	
Participation in regional groups addressing climate risks	High
<i>Comment: VCPWA-WP staff participates in decision-making by the Watersheds Coalition of Ventura County (local body that implements state-level Integrated Regional Water Management planning), Ventura County General Plan climate adaptation updates and implementation of strategies for action, Beach Erosion Authority for Control and Nourishment (BEACON) relating to sea level rise and increasing coastal erosion impacts along the Ventura County coast. VCPWA-WP leads the countywide effort among all City and County floodplain managers addressing coastal and riverine flood modeling and mapping technical review and comments to FEMA, partners with local non-governmental organizations (The Nature Conservancy and others) to advance preservation of floodplain properties to prevent development on lands at risk of flooding countywide.</i>	

Criterion	Jurisdiction Rating ^a
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	High
<p><i>Comment:</i> VCPWA-WP, as a state-created, county-dependent special district is required to comply with several state laws addressing climate change impacts, including but not limited to the California Global Warming Solutions Act of 2006 and Senate Bill 97 enacted in 2007 to amend the CEQA statute to address GHG emissions and impacts. Additionally, VCPWA-WP is required to comply with the 2040 General Plan for Ventura County, which notes: "...the County developed an integrated approach to addressing climate change in the General Plan by incorporating related policies and programs throughout the General Plan elements, such that the General Plan will also serve as the County's Climate Action Plan. VCPWA-WP staff also functions as staff for several groundwater sustainability agencies, including the Fox Canyon Groundwater Management Agency, tasked with developing Groundwater Sustainability Plans for medium and high priority over drafted groundwater basins, in compliance with the Sustainable Groundwater Management Act (SGMA).</p>	
Identified strategies for greenhouse gas mitigation efforts	Low
<p><i>Comment:</i> Interim VCPWA Teleworking policy in place. Hybrid and electric models are replacing aging fleet vehicles to the extent feasible, as administered by the Ventura County General Services Agency. Agricultural irrigation efficiency assistance by Fox Canyon Groundwater Management Agency.</p> <p>A GHG inventory with 2015 as the baseline year was prepared to support the Ventura County General Plan update and will be updated every five years. The greatest contribution was transportation (36%).</p> <p>VC General Plan 2040 Policies created for the purpose of mitigating GHGs are listed below. Please refer to the General Plan for the numerous related Implementation Programs (FB=Financing and Budgeting; IGC=Inter-Governmental Coordination; JP=Joint Partnerships with the Private Sector; RDR=Regulation and Development Review; SO=Services and Operations):</p> <p>Conservation and Open Space Element (COS)</p> <p>COS-1.13: The County shall continue to work in partnership with agencies, organizations, and entities responsible for the protection, management, and enhancement of the county's biological resources. (IGC)</p> <p>COS-1.15: The County shall establish and support a countywide target for the County, cities in Ventura County, agencies, organizations, businesses, and citizens to plant two million trees throughout the county by 2040. (SO, JP, IGC)</p> <p>COS-3.2: The County shall encourage the planting of trees and the protection of existing urban forests and native woodlands, savannahs, and tree canopy throughout the county, including along State or County designated scenic roadways and in residential and commercial zones throughout the county, especially those located within designated disadvantaged communities. (MPSP, RDR)</p> <p>COS-3.3: The County shall give overhead utility undergrounding within high fire hazard areas and Scenic Resource Areas priority when allocating County Utility Undergrounding Funds. (MPSP, FB)</p> <p>COS-7.4: The County shall require discretionary development for oil and gas exploration and production to use electrically powered equipment from 100 percent renewable sources and cogeneration, where feasible, to reduce air pollution and greenhouse gas emissions from internal combustion engines and equipment. (RDR)</p> <p>COS-7.7: The County shall require new discretionary oil wells to use pipelines to convey oil and produced water; oil and produced water shall not be trucked. (RDR)</p> <p>COS-8.1: The County shall promote the development and use of renewable energy resources (e.g., solar, thermal, wind, tidal, bioenergy, hydroelectricity) to reduce dependency on petroleum-based energy sources. (IGC, RDR)</p> <p>COS-8.2: The County shall encourage the State, community choice aggregation programs, and energy utility companies to provide programs, rebates, and incentives for energy efficiency installation and retrofit projects. (IGC)</p> <p>COS-8.3: The County shall facilitate the coordination of its Climate Action Plan implementation and maintenance with the cities in the county, the Air Pollution Control District (APCD), and other organizations to promote countywide collaboration on addressing climate change. (SO, IGC)</p> <p>COS-8.4: The County, as a signatory to a legal entity created under a Joint Powers Authority with neighboring communities, shall continue to serve as an active member of the Clean Power Alliance or similar organization providing local customer access to electricity generated from low carbon renewable energy sources in excess of State requirements. (SO, IGC)</p> <p>COS-8.5: The County shall work with utility providers to offer residents options to purchase and use renewable energy resources. (SO, IGC, JP)</p> <p>COS-8.6: The County shall support the transition to zero net energy and zero net carbon buildings, including electrification of new buildings. (RDR)</p> <p>COS-8.7: The County shall promote sustainable building practices that incorporate a "whole systems" approach for design and construction that consumes less energy, water, and other non-renewable resources, such as by facilitation passive ventilation and effective use of daylight. (RDR)</p>	

Criterion	Jurisdiction Rating ^a
<p><i>COS-8.8: The County shall encourage the integration of features that support the generation, transmission, efficient use, and storage of renewable energy sources in discretionary development. (RDR)</i></p> <p><i>COS-8.9: The County shall encourage discretionary development to include the planting of shade trees on each property and within parking areas to reduce radiation heat production. (RDR)</i></p> <p><i>COS-8.10: The County shall encourage battery energy storage systems as an option for optimizing the management of electricity generated by renewable resources. (RDR)</i></p> <p><i>COS-9.1: The County shall preserve natural open space resources through: the concentration of development in Urban Areas and Existing Communities; use of cluster or compact development techniques in discretionary development adjacent to natural open space resources; maintaining large lot sizes in agricultural, rural, and open space areas; discouraging conversion of lands currently used for agricultural production or grazing; limiting development in areas constrained by natural hazards; and encouraging agricultural and ranching interests to maintain natural habitat in open space areas where the terrain or soil is not conducive to agricultural production or grazing. (RDR)</i></p> <p><i>COS-9.3: The County shall place a high priority on preserving open space lands for recreation, habitat protection, and overall community benefit. (MPSP)</i></p> <p><i>COS-10.1: The County shall maintain and refer to the General Plan and its integrated greenhouse gas (GHG) Reduction Strategy as the County's comprehensive plan for reducing community-wide GHG emissions in the unincorporated County. (RDR)</i></p> <p><i>COS-10.2: The County shall work toward achieving a community-wide GHG emissions reduction target of 41 percent below 2015 levels by 2030. (RDR)</i></p> <p><i>COS-10.3: The County shall work toward achieving longer-term, post-2030 community-wide GHG emissions reduction goals, as follows: 61 percent below 2015 levels by 2040 and 80 percent below 2015 levels by 2050. (RDR)</i></p> <p><i>COS-10.4: The County shall reduce GHG emissions in both existing and new development through a combination of measures included in the GHG Strategy, which includes new and modified regulations, financing and incentive-based programs, community outreach and education programs, partnerships with local or regional agencies, and other related actions. (RDR)</i></p>	
Identified strategies for adaptation to impacts	High
<p><i>Comment: The 2015 Ventura County Local Hazard Mitigation Plan identified the following overarching mitigation actions (OA) that could be implemented:</i></p> <p><i>OA 4: Relocate or reinforce bike trails, parking lots, and other beach access amenities away from the shoreline to restore the beach/shoreline in sea-level rise/coastal erosion areas.</i></p> <p><i>OA 5: Restore habitat and improve flood protection for low-lying areas by employing innovative techniques such as constructing levees coupled with gently sloping tidal marshes to help protect from storm wave action and tidal surge.</i></p> <p><i>OA 7: Develop a water conservation public outreach program to increase awareness about the drought, fines, and penalties for overuse and solutions for conserving water.</i></p> <p><i>OA 8: Adopt emergency water conservation measures and/or water conservation ordinance to limit irrigation.</i></p> <p><i>OA 13: Reinforce roads/bridges from flooding through protection activities, including elevating the roads/bridges and installing/widening culverts beneath the roads/bridges or upgrading storm drains.</i></p> <p><i>OA 14: Acquire, relocate, or elevate residential structures, particularly those that have been identified as repetitive loss properties, within the 100-year floodplain.</i></p> <p><i>OA 16: Implement landslide stabilization and/or protection measures. Stabilization measures include grading the unstable portion of the slope to a lower gradient, construction of rock buttresses and retaining walls, and drainage improvements. Protection measures include containment and/or diversion of the moving debris, such as walls, berms, ditches, and catchment basins.</i></p> <p><i>OA 19: Create a new vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes.</i></p> <p><i>OA 20: Implement a fuel modification program for new construction by requiring builders and developers to submit their plans, complete with proposed fuel modification zones, to the local fire department for review and approval prior to beginning construction.</i></p> <p><i>OA 21: Develop a hazards fuel treatment program for areas that have been identified as overgrown or contain dead brush and trees to reduce the potential for tree-to-tree ignition. Ensure that the program includes a "maintenance now" component to provide continued fire resistance.</i></p> <p><i>VC General Plan 2040 Policies are listed below (FB=Financing and Budgeting; IGC=Inter-Governmental Coordination; JP=Joint Partnerships with the Private Sector; MPSP=Master Plans, Strategies, and Programs; PI=Public Information; PSR=Planning Studies and Reports; RDR=Regulation and Development Review; SO=Services and Operations):</i></p>	

Criterion	Jurisdiction Rating ^a
<p>Conservation and Open Space Element (COS)</p> <p><i>COS-2.2: The County shall support activities that trap or add sand through beach nourishment, dune restoration, and other adaptation strategies to enhance or create beaches in areas susceptible to sea-level rise and coastal flooding. (MPSP)</i></p> <p><i>COS-2.10: The County shall work with Federal, State, and local jurisdictions, agencies, and organizations to monitor saltwater intrusion and take proactive steps to reduce intrusion, including: working to maintain and restore coastal wetlands buffers; enhancing groundwater management to prevent excessive pumping in order to restore groundwater levels needed to reduce saltwater intrusion; and implementing mitigation measures to prevent saltwater intrusion into estuaries and groundwater basins including, but not limited to, implementation of reactive barriers and use of pumps to divert saltwater. (PSR, IGC, JP)</i></p> <p><i>COS-3.2: The County shall encourage the planting of trees and the protection of existing urban forests and native woodlands, savannahs, and tree canopy throughout the county, including along State or County designated scenic roadways and in residential and commercial zones throughout the county, especially those located within designated disadvantaged communities. (MPSP, RDR)</i></p> <p><i>COS-3.3: The County shall give overhead utility undergrounding within high fire hazard areas and Scenic Resource Areas priority when allocating County Utility Undergrounding Funds. (MPSP, FB)</i></p> <p><i>COS-5.3: The County shall encourage landowners to participate in voluntary programs that reduce soil erosion and increase soil productivity. To this end, the County shall promote coordination between the Natural Resources Conservation Service, Ventura County Resource Conservation District, University of California Cooperative Extension, and other similar agencies and organizations. (RDR)</i></p> <p>Land Use and Community Character Element (LU)</p> <p><i>LU-1.1: The County shall continue to promote orderly and compact development by: working with cities in Ventura County and the Ventura Local Agency Formation Commission to promote and maintain reasonable city boundaries and Spheres of Influence to prevent growth-inducing urban development in unincorporated areas; and require unincorporated urban development to be located in areas designated as Existing Communities and unincorporated urban centers consistent with the Guidelines for Orderly Development and as defined in Policy LU-1.2. (RDR, IGC)</i></p> <p><i>LU-11.3: The County shall require new commercial and industrial developments to be designed to be generally compact, grouped and consolidated into functional units providing for sufficient off-street parking and loading facilities, maximize pedestrian and vehicle safety, reduce vehicle miles traveled (VMT), encourage electric vehicle charging, and minimize land use conflicts and traffic congestion. The County shall require that commercial and industrial discretionary development is designed to provide adequate buffering (e.g., walls, landscaping, setbacks) and operational conditions (e.g., hours of operation, and scheduling of deliveries) to minimize adverse impacts (e.g., noise, glare, and odors) on adjoining and adjacent residential areas. (RDR)</i></p> <p><i>LU-11.4: The County shall encourage discretionary development on commercial- and industrial-designated land to incorporate sustainable technologies, including energy- and water-efficient practices and low- and zero-carbon practices. (RDR)</i></p> <p><i>LU-16.5: The County shall encourage discretionary commercial development to promote ease of pedestrian/bicycle access to encourage walk-in business, while providing sufficient off-street parking. (RDR)</i></p> <p><i>LU-16.9: The County shall encourage discretionary development to be oriented and landscaped to enhance natural lighting, solar access, and passive heating or cooling opportunities to maximize energy efficiency. (RDR)</i></p> <p><i>LU-18.5: The County shall encourage stakeholders in designated disadvantaged communities who are vulnerable to sea level rise or other climate change impacts to have the opportunity to learn about and participate in the decision-making process for adaptation planning within Ventura County. (PI)</i></p> <p><i>LU-22.2: The County shall maintain and annually review the General Plan Implementation Programs before the preparation of the County's Annual Budget. As part of this process, the County shall update the prioritization of programs based on applicability, relevance, timing of initiation, and availability of funding. (PSR, SO)</i></p> <p>Circulation, Transportation, and Mobility Element (CTM)</p> <p><i>CTM-2.1: The County shall prepare and adopt Complete Streets Design Guidelines to be used when constructing new roadways or improving existing roadways where Complete Streets would be appropriate/feasible. The Complete Streets Design Guidelines shall employ a context-sensitive approach to planning and designing the road and street network to reflect the distinct agricultural, rural, or urban character of a particular location. (MPSP)</i></p> <p><i>CTM-2.2: The County shall plan a roadway system that has adequate capacity and is designed to provide reasonable and safe use by vehicles, public transportation, bicycles, and pedestrians with minimum delay pursuant to LOS standards described in Policy CMT-1.2. The road system should follow Federal Highway Administration classification as identified on Figure 4-4. (MPSP)</i></p>	

Criterion	Jurisdiction Rating ^a
<i>CTM-2.3: The County shall require discretionary development with access onto a County road to have the access point(s) designed and built to County standards. (RDR)</i>	
<i>CTM-2.4: The County shall strive to provide safe operating conditions for all appropriate modes and uses of County roadways. (RDR, MPSP, SO)</i>	
<i>CTM-2.5: The County shall coordinate the development and maintenance of all transportation facilities with emergency service providers to ensure continued emergency service operation and service levels. (ICG)</i>	
<i>CTM-2.6: The County shall work with Caltrans, Southern California Association of Governments (SCAG), Ventura County Transportation Commission (VCTC), and cities in the county to plan, develop, and maintain regional transportation facilities and services, and to identify existing and future transportation corridors that should be linked across jurisdictional boundaries so that sufficient right-of-way may be preserved. (IGC)</i>	
<i>CTM-2.7: The County shall coordinate with VCTC to implement and update the Congestion Management Plan (CMP). The County shall also encourage consideration of multimodal performance measures as part of future updates to the CMP. (MPSP, IGC)</i>	
<i>CTM-2.8: For those portions of the County's Regional Road Network currently not designated as part of the CMP, the County shall coordinate with VCTC to formally designate applicable County maintained roadways as part of the CMP. (MPSP, IGC)</i>	
<i>CTM-2.9: The County shall work with the VCTC and Caltrans to reprioritize the re-striping of SR 118 from Vineyard Avenue to Darling Road on the CMP and the Caltrans list of projects to provide for an additional lane in each direction of travel. (IGC)</i>	
<i>CTM-2.10: The County shall work with public and private schools to identify and expand safe routes to school, where feasible. (IGC)</i>	
<i>CTM-2.11: The County shall establish land use patterns that promote shorter travel distances between residences, employment centers, and retail and service-oriented uses to support the use of public transportation, walking, bicycling, and other forms of transportation that reduce reliance on single-passenger automobile trips. (RDR, MPSP)</i>	
<i>CTM-2.12: The County shall coordinate with the cities in the county and VCTC to plan and implement a system of bicycle lanes and multi-use trails that link the cities, unincorporated communities, schools including colleges and universities, commercial/retail, employment centers, health care service facilities, public transportation, and other points of interest. (MPSP, IGC)</i>	
<i>CTM-2.13: The County shall strive to eliminate "gaps" in roadways, bikeways, and pedestrian networks by planning for and seeking funding to construct necessary improvements to remove barriers and improve transportation system connectivity as well as connections that support first and last mile accessibility to and from public transportation. (MPSP, PSR, FB)</i>	
<i>CTM-2.14: When designing new bicycle facilities, or modifying existing roadways with bicycle facilities, the County shall prioritize and install features to improve the safety and visibility of bicyclists. (MPSP)</i>	
<i>CTM-2.15: The County shall rely on the guidelines and design standards for bicycle and pedestrian facilities established by the California Manual on Uniform Traffic Control Devices (CAMUTCD) and supporting guidelines provided by the Federal Highway Administration, Caltrans, and American Association of State Highway and Transportation Officials (AASHTO). (MPSP, PSR, SO)</i>	
<i>CTM-2.16: The County shall consider the safety and accessibility of pedestrians when preparing transportation plans, studies, and reports. (MPSP)</i>	
<i>CTM-2.17: The County shall support regional bicycle efforts to improve infrastructure that will make biking more attractive to residents and tourists. (IGC, SO, JP)</i>	
<i>CTM-2.18: The County shall require discretionary development in designated Existing Communities to construct roadways to urban standards and Complete Streets principles, including curb, gutter, sidewalks, and bike lanes when there is a nexus for improvement. The County shall rely on the guidelines and design standards for the CAMUTCD, Caltrans in the Highway Design Manual, and Complete Streets Guidelines (pursuant to Deputy Directive-64-R2), Federal Highway Administration, AASHTO. (RDR)</i>	
<i>CTM-2.19: The County shall continue to examine and update safety metrics for CEQA impact analysis as appropriate. Options include but are not limited to queue spill-back at intersections; mid-block unprotected crossings; and increased crossing distances. (RDR)</i>	
<i>CTM-2.20: The County shall improve pedestrian safety at intersections and mid-block locations in Existing Communities through approved features consistent with the CAMUTCD, Highway Design Manual, Federal Highway Administration, AASHTO, and the National Cooperative Highway Research Program Report 498 (Application of Pedestrian Crossing Treatments for Streets and Highways). (RDR, SO)</i>	
<i>CTM-2.21: Within Existing Communities, the County shall provide/retrofit separated or buffered pedestrian and bicycle paths from the outside travel lane along County Road Network roads that are designated Overweight Vehicle Corridors and</i>	

Criterion	Jurisdiction Rating ^a
<p><i>Surface Transportation Assistance Act designated Terminal Access Routes. Where the application or retrofitting of separated or buffered facilities is not feasible, the County shall prioritize alternative pedestrian and bicycle connections that encourage and attract pedestrian and bicycle traffic off designated Overweight Vehicle Corridors or Surface Transportation Assistance Act designated truck routes. (MPSP)</i></p> <p><i>CTM-2.22: The County shall seek funding sources first for construction of new sidewalks in designated disadvantaged communities and then for sidewalk maintenance, particularly in low-income areas. (FB)</i></p> <p><i>CTM-2.23: The County shall continue to work with VCTC, Naval Base Ventura County, and local public transportation regional bus service providers to promote the expansion of a safe, efficient, convenient, integrated, and cost-effective intercommunity and countywide public transportation and bus service that provides county residents with access to employment, commercial services, health and medical facilities, social services, educational facilities and institutions, and personal business destinations. (IGC)</i></p> <p><i>CTM-2.24: The County shall work with VCTC and local public transportation providers to address the needs of non-drivers living in rural areas to provide public transportation and paratransit service. (IGC)</i></p> <p><i>CTM-2.25: The County shall support the recommendations of the California State Rail Plan for Amtrak trains, including track and signalization upgrades, increasing service frequencies by additional round-trip service to regional destinations north and south of Ventura County, improving passenger information and comfort, and reducing travel time. (IGC)</i></p> <p><i>CTM-2.26: When railroad rights-of-way are abandoned, the County shall evaluate the feasibility of acquiring the land for public use as public transportation, bicycle, pedestrian, or equestrian paths. (MPSP)</i></p> <p><i>CTM-2.27: The County shall require that discretionary development be subject to the following permit conditions of approval, where feasible, to minimize traffic impacts by incorporating pedestrian and bicycle pathways, bicycle racks and lockers, ridesharing programs, transit improvements (bus turnouts, shelters, benches), and/or transit subsidies for employees or residents of the proposed development. (RDR)</i></p> <p><i>CTM-3.1: The County shall identify and prioritize components of a bicycle network to increase public access and ridership on bicycle routes. (MPSP, SO)</i></p> <p><i>CTM-3.2: The County shall develop a bicycle network for all user types and routes across the county. (MPSP, SO, PI)</i></p> <p><i>CTM-3.3: The County shall encourage the development of a bicycle network that connects to regional destinations such as parks, trails, educational institutions, employment centers, transit, park, and ride lots, and tourist destinations. (IGC)</i></p> <p><i>CTM-3.4: The County shall promote bicycle network connectivity between Ventura County communities as well as Santa Barbara and Los Angeles Counties. (IGC)</i></p> <p><i>CTM-3.5: The County shall plan for bicycle network connectivity in rural, agricultural, and open space areas in a way that supports and complements business and agricultural activities in those areas. (JP)</i></p> <p><i>CTM-3.6: The County shall support the Complete Streets effort by, when feasible, constructing bicycle lanes on County maintained roads listed in the VCTC Bicycle Wayfinding Plan. (SO, JP, IGC)</i></p> <p><i>CTM-3.7: The County shall encourage the construction of a bicycle trail along the Santa Paula Branch Line Railroad in the unincorporated area between the cities of Ventura and Santa Paula. (SO, JP, IGC)</i></p> <p><i>CTM-3.8: The County shall use clear and consistent message and placement for on- and off-street regional bikeways and to regional destinations. (PI, SO)</i></p> <p><i>CTM-3.9: The County shall actively pursue outside funding opportunities for bicycle network improvements. (FB, JP)</i></p> <p><i>CTM-3.10: The County shall require adequate bicycle storage facilities (e.g., bicycle racks, lockers) for discretionary development as determined by allowable land uses at a given site. (RDR)</i></p> <p><i>CTM-4.1: The County shall work with Caltrans and VCTC to reduce VMT by facilitating the efficient use of existing transportation facilities; striving to provide viable modal choices that make driving alone an option rather than a necessity; supporting variable work schedules to reduce peak period VMT; and providing more direct routes for pedestrians and bicyclists. (MPSP, SO)</i></p> <p><i>CTM-4.2: The County shall encourage bicycling, walking, public transportation, and other forms of alternative transportation to reduce VMT, traffic congestion, and GHG emissions. (PI)</i></p> <p><i>CTM-4.3: The County shall work with a broad range of agencies (e.g., Caltrans, VCTC, Amtrak, Ventura County APCD, public transportation providers, and shared mobility vendors) to encourage and support programs that increase vehicle occupancy including the provision of traveler information, shuttles, and preferential parking for carpools/vanpools. (IGC, PI)</i></p> <p><i>CTM-4.4: The County shall coordinate with Caltrans and VCTC to identify future park-and-ride lots within the unincorporated areas of Ventura County to facilitate more carpooling, vanpooling, and public transportation use. (IGC)</i></p> <p><i>CTM-6.1: The County shall support the integration of emerging technologies that increase the routine use of alternative transportation options to decrease single-passenger automobile travel. (MPSP)</i></p>	

Criterion	Jurisdiction Rating ^a
<p>CTM-6.3: As part of new roadway planning and design as part of discretionary development, the County shall promote the use of permeable paving and other passive drainage features such as bio-swales to prevent flooding, particularly in urban areas. (RDR, SO)</p>	
<p>CTM-6.4: The County shall support the development of alternative fueling stations (e.g., electric and hydrogen) and vehicle-to-infrastructure (V2I) technology for emerging technologies. (SO)</p>	
<p>CTM-6.5: The County shall support the installation of electric vehicle charging stations, where feasible, at County facilities, parking lots, park-and-ride lots, truck stops, and new development. (RDR, SO)</p>	
<p>CTM-6.6: The County shall encourage developments and street systems that support the use of properly licensed Neighborhood Electric Vehicles where appropriate. (MPSP)</p>	
<p>CTM-6.7: The County shall encourage and support car share operators at multimodal facilities including transportation hubs, passenger rail stations, and park-and-ride lots. (RDR)</p>	
<p>CTM-6.8: The County shall evaluate the feasibility and work to establish requirements for shared micro-mobility (e.g., bike sharing) vendors within unincorporated areas. (RDR)</p>	
<p>CTM-6.9: The County shall encourage Mobility-as-a-Service (MaaS) providers to park between service calls versus driving within unincorporated communities. (RDR, SO)</p>	
<p>CTM-6.10: The County shall encourage Mobility-as-a-Service (MaaS) providers to coordinate with public transportation providers that serve unincorporated areas to increase the attractiveness of public transportation through the provision of free or subsidized public transportation patron first and last mile connections within unincorporated communities. (IGC, JP)</p>	
<p>Public Facilities, Services, and Infrastructure Element (PFS)</p>	
<p>PFS-1.2: The County shall monitor the projected impacts of climate change and natural disasters to make adaptive improvements and upgrades to public facilities and services. (SO)</p>	
<p>PFS-1.3: The County shall review plans for constructing new essential public facility, such as a hospital, health care facility, emergency shelter, emergency command center, or emergency communications facility, so that these facilities are located outside of at-risk areas whenever feasible. If such a location is infeasible, then the County shall require the use of construction methods and site design features to minimize potential damage to these facilities. (RDR, SO)</p>	
<p>PFS-1.10: The County shall operate and maintain County facilities in an efficient manner that meets community needs while conserving financial and natural resources. (SO)</p>	
<p>PFS-2.1: The County shall encourage energy efficiency, GHG reduction features, and resiliency planning into County facility and service plans and operations. (PSR, SO)</p>	
<p>PFS-2.2: The County shall encourage the incorporation of sustainable design features in community facilities to reduce energy demand and environmental impacts, such as solar reflective roofing, permeable pavement, and incorporation of shade trees. (SO, IGC)</p>	
<p>PFS-2.3: The County shall prioritize energy efficiency and water conservation as key design features when constructing, purchasing, leasing, retrofitting, or expanding County facilities. (SO)</p>	
<p>PFS-2.4: The County shall provide recycling and composting receptacles and use of biodegradable or recycled-material products at County facilities and events, where feasible. (SO)</p>	
<p>PFS-2.5: The County shall encourage its employees to reduce the number and distance of single-occupancy vehicle work trips. (SO)</p>	
<p>PFS-2.6: The County shall review market-available technologies for alternative fuel vehicles and prioritize purchase of vehicles to reduce GHG emissions where economically feasible. (SO)</p>	
<p>PFS-2.8: The County shall include electrical vehicle charging station infrastructure in a new County-initiated facility construction to the extent feasible. The County shall also look for opportunities to install EV charging stations as part of any major renovation, retrofit or expansion of County facilities. (SO)</p>	
<p>PFS-4.4: The County shall encourage wastewater treatment facilities to provide the maximum feasible protection and enhancement of groundwater resources. (SO, IGC)</p>	
<p>PFS-4.6: The County shall encourage public wastewater system operators to upgrade existing wastewater treatment systems to reclaim water suitable for reuse for landscaping, irrigation, and groundwater recharge. (SO, IGC)</p>	
<p>PFS-5.4: The County shall continue to provide educational and informational materials to restaurants, grocery stores, and other food providers, as part of food facility inspections, to support donation of safe, unused food to non-profit service agencies.</p>	
<p>PFS-5.5: The County shall support the beneficial reuse of agricultural wastes for activities such as composting and energy generation. (RDR, SO)</p>	
<p>PFS-5.6: The County shall promote value-added alternatives to solid waste management, such as compost, energy, biochar, and wood products to avoid open burning of agricultural biomass wastes. (SO, PI)</p>	

Criterion	Jurisdiction Rating ^a
<p>PFS-6.3: The County shall monitor projected climate change impacts, and coordinate with local, regional, state, and federal agencies to identify existing and potential projected impacts and develop strategies to maintain and improve flood control facilities accordingly. (SO, IGC)</p>	
<p>PFS-6.4: The County shall coordinate with local, regional, state, and federal agencies to identify existing and potential infrastructure improvements to increase water retention to respond to drought conditions. (SO, IGC)</p>	
<p>PFS-7.2: The County shall work with utility companies to modernize and upgrade transmission lines and associated equipment to reduce the risk of fire in areas with a high wildfire hazard risk. (JP)</p>	
<p>PFS-7.6: The County shall work with utility providers to implement smart grid technologies as part of new developments and infrastructure projects. (JP)</p>	
<p>PFS-12.4: The County, in coordination with local water agencies and the Fire Protection District, shall require new discretionary development to comply with applicable standards for fire flows and fire protection. (RDR, IGC)</p>	
<p>Hazards and Safety Element (HAZ)</p>	
<p>HAZ-1.1: 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)</p>	
<p>HAZ-1.2: 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. (CAL FIRE) (IGC, PI, RDR)</p>	
<p>HAZ-1.3: The County shall continue to recognize the role of fire in local ecosystems by supporting controlled burns and other fire prevention measures. (IGC)</p>	
<p>HAZ-1.4: The County shall require the recordation of a Notice of Fire Hazard with the County Recorded 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 CAL FIRE. (RDR)</p>	
<p>HAZ-1.6: 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)</p>	
<p>HAZ-3.1: 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)</p>	
<p>HAZ-3.2: 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)</p>	
<p>HAZ-3.3: 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 option for adaptation. (RDR, SO, JP)</p>	
<p>HAZ-10.1: 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)</p>	
<p>HAZ-10.5: 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, the use of zero and/or near zero emission vehicles and other measures to reduce air pollution impacts and reduce GHG emissions. (RDR)</p>	
<p>HAZ-10.6: The County shall continue to work with the APCD and 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)</p>	
<p>HAZ-10.7: 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)</p>	
<p>HAZ-10.8: 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)</p>	
<p>HAZ-11.1: The County shall identify and protect critical infrastructure locations that are vulnerable to damage from extreme heat. (SO, FB, PSR, IGC)</p>	
<p>HAZ-11.2: The County shall partner with 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)</p>	
<p>HAZ-11.3: 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</p>	

Criterion	Jurisdiction Rating ^a
<p><i>need and ensuring representatives of these communities have a role in the decision-making process for directing climate change response. (MPSP, SO)</i></p> <p><i>HAZ-11.4: 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)</i></p> <p><i>HAZ-11.5: 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)</i></p> <p><i>HAZ-11.6: 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)</i></p> <p><i>HAZ-11.7: The County shall encourage development to include new building designs or retrofits to improve building performance through strategic building design features, including insulation to reduce energy usage, solar-reflective white roofs, solar panels, green roofs (vegetation on roofs), and battery storage for energy. (RDR)</i></p> <p><i>HAZ-11.8: 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)</i></p> <p><i>HAZ-11.9: 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 GHG emissions for discretionary development and County-initiated projects. (RDR, FB, SO)</i></p> <p><i>HAZ-11.10: The County shall promote the use of solar photovoltaic carports for discretionary development and County initiated projects. (RDR)</i></p>	
<p>Agriculture Element (AG)</p>	
<p><i>AG-1.1: The County shall continue to protect and preserve agricultural land by directing growth away from productive agricultural lands into cities, unincorporated urban areas, or existing communities and by supporting the acquisition or voluntary dedication of agriculture conservation easements. (RDR, MPSP)</i></p>	
<p><i>AG-3.2: The County shall encourage and support the use of Integrated Pest Management practices to reduce pesticide use and human health risks. (JP, PI)</i></p>	
<p><i>AG-3.3: The County shall collaborate with the agricultural community to provide information on Integrated Pest Management and agricultural products and practices in Ventura County. (JP, PI)</i></p>	
<p><i>AG-4.1: The County shall strive to enhance access to and consumption of fresh, local produce by encouraging direct connections between local farmers/ranchers and markets, restaurants, institutions, schools, hospitals, food banks, and other businesses. (JP)</i></p>	
<p><i>AG-4.3: The County shall encourage the use of technology that supports agricultural production, while enhancing environmental sustainability and natural resource conservation. (JP)</i></p>	
<p><i>AG-5.1: The County shall encourage farmers to reduce fertilizer application and transition to products that reduce or avoid nitrous oxide (N₂O) emissions, such as organic composting and enhanced efficiency fertilizers. (MPSP)</i></p>	
<p><i>AG-5.2: The County shall encourage and support the transition to electric- or renewable-powered or lower emission agricultural equipment in place of fossil fuel-powered equipment, when feasible. (PI, JP)</i></p>	
<p><i>AG-5.3: The County shall encourage farmers to convert fossil fuel-powered irrigation pumps to systems powered by electric or renewable energy sources, such as solar-power, and encourage electric utilities to eliminate or reduce stand-by charges. (SO)</i></p>	
<p><i>AG-5.4: The County shall encourage farmers to continue and enhance the water-saving irrigation techniques designed to reduce water consumption. (RDR, JP)</i></p>	
<p><i>AG-5.5: The County shall encourage and support the efforts of resource conservation districts, farmers, and other stakeholders to expand carbon farming practices, such as reduced tilling, cover-cropping, composting, biochar, and other activities that both reduce GHG emissions and increase carbon sequestration and storage, when feasible. (JP)</i></p>	
<p><i>AG-6.1: The County shall support and monitor research on the effects of a changing climate on the agricultural industry within Ventura County. (PSR)</i></p>	
<p><i>AG-6.2: The County shall engage the agricultural sector to understand the tolerance of current crop mixes to withstand the impacts of climate change, including increased temperatures, disease, and pests, and explore options to diversify crops. (JP)</i></p>	
<p>Water Resources Element (WR)</p>	
<p><i>WR-3.1: The County shall encourage the use of non-potable water, such as tertiary treated wastewater and household graywater, for industrial, agricultural, environmental, and landscaping needs consistent with appropriate regulations. (RDR)</i></p>	

Criterion	Jurisdiction Rating ^a
<p><i>WR-3.2: The County shall require the use of water conservation techniques for discretionary development, as appropriate. Such techniques include low flow plumbing fixtures in new construction that meet or exceed the California Plumbing Code, use of graywater or reclaimed water for landscaping, retention of stormwater runoff for direct use and/or groundwater recharge, and landscape water efficiency standards that meet or exceed the standards in the California Model Water Efficiency Landscape Ordinance.</i></p> <p><i>WR-3.3: The County shall require discretionary development to incorporate low impact development design features and best management practices, including integration of stormwater capture facilities, consistent with County's Stormwater Permit. (RDR)</i></p> <p><i>WR-3.4: The County shall strive for efficient use of potable water in County buildings and facilities through conservation measures and technological advancements. (SO)</i></p> <p><i>WR-4.1: The County shall work with water suppliers, water users, groundwater management agencies, and groundwater sustainability agencies to implement the Sustainable Groundwater Management Act (SGMA) and manage groundwater resources within the sustainable yield of each basin to ensure that county residents, businesses, agriculture, government, and the environment have reliable, high-quality groundwater to serve existing and planned land uses during prolonged drought years. (IGC, RDR, SO)</i></p> <p><i>WR-4.3: The County shall support groundwater recharge and multi-benefit projects consistent with SGMA and the Integrated Regional Water Management Plan to ensure the long-term sustainability of groundwater. (IGC, RDR, SO)</i></p> <p><i>WR-4.4: The County shall encourage the use of in-stream water flow and recycled water for groundwater recharge while balancing the needs of urban and agricultural uses, and healthy ecosystems, including in-stream waterflows needed for endangered species protection. (RDR)</i></p> <p><i>WR-6.1: The County should support the appropriate agencies in their efforts to effectively manage and enhance water quantity and quality to ensure long-term, adequate availability of high quality and economically viable water for agricultural uses, consistent with water use efficiency programs. (IGC)</i></p> <p><i>WR-6.2: The County should support programs designed to increase agricultural water use efficiency and secure long-term water supplies for agriculture. (PI)</i></p> <p><i>WR-6.3: The County should encourage the use of reclaimed irrigation water and treated urban wastewater for agricultural irrigation in accordance with federal and state requirements to conserve untreated groundwater and potable water supplies. (IGC, RDR, SO)</i></p> <p>Economic Vitality Element (EV)</p> <p><i>EV-4.4: The County shall identify appropriate locations to allow for development of renewable energy generation and storage facilities and encourage the development of innovative approaches to renewable energy deployment, including solar power, wind power, wave energy, distributed power systems and micro-grids, and other appropriate renewable sources and storage and distribution systems. (MPSP, JP)</i></p>	
<p>Champions for climate action in local government departments</p> <p><i>Comment: The Ventura County Board of Supervisors adopted the 2040 General Plan on September 15, 2020, which includes the above referenced reduction measures and adaptation strategies. As a result, effective October 15, 2020, VCPWA-WP, and other County departments are directed to incorporate climate action in their policies, procedures, and operational practices.</i></p>	High
<p>Political support for implementing climate change adaptation strategies</p> <p><i>Comment: See above.</i></p>	High
<p>Financial resources devoted to climate change adaptation</p> <p><i>Comment: Pursuant to the Board of Supervisors policy direction to all County departments, including VCPWA-WP, to incorporate climate action in their policies, procedures, and operational practices, it is anticipated that additional financial resources will be required to accomplish this policy directive. And those additional financial resources, be they repurposing a portion of existing VCPWA-WP revenue streams or new, climate action dedicated grant revenue funding streams, will be identified in future fiscal year budgets for consideration and adoption by the Ventura County Watershed Protection Board of Supervisors.</i></p>	Medium
<p>Local authority over sectors likely to be negative impacted</p> <p><i>Comment: VCPWA-WP has proprietary authority over flood protection facilities that it designs, constructs, operates, and maintains in its flood protection asset portfolio. It also has permitting authority over watercourses designated as red line channels by its ordinance (WP-2). VCPWA-WP provides staffing and technical assistance to the VCPWA-Engineering Services Department in their role of implementation of the Ventura County Floodplain Management Ordinance No. 4521 and Well Ordinance No. 4468.</i></p>	Medium

Criterion	Jurisdiction Rating ^a
Public Capacity	
Local Residents' knowledge of and understanding of climate risk <i>Comment: Not enough objectively credible information is known to VCPWA-WP staff to assign a rating.</i>	Unsure
Local Residents' support of adaptation efforts <i>Comment: Not enough objectively credible information is known to VCPWA-WP staff to assign a rating.</i>	Unsure
Local Residents' capacity to adapt to climate impacts <i>Comment: Not enough objectively credible information is known to VCPWA-WP staff to assign a rating.</i>	Unsure
Local economy current capacity to adapt to climate impacts <i>Comment: Not enough objectively credible information is known to VCPWA-WP staff to assign a rating.</i>	Unsure
Local ecosystems capacity to adapt to climate impacts <i>Comment: Local ecosystems are stressed by the current multi-year drought that has created favorable conditions for repeated fires (just since 2017, Thomas, Woolsey, Easy, Maria, etc.). Once fire devastates local ecosystems, they are unable to quickly recover in the absence of sufficient rainfall. Non-native, invasive vegetation then can quickly gain a foothold, potentially fueling future fires.</i>	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

24.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

24.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- VCPWA-WP’s Integrated Watershed Protection Plan Project Prioritization Process
- VCPWA-WP 5 Year Capital Improvement Projects Plan—Annual Update and Prioritized Project Ranking Process
- VCPWA-WP’s Preparation of Annual Recertifications and Cycle Verification of Class V Rating for Unincorporated Ventura County under FEMA’s Community Rating System Program
- Ventura County Flood Safety Plan
- Ventura County 2040 General Plan Implementation Actions Under the Following Plan Elements:
 - Public Facilities, Services, and Infrastructure
 - Conservation and Open Space
 - Hazards and Safety
 - Water Resources
 - Economic Vitality

- Unincorporated Communities' Area Plans
- Appendix B, Climate Change
- Ventura County Integrated Regional Water Management Plan Updates (IRWM) and Eligible Project List Development for IRWM Grant Funding Opportunities Provided by the State
- Ventura River Watershed Management Plan
- Ventura County Transportation Commission Transportation Emergency Preparedness Plan
- Ventura County Local Coastal Plan Update, VC Resilient Coastal Adaptation Project

24.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- Ventura County Integrated Regional Water Management Plan Updates (IRWM) Climate Change Vulnerability Assessment (new section in IRWMP 2019)
- Ventura County Active Transportation Plan (ongoing)
- Climate resiliency, Fire Safe Council, programs led by Ventura County Resource Conservation District
- Groundwater Sustainability Plans (FCGMA, Mound Basin, Fillmore and Piru groundwater sustainability agency, Cuyama groundwater sustainability agency, Upper Ventura groundwater sustainability agency)
- Naval Base of Ventura County
- Urban Water Management Plans (County of Ventura, its 10 cities, and water districts required to develop them)
- Prop 1 IRWM Disadvantaged Community Involvement Program Needs Assessment Report (completed by fall 2021). Includes surveys and meetings with community members to identify water management needs of disadvantaged communities and tribal communities.
- Watershed Management Program (WMP) for Ventura County including Ventura River, Calleguas Creek, Santa Clara River, upper Malibu Creek, and Coastal Watersheds of Ventura County. WMP development results from a Los Angeles Regional Water Quality Control Board (Region 4) decision that by September 11, 2023, Ventura County is required to meet compliance with the 2021 Regional Municipal Stormwater (MS4) National Pollutant Discharge Elimination System (NPDES) Permit Order No. CAS004004, Order No. R4-2021-0105. The Ventura County WMP will be developed by the County, Watershed Protection, and 10 incorporated cities.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

24.6 RISK ASSESSMENT

24.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 24-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 24-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4482	January 20, 2020 and continuing	\$Unknown
Maria Fire	FM-5302	November 1, 2019	\$Unknown
Easy Fire	FM-5298	October 1, 2019	\$Unknown
Saddleridge Fire	FM-5293	October 10, 2019	\$Unknown
Severe Storms & Flooding	State	February 3, 2019	\$Unknown
Wildfires	DR-4407	November 8-25, 2018	\$Unknown
Wildfires, Flooding, Mudflows, and Debris Flows	DR-4353	Dec 4, 2017-January 31, 2018	\$165,110-PA & HMGP-Gauges
Thomas Fire	FM-5224	December 4, 2017	\$Unknown
Wildfire	FM-5189	July 9, 2017	\$5,000,000-HMGP-Fresno Cyn.
Winter Storms	State	February 1, 2017	\$Unknown
Springs Fire	FM-5024	May 2-11, 2013	\$Unknown
Winter Storms	State	February 20, 2013	\$Unknown
Winter Storms	State	February 19 – 26, 2011	\$Unknown
Ormond Beach Breach	None	January 18, 2010	\$162,933 VCPWA-WP Internal Data
Guiberson Fire	FM-2839	September 22-29, 2009	\$Unknown
Wildfires, Flooding, Mudflows, and Debris Flows	DR-1731	October 21, 2007-March 31, 2008	\$16,650-CDAA-Gauges
Severe Freeze	DR-1689	January 11-17, 2007	\$Unknown
Shekell Fire	FM-2681	December 3 – 6, 2006	\$Unknown
Day Fire	FM-2677	September 25-30, 2006	\$55,867-CDAA-Gauges & Stop Log
School Fire	FM-2586	November 18-23, 2005	\$Unknown
Topanga Fire	FM-2583	September 28-October 10, 2005	\$Unknown
Severe Storms, Flooding, Landslides, Mud and Debris Flows	DR-1585	February 16, 23, 2005	\$735,657 HMGP North Simi, FEMA, \$3,656,067, CDAA \$973,722, PDM Fresno Canyon Diversion \$55,499
Severe Storms, Flooding, Debris Flows and Mudslides	DR-1577	December 27, 2004 – January 11, 2005	FEMA \$13,293,182 CDAA \$110,636
Wildfires, Flooding, Mudflow and Debris Flow	DR-1498	October 31, 2003 – March 31, 2004	\$46,875-HMGP Gauges FEMA \$265,310, CDDA \$1,740,850
Severe Storms, Tornadoes, High Winds, and Flooding	DR-1267	December 20 – 28, 1988	\$Unknown
Severe Winter Storms and Flooding	DR-1203	February 2 – April 30, 1998	\$ 5,464,863 FEMA \$1,742,593 CDAA

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Fires	EM-3120	October 21 – 31, 1996	\$Unknown
Severe Winter Storms, Flooding, Landslides, and Mud Flows	DR-1046	February 13 – April 19, 1996	\$Unknown
Severe Winter Storms, Flooding, Landslides, and Mud Flows	DR-1044	January 3 – February, 1995	\$Unknown
Northridge Earthquake	DR-1008	January 17 – November 30, 1994	\$Unknown
Fires, Mud & Landslides, Soil Erosion, and Flooding	DR-1005	October 26, 1993 – April 22, 1994	\$881,390
Severe Storm, Winter Storm, Mud & Landslides and Flooding	DR-979	January 5 – March 20, 1993	\$Unknown
Snow Storm, Heavy Rain, High Winds, Flooding and Mudslide	DR-935	February 10-19, 1992	\$5,335,410
Severe Freeze	DR-894	December 19, 1990 – January 3, 1991	\$Unknown
Severe Storms, High Tides & Flooding	DR-812	January 17 – 22, 1988	\$Unknown
Grass, Wildlands, & Forrest Fires	DR-739	June 26 – July 19, 1985	\$Unknown
Coastal Winter Storms, Floods, Slides and Tornadoes	DR-677	January 21 – March 30, 1983 February 26 – March 1, 1983	\$4,098,650 \$14,181,650
Severe Storms, Mudslides & Flooding	DR-615	January 8, 1980	\$5,464,869
Coastal Storms, Mudslides & Flooding	DR-547	February 15, 1978	\$Unknown
Severe Storms, High Tides & Flooding	DR-364	February 8, 1973	\$1,800,000
Forest & Brush Fires	DR-295	September 29, 1970	\$Unknown
Severe Storms & Flooding	DR-253	January 26, 1969	\$15,770,000
Heavy Rains & Flooding	DR-211	February 25, 1965	\$Unknown

24.6.2 Hazard Risk Ranking

Table 24-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Table 24-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Dam Failure	34	High
2	Severe Storms ^a	24	High
2	Severe Weather ^a	24	High
4	Flooding ^a	18	High
5	Earthquake	32	Medium
6	Wildfire	24	Medium
7	Landslide ^b	18	Medium
8	Sea Level Rise	12	Low
8	Tsunami	12	Low

Rank	Hazard	Risk Ranking Score	Risk Category
10	Drought	9	Low

- a. Risk Category adjusted based on local knowledge and past natural hazard events
- b. Score based only on Very High susceptibility category

24.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Based on the fact that virtually all of VCPWA-WP's critical facility assets were constructed to provide flood protection and/or are geospatially located proximate to and/or in flood plains, and as documented in Table 1.8 Past Natural Hazard Events above, during the aforementioned 56-year period, VCPWA-WP's critical facility flood protection assets experienced \$81 Million in damage from flooding, severe storms and severe weather events, VCPWA-WP has ranked Flood risks as "High" in Table 1.9 above.
- Matilija Dam in the Ventura River watershed is vulnerable to seismic failure. Many communities are at risk of inundation. Implementation of the Matilija Dam Ecosystem Restoration Project (MDERP) would address this risk while also opening 17 miles of habitat for endangered steelhead trout. MDERP comprises several downstream flood protection and water supply reliability components that must precede removal of the dam, some of which have been completed or are at various stages of completion (alternatives analysis, design, or construction).
- VCPWA-WP is currently engaged in preliminary design engineering and CEQA work in support of levee retrofit and/or flood-protection enhancement projects required to certify all its levees in full-compliance with Federal Levee Certification requirements. Major levee rehabilitation and ultimate certification projects in Ventura County mentioned in the Action Plan Items below include: Calleguas Creek Levee-Somis Flood Wall (CC-2) located in the City of Camarillo, the Santa Clara River Levee upstream of Hwy 101 (SCR-1) located in the City of Oxnard, the Ventura River Levee (VR-1) located in the City of San Buenaventura, the Ventura River Levee (VR-2) located in the unincorporated community of Casitas Spring, and the Live Oak Acres Levee located in the near the unincorporated community of Oak View. VCPWA-WP is working closely with FEMA, the United States Army Corps of Engineers (USACE), as well as affected cities, residents, and property owners throughout Ventura County to marshal scarce Federal, State, and local funding resources necessary to complete five very important levee retrofit public safety and flood protection projects. Once all VCPWA-WP's levee retrofit projects are completed, VCPWA-WP's levees will fully comply with applicable Federal Levee Certification requirements found in 44 CFR 65.10. At best, full completion of VCPWA-WP's five levee rehab projects will require a minimum of five to ten years, and could take longer, depending on final engineering design plan results, environmental considerations, and availability of project funding required to construct the rehab projects.
- San Nicholas, Santa Monica, and Santa Paula Pump Stations lift stormwater from low elevation coastal neighborhoods and discharge directly to the Pacific Ocean. The Santa Monica and Santa Paula Pump Station outlets are frequently clogged during high tide and heavy surf events, causing the pumps to shut off and requiring manual removal of sand to ensure the coastal communities do not flood. With sea level rise, the risk increases. While not currently afflicted with the propensity for sand to clog its outlet, San Nicholas Pump Station is vulnerable to failure as sea level rises. In addition, San Nicholas Pump Station was retrofitted in 2004 to

include a secondary pumping system to divert urban runoff into the sewer conveyance system operated by Channel Island Beach Community Services District for treatment at the Oxnard Wastewater Treatment Plant. This diversion system allows the County and Watershed Protection to meet compliance with dry weather Bacteria Total Maximum Daily Load (TMDL) for Channel Island Harbor Beaches (Resolution No. R2007-017). The diversion system does not work during wet days, defined as rain event of 0.1 inch or more and within 72 hours after eligible rain event stops. The County and Watershed Protection are in the process of evaluating feasible options to stop stormwater discharge from San Nicholas Pump Station into Kiddie Beach to comply with the TMDL during wet weather. The pumps in each facility are over 40 years old and do not have on site backup generators, making them vulnerable to power failures, which cause alarms to sound signaling the need for immediate emergency response. All three facilities need constant repair due to corrosive salt air and water. Upgrades are needed, but more land is required for truly effective solutions, and adjacent land is occupied by high value coastal residences.

- Ormond Lagoon is a coastal estuary open to the ocean only during rain events and for a variable period thereafter depending on time between rain events, tides, etc. Sea level rise may reduce the ability of storm runoff from Ormond Lagoon Waterway and *tšumaš* Creek to breach the lagoon and flow into the Pacific Ocean. Without a Beach Elevation Management Plan (BEMP), the adjacent Oxnard Wastewater Treatment Plant, Advanced Water Purification Facility, New Indy paper recycling plant, Halaco Superfund Site, local residences, and roads are all vulnerable to flooding from storm water backed up in the lagoon. It is likely that the current BEMP will need to be adjusted as sea level rise occurs to avoid flooding to the adjacent areas. Restoration of a large Ormond Wetlands complex may help reduce flood potential.

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

24.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 24-11 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 24-11. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>VCWPD 1—Complete the General Plan Update. In 2015, the Resource Management Agency, Planning Division initiated a General Plan Update project that is expected to take 5 years to complete. As part of the General Plan Update, the County will be considering the adoption of a number of new elements that will include land use policies that will apply to new land use development projects within the Unincorporated area of the County. In addition, the Resource Management Agency, Planning Division is currently working on Phase II of an update to its Local Coastal Program (“LCP Update”).</p> <p>The relevant issues that the General Plan Update and LCP Update will address include the following:</p> <ul style="list-style-type: none"> • Climate change, including (but not limited to) sea level rise and coastal resiliency policies for new development along the coast. • Wildlife movement overlay zone that will limit new development within flood-prone areas (e.g., riparian corridors). • Limitations on new development within Environmentally Sensitive Habitat Areas (e.g., the Santa Monica Mountains that are characterized by steep slopes, relatively intact native habitat, and coastal areas subject to flooding hazards); and • Changes to the permitting requirements for brush removal in open space areas (e.g., areas with steep slopes that are prone to erosion, mudslide, and flood hazards). <p><i>Comment:</i> The Ventura County General Plan Update was completed and approved by the Board of Supervisors in October 2020. The update addressed climate change and sea level rise. A Habitat Connectivity and Wildlife Corridors ordinance was passed by the Board of Supervisors in 2019, which established development standards intended to preserve wildlife corridors in certain overlay zones. Development requirements in the unincorporated areas of the County are enforced by the County’s Resource Management Agency as part of the normal planning and building permit process. The Coastal Area Plan which is part of the Local Coastal Program was updated in April 2017 and approved by the California Coastal Commission in July 2017. The updated Coastal Area Plan includes policies to protect Environmentally Sensitive Habitat Areas such as coastal dunes.</p>	✓			
<p>VCWPD 2—Revise existing landslide/debris flow maps to include potential runout areas and include the runout area with a classification scheme for probability. Present landslide/debris flow maps only include the main slide mass or body and not the potential areas of effect from potential future movement.</p> <p><i>Comment:</i> After the Thomas, Woolsey, and Maria fires Debris Flow maps were prepared in early 2018 for emergency repair planning purposes for major Watershed Protection jurisdictional channels significantly impacted by the wildfires. Major streams impacted by the Thomas, Woolsey, Maria, and Easy Fires were all mapped. The mapping focuses on identifying at-risk areas resulting from 1% annual chance flood flows with after fire debris bulking applied.</p>	✓			
<p>VCWPD 4—Integrate alluvial fan management measures for oil, agriculture, and development to include stormwater runoff, sediment transport, and alluvial fan geomorphology from geologic perspective. Alluvial fans are presently considered only from hydrologic/hydraulic models.</p> <p><i>Comment:</i> Alluvial fan management is regulated by the Ventura County Public Works Agency Engineering Services (VCPWA-ES) Department, Land Development Division with support from VCPWA-WP as part of the site review for grading permits associated with agricultural, oil and development projects. Geology and Engineering disciplines are utilized during these reviews to consider potential alluvial fan hazards typically not associated with the riverine environment. The reviews are performed on a project-by-project basis as many projects are not within the alluvial fan environment.</p>	✓			

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>VCWPD 5—Upgrade the County of Ventura’s Flood warning system. The existing ALERT (<i>Automated Local Evaluation in Real Time</i>) system is utilizing radio technology from the 1980s.</p> <p><i>Comment:</i> VCPWA-WP successfully secured a total of \$3,174,181 in three rounds of Flood Emergency Response Grants in 2014, 2016, and 2018. These three grants which funded the update of older ALERT legacy flood warning systems throughout Southern California to a new radio protocol called ALERT2. All three Flood Emergency Response Grants for Southern California were managed by Ventura County. Participating agencies included: Ventura County, County of Orange, Los Angeles County, San Bernardino County, Riverside County, San Diego County, National Weather Service Oxnard, National Weather Service San Diego, Santa Barbara County, San Luis Obispo County and Coachella Valley Water District</p> <p>ALERT2 incorporates the use of GPS timing with timed transmissions among other enhancements like faster transmission rates. The faster rates facilitate sending more data in a shorter time slot. This makes the radio transmissions shorter. Some of the timed data check ins being received are now at a higher frequency rate in some cases going from 12-hour check-ins to receiving 5-minute data every hour. ALERT2 also makes the warning system much more reliable. The timed transmissions reduce the radio signal collisions where data can be lost to almost nothing making the ALERT2 a much more reliable system when it comes to data loss. The timed transmissions during an event are still considered real time as no transmissions are more than two minutes old.</p>	✓			
<p>VCWPD 6—Continue modernizing and streamlining the Ventura County Watershed Protection’s Integrated Watershed Protection Plan and establish collaborative, cost-sharing, multi-benefit project partnerships with public and private sector agencies and organizations, aimed at improving community resiliency to flood risk hazards, floodplain management, groundwater, and environmental protection, and securing a sustainable water supply for urban and agricultural customers.</p> <p><i>Comment:</i> An Integrated Watershed Protection Plan is used by VCPWA-WP to rank projects for prioritizing funding and inclusion in VCPWA-WP’s 5-Year Capital Improvement Plan. The plan encourages collaboration and cost-sharing among public and private sector agencies and organizations on multi-purpose projects which integrate project objectives for flood control, floodplain management, groundwater recharge, recreation, and environmental enhancement. A cost sharing collaboration for Runkle Canyon resulted in completed improvements to rehabilitate infrastructure and increase flood safety by creating a sustainable funding source through a special assessment to properties that benefit from the improvements. A similar model has also been used for an area impacted by flood risks from Santa Paula Creek. Through collaboration and cost-sharing with the City of Oxnard, a linear park is planned together with the improvement to the flood channel conveyance capacity of tSumas Creek.</p>			✓	VCPWA-WP-2
<p>VCWPD 7—Undertake public outreach initiatives aimed at increasing property owner awareness of the risks of flooding, including coastal flooding from sea-level rise and actions that residents can take to reduce the risk of loss of life and property damage.</p> <p><i>Comment:</i> VCPWA-WP actively participates in CA Flood Preparedness Week activities during the month of October annually, which provides helpful information to residents, businesses, and schools on proactive steps that everyone should take to reduce their risk to loss of life and property damage from flood events, including coastal flooding from sea level rise. The County also mails flood safety information to all properties within a FEMA defined floodplain which often includes coastal residents vulnerable to coastal erosion and sea level rise. Another outreach activity is to provide flood risk information to realtors and lenders who serve residents looking for new housing.</p>	✓			
<p>VCWPD 8—Stabilize landslide-prone areas through stability improvement measures, including interceptor drains, in situ soil piles, drained earth buttresses, subdrains, removal of slide areas, and dewatering ground.</p> <p><i>Comment:</i> Landslide prone areas are stabilized as development is proposed within these areas. Should development or access to development be proposed in these areas and are not able to be relocated away from the hazard then geologic and engineering studies are required to provide recommendations for mitigation strategies to stabilize the ground that include factors of safety against future movement.</p>	✓			

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>VCWPD 9—Acquire, relocate and/or floodproof critical facilities located within the 100-year floodplain, as financially feasible. Projects will be undertaken by the Ventura County Public Works Agency and other applicable County agencies. Where feasible, acquired lands will be considered for passive open space.</p> <p><i>Comment:</i> VCPWA-WP and other County Agencies routinely consider the feasibility, practicality, and affordability of relocating and or floodproofing critical facilities located within the 100-year flood plain during routine project engineering design efforts, and in the preparation of project alternatives analyses in applicable CEQA documentation. Further, the Ventura County 2040 General Plan provides the following two policies providing direction to flood-proof critical facilities located within flood plains or in areas subject to sea-level rise</p> <p>Public Facilities, Services, and Infrastructure Element (PFS): PFS-1.3: The County shall review plans for constructing new essential public facility, such as a hospital, health care facility, emergency shelter, emergency command center, or emergency communications facility, so that these facilities are located outside of at-risk areas whenever feasible. If such a location is infeasible, then the County shall require the use of construction methods and site design features to minimize potential damage to these facilities.</p> <p>Hazards and Safety Element (HAZ): HAZ-3.2: 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</p>			✓	VCPWA-WP-5
<p>VCWPD 10—Reinforce and maintain County roads, bridges, ditches, and culverts from flooding through various flood proofing measures.</p> <p><i>Comment:</i> Ventura County Public Works Agency Roads and Transportation Department (VCPWA-RT) is responsible for the operation and maintenance of County roads, bridges, ditches, and culverts in the unincorporated areas of Ventura County. VCPWA-RT conducts annual ditch cleaning and culvert cleaning before winter storm season to maintain the capacity of ditches and proper drainage flow to mitigate roadway flooding in rural areas of the county. In addition to the annual cleaning of ditches and culverts, the VCPWA-RT is actively working to rehabilitate Bridge Road Bridge (#442) which is currently in design and environmental permitting phase and is expected to be completed in 2023. Replacement of Catalina Drive Bridge (#384) was completed in May 2020 and replacement of Casitas Vista Road Bridge (#327) was completed in September 2020. Mupu Road Bridge and the Wheeler Canyon Road Bridge improvements projects were completed in 2016-2017. The VCPWA-RT is developing a Bridge Management Program to maintain County bridges. The program will identify and prioritize VCPWA-RT's 158 bridge structures which include 81 bridges on the National Bridge Inventory and 77 other structures. This program will identify budget needs, and schedules for preventive maintenance as well as budget for required rehabilitation or replacement of VCPWA-RT maintained bridges for short and long-term planning needs. The Bridge Management Program is expected to be completed in calendar year 2021. In 2020-2021, VCPWA-WP continued to clean flood control channels and catch basins to prepare for winter storm seasons. VCPWA-WP also secured Proposition 1 grant funding for the Santa Ana Bridge and Camino Cielo Bridge replacement projects which are managed by VCPWA-RT (both are components of the MDERP). The design of Camino Cielo Bridge is progressing towards 30% milestone. For the Santa Ana Bridge project, a construction contract was awarded in March 2021 with an estimated completion date of December 2022.</p>			✓	VCPWA-WP-5

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>VCWPD 11—Work with FEMA Region IX to address any floodplain management issues that may have arisen/arise from the countywide DFIRM, Community Assessment Visits, and/or DWR.</p> <p><i>Comment:</i> VCPWA-WPD staff have worked closely with FEMA Region IX and CA Department of Water Resources (DWR) staff on a regular basis to address floodplain management issues. In coordination with FEMA Region IX, floodplain managers from the county and cities meet quarterly to discuss and address issues facing the floodplain management communities. The County continues to work with FEMA in moving forward with the Physical Map Revisions (PMR) for Santa Clara River watershed. The mapping projects for the Ventura River watershed and the Californian Coastal Analysis and Mapping Project were completed with maps effective 1/29/2021. County staff worked closely with FEMA on the public outreach for the completed mapping projects ahead of the effective dates to inform residents and encourage flood insurance purchase. County staff worked closely with FEMA and DWR on the dam break analysis and mapping and successfully achieved approval. All eight (8) state sized dams Ventura County maintains have approved inundation maps.</p>			✓	VCPWA-WP-10
<p>VCWPD 12—Increase the Unincorporated Ventura County's participation in the NFIP by maintaining a CRS Class 6 CRS rating, if not improving to a Class 5 or better rating, which through enhanced floodplain management activities allows property owners to receive increasing discounts on their NFIP flood insurance premiums.</p> <p><i>Comment:</i> Since May 1, 2016, unincorporated Ventura County has achieved a Class 5 rating in the NFIP's CRS administered by FEMA. A CRS rating reflects the extent to which a community has exceeded the NFIP's minimum standards for flood hazard mitigation and credits those efforts through flood insurance premium discounts. This Class 5 rating allows owners of floodplain properties in the unincorporated Ventura County to receive annual discounts of up to 25% on flood insurance premiums. FEMA listed the county's class 5 rating in the CRS program on April 1, 2021. In May of 2018, FEMA performed a Cycle Verification confirming Class 5 status. The next Cycle Verification is due in 2023. Additionally, in compliance with CRS program protocols, yearly recertification documentation continues to be submitted by VCPWA-WP to FEMA between Cycle Verifications. The most recent recertification was submitted July 28, 2021 and the next recertification will be due by August 1st of 2022.</p>			✓	VCPWA-WP-7
<p>VCWPD 14—Engage in preliminary design engineering, project feasibility analysis, and CEQA work for the Calleguas Creek Levee (CC-2) in Camarillo, the Santa Clara River Levee (SCR-1) in Oxnard, the Ventura River Levee (VR-1) in Ventura, and the Ventura River Levee (VR-2) in the Unincorporated area of Casitas Springs.</p> <p><i>Comment:</i> The County of Ventura, working in close coordination with federal and state agencies, continues to progress the design engineering and environmental permitting, and in some cases, the construction of projects required to rehabilitate levees owned by the County. A DWR Local Levee Assistance Program (LLAP) grant provided funding for the hydrologic and hydraulic analysis, geologic investigation, and alternative analysis for the preliminary design of the rehabilitation of the Calleguas Creek and Somis Drain Levee System (CC-2) in the City of Camarillo, and for the Ventura River Levee (VR-2) in the unincorporated community of Casitas Springs, which will ultimately lead to certification of these levees by the County, and accreditation of that certification by FEMA. The predesign study for CC-2 was completed in March 2021. That LLAP grant also provided funding to advance design engineering work, CEQA report preparation, and required environmental permitting approvals for both the Santa Clara River Levee (SCR-1) in Oxnard, and the Ventura River Levee (VR-1) in Ventura. Finally, the Sespe Creek Levee (SC-2) rehabilitation from HWY 126 to Old Telegraph Road was completed in the fall of 2017. Phase I levee rehabilitation construction work required to support the eventual certification of the Santa Clara River Levee (SCR-3) in Oxnard was completed by the County in June of 2018. Phase II of SCR-3 is planned for construction beginning in the 2022-23 fiscal year. Ongoing coordination between the County and the USACE, under the Section 408 Permit envelope, is underway for both the SCR-1 and VR-1 levees. For VR-1, the County submitted 60% design plans to USACE for review in early 2021.</p>			✓	VCPWA-WP-6

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>VCWPD 15—As part of the Memorandum of Agreement / Memorandum of Understanding with The Nature Conservancy (TNC): partner with TNC on acquisition, restoration, and mitigation planning processes; partner on grant proposals; participate in negotiations with land use owners; carry-out restoration projects; hold titles to floodplain properties as appropriate; and hold or co-hold with TNC multipurpose easements.</p> <p>Comment: <i>In November 2020, VCPWA-WP collaborated with TNC as well as the Santa Clara River Conservancy and the University of California at Santa Barbara to identify privately-owned parcels within the Santa Clara River one-percent annual chance flood zone that could be acquired, preserved with a conservation easement, and whose habitat quality could be enhanced. VCPWA-WP included acquisition and enhancement of the parcels in its SCR-3 Levee Rehab and Habitat Enhancement Project grant application to the California Department of Water Resources' Coastal Watershed Flood Risk Reduction grant program. TNC and SCRC submitted letters of support. On June 1, 2021, DWR issued a recommendation to fund five grants, including \$3.125 million for the SCR-3 Project, of which \$625,000 is budgeted for the habitat acquisition and enhancement. A 15-day public comment period regarding this recommendation ended on June 15, 2021.</i></p> <p><i>VCPWA-WP also coordinated with TNC and other NGOs such as Ojai Valley Land Conservancy and Friends of the Santa Clara River during preparation of its original (2010) and follow up (2015 & 2018) Community Rating System applications, Activity 420-Open Space, to document and quantify all lands preserved as open space within the one-percent annual chance flood zone throughout Ventura County. Through its participation in the Santa Clara River Watershed Committee and other organizations, VCPWA-WP also encourages all entities considering acquisition and preservation of open space to prioritize those parcels within the one-percent annual chance floodplain.</i></p> <p><i>In 2019, TNC reached out to VCPWA-WP to assist in developing multi-benefit project ideas to enhance stream water quality, in compliance with National Pollutant Discharge Elimination System /MS4 permit requirements. TNC, in collaboration with the City of Oxnard and State Coastal Conservancy, is developing the Ormond Beach Restoration and Access Plan (OBRAP). VCPWA-WP has provided input on the plan, including recommendations on approaches to incorporate its existing flood control facilities such as the Ormond Lagoon Waterway into the project while still protecting adjacent developed areas from flooding. In January 2021, VCPWA-WP began enlarging a portion of tšumas Creek, another tributary to Ormond Lagoon. Project completion is anticipated by February 2022 and VCPWA-WP continues to seek grant funding to continue the channel enlargement upstream. The tšumas Creek project is also covering the channel from Hueneme Road northward to provide a surface on which the City of Oxnard could install a linear park connecting an underserved community to Ormond Beach and coastal recreation areas (VCPWA-WP has assisted the City in preparation of three grant applications for this purpose, though to date no grant has been awarded). This linear park feature is reflected in the OBRAP.</i></p> <p><i>VCPWA-WP has carried out several habitat restoration projects, including removal of giant reed (Arundo donax) and other invasive species and either native plant installation or passive recruitment in the Ventura River, Santa Clara River, and Calleguas Creek watersheds. This work is ongoing.</i></p>			✓	VCPWA-WP-8

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p>VCWPD 16—Develop a Post Disaster Assessment and Planning Data Base. WPD will collect Ventura County's OES Post Disaster Damage Reports. This information will be geo-referenced and stored in a special database as a shape file. VCPWA-WP will compare the disaster information with existing DFIRM maps, and existing repetitive loss inventory data for monitoring and identification of flood prone areas (Hot Spots). Following the identification of damaged structures, VCPWA-WP will research and document if damaged structures were affected by local drainage problems, such as a plugged culvert, or unintended drain blockage. If not, consider the type of drainage system. If drainage system is local, refer the problem to PWA-Transportation for future mitigation, or if it is within VCPWA-WP's facilities, VCPWA-WP to assess problem and potential solution.</p> <p><i>Comment: In January of 2018, VCPWPD piloted the creation of a geospatially referenced post disaster damage assessment storyboard after the Thomas Fire which captured many of the features mentioned in this action plan item. Efforts to refine, improve, and standardize that storyboard to cover critical facility-assets found in the asset management portfolios of VCPWA-Roads and Transportation, Water and Sanitation Department, and Watershed Protection will be explored and further developed in an action item entry for the next five-year plan development period.</i></p>			✓	VCPWA-WP-3

24.8 HAZARD MITIGATION ACTION PLAN

Table 24-12 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 24-13 identifies the priority for each action. Table 24-14 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 24-12. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action VCPWA-WP-1—Support and actively participate in countywide initiatives and plan maintenance protocols identified in Volume 1 of the hazard mitigation plan, prioritizing VCPWA-WP's involvement in geographical areas of the county which have experienced severe repetitive losses and/or are in high- or medium-risk hazard areas identified in Watershed Protection's jurisdictional annex.</p> <p><u>Hazards Mitigated:</u> Drought, Dam Failure, Earthquake, Flood, Landslide, Sea Level Rise, Severe Storm, Severe Weather, Tsunami, and Wildfire</p>						
Existing & New	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19	VCSOES and Ventura County Departments	VCPWA-WP	Low	VCPWA-WP Structural Revenues augmented by FEMA Grants (BRIC and HMGP) and County General Funds, as required	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action VCPWA-WP-2—Refine the Integrated Watershed Protection Plan to update the identification and prioritization of multi-hazard mitigation projects, which incorporate dam failure, drought, earthquake, landslide, sea-level rise, severe storm and weather, and tsunami hazard mitigation features to advance the inclusion of multi-hazard mitigation projects in Capital Improvement Project (CIP) project planning, design, and implementation actions. Ensure that the unique vulnerabilities of disadvantaged, socially vulnerable, and historically underrepresented communities are identified, considered, and reflected appropriately in the project prioritization ranking process through coordination and engagement with representatives of these communities, multi-stakeholder watershed groups, and nonprofit partners.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Drought, Earthquake, Flooding, Landslide, Sea Level Rise, Severe Storm, Severe Weather, and Tsunami</p>						
New & Existing	1, 2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	VCPWA-WP	Ventura County Departments, Cities, Special-Purpose Districts, and NGOs.	Medium	VCPWA-WP Structural Revenues augmented by FEMA Grants (BRIC, FMA, and HMGP) and County General Funds, as required	Ongoing
<p>Action VCPWA-WP-3—Implement a Post Disaster Critical Facilities Risk Impact Assessment Program designed to capture and geo-reference perishable data after significant events (e.g., preliminary damage estimates, damage photos, event mapping, etc.) in support of future hazard mitigation efforts including the implementation and maintenance of the HMP. Leverage applications (Maintstar v15, ArcGIS Online) to capture information related to VCPWA-RT, W&S, and WP critical facility asset impacts, and establish a centralized location to document and archive critical facilities geospatial data related to disaster events which will facilitate the development and optimize the pursuit of grant funding for future hazard mitigation projects.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Drought, Earthquake, Flood, Landslide, Sea Level Rise, Severe Storm, Severe Weather, Tsunami, and Wildfire</p>						
New & Existing	1, 2, 4, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19	VCPWA-WP	Ventura County Departments, Cities, Special-Purpose Districts, and NGOs.	Low	VCPWA-WP Structural Revenues augmented by FEMA Grants (BRIC) and County General Funds, as required	Short Term
<p>Action VCPWA-WP-4—Improve public awareness and community response to flood event emergencies by upgrading and modernizing the Flood Warning System (FWS) optimized to leverage multi-social media venues. Expand the public outreach of the FWS through targeted marketing based on web-site analytics and develop multiple language interfaces to better reflect the linguistic and cultural diversity found in Ventura County communities.</p> <p><u>Hazards Mitigated:</u> Flood, Landslide, Sea Level Rise, Severe Storms, Severe Weather, Tsunami</p>						
New & Existing	1, 2, 6, 7, 12, 17, 18, 19	VCPWA-WP	DWR, NOAA, VCSOES, Ventura County Departments, Cities, Special-Purpose Districts, community and tribal leaders, community councils, and NGOs	Medium	VCPWA-WP Structural Revenues augmented by DWR and FEMA Grants (BRIC and HMGP) and County General Funds, as required	Short Term
<p>Action VCPWA-WP-5—Prioritize efforts to upgrade County bridges, culverts, dams, debris and detention basins, flood conveyance channel and pipeline infrastructure, pump stations, roads, water and wastewater community infrastructure, and other critical facilities required to provide adequate flood-proofing protection and enhance the resiliency of vital community lifelines in Ventura County.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flood, Landslide, Sea Level Rise, Severe Storm, Severe Weather, Tsunami and Wildfire</p>						
New & Existing	1, 2, 5, 6, 8, 9, 10, 11, 13, 16, 18, 19	VCPWA Departments	Ventura County Departments, Cities, Special-Purpose Districts	High	VCPWA-WP Structural Revenues augmented by FEMA Grants (BRIC, HMGP) DWR, VCTC, Caltrans and County General Funds, as required	Long Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action VCPWA-WP-6—Complete project feasibility analyses, design engineering and CEQA work for the Calleguas Creek Levee (CC-2) in Camarillo, the Santa Clara River Levee (SCR-1) in Oxnard, the Santa Paula Creek Flood Protection Project in Santa Paula, the Ventura River Levee (VR-1) in Ventura, the Ventura River Levee (VR-2) in the unincorporated community of Casitas Springs, and the Live Oak Acres Levee near the unincorporated community of Oak View required to evidence local compliance with Federal Levee Certification Regulations (44 CFR 65.10)</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flood, Landslide, Sea Level Rise, Severe Storm, Severe Weather, and Tsunami</p>						
New & Existing	1, 2, 5, 6, 8, 9, 10, 11, 13, 16, 18, 19	VCPWA-WP	Ventura County Departments and Cities of Camarillo, Oxnard, and San Buenaventura	High	VCPWA-WP Structural Revenues augmented by FEMA Grants (BRIC and HMGP) DWR-LLAP Grants USACE, and County General Funds, as required	Long Term
<p>Action VCPWA-WP-7—Strengthen the unincorporated area’s participation in the NFIP by maintaining a CRS Class 5 Rating; and pursue a renewed emphasis on the planning and implementation of flood mitigation projects for repetitive loss properties eligible for grant funding under FEMA’s Building Resilient Infrastructure and Communities (BRIC) program with the goal of reducing the number of repetitive loss properties in Ventura County.</p> <p><u>Hazards Mitigated:</u> Flood, Landslide, Sea Level Rise, Severe Storm, Severe Weather, Tsunami</p>						
New & Existing	1, 2, 4, 6, 9, 10, 11, 12, 13, 16, 18, 19	VCPWA-WP	Ventura County Departments, DWR, FEMA	High	VCPWA-WP Structural Revenues augmented by Grants (FMA, BRIC, HMGP) and County General Funds, as required	Ongoing
<p>Action VCPWA-WP-8—Partner with the Nature Conservancy, Santa Clara River Conservancy, Ojai Valley Land Conservancy, and other NGOs in cooperative efforts to acquire floodplain properties, carry out restoration projects, and enhance resiliency to natural disasters with green design elements included in hazard mitigation projects where feasible.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Drought, Flood, Landslide, Sea Level Rise, Severe Storms, Severe Weather, Tsunami, and Wildfire</p>						
New & Existing	1, 2, 5, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18	VCPWA-WP	Ventura County Departments, TNC, SCRC, OVLC, DWR, CDFW, State Coastal Conservancy	High	VCPWA-WP Structural Revenues augmented by Grants (FMA, BRIC, HMGP, DWR, SCC, etc.) and County General Funds, as required	Ongoing
<p>Action VCPWA-WP-9—Advance planning, feasibility analyses, preliminary design, and ultimate construction of multi-benefit stormwater capture projects through a regionally collaborative approach; as well as pursue strategies to maximize stormwater as a resource (enhance recycled water, stormwater capture and sanitary system diversion, and groundwater recharge) where possible in infrastructure planning and implementation of VCPWA-WP stormwater capital projects.</p> <p><u>Hazards Mitigated:</u> Drought, Flood, Sea Level Rise, Severe Storm, and Severe Weather</p>						
New	1, 2, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19	VCPWA-WP	Ventura County Departments, SWRCB, LARWQCB, DWR, SGMA, NGOs and Private Landowners	High	VCPWA-WP Structural Revenues augmented by FEMA Grants (BRIC & HMGP) DWR, IRWM, LARWQCB, SWRCB) and County General Funds, as required	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action VCPWA-10—Coordinate with FEMA Region IX to proactively address flood plain management and flood risk mapping issues that could adversely impact local hazard mitigation project planning and implementation efforts which may arise from updates to the Countywide DFIRMs, Community Assistance Visits, and/or other risk mapping initiatives.</p> <p><u>Hazards Mitigated:</u> Flood, Sea Level Rise, Severe Storm, and Weather</p>						
New & Existing	1, 2, 4, 6, 8, 9, 10, 11, 12, 16, 17, 18, 19	VCPWA-WP	Ventura County Departments, DWR, FEMA, Cities, NGOs, and Private Landowners	Medium	VCPWA-WP Structural Revenues augmented by FEMA Grants (BRIC & HMGP) DWR, and County General Funds, as required	Ongoing
<p>Action VCPWA-11—Work closely with CA Division of Safety of Dams (DSOD), County Sheriff Office of Emergency Services (OES), and other Federal, State, and local agencies to update and refine the Emergency Action Plans (EAPs) for the state size dams owned by the County.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Flood, Earthquake, Severe Storms and Weather</p>						
New & Existing	1, 2, 4, 7, 8, 12, 17, 18	VCPWA-WP	Ventura County Departments, FEMA, DWR, Cities, NGOs, and Private Landowners	Medium	VCPWA-WP Structural Revenues augmented by FEMA Grants (BRIC), DWR, and County General Funds, as required	Short-Term
<p>Action VCPWA-12—Complete project feasibility analyses, design engineering, CEQA, and implementation of the removal of Matilija Dam, reconstruction of the Camino Cielo Bridge crossing, and work with the Casitas Municipal Water District to reconstruct the Robles Diversion, as well as complete the construction of flood protection projects in the unincorporated community of Meiners Oaks in compliance with DSOD requirements.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Drought, Earthquake, Flood, Severe Storm and Weather</p>						
New & Existing	1, 2, 4, 6, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19	VCPWA-WP	Ventura County Departments, Casitas Municipal Water District, Bureau of Reclamation, Caltrans, CDFW, DSOD, DWR, FEMA, USACE, NGOs	High	VCPWA-WP Structural Revenues augmented by FEMA Grants (BRIC & HMGP) CDFW, DWR, NFWF, NRCS, SCC, WCB, and NGO's and County and Casitas General Funds, as required	Long-Term
<p>Action VCPWA-13—Collaborate with the City of Oxnard, Nature Conservancy, and State Coastal Conservancy to advance planning, design, and implementation of the Ormond Beach Restoration and Access Plan (OBRAP), particularly those components alleviating flooding along the Ormond Lagoon Waterway and creating public access along <i>tšumaš</i> Creek. This supports the City of Oxnard's Action OXN-12</p> <p><u>Hazards Mitigated:</u> Drought, Flood, Severe Weather, Severe Storms, Sea Level Rise, Tsunami</p>						
New & Existing	1, 2, 3, 9, 12, 13, 14, 15, 17, 18, 19	City of Oxnard	VCPWA-WP	High	City Structural Revenues augmented by FEMA Grants (BRIC), CDFG	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action VCPWA-14—Coordinate efforts to plan, develop, and ultimately construct multi-benefit, flood resiliency and other risk hazard mitigation projects with the Watershed Coalition of Ventura County (WCVC) 3-Watershed Councils, its Disadvantaged Community Committee, and nonprofit partners by increasing outreach and engagement with disadvantaged and socially vulnerable communities and tribal groups to better understand their unique community-lifeline vulnerabilities, facilitate the development of flood hazard mitigation multi-benefit projects, and align and leverage advocacy efforts to optimize grant funding opportunities.</p> <p><u>Hazards Mitigated:</u> Flood, Severe Weather, Severe Storms and Weather, Sea Level Rise, Tsunami</p>						
New & Existing	1, 2, 4, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18, 19	VCPWA-WP	County of Ventura Departments, Cities, Special-Purpose Districts, community and tribal leaders, community councils, WCVC, and NGOs	Medium	VCPWA-WP Structural Revenues augmented by FEMA Grants (BRIC & HMGP) DWR, IRWM, and City and County General Funds as required	Ongoing
<p>Action VCPWA-WP-15—Complete construction of the SCR-3 Levee Rehab Project consisting of 2400 linear feet of flood protection beginning from the east end of Reach 3 and ending north of the Union Pacific Railroad embankment. The flood protection consists of earthen levee embankment, sheet pile, reinforced concrete floodwalls, floodgate, rock riprap bank protection, and drainage improvements. When completed, this project will provide flood protection from a 1%-annual chance flood event to over 3,800 structures and nearly 6,400 residents of North Oxnard along the South Bank of the Santa Clara River.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flood, Landslide, Sea Level Rise, Severe Storm, Severe Weather, and Tsunami</p>						
New & Existing	1, 2, 5, 6, 8, 9, 10, 11, 13, 16, 18, 19	VCPWA-WP	Ventura County Departments and City of Oxnard	High	VCPWA-WP Structural Revenues augmented by FEMA Grants (HMGP) DWR (Coastal Watershed Flood Risk Reduction and LLAP), and City and County General Funds as required	Short-Term
<p>Action VCPWA-WP-16—Continue to participate in the National Weather Service's (NWS) StormReady and TsunamiReady Programs.</p> <p><u>Hazards Mitigated:</u> Severe Storms, Severe Weather, Tsunami, Flood, Dam Failure, Landslide, Sea Level Rise</p>						
New & Existing	1, 2, 7, 8, 17	Ventura County Public Works	Ventura County Sheriff's OES	Low	Staff Time, General Funds	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date
 Acronyms used here are defined at the beginning of this volume.

Table 24-13. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	17	Medium	Low	Yes	Yes	Yes-only at a level that is "Minimally Necessary to Comply"	Medium	Medium
2	16	Medium	Medium	Yes	Yes	No	Medium	Medium
3	14	Medium	Low	Yes	Yes	Yes-only at a level that is "Minimally Necessary to Comply"	Medium	Medium
4	8	Medium	Medium	Yes	Yes	Yes-only at a level that is "Minimally Necessary to Comply"	Medium	Medium
5	12	High	High	Yes	Yes	No	Medium	High
6	12	Medium	High	No	Yes	No	Low	Medium

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
7	12	Medium	High	Yes	Yes	Maintaining Class 5-CRS Rating: Yes. Reducing Severe Repetitive Loss Property Exposure: No.	Low	Medium
8	13	High	High	Yes	Yes	Establishing Partnerships with NGOs: Yes Acquiring flood plain properties, carrying out restoration projects, and including green design elements: No	Low	Medium
9	12	High	High	Yes	Yes	Advance planning and feasibility analysis: Yes. Perform Final Design and Construction: No	Medium	High
10	13	Medium	Medium	Yes	Yes	Coordination with FEMA: Yes. New Hazard Mitigation Project Planning and Execution: No	Medium	Medium
11	8	High	Medium	Yes	Yes	Coordination with FEMA, DWR, and DSOD: Yes Emergency Action Plan Refinements: No	Medium	High
12	15	High	High	Yes	Yes	No	Medium	High
13	11	High	High	Yes	Yes	Collaboration with City of Oxnard: Yes. OBRAP Flood Mitigation Project Design and Implementation Actions: No	Medium	High
14	14	High	Medium	Yes	Yes	Coordination efforts with WCVC, its DAC, and NGOs: Yes. Flood Mitigation Project Design and Implementation Actions: No	Medium	High
15	12	High	Medium	Yes	Yes	Yes. Project has received \$5 Million in grant awards from FEMA and DWR, which will augment VCPWA-WP's Zone 2 project funding	High	Low
16	5	Medium	Low	Yes	No	Yes	Medium	Low

a. See the introduction to this volume for explanation of priorities.

Table 24-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
High-Risk Hazards								
Dam Failure	VCPWA-WP-11	VCPWA-WP-7	VCPWA-WP-1, 2, 16	VCPWA-WP-8, 13	VCPWA-WP-4, 11	VCPWA-WP-5, 6, 12, 15	VCPWA-WP-5, 6, 8	VCPWA-WP-1, 2, 3, 14, 16
Severe Storms	VCPWA-WP-10, 11	VCPWA-WP-7	VCPWA-WP-1, 2, 4, 16	VCPWA-WP-8, 9, 13	VCPWA-WP-4, 11	VCPWA-WP-5, 6, 12, 13, 15	VCPWA-WP-5, 6, 8	VCPWA-WP-1, 2, 3, 10, 14, 16
Severe Weather	VCPWA-WP-10, 11	VCPWA-WP-7	VCPWA-WP-1, 2, 4, 16	VCPWA-WP-8, 9, 13	VCPWA-WP-4, 11	VCPWA-WP-5, 6, 12, 13, 15	VCPWA-WP-5, 6, 8	VCPWA-WP-1, 2, 3, 4, 7, 10, 14, 16
Flooding	VCPWA-WP-10, 11	VCPWA-WP-7	VCPWA-WP-1, 2, 4, 16	VCPWA-WP-8, 9, 13	VCPWA-WP-4, 11	VCPWA-WP-5, 6, 12, 13, 15	VCPWA-WP-5, 6, 8, 12	VCPWA-WP-1, 2, 3, 4, 7, 10, 14, 16
Medium-Risk Hazards								
Earthquake	VCPWA-WP-11		VCPWA-WP-1, 2		VCPWA-WP-11	VCPWA-WP-5, 6	VCPWA-WP-12	VCPWA-WP-1, 2, 3
Wildfire			VCPWA-WP-1	VCPWA-WP-8				VCPWA-WP-1, 2, 3
Landslides			VCPWA-WP-1, 2, 4, 16	VCPWA-WP-8	VCPWA-WP-4	VCPWA-WP-5, 6		VCPWA-WP-1, 2, 3, 4, 16
Low-Risk Hazards								
Sea Level Rise	VCPWA-WP-10	VCPWA-WP-7	VCPWA-WP-1, 2, 4, 16	VCPWA-WP-8, 9, 13	VCPWA-WP-4	VCPWA-WP-5, 6, 13, 15	VCPWA-WP-5, 6, 8	VCPWA-WP-1, 2, 3, 4, 7, 10, 14, 16
Tsunami		VCPWA-WP-7	VCPWA-WP-1, 2, 4, 16	VCPWA-WP-8, 13	VCPWA-WP-4	VCPWA-WP-5, 6, 13, 15		VCPWA-WP-1, 2, 3, 4, 7, 14, 16
Drought			VCPWA-WP-1, 2	VCPWA-WP-8, 9, 13		VCPWA-WP-12, 13	VCPWA-WP-5, 6, 8	VCPWA-WP-1, 2, 3, 14

a. See the introduction to this volume for explanation of mitigation types.

24.9 PUBLIC OUTREACH

Table 24-15 lists public outreach activities for this jurisdiction.

Table 24-15. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Multi-Hazard Mitigation Plan 2020 Progress Report to Ventura County Board of Supervisors	7-28-20	Annual Report Approved without express Board or Public Comments during Board's Adoption of Consent Agenda Items for this Remote Zoom Meeting
Multi-Hazard Mitigation Plan 2021 Progress Report to Ventura County Board of Supervisors	7-21-21	Annual Report Approved without express Board or Public Comments during Board's Adoption of Consent Agenda Items for this Remote Zoom Meeting
Ventura County Sheriff's Office of Emergency Services' Multi-Jurisdictional Hazard Mitigation Plan Development Public Outreach/Emergency Preparedness Workshops Planned During Month of September 2021	9-15-21 9-16-21 9-22-21 9-23-21	Unknown

24.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- Ventura County 2040 General Plan:** Evaluated Plan Implementation Actions under the following Plan Elements: (a) Public Facilities, Services, and Infrastructure, (b) Conservation and Open Space, (c) Hazards and Safety, (d) Water Resources, (e) Economic Vitality, (f) Unincorporated Communities' Area Plans, and (g) Appendix B: Climate Change which helped Watershed Protection perform its capability assessment and frame the development of its Hazard Mitigation Plan Action Items with more granular-precision and purposeful-effect.
- VCPWA-WP's Integrated Watershed Protection Plan Project Prioritization Process:** Explored possible opportunities to better integrate the development of multi-benefit flood protection project partnerships with public and private sector agencies and organizations aimed at improving community resiliency to flood hazard risk, flood plain management, groundwater conservation, stormwater capture, environmental protection, and helping to secure a sustainable water supply for agricultural and urban users.
- VCPWA-WP 5-Year Capital Improvement Projects Plan, Annual Update:** Confirmed inclusion of flood protection projects in VCPWA-WP's current 5-year portfolio which address a mix of high, medium, and low hazard risks found in VCPWA-WP's current Jurisdiction Annex, keying-up those projects as entries in VCPWA-WP's new 5-year Action Plan portfolio, including seven levee rehabilitation projects which when completed will ultimately result in local compliance with Federal Levee Certification regulations found in 44CFR 65.10.
- Ventura County Flood Mitigation and Safety Plans:** Consulted current plan documents to identify opportunities of alignment and optimization of VCPWA-WP's new 5-Year Action Plan submittal with the baseline framework found in these historical County flood mitigation and safety plan documents.
- VCPWA-WP's Preparation of Annual Recertifications and Cycle Verification of Class V Rating for Unincorporated Ventura County under FEMA's Community Rating System Program:** Consulted the current Class 5 Rating program performance and reporting requirements to ensure continuation of this rating, as well as identified opportunities for renewed emphasis on the planning and implementation of flood mitigation projects for repetitive loss properties eligible for grant funding under FEMA's Building Resilient Infrastructure and Communities (BRIC) program with the goal of reducing the number of repetitive loss properties in Ventura County.
- Ventura County Emergency Services Planning Documents:** Reviewed emergency services planning documents prepared by the Ventura County Sheriff's Office of Emergency Services to gain a better understanding of how best to facilitate appropriate development of VCPWA-WP's new 5-year Action Plan submittal by complementing and supplementing countywide risk hazard emergency planning rubric defined by County's Emergency Action Plan, as well as refine Emergency Action Plans for the state-sized dams owned by the County.
- Ventura County Integrated Regional Water Management Plan (IRWMP) Updates and DAC Public Outreach Engagement Initiative:** Explored framing potential opportunities to better coordinate joint efforts to plan, develop, and ultimately construct multi-benefit, flood resiliency and other risk hazard mitigation projects contained in VCPWA-WP's new 5-Year Action Plan submittal by increasing outreach and engagement with disadvantaged and socially vulnerable communities and tribal groups to better understand their unique community-lifeline

vulnerabilities, facilitate the development of flood hazard mitigation multi-benefit projects, and align and leverage advocacy efforts to optimize grant funding opportunities.

- Watershed Management Program (WMP) for Ventura County including Ventura River, Calleguas Creek, Santa Clara River, upper Malibu Creek, and Coastal Watersheds of Ventura County due to Los Angeles Regional Water Quality Control Board (Region 4) by September 11, 2023 to meet compliance with 2021 Regional Municipal Stormwater (MS4) National Pollutant Discharge Elimination System (NPDES) Permit Order No. CAS004004, Order No. R4-2021-0105. The Ventura County WMP will be developed by the County, Watershed Protection, and ten incorporated cities.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

25. VENTURA REGIONAL SANITATION DISTRICT

25.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

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Alternate Point of Contact

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This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 25-1.

Table 25-1. Local Hazard Mitigation Planning Team Members

Name	Title
Sandy Warren (through 6-30-21)	Management Analyst
Tina Rivera	Director of Finance
Eddie Pettit	Senior Engineer
Jo Cavanaugh	Safety Officer
Richard Jones	Director of Operations

25.2 JURISDICTION PROFILE

25.2.1 Overview

The Ventura Regional Sanitation District (VRSD) is a special district created in 1970 to provide sanitation services to cities and unincorporated areas of Ventura County. The District provides solid waste disposal services via the Toland Road Landfill and also offers a variety of water and wastewater-related services under contract to selected special districts and private entities. A nine-member appointed Board of Directors oversees the District. VRSD has approximately 60 employees. The District's operations are funded solely by fees for the services it provides.

The VRSD Board of Directors assumes responsibility for the adoption of this plan; the Executive General Manager will oversee its implementation.

25.2.2 Service Area

The District service area covers approximately 200 square miles, serving a population of approximately 600,000 in the cities of Camarillo, Fillmore, Ojai, Oxnard, Port Hueneme, Santa Paula, Thousand Oaks, and Ventura, as well as unincorporated County areas.

25.2.3 Assets

Table 25-2 summarizes the assets of the District and their value.

Asset	Value
Property	
449 acres of land	(unknown)
Equipment	
Landfill & water/wastewater operations equipment	\$9,121,492
Landfill gas above-ground pipework	\$825,000
Landfill liner	\$1,500,000
<i>Total:</i>	\$11,446,492
Critical Facilities	
Toland Road Landfill (active) 3500 Toland Road, Santa Paula, CA 93060	\$2,627,200
Bailard Landfill (inactive) 4105 W. Gonzales Road, Oxnard, CA 93030	\$943,800
Malibu Bay Club (Wastewater Treatment Plant) 4100 Pacific Coast Highway, Malibu CA 90265	\$3,587,976
<i>Total:</i>	\$7,158,976

25.3 CURRENT TRENDS

From 1970 to 2019, Ventura County’s population grew from approximately 370,000 to 846,000, an overall increase of approximately 128 percent. VRSD expanded its solid waste disposal capacity over the years to keep pace with projected needs. In March 2021, VRSD received approval from the Ventura County Board of Supervisors to proceed with the Toland Optimization Plan, which removes the prior mandated 2027 landfill closure date, eliminates the lifetime limit of 15 million tons, and allows for the landfill to be filled to the 1,435-foot elevation approved in 1996. The landfill will be able to keep pace with any population growth.

25.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- Table 25-3 presents an assessment of planning and regulatory capabilities
- Table 25-4 presents an assessment of fiscal capabilities
- Table 25-5 presents an assessment of administrative and technical capabilities
- Table 25-6 presents an assessment of education and outreach capabilities
- Table 25-7 presents classifications under various community mitigation programs
- Table 25-8 Presents the community's adaptive capacity for the impacts of climate change

Table 25-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update
Joint Technical Document	5/21
Stormwater Pollution Prevention Plan	9/20
Spill Prevention Control and Countermeasure Plan	9/20
Hazardous Materials Business Plan	3/21

Table 25-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service <i>If yes, specify:</i> Landfill Disposal Services	Yes
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No

Table 25-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Director Of Operations, Senior Engineer	Yes
Engineers or professionals trained in building or infrastructure construction practices	No
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Director of Operations, Senior Engineer	Yes
Staff with training in benefit/cost analysis <i>If Yes, Department /Position:</i> Director of Finance	Yes
Surveyors	No
Personnel skilled or trained in GIS applications	No
Scientist familiar with natural hazards in local area	No
Emergency manager <i>If Yes, Department /Position:</i> Safety Officer	Yes
Grant writers	No

Table 25-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	No
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website?	No
Do you use social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe: Hazardous Materials Business Plan / Spill Prevention Control and Countermeasure Plan</i>	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe: Listed in the Hazardous Materials Business Plan and included in training</i>	Yes

Table 25-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	No	N/A	N/A
DUNS#	Yes	030382014	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 25-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Participate in GHG study sponsored by NASA and the California Air Resources Board</i>	High
Jurisdiction-level monitoring of climate change impacts <i>Comment: Required to monitor GHG at active and closed landfills</i>	High
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: Work with several landfill gas consultants and state and federal agencies to reduce GHG emissions at our sites</i>	High
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: Required to monitor and report GHG generation at active and closed landfills</i>	High
Capital planning and land use decisions informed by potential climate impacts <i>Comment: Increase in annual budget in order to upgrade systems to reduce climate impacts</i>	High
Participation in regional groups addressing climate risks <i>Comment: Participate in statewide study of GHG sponsored by NASA and the California Air Resources Board</i>	High
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: We are required by District rule and regulation to reduce impacts to the environment</i>	High
Identified strategies for greenhouse gas mitigation efforts <i>Comment: Required to monitor and report GHG generation at active and closed landfills</i>	High

Criterion	Jurisdiction Rating ^a
Identified strategies for adaptation to impacts <i>Comment: Provide health & safety cooling stations for employees</i>	Medium
Champions for climate action in local government departments <i>Comment: Our scope of authority is specific as defined by state legislation.</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment: Our scope of authority is specific as defined by state legislation.</i>	Low
Financial resources devoted to climate change adaptation <i>Comment: Our scope of authority is specific as defined by state legislation.</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment: Our scope of authority is specific as defined by state legislation.</i>	Low
Public Capacity	
Local residents' knowledge of and understanding of climate risk <i>Comment: Our scope of authority is specific as defined by state legislation.</i>	Low
Local residents' support of adaptation efforts <i>Comment: Our scope of authority is specific as defined by state legislation.</i>	Low
Local residents' capacity to adapt to climate impacts <i>Comment: Our scope of authority is specific as defined by state legislation.</i>	Low
Local economy current capacity to adapt to climate impacts <i>Comment: Our scope of authority is specific as defined by state legislation.</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment: Our scope of authority is specific as defined by state legislation.</i>	Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

25.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

25.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- Joint Technical Document—Planning and control document for landfill operations and maintenance
- Stormwater Pollution Prevention plan—This program is how stormwater and run off are handled at the landfill
- Spill Prevention Control and Countermeasure Plan

- Hazard Materials Business Plan—this plan defines and establishes location of all hazard materials at VRSD facilities

25.5.2 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization.
- **Post-Disaster Recovery Plan**—The District does not have a recovery plan and intends to develop one as a mitigation planning action during the next five years. The plan will build on the mitigation goals and objectives identified in the mitigation plan.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan in this annex.

25.6 RISK ASSESSMENT

25.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 25-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 25-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Covid- 19	DR-4482	1/20/21	\$116,525
Easy Fire	FM-5298	10/30/2019	\$2,196,235
Thomas Fire	FM-5224	December 4, 2017	\$1,732,810

25.6.2 Hazard Risk Ranking

Table 25-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and district operations. Mitigation actions primarily target hazards with high and medium rankings.

Table 25-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Wildfire	36	High
2	Landslide	33	High
3	Earthquake	32	Medium
4	Severe Storm	24	Medium
4	Severe Weather	24	Medium
6	Dam Failure	24	Medium
7	Flooding	18	Medium
8	Sea Level Rise	12	Medium
9	Tsunami	10	Low
10	Drought	9	Low

25.6.3 Other Noted Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Underground Fires.
- Wind Storms—often halts operations and spreads debris which requires additional labor to clean-up

Mitigation actions addressing these issues were prioritized for consideration in the action plan in this annex.

25.7 HAZARD MITIGATION ACTION PLAN

Table 25-11 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 25-12 identifies the priority for each action. Table 25-13 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 25-11. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action VRS-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<i>Hazards Mitigated:</i> Earthquake, Flooding, Landslide, Severe Weather, Wildfire, Severe Storms, Dam Failure						
Existing	2, 6, 9, 11	VRSD		High	Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Short-term
Action VRS-2 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> Earthquake, Flooding, Landslide, Severe Weather, Tsunami, Wildfire, Severe Storms, Dam Failure, Drought, Sea Level Rise						
New & Existing	1, 4, 6, 8, 19	VRSD		Low	Staff Time, General Funds	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action VRS-3 —Purchase generators for critical facilities and infrastructure that lack adequate backup power, including Landfill gas extraction and Flares						
<i>Hazards Mitigated:</i> Existing	Earthquake, Flooding, Landslide, Severe Weather, Tsunami, Wildfire, Severe Storms, Dam Failure 2, 6, 7	VRSD		Medium	Staff Time, Grant Funding- FEMA HMA (BRIC, HMGP)	Long-term
Action VRS-4 —Develop a post disaster action plan that includes grant funding, debris removal components, and warehousing of critical infrastructure components						
<i>Hazards Mitigated:</i> Existing/Future	Earthquake, Flooding, Landslide, Severe Weather, Tsunami, Wildfire, Severe Storms, Dam Failure 2, 8, 19	VRSD		Medium	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Long-Term
Action VRS-5 —Create/implement wildfire preparedness plan with emphasis on defensible space and access issues						
<i>Hazards Mitigated:</i> Existing	Wildfire 5, 11, 14, 17, 19	VRSD		Medium	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, FMAP and HMGP)	Short-term
Action VRS-6 —Slope stabilization and drainage control features around water reservoirs						
<i>Hazards Mitigated:</i> Existing	Earthquake, Flooding, Landslide, Severe Weather, Wildfire, Severe Storms, Dam Failure 5, 9, 11, 14	VRSD		High	Staff Time, General Funds, Grant Funding- FEMA HMA (BRIC, FMA, HMGP)	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 25-12. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	4	High	High	Yes	Yes	No	Medium	High
2	5	Medium	Low	Yes	No	No	High	Low
3	3	High	Medium	Yes	Yes	No	Medium	High
4	3	Medium	Medium	Yes	Yes	No	Medium	Medium
5	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium
6	4	High	High	Yes	Yes	Yes	Medium	High

a. See the introduction to this volume for explanation of priorities.

Table 25-13. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building ^b
High-Risk Hazards								
Wildfire		VRS-1, 5	VRS-2	VRS-5, 6	VRS-2, 5, 6	VRS-6	VRS-5	VRS-2, 4
Landslide		VRS-1	VRS-2	VRS-6	VRS-2, 6	VRS-6		VRS-2, 4
Medium-Risk Hazards								
Earthquake		VRS-1	VRS-2	VRS-6	VRS-2	VRS-6		VRS-2, 4
Severe Storm		VRS-1	VRS-2	VRS-6	VRS-2	VRS-6		VRS-2, 4
Severe Weather		VRS-1	VRS-2	VRS-	VRS-2	VRS-6		VRS-2, 4
Dam Failure		VRS-1	VRS-2	VRS-6	VRS-2	VRS-6		VRS-2, 4
Flooding		VRS-1	VRS-2	VRS-6	VRS-2	VRS-6		VRS-2, 4
Sea Level Rise		VRS-1	VRS-2					VRS-2
Low-Risk Hazards								
Tsunami		VRS-1	VRS-2		VRS-2			VRS-2, 4
Drought		VRS-1	VRS-2					VRS-2

a. See the introduction to this volume for explanation of mitigation types.

b. Note that the jurisdiction did not identify a need for expansion of administrative and technical or financial capabilities, based on existing capabilities. The intent of this hazard mitigation plan is to expand the financial capability of the jurisdiction.

25.8 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **Joint Technical Document**—Used to inform the capability assessment.
- **Title V Reports**—Used to inform the capability assessment.
- **Stormwater Pollution Prevention Plan**—Used to inform the capability assessment.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

Ventura County Multi-Jurisdictional Hazard Mitigation Plan

Appendix A. Planning Partner Expectations

A. PLANNING PARTNER EXPECTATIONS

The federal Disaster Mitigation Act (DMA) of 2000 (Public Law 106-390), commonly known as the 2000 Stafford Act amendments, was approved by Congress on October 10, 2000. This act required state and local governments to develop hazard mitigation plans as a condition for federal grant assistance. Among other things, this legislation reinforces the importance of pre-disaster infrastructure mitigation planning to reduce disaster losses nationwide. DMA 2000 is aimed primarily at the control and streamlining of the administration of federal disaster relief and programs to promote mitigation activities. Prior to 2000, federal legislation provided funding for disaster relief, recovery, and some hazard mitigation planning. The DMA improves upon the planning process by emphasizing the importance of communities planning for disasters before they occur.

The Disaster Mitigation Act defines a “local government” as:

Any county, municipality, city, town, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity

Any local government wishing to pursue funding afforded under FEMA Hazard Mitigation Grant Programs must have an approved hazard mitigation plan in order to be eligible to apply for these funds.

One of the goals of the multi-jurisdictional approach to hazard mitigation planning is to achieve compliance with the Disaster Mitigation Act (DMA) for all participating members in the planning effort. DMA compliance must be certified for each member in order to maintain eligibility for the benefits under the DMA. Whether the planning process generates ten individual plans or one large plan that has a chapter for each partner jurisdiction, the following items must be addressed by each planning partner to achieve DMA compliance:

- **Participate in the Process.** It must be documented in the plan that each planning partner “participated” in the process that generated the plan. Participation can vary based on the type of planning partner (i.e.: City vs. a Special-Purpose District). However, the level of participation must be defined and the extent for which this level of participation has been met for each partner must be contained in the plan context.
- **Consistency Review.** Review of existing documents pertinent to each jurisdiction to identify policies or recommendations that are not consistent with those documents reviewed in producing the “parent” plan or have policies and recommendations that complement the hazard mitigation initiatives selected (i.e.: comp plans, basin plans or hazard-specific plans).

- **Action Review.** For plan updates, a review of the strategies from your prior action plan to determine those that have been accomplished and how they were accomplished; and why those that have not been accomplished were not completed.
- **Update Localized Risk Assessment.** Personalize the Risk Assessment for each jurisdiction by removing any hazards not associated with the defined jurisdictional area (e.g. tsunami and coastal erosion hazards for inland jurisdictions) or redefining vulnerability based on a hazard's impact to a jurisdiction. This phase will include:
 - A ranking of the risk
 - A description of the number and type of structures at risk
 - An estimate of the potential dollar losses to vulnerable structures
 - A general description of land uses and development trends within the community, so that mitigation options can be considered in future land use decisions.
- **Capability Assessment.** Each planning partner must identify and review their individual regulatory, technical, and financial capabilities with regards to the implementation of hazard mitigation actions.
- **Prioritize Mitigation Recommendations.** Identify and prioritize mitigation recommendations specific to each jurisdiction's defined area.
- **Create an Action Plan.**
- **Incorporate Public Participation.** Each jurisdiction must present the Plan to the public for comment at least once, within two weeks prior to adoption.
- **Plan Adoption.** The updated plan must be adopted by each jurisdiction following FEMA approval.

One of the benefits to multi-jurisdictional planning is the ability to pool resources. This means more than monetary resources. Resources such as staff time, meeting locations, media resources, technical expertise will all need to be utilized to generate a successful plan. In addition, these resources can be pooled such that decisions can be made by a peer group applying to the whole and thus reducing the individual level of effort of each planning partner. This will be accomplished by the formation of a steering committee made up of planning partners and other "stakeholders" within the planning area. The size and makeup of this steering committee will be determined by the planning partnership. This body will assume the decision-making responsibilities on behalf of the entire partnership. This will streamline the planning process by reducing the number of meetings that will need to be attended by each planning partner. The assembled Steering Committee for this effort will meet monthly on an as needed basis as determined by the planning team, and will provide guidance and decision making during all phases of the plan's development.

With the above participation requirements in mind, each partner is expected to aid this process by being prepared to develop its section of the plan. To be an eligible planning partner in this effort, each planning partner shall provide the following:

- A. *If you haven't already submitted a "Letter of Intent (LOI) to participate" or Resolution to participate (see Exhibit A); you must submit an LOI.*
- B. Designate a lead and alternate points of contact for this effort. The lead will be listed as the hazard mitigation point of contact for your jurisdiction in the plan.

- C. If requested, provide support in the form of a mailing list and public information materials, such as newsletters, newspapers, or direct mailed brochures, required to implement the public engagement strategy developed by the Steering Committee.
- D. Participate in the entire process (from first partner meeting to plan completion). There will be many ways as this plan evolves to participate. Opportunities such as:
- a. Attending online Steering Committee meetings
 - b. Attending online public meetings
 - c. Completing the phased Jurisdiction Annex Process
 - d. Participating in public review and comment periods prior to adoption

At each of these meetings, attendance will be recorded. Attendance records will be used to document participation for each planning partner. No thresholds will be established as minimum levels of participation. However, each planning partner should attempt to attend all possible meetings and events.

- E. Designate a Local Planning Team. Each planning partner will be asked to identify a lead point of contact and an alternate point of contact for their jurisdiction as well as other resources within that jurisdiction that can support or enhance the mitigation actions from this plan. For municipal planning partners, participants should include, at a minimum, representation from Planning, Public Works and Emergency Management. For Special Purpose Districts, participants should include anyone responsible for facilities management and/or emergency management. All phases of the Jurisdictional Annex process should be conducted through these local planning teams.
- F. Complete all 3 phases of the Jurisdictional Annex process. Volume 2 of the plan consists of jurisdictional specific components of the plan required under section 2016, 44CFR for multi-jurisdictional local hazard mitigation plans. It is mission-critical to the ultimate approval of this plan update that these annexes are created or updated in accordance with the requirements. To achieve this compliance, the Core Planning Team (CPT) will deploy the Jurisdictional Annex process in the following 3 phases over the course of this plan update process:
- Phase 1 - Jurisdiction Profiles and Prior Action Review
 - Phase 2 - Core Capability Assessment
 - Phase 3 - Risk Ranking and Action Plan Development

Complete and thorough technical assistance will be available to all planning partners during this phased process. Phase 1 will be deployed in May 2021 with specified deadlines, and the response to each phase by the Planning Partnership will be aggregated by the CPT.

Failure to meet deadlines specified for Phases 1 and 2 will not jeopardize and planning partner's eligibility for coverage under the plan. However, it is important to note that, if a planning partner does not meet the deadline for Phase 1, it is expected that the information submitted during Phase 2 will include all of the information requested under Phases 1 and 2. The ultimate deadline for this phased process will be the deadline for Phase 3.

Failure to submit a complete Jurisdictional Annex by the specified deadline for Phase 3 will result in a planning partner's removal from the Partnership for failure to meet the specified planning partner expectations.

Phase 3 will include a mandatory workshop that will focus on action plan development and prioritization. Attendance at the Phase 3 workshop will be tracked, and each planning partner must send at least one representative to the workshop to fully meet the participation requirements defined for this plan update process.

At a minimum, two workshops will be conducted - one for municipal planning partners and one for special district planning partners to provide guidance on action plan development specific to the differing capabilities between these two planning partner types.

- G. Each partner will be asked to perform a “consistency review” of all technical studies, plans, ordinances specific to hazards to determine the existence of any not consistent with the same such documents reviewed in the preparation of the County (parent) Plan. For example, if your community has a floodplain management plan that makes recommendations that are not consistent with any of the County’s Basin Plans, that plan will need to be reviewed for probable incorporation into the plan for your area.
- H. Each partner will be asked to review the Risk Assessment and identify hazards and vulnerabilities specific to its jurisdiction. Contract resources will provide the jurisdiction-specific mapping and technical consultation to aid in this task, but the determination of risk and vulnerability will be up to each partner.
- I. Each partner will be asked to review and determine if the mitigation recommendations chosen in the parent plan will meet the needs of its jurisdiction. Projects within each jurisdiction consistent with the parent plan recommendations will need to be identified, prioritized, and reviewed to determine their benefits vs. costs.
- J. Each partner will be required to create its own action plan that identifies each project, who will oversee the task, how it will be financed, and when it is estimated to occur.
- K. Each partner will be required to formally adopt the plan.

Templates and instructions to aid in the compilation of this information will be provided to all committed planning partners. Each partner will be asked to complete their templates in a timely manner and according to the timeline specified.

NOTE: Once this plan is completed, and DMA compliance has been determined for each partner, maintaining that eligibility will be dependent upon each partner implementing the plan implementation-maintenance protocol identified in the plan.

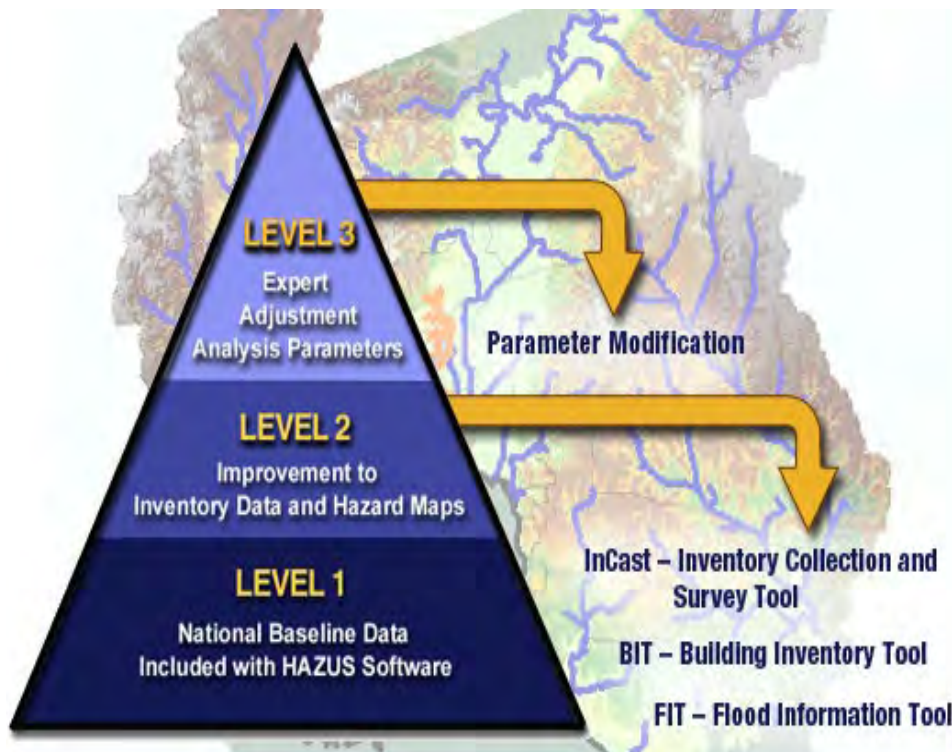
Exhibit A
Planning Team Contact information

Name	Representing	Address	e-mail
Bonnie Luke	Ventura County Sheriff's Office of Emergency Services	800 South Victoria Avenue Ventura, CA 93009	BonnieK.Luke@ventura.org
Kathy Gibson	Ventura County Sheriff's Office of Emergency Services	800 South Victoria Avenue Ventura, CA 93009	kathy.gibson@ventura.org
Patrick Maynard	Ventura County Sheriff's Office of Emergency Services	800 South Victoria Avenue Ventura, CA 93009	patrick.maynard@ventura.org
Glenn Shephard	Ventura County Public Works Agency Watershed Protection	800 South Victoria Avenue Ventura, CA 93009	glenn.shephard@ventura.org
Gerard Kapuscik	Ventura County Public Works Agency Watershed Protection	800 South Victoria Avenue Ventura, CA 93009	gerard.kapuscik@ventura.org
Ruth Venus	Ventura County Information Technology Services	1957 Eastman Avenue Ventura, CA 93003	Ruth.Venus@ventura.org
Cole McLaughlin	Ventura County Information Technology Services	1957 Eastman Avenue Ventura, CA 93003	cole.mclaughlin@ventura.org
Richard Paschal	Ventura County Information Technology Services	1957 Eastman Avenue Ventura, CA 93003	Richard.Paschal@ventura.org
Ashley Bautista	Ventura County CEO	800 South Victoria Avenue Ventura, CA 93009	ashley.bautista@ventura.org
Jackie Nuñez	Ventura County CEO	800 South Victoria Avenue Ventura, CA 93009	jackie.nunez@ventura.org
Rob Flaner	Tetra Tech, Inc.	90 S. Blackwood Ave Eagle, ID 83616	rob.flaner@tetratech.com
Megan Brotherton	Tetra Tech, Inc.	737 Bishop Street, Suite 2340 Honolulu, HI 96813	megan.brotherton@tetratech.com
Carol Bauman	Tetra Tech, Inc.		carol.bauman@tetratech.com

**Exhibit C.
Overview of Hazus**

Overview of Hazus (Multi-Hazard)

Hazus, is a nationally applicable standardized methodology and software program that contains models for estimating potential losses from earthquakes, floods, tsunamis, and hurricane winds. Hazus was developed by the Federal Emergency Management Agency (FEMA) under contract with the National Institute of Building Sciences (NIBS). NIBS maintains committees of wind, flood, earthquake and software experts to provide technical oversight and guidance to Hazus development. Loss estimates produced by Hazus are based on current scientific and engineering knowledge of the effects of hurricane winds, floods, and earthquakes. Estimating losses is essential to decision-making at all levels of government, providing a basis for developing mitigation plans and policies, emergency preparedness, and response and recovery planning.



Hazus uses state-of-the-art geographic information system (GIS) software to map and display hazard data and the results of damage and economic loss estimates for buildings and infrastructure. It also allows users to estimate the impacts of hurricane winds, floods, tsunamis, and earthquakes on populations. The latest release, Hazus 4.0, is an updated version of Hazus that incorporates many new features which improve both the speed and functionality of the models. For information on

software and hardware requirements to run Hazus 4.0, see Hazus Hardware and Software Requirements.

Hazus Analysis Levels

Hazus provides for three levels of analysis:

- A Level 1 analysis yields a rough estimate based on the nationwide database and is a great way to begin the risk assessment process and prioritize high-risk communities.

- A Level 2 analysis requires the input of additional or refined data and hazard maps that will produce more accurate risk and loss estimates. Assistance from local emergency management personnel, city planners, GIS professionals, and others may be necessary for this level of analysis.
- A Level 3 analysis yields the most accurate estimate of loss and typically requires the involvement of technical experts such as structural and geotechnical engineers who can modify loss parameters based on to the specific conditions of a community. This level analysis will allow users to supply their own techniques to study special conditions such as dam breaks and tsunamis. Engineering and other expertise is needed at this level.

Three data input tools have been developed to support data collection. The Comprehensive Data Management System helps users collect and manage local building data for more refined analyses than are possible with the national level data sets that come with Hazus. The system has expanded capabilities for multi-hazard data collection. Hazus includes an enhanced Building Inventory Tool allows users to import building data and is most useful when handling large datasets, such as tax assessor records. The Flood Information Tool helps users manipulate flood data into the format required by the Hazus flood model. All Three tools are included in the Hazus MR1 Application DVD.

Hazus Models

The Hazus Hurricane Wind Model gives users in the Atlantic and Gulf Coast regions and Hawaii the ability to estimate potential damage and loss to residential, commercial, and industrial buildings. It also allows users to estimate direct economic loss, post-storm shelter needs and building debris. In the future, the model will include the capability to estimate wind effects in island territories, storm surge, indirect economic losses, casualties, and impacts to utility and transportation lifelines and agriculture. Loss models for other severe wind hazards will be included in the future. Details about the Hurricane Wind Model.

The Hazus Flood Model is capable of assessing riverine and coastal flooding. It estimates potential damage to all classes of buildings, essential facilities, transportation and utility lifelines, vehicles, and agricultural crops. The model addresses building debris generation and shelter requirements. Direct losses are estimated based on physical damage to structures, contents, and building interiors. The effects of flood warning are taken into account, as are flow velocity effects. Details about the Flood Model.

The Hazus Earthquake Model, The Hazus earthquake model provides loss estimates of damage and loss to buildings, essential facilities, transportation and utility lifelines, and population based on scenario or probabilistic earthquakes. The model addresses debris generation, fire-following, casualties, and shelter requirements. Direct losses are estimated based on physical damage to structures, contents, inventory, and building interiors. The earthquake model also includes the Advanced



Engineering Building Module for single- and group-building mitigation analysis. Details about the Earthquake Model.

The Hazus Tsunami Model represents the first new disaster module for the Hazus software in almost 15 years and is the culmination of work completed on the Hazus Tsunami Methodology Development (FEMA, 2013) by a team of tsunami experts, engineers, modelers, emergency planners, economists, social scientists, geographic information system (GIS) analysts, and software developers. A Tsunami Oversight Committee provided technical direction and review of the methodology development. New features with the model include:

- **Territory Analysis:** This release represents the first time that analysis will be available for U.S. territories (Guam, American Samoa, Commonwealth of Northern Mariana Islands and U.S. Virgin Islands).
- **New Point Format:** The Hazus General Building Stock for the Tsunami release will use a new National Structure Inventory point format (details in User Release Notes available with download).
- **Case Studies:** The Tsunami Module will require user-provided data, so the Hazus Team has provided five case study datasets for users, which will be available on the MSC download site.
- **Two Types of Damage Analysis:** Users will be able to run both near-source (Earthquake + Tsunami) and distant-source (Tsunami only) damage analysis.

Additionally, Hazus can perform multi-hazard analysis by providing access to the average annualized loss and probabilistic results from the hurricane wind, flood, and earthquake models and combining them to provide integrated multi-hazard reports and graphs. Hazus also contains a third-party model integration capability that provides access and operational capability to a wide range of natural, man-made, and technological hazard models (nuclear and conventional blast, radiological, chemical, and biological) that will supplement the natural hazard loss estimation capability (hurricane wind, flood, tsunami and earthquake) in Hazus.

Ventura County Multi-Jurisdictional Hazard Mitigation Plan

Appendix B. Annex Instructions and Templates

Appendix B.1
Instructions and Templates for
Municipality Annexes

INSTRUCTIONS FOR COMPLETING CITY/COUNTY ANNEX TEMPLATE

Jurisdictional annex templates for the *2022 Ventura County Multi-Jurisdictional Hazard Mitigation Plan* update will be completed in three phases. **This document provides instructions for completing all phases of the template for cities and counties.**

The target timeline for completion is as follows:

- **Phase 1**—Team, Profile, Trends, and Previous Plan Status
 - **Deploy:** May 10, 2021
 - **Due:** June 21, 2021 by close of business
- **Phase 2**—Capability Assessment, Integration Review, and Information Sources
 - **Deploy:** July 6, 2021
 - **Due:** August 20, 2021 by close of business
- **Phase 3**—Risk Assessment, Action Plan, Information Sources, Future Needs, and Additional Comments
 - **Deploy:** September 9, 2021
 - **Mandatory Phase 3 Workshop:** September 22, 2021
 - **Due:** October 25, 2021 by close of business, Pacific Time. **No due date extensions!**

Please direct any questions and return your completed Phase 3 template in electronic format to:

Megan Brotherton
Tetra Tech
Phone: (808) 339-9119
E-mail: megan.brotherton@tetrattech.com

A Note About Formatting

The template for the annex is a Microsoft Word document in a format that will be used in the final plan. Partners are asked to use this template so that a uniform product will be completed for each partner.

Content should be entered directly into the template rather than creating text in another document and pasting it into the template. Text from another source may alter the formatting of the document.

The section and table numbering in the document will be updated when completed annexes are combined into the final document. Please do not adjust any of the numbering.

For planning partners who participated in the 2015 planning effort, relevant information has been brought over to the 2022 template. Fields that require attention have been highlighted using the following color coding:

- **Yellow:** Text has been brought over from 2015 Plan and should be reviewed and updated as needed.
- **Pink:** This is a new field that will require information that was not included in 2015.

Un-highlight each field that you update so that reviewers will know an edit has been made.

New planning partners will need to complete the template in its entirety.

PHASE 1 INSTRUCTIONS

CHAPTER TITLE

In the chapter title at the top of Page 1, type in the complete official name of your municipality (e.g., City of Pleasantville, West County). Do not change the chapter number. Revise only the jurisdiction name. If your jurisdiction's name has already been entered, verify that wording and spelling are correct; revise as needed.

LOCAL HAZARD MITIGATION PLANNING TEAM

Points of Contact

Provide the name, title, mailing address, telephone number, and e-mail address for the primary point of contact for your jurisdiction. This should be the person responsible for monitoring, evaluating and updating the annex for your jurisdiction. This person should also be the principle liaison between your jurisdiction and the Steering Committee overseeing development of this plan.

In addition, designate an alternate point of contact. This would be a person to contact should the primary point of contact be unavailable or no longer employed by the jurisdiction.

Note: Both of these contacts should match the contacts that were designated in your jurisdiction's letter of intent to participate in this planning process. If you have changed the primary or secondary contact, let the planning team know by inserting a comment into the document.

Who Should Be on the Local Mitigation Planning Team

The Local Hazard Mitigation Planning Team is responsible for developing your jurisdiction's annex to the hazard mitigation plan. Team membership should represent agencies with authority to regulate development and enforce local ordinances or regulatory standards, such as building/fire code enforcement, emergency management, emergency services, floodplain management, parks and recreation, planning/ community development, public information, public works/ engineering, stormwater management, transportation, or infrastructure.

Participating Planning Team

Populate Table 1-1 with the names of staff from your jurisdiction who participated in preparing this annex or otherwise contributed to the planning process for this hazard mitigation plan.

JURISDICTION PROFILE

Provide information specific to your jurisdiction as indicated, in a style similar to the examples provided below. This should be information that will not be provided in the overall mitigation plan document.

Location and Features

Describe the community's location, size and prominent features, in a statement similar to the example below:

EXAMPLE: The City of Jones is in the northwest portion of Smith County, along the Pacific Coast in northern California. It is almost 150 miles northeast of San Francisco. The city's total area is 4.2 square miles, with boundaries generally extending north-south from State Highway 111 to the

Johnson River and east-west from Coast Road to East Frank Avenue. The City of Allen is to the north, unincorporated county is to the west, the City of Bethany is to the south, and the Pacific Ocean is to the west.

Jones is home to the University of Arbor, Bickerson Manufacturing, and the western portion of Soosoo National Park. Significant geographic features include the Watery River, which flows southwest across the city, Lake Splash in the city's northwest corner, and the foothills of the Craggy Mountains on the east side.

History

Describe the community's history, focusing on economy and development, and note its year of incorporation, in a statement similar to the example below:

EXAMPLE: The City of Jones was incorporated in 1858. The area was settled during the gold rush in the 1850s as a supply center for miners. As the gold rush died down, timber and fishing became the area's major economic resources. By 1913, the Jones Teachers College, a predecessor to today's University of Arbor, was founded. Recently, the presence of the college has come to shape Jones' population into a young and educated demographic. In 1981 the City developed the Jones Marsh and Wildlife Sanctuary, an environmentally friendly sewage treatment enhancement system.

With numerous annexations since its original incorporation, the city's area has almost doubled. Today it features a commercial core in the center of the city, with mostly residential areas to the north and south, the university to the west and the national park on the east.

Governing Body Format

Describe the community's key governance elements and staffing, in a statement similar to the example below:

EXAMPLE: The City of Jones is governed by a five-member city council. The City consists of six departments: Finance, Environmental Services, Community Development, Public Works, Police, and the City Manager's Office. The City has 13 commissions and task forces, which report to the City Council. The City currently employs a total of 155 employees (full-time equivalent).

The City Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.

CURRENT TRENDS

Population

Provide the most current population estimate for your jurisdiction based on an official means of tracking (e.g., the U.S. Census or state agency that develops population estimates). Describe the current estimate and recent population trends in a statement similar to the example below.

EXAMPLE: According to California Department of Finance, the population of Jones as of July 2020 was 17,280. Since 2010, the population has grown at an average annual rate of 1.2 percent, though that rate is declining, with an annual average of only 0.8 percent since 2015.

Development

In the highlighted text that says “Describe trends in general,” provide a brief description of your jurisdiction’s recent development trends in a statement similar to the example below:

EXAMPLE: Anticipated future development for Jones is low to moderate, consisting primarily of residential growth. Recent development has been mostly infill. There has been a focus on affordable housing and a push for more secondary mother-in-law units. Future growth in the City will be managed as identified in the City’s 2018 general plan. City actions, such as those relating to land use, annexations, zoning, subdivision and design review, redevelopment, and capital improvements, must be consistent with the plan.

Complete the table titled “Recent and Expected Future Development Trends.” Note:

- The portion of the table requesting the number of permits by year is specifically looking for development permits for **new** construction. If your jurisdiction does not have the ability to differentiate between permit types, list the total number of permits and indicate “N/A” (not applicable) for the permit sub-types.
- If your jurisdiction does not have the ability to track permits by hazard area, delete the bullet list of hazard areas and insert a qualitative description of where development has occurred.

STATUS OF PREVIOUS PLAN ACTIONS

Note that this section only applies to jurisdictions that are conducting updates to previously approved hazard mitigation plans. If your jurisdiction has not previously participated in an approved plan, enter an “X” in the box at the beginning of this section and do not complete the section. We will remove this section from your final annex.

Also note that this section is further back in the annex than the rest of the Phase 1 content. Some Phase 2 sections are included before it.

All action items identified in prior mitigation plans must be reconciled in this update. Action items must all be marked as **ONE** of the following; check the appropriate box (place an X) and provide information as follows:

- **Completed**—If an action has been completed since the prior plan was prepared, check the “Completed” box and **provide a date of completion in the comment section**. If an action has been initiated and is an ongoing program (e.g. annual outreach event), you may mark it as completed and **note that it is ongoing in the comments**. If an action addresses an ongoing program you would like to continue to include in your action plan, see the “Carried Over to Plan Update” bullet below.
- **Removed**—If action items are to be removed because they are no longer feasible, a reason must be given. Lack of funding does not mean that it is no longer feasible, unless the sole source of funding for an action is no longer available. **Place a comment in the comment section explaining why the action is no longer feasible or barriers that prevented the action from being implemented (e.g., “Action no longer considered feasible due to lack of political support.”)**. If the wording and/or intent of a previously identified action is unclear, this can be a reason for removal. A change in community priorities may also be a reason for removal and should be discussed in the comments.
- **Carried Over to Plan Update**—If an action is in progress, is ongoing, or has not been initiated and you would like to carry it over to the plan update, check the “Check if Yes” column under “Carried Over to Plan Update.” Selecting this option indicates that the action will be included in the mitigation action

plan for this update. If you are carrying over an action to the update, **include a comment describing any action that has been taken or why the action was not taken** (specifically, any barriers or obstacles that prevented the action from moving forward or slowed progress). Leave the last column, “Action # in Update,” blank at this point. This will be filled in after completing the updated action plan in Phase 3.

Ensure that you have provided **a status and a comment for each action.**

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, all action items from your jurisdiction’s previous hazard mitigation plan that are marked as “Carried Over to Plan Update” will need to be included in the action plan.

THIS COMPLETES PHASE 1

PHASE 2 INSTRUCTIONS

CAPABILITY ASSESSMENT

Note that it is unlikely that one person will be able to complete all sections of the capability assessment alone. The primary preparer will likely need to reach out to other departments within the local government for information. It may be beneficial to provide these individuals with background information about this planning process, as input from them will be needed again during Phase 3 of the annex development.

Planning and Regulatory Capability

In the table titled “Planning and Regulatory Capability,” indicate “Yes” or “No” for each listed code, ordinance, requirement or planning document in each of the following columns:

- **Local Authority**—Enter “Yes” if your jurisdiction has prepared or adopted the identified item; otherwise, enter “No.” If yes, then enter the code, ordinance number, or plan name and its date of adoption in the comments column. *Note: If you enter yes, be sure to provide a comment with the appropriate code, ordinance or plan and date of adoption.*
- **Other Jurisdiction Authority**—Enter “Yes” if another agency (e.g., a state agency or special purpose district) enforces or administers the identified item in a way that may impact your jurisdiction or if any state or federal regulations or laws would prohibit local implementation of the identified item; otherwise, enter “No.” *Note: If you enter yes, be sure to provide a comment indicating the other agency and its relevant authority.*
- **State Mandated**—Enter “Yes” if state laws or other requirements enable or require the listed item to be implemented at the local level; otherwise, enter “No.” *Note: If you enter yes, be sure to provide a comment describing the relevant state mandate.*
- **Integration Opportunity**—Enter “Yes” if there are obvious ways that the code, ordinance or plan can be coordinated with the hazard mitigation plan. Consider the following:
 - If you answered “Yes” in the Local Authority column for this item, then enter “Yes” for integration opportunity if any of the following are true:
 - The item already addresses hazards and their impacts and should be updated to reflect new information about risk from this hazard mitigation plan
 - The item does not address hazards and their impacts but is due for an update in the next 5 years and could be updated in a way that does address hazards and impacts
 - The item identifies projects for implementation and these could be reviewed to determine if they can be modified to help address hazard mitigation goals
 - The item identifies projects for implementation and some of these should be considered for inclusion in the hazard mitigation action plan for your jurisdiction
 - If you answered “No” in the Local Authority column for this item, then enter “Yes” for integration opportunity if your jurisdiction will develop the item over the next 5 years

Note: Each capability with a “Yes” answer to Integration Opportunity will be discussed in more detail later in the annex. You may wish to keep notes when assessing the Integration Opportunity or review the “Integration with Other Planning Initiatives” section below.
- **Comments**—Enter the code number and adoption date for any local code indicated as being in place; provide other comments as appropriate to describe capabilities for each entry. **DO NOT OVERLOOK THIS STEP**

For the categories “General Plan” and “Capital Improvement Plan,” answer the specific questions shown, in addition to completing the four columns indicating level of capability.

Development and Permit Capability

Complete the table titled “Development and Permitting Capabilities.”

Fiscal Capability

Complete the table titled “Fiscal Capability” by indicating whether each of the listed financial resources is accessible to your jurisdiction. Enter “Yes” if the resource is fully accessible to your jurisdiction. Enter “No” if there are limitations or prerequisites that may hinder your use of this resource.

Administrative and Technical Capability

Complete the table titled “Administrative and Technical Capability” by indicating whether your jurisdiction has access to each of the listed personnel resources. Enter “Yes” or “No” in the column labeled “Available?”. If yes, then enter the department and position title. If you have contract support with these capabilities, you can still answer “Yes.” Indicate in the department row that this resource is provided through contract.

Education and Outreach Capability

Complete the table titled “Education and Outreach.”

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, review all the above capability assessment tables and consider including actions to provide a capability that your jurisdiction does not currently have, update a capability that your jurisdiction does have, or implement an action that is recommended in an existing plan or program.

National Flood Insurance Program Compliance

Complete the table titled “National Flood Insurance Program Compliance.”

Community Classifications

Complete the table titled “Community Classifications” to indicate your jurisdiction’s participation in various national programs related to natural hazard mitigation. For each program enter “Yes” or “No” in the second column to indicate whether your jurisdiction participates. If yes, then enter the classification that your jurisdiction has earned under the program in the third column and the date on which that classification was issued in the fourth column; enter “N/A” in the third and fourth columns if your jurisdiction is not participating. If you do not know your current classification, information is available at the following websites:

- **FIPS Code**— <https://www.census.gov/geographies/reference-files/2018/demo/popest/2018-fips.html>

- **DUNS #**— <https://www.dnb.com/duns-number.html>
- **Community Rating System**— <https://www.fema.gov/floodplain-management/community-rating-system>
- **Building Code Effectiveness Grading Schedule**— <https://www.isomitigation.com/bcegs/iso-s-building-code-effectiveness-grading-schedule-bcegs.html>
- **Public Protection Classification**— <https://www.isomitigation.com/ppc/>
- **Storm Ready**— <https://www.weather.gov/stormready/communities>
- **Firewise**— <http://www.firewise.org/usa-recognition-program/map-of-active-participants.aspx>
- **Tsunami Ready**— <https://www.weather.gov/tsunamiready/communities>

Adaptive Capacity for Climate Change

Consider climate change impact concerns such as the following:

- Reduced snowpack
- Increased wildfires
- Sea level rise
- Inland flooding
- Threats to sensitive species
- Loss in agricultural productivity
- Public health and safety.

With those impacts in mind, complete the table titled “Adaptive Capacity for Climate Change” by indicating your jurisdiction’s capacity for each listed criterion as follows:

- **High**—The capacity exists and is in use.
- **Medium**—The capacity may exist, but is not used or could use some improvement.
- **Low**—The capacity does not exist or could use substantial improvement.
- **Unsure**—Not enough information is known to assign a rating.

This is a subjective assessment, but providing a few words of explanation is useful. It is highly recommended that you complete this table with an internal planning team after reviewing the results of the other capability assessment tables.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, review all the adaptive capacity criteria and consider including actions to improve the rating for those rated medium or low, to make use of the capacity for those rated high, or to acquire additional information for those rated unsure.

INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. FEMA recommends integration as follows:

- Integrate hazard mitigation plan goals with community objectives (e.g. incorporate the goals for risk reduction and safety into the policies of other plans).
- Use the risk assessment to inform plans and policies (e.g. incorporate risk assessment findings into land use plans, site plan review, emergency operations plans).
- Implement mitigation actions through existing mechanisms (e.g. include mitigation projects in the capital improvement plan).
- Think about mitigation before and after a disaster (e.g. build recovery planning on existing mitigation plans and goals).

After reviewing the plans, programs and ordinances identified in the capability assessment tables, identify all plans and programs that have already been integrated with the hazard mitigation plan, and those that offer opportunities for future integration. The simplest way to do this is to review the Planning and Regulatory Capabilities table to see which items were marked as “Yes” under the Integration Opportunity column.

Existing Integration

In the highlighted bullet list, list items for which you entered “Yes” under the Integration Opportunity column of the “Planning and Regulatory Capability” table because the plan or ordinance already addresses potential impacts or includes specific projects that should be included as action items in the mitigation action plan. Consider listing items marked as Completed in the “Status of Previous Plan Actions” table if they were indicated as being ongoing actions. Provide a brief description of how the plan or ordinance is integrated. Examples are as follows:

- **Capital Improvement Plan**—The capital improvement plan includes projects that can help mitigate potential hazards. The City will act to ensure consistency between the hazard mitigation plan and the current and future capital improvement plans. The hazard mitigation plan may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment.
- **Building Code and Fire Code**—The City’s adoption of the 2016 California building and fire codes incorporated local modifications to account for the climatic, topographic and geographic conditions that exist in the City.
- **General Plan**—The general plan includes a Safety Element to protect the community from unreasonable risk by establishing policies and actions to avoid or minimize the following hazards:
 - Geologic and seismic hazards
 - Fire hazards
 - Hazardous materials
 - Flood control
 - Impacts from climate change.

- **Climate Action Plan**—The City’s Climate Action Plan includes projects for reducing greenhouse gas emissions and adapting to likely impacts of climate change. These projects were reviewed to identify cross-planning initiatives that serve both adaptation and mitigation objectives.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, any plans that fall into the “Existing Integration” category should be reviewed and elements from them should be included in the action plan as appropriate.

Opportunities for Future Integration

List any remaining items that say “Yes” in the Integration Opportunity column in the Planning and Regulatory Capabilities table and explain the process by which integration could occur. Examples follow:

- **Zoning Code**—The City is conducting a comprehensive update to its zoning code. Additional mitigation and abatement measures will be considered for incorporation into the code.
- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization.
- **Post-Disaster Recovery Plan**—The City does not have a recovery plan and intends to develop one as a mitigation planning action during the next five years. The plan will build on the goals and objectives identified in the hazard mitigation plan.

After you have accounted for all items marked as “Yes” under the Integration Opportunity column, consider other programs you may have in place in your jurisdiction that include routine consideration and management of hazard risk. Examples of such programs may include: tree pruning programs, right-of-way mowing programs, erosion control or stream maintenance programs, etc. Add any such programs to the integration discussion and provide a brief description of how these programs manage (or could be adapted to manage) risk from hazards.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, an action to integrate any identified “Opportunities for Future Integration” should be considered for inclusion in the action plan.

INFORMATION SOURCES USED FOR THIS ANNEX

Note that this section will ultimately describe all information sources used to develop this annex, but that only the sources used for Phases 1 and 2 will be listed at this point. Additional sources will be added with the preparation of the Phase 3 annex.

This section should describe what resources you used to complete the annex and how you used them. Several items are started for you, but be sure to update and enhance any descriptions. Providing this information is a requirement to pass the state and FEMA review process.

THIS COMPLETES PHASE 2

We recommend including most large-scale disasters, unless you know that there were no impacts on your jurisdiction. Specifically, we recommend that you include these events if you have damage estimate information or can provide a brief description of impacts that occurred within your community. In addition to these events, refer to the NOAA NCEM storm events database included in the toolkit. We recommend conducting a search for the name of your jurisdiction in order to identify events with known impacts. Other potential sources of damage information include the following

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data
- Newspaper archives
- Emergency management documents (general plan safety element, emergency response plan, etc.)
- Resident input.

If you do not have estimates for costs of damage caused, list “Not Available” in the “Damage Assessment” column or list a brief description of the damage rather than a dollar value (e.g., Main Street closed as a result of flooding, downed trees and residential damage). Note that tracking such damage is a valid and useful mitigation action if your jurisdiction does not currently track such information.

Hazard Risk Ranking

Risk ranking identifies which hazards pose the greatest risk to the community, based on how likely it is for each hazard to occur (this is called the community’s exposure) and how great an impact each hazard will have if it does occur (this is called the community’s vulnerability). Every jurisdiction has differing degrees of risk exposure and vulnerability and therefore needs to rank risk for its own area. The risk ranking for each jurisdiction has been calculated in the “Loss Matrix” spreadsheet included in the annex preparation toolkit. The ranking is on the basis of risk ranking scores for each hazard that were calculated based on the hazard’s probability of occurrence and its potential impact on people, property and the economy.

The results for your jurisdiction have already been entered into the “Hazard Risk Ranking” table in your Phase 3 annex template. The hazard with the highest risk rating is listed at the top of table and was given a rank of 1; the hazard with the second highest rating is listed second with a rank of 2; and so on. Two hazards with equal risk ranking scores were given the same rank. Hazards were assigned to “High,” Medium,” or “Low” risk categories based on the risk ranking score. If you wish to review the calculations in detail, the appendix at the end of these instructions describes the calculation methodology that the spreadsheet uses.

Review the hazard risk ranking information that is included in your annex. If these results differ from what you know based on substantiated data and documentation, you may alter the ranking and risk categories based on this knowledge. If you do so, indicate the reason for the change in your template. For example:

“Drought was ranked as low; however, the jurisdiction’s economy is heavily reliant on water-using industries, such as agriculture or manufacturing, so this hazard should be ranked as medium.”

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, you will need to have at least one mitigation action for each hazard ranked as “high” or “medium.”

Jurisdiction-Specific Vulnerabilities

Repetitive Loss Properties

A repetitive loss property is any property for which FEMA has paid two or more flood insurance claims in excess of \$1,000 in any rolling 10-year period since 1978. In the space provided, the following information has been included in your annex based on data provided by FEMA:

- The number of any FEMA-identified repetitive-loss properties in your jurisdiction.
- The number of any FEMA-identified severe-repetitive-loss properties in your jurisdiction.
- The number (if any) of repetitive-loss or severe-repetitive-loss properties in your jurisdiction that have been mitigated. Mitigated for this exercise means that flood protection has been provided to the structure.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, if your jurisdiction has any repetitive loss properties, you should strongly consider including a mitigation action that addresses mitigating these properties.

Other Noted Vulnerabilities

Review the results of the risk assessment included in the toolkit, your jurisdiction's natural events history, and any relevant public comments/input, then develop a few sentences that discuss specific hazard vulnerabilities. You do not need to develop a sentence for every hazard, but identify a few issues you would like to highlight. Also list any known hazard vulnerabilities in your jurisdiction that may not be apparent from the risk assessment and other information provided.

Spending some time thinking about the results of the risk assessment and other noted vulnerabilities will be a big help in the development of your hazard mitigation action plan. The following are examples of vulnerabilities you could identify through this exercise:

- About 45 percent of the population lives in the 0.2 percent annual chance flood hazard area, where flood insurance is generally not required.
- A magnitude 7.5 earthquake on the Smithburg Fault is estimated to produce nearly 1 million tons of structure debris.
- Over the past 10 years, the jurisdiction has experienced more than \$6 million in damage from severe storm events.
- More than 50 buildings are located in areas that would be permanently inundated with 12 inches of sea level rise.
- The results of the public survey indicated that 40 percent of Smithburg residents would not be able to be self-sufficient for 5 days following a major event.
- An urban drainage issue at a specific location results in localized flooding every time it rains.
- One area of the community frequently loses power due to a lack of tree maintenance.

- A critical facility, such as a police station, is not equipped with a generator.
- A neighborhood has the potential to have ingress and egress cut off as the result of a flood or earthquake (e.g. a bridge is the only access).
- Substantial number of buildings in one area of the community are unreinforced masonry or soft-story construction.
- An area along the river is eroding and threatening public and/or private property.
- A large visitor population that may not be aware of tsunami risk.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, consider including actions to address the jurisdiction-specific vulnerabilities listed in this section.

HAZARD MITIGATION ACTION PLAN

Hazard Mitigation Action Plan Matrix

The hazard mitigation action plan is the heart of your jurisdictional annex. This is where you will identify the actions your jurisdiction would like to pursue with this plan.

Select Recommended Actions

All of the work that you have done thus far should provide you with ideas for actions. Throughout these instructions, green boxes labeled “Hazard Mitigation Action Plan Input” have indicated information that needs to be considered in the selection of mitigation actions. The following sections describe how to consider these and other information sources to develop a list of potential actions.

Be sure to consider the following factors in your selection of actions:

- Select actions that are consistent with the overall purpose, goals, and objectives of the hazard mitigation plan.
- Identify actions where benefits exceed costs.
- Include any action that your jurisdiction has committed to pursuing, regardless of grant eligibility.
- Know what is and is not grant-eligible under various federal grant programs (see the fact sheet on FEMA hazard mitigation grant programs in the annex preparation toolkit and the table below).

Table 2. Federal Hazard Mitigation Grant Program Eligibility by Action Type

Eligible Activities	Hazard Mitigation Grant Program	BRIC	Flood Mitigation Assistance
Mitigation Projects			
Property Acquisition and Structure Demolition	√	√	√
Property Acquisition and Structure Relocation	√	√	√
Structure Elevation	√	√	√
Mitigation Reconstruction	√	√	√
Dry Floodproofing of Historic Residential Structures	√	√	√
Dry Floodproofing of Non-residential Structures	√	√	√
Generators	√	√	
Localized Flood Risk Reduction Projects	√	√	√
Non-Localized Flood Risk Reduction Projects	√	√	
Structural Retrofitting of Existing Buildings	√	√	√
Non-structural Retrofitting of Existing Buildings and Facilities	√	√	√
Safe Room Construction	√	√	
Wind Retrofit for One- and Two-Family Residences	√	√	
Infrastructure Retrofit	√	√	√
Soil Stabilization	√	√	√
Wildland fire Mitigation	√	√	
Post-Disaster Code Enforcement	√		
Advance Assistance	√		
5 Percent Initiative Projects*	√		
Aquifer and Storage Recovery**	√	√	√
Flood Diversion and Storage**	√	√	√
Floodplain and Stream Restoration**	√	√	√
Green Infrastructure**	√	√	√
Miscellaneous/Other**	√	√	√
Hazard Mitigation Planning	√	√	√
Technical Assistance			√
Management Costs	√	√	√

* FEMA allows increasing the 5% initiative amount under the Hazard Mitigation Grant Program up to 10% for a presidential major disaster declaration. The additional 5% initiative funding can be used for activities that promote disaster-resistant codes for all hazards. As a condition of the award, either a disaster-resistant building code must be adopted or an improved Building Code Effectiveness Grading Schedule is required.

** Indicates that any proposed action will be evaluated on its own merit against program requirements. Eligible projects will be approved provided funding is available.

Material Previously Developed for This Annex

Capability Assessment Section—Planning and Regulatory Capability Table, Fiscal Capability Table, Administrative and Technical Capability Table, Education and Outreach Table, and Community Classification Table

Review these tables and consider the following:

- For any capability that you do not currently have, consider whether your jurisdiction should have this capability. If so, consider including an action to develop/acquire the capability.
- For any capability that you do currently have, consider whether this capability can be leveraged to increase or improve hazard mitigation in the jurisdiction.
- If any capabilities listed in the Planning and Regulatory Capabilities table have not been updated in more than 10 years, consider an action to review and update the capability and, as appropriate, incorporate hazard mitigation principles or information obtained in the risk assessment.
- Consider including actions that are identified in other plans and programs (capital improvement plans, strategic plans, etc.) as actions in this plan.

Capability Assessment Section—National Flood Insurance Program Compliance table

Review the table and consider the following:

- If you have no certified floodplain managers and you have flood risk, consider adding an action to provide key staff members with training to obtain certification.
- If your flood damage prevention was last updated in or before 2004, you should identify an action to update your ordinance to ensure it is compliant with current NFIP requirements.
- If you have any outstanding NFIP compliance issues, be sure to add an action to address them.
- If flood hazard maps do not adequately address the flood risk within your jurisdiction, consider actions to request new mapping or conduct studies.
- If you wish to begin to participate in CRS or you already to participate and would like to improve your classification, consider this as an action.
- If the number of flood insurance policies in your jurisdiction is low relative to the number of structures in the floodplain, consider an action that will promote flood insurance in your jurisdiction.

Capability Assessment Section— Adaptive Capacity for Climate Change Table

Consider your responses to this section:

- For criteria that you listed as medium or low, think of ways you could improve this rating (see adaptive capacity portion of the mitigation best practices catalog).
- For criteria you listed as high, think about how you can leverage this capacity to improve or enhance mitigation or continue to improve this capacity.
- For criteria that you were unable to provide responses for, consider ways you could improve your understanding of this capacity (see mitigation best practices and adaptive capacity catalog).

Integration Review Section

Review the items you identified in this section and consider an action that specifically says what the plan, code, ordinance etc. is and how it will be integrated. For items that address land use, include them in the prepopulated action in your template that reads as follows:

“Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including _____.”

Risk Ranking Section

You must identify at least one mitigation action that is clearly defined and actionable (i.e. not a preparedness or response action) for every hazard that is categorized in the risk ranking as “high” or “medium” risk.

Jurisdiction-Specific Vulnerabilities Section

Review the vulnerability issues that you identified in this section and consider actions to address them (see mitigation best practices catalog). Two examples are shown in the table below.

Table 3. Example Actions to Address Jurisdiction-Specific Vulnerabilities

Noted Vulnerability	Example Mitigation Action
About 45 percent of the population lives in the 0.2 percent annual chance flood hazard area where flood insurance is generally not required.	Implement an annual public information initiative that targets residents in the 0.2 percent annual chance flood hazard area. Provide information on the availability of relatively low cost flood insurance policies.
An urban drainage issue results in localized flooding every time it rains.	Replace undersized culverts that are contributing to localized flooding. Priority areas include: <ul style="list-style-type: none"> • The corner of Main Street and 1st Street • Old Oak subdivision.

Status of Previous Plan Actions Section

If your jurisdiction participated in a previous hazard mitigation plan, be sure to include any actions that were identified as “carry over” actions.

Other Sources

Mitigation Best Practices Catalog

A catalog that includes best practices identified by FEMA and other agencies, as well as recommendations from the steering committee and other stakeholders, is included in your toolkit. Review the catalog and identify actions your jurisdiction should consider for its action plan.

Public Input

Review input received during the process, specifically the public survey results included in your toolkit.

Common Actions for All Partners

The following six actions have been prepopulated in your annex template; **these six actions should be included in every annex and should not be removed:**

- Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas, prioritizing those structures that have experienced repetitive losses and/or are located in high or medium ranked hazard.
- Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.
- Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.
- Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:
 - Enforce the flood damage prevention ordinance.
 - Participate in floodplain identification and mapping updates.
 - Provide public assistance/information on floodplain requirements and impacts.
- Identify and pursue strategies to increase adaptive capacity to climate change.
- Purchase generators for critical facilities and infrastructure that lack adequate back-up power.

In addition, the core planning team recommends that every planning partner strongly consider the following actions:

- Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.
- Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.
- Develop a post-disaster recovery plan and a debris management plan.
- Develop and/or update plans that support or enhance continuity of operations following disasters.

The specifics of all these common actions should be adjusted as needed for the particulars of each community.

Complete the Table

Complete the table titled “Hazard Mitigation Action Plan Matrix” for all the actions you have identified and would like to include in the plan:

- Enter the action number (see box on next page) and description. **If the action is carried over from your previous hazard mitigation plan, return to the “Status of Previous Plan Actions” table you completed in Phase 1 and enter the new action number in the column labeled “Action # in Update.”**
- Indicate whether the action mitigates hazards for new and/or existing assets.
- Identify the specific hazards the action will mitigate (note: you must list each hazard by name; simply indicating “all hazards” is not deemed acceptable).
- Identify by number the mitigation plan objectives that the action addresses (see toolkit).
- Indicate who will be the lead in administering the action. This will most likely be a department within your jurisdiction (e.g. planning or public works). If you wish to indicate more than one department as responsible for the action, clearly identify one as the lead agency and list the others in the “supporting agency” column.

- Enter an estimated cost in dollars if known; otherwise, enter “High,” “Medium,” or “Low,” as determined for the prioritization process described in the following section.
- Identify funding sources for the action. If it is a grant, include the grant-providing agency as well as funding sources for any required cost share. Refer to your fiscal capability assessment to identify possible sources of funding and refer to the table on page 15 of these instructions for project eligibility for FEMA’s hazard mitigation assistance grant programs.
- Indicate the time line as “short-term” (1 to 5 years) or “long-term” (5 years or greater) or “ongoing” (a continual program)

Action Numbering

Actions are to be numbered using the three-letter code for your jurisdiction shown below, followed by a hyphen and the action’s sequential number:

- Ventura, County of—VCO-1, VCO-2...
- Camarillo, City of—CAM-1, CAM-2...
- Fillmore, City of—FIL-1, FIL-2...
- Moorpark, City of —MPK-1, MPK-2...
- Ojai, City of —OJC-1, OJC-2...
- Oxnard, City of —OXN-1, OXN-2...
- Port Hueneme, City of —PTH-1, PTH-2...
- Santa Paula, City of —STP-1, STP-2...
- Simi Valley, City of —SIM-1, SIM-2...
- Thousand Oaks, City of —THO-1, THO-2...
- Ventura, City of —VEN-1, VEN-2...

Mitigation Action Priority

Complete the information in the table titled “Mitigation Action Priority” as follows:

- **Action #**—Indicate the action number from the Hazard Mitigation Action Plan Matrix table.
- **# of Objectives Met**—Enter the number of objectives the action will meet.
- **Benefits**—Enter “High,” “Medium” or “Low” as follows:
 - High—Action will provide an immediate reduction of risk exposure for life and property.
 - Medium—Action will have a long-term impact on the reduction of risk exposure for life and property, or action will provide an immediate reduction in the risk exposure for property.
 - Low—Long-term benefits of the action are difficult to quantify in the short term.
- **Cost**—Enter “High,” “Medium” or “Low” as follows:
 - High—Existing funding will not cover the cost of the action; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
 - Medium—The action could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the action would have to be spread over multiple years.
 - Low—The action could be funded under the existing budget. The action is part of or can be part of an ongoing existing program.
- **Do Benefits Exceed the Cost?**—Enter “Yes” or “No.” This is a qualitative assessment. Enter “Yes” if the benefit rating (high, medium or low) is the same as or higher than the cost rating (high benefit/high cost; high benefit/medium cost; medium benefit/low cost; etc.). Enter “No” if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)
- **Is the Action Grant-Eligible?**—Enter “Yes” or “No.” Refer to the fact sheet on FEMA hazard mitigation grant programs in the annex preparation toolkit and the table on page 15 of these instructions.

- **Can Action Be Funded Under Existing Program Budgets?**—Enter “Yes” or “No.” In other words, is this action currently budgeted for, or would it require a new budget authorization or funding from another source such as grants?
- **Implementation Priority**— Enter “High,” “Medium” or “Low” as follows:
 - High Priority—An action that meets multiple objectives, has benefits that exceed costs, and has a secured source of funding. Action can be completed in the short term (1 to 5 years).
 - Medium Priority—An action that meets multiple objectives, has benefits that exceed costs, and is eligible for funding though no funding has yet been secured for it. Action can be completed in the short term (1 to 5 years), once funding is secured. Medium-priority actions become high-priority actions once funding is secured.
 - Low Priority—An action that will mitigate the risk of a hazard, has benefits that do not exceed the costs or are difficult to quantify, has no secured source of funding, and is not eligible for any known grant funding. Action can be completed in the long term (1 to 10 years). Low-priority actions may be eligible for grant funding from programs that have not yet been identified.
- **Grant Pursuit Priority**— Enter “High,” “Medium” or “Low” as follows:
 - High Priority—An action that meets identified grant eligibility requirements, has high benefits, and is listed as high or medium implementation priority; local funding options are unavailable or available local funds could be used instead for actions that are not eligible for grant funding.
 - Medium Priority—An action that meets identified grant eligibility requirements, has medium or low benefits, and is listed as medium or low implementation priority; local funding options are unavailable.
 - Low Priority—An action that has not been identified as meeting any grant eligibility requirements.

Actions identified as high-grant-pursuit priority actions should be closely reviewed for consideration when grant funding opportunities arise.

Note: If a jurisdiction wishes to identify an action as high priority that is outside of the prioritization scheme for high priorities, a note indicating so should be inserted and a rationale should be provided.

Analysis of Mitigation Actions

In the table titled “Analysis of Mitigation Actions,” for each combination of hazard type and mitigation type, enter the numbers of all recommended actions that address that hazard type and can be categorized as that mitigation type. The mitigation types are as follows:

- **Prevention**—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- **Public Education & Awareness**—Actions to inform residents and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.

- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, wetland restoration and preservation, and green infrastructure.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.
- **Climate Resilience**—Actions that incorporate methods to mitigate and/or adapt to the impacts of climate change. Includes aquifer storage and recovery activities, incorporating future conditions projections in project design or planning, or actions that specifically address jurisdiction-specific climate change risks, such as sea-level rise or urban heat island effect.
- **Community Capacity Building**—Actions that increase or enhance local capabilities to adjust to potential damage, to take advantage of opportunities, or to respond to consequences. Includes staff training, memorandums of understanding, development of plans and studies, and monitoring programs.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions. This table must show at least one action to address each “high” and “medium” ranked hazard. Planning partners should aim to identify at least one action for each mitigation type, but this is not required.

An example of a completed “Analysis of Mitigation Actions” table is provided below. Note that an action can be more than one mitigation type.

Sample Completed Table – Analysis of Mitigation Actions								
Hazard Type	Action Addressing Hazard, by Mitigation Type							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Dam Failure	EX-2, 3, 4, 5, 6	EX-1, 6	EX-4, 6		EX-8, 11			EX-3, 4, 8, 9, 10
Drought	EX-2	EX-1	EX-4					EX-3, 4, 8, 9, 10
Medium-Risk Hazards								
Earthquake	EX-2, 3, 4, 5, 7	EX-1, 7	EX-4		EX-8, 11			EX-3, 4, 8, 9
Flooding	EX-2, 3, 4, 5, 6, 7	EX-1, 6, 7	EX-4, 6	EX-9	EX-8, 11	EX-6		EX-3, 4, 8, 9, 10
Landslide	EX-2, 3, 4, 5, 7	EX-1, 7	EX-4		EX-8, 11			EX-3, 4, 8, 9, 10
Low-Risk Hazards								
Severe Weather	EX-2, 3, 4, 5, 7	EX-1, 7, 9	EX-4		EX-8, 9, 11		EX-8, 7	EX-3, 4, 8, 9, 10
Wildfire	EX-2, 3, 4, 5, 7	EX-1, 7, 9	EX-4, 9	EX-9	EX-8, 11			EX-3, 4, 8, 9, 10

PUBLIC OUTREACH

FEMA requirements for public outreach will be met by the County’s engagement efforts and are included in the main part of the plan. These may include public meetings, a StoryMap, surveys, etc. If individual jurisdictions want to have a more robust outreach for their local community, the public outreach table in each annex may be used to memorialize those local efforts.

This table should record local public outreach efforts made by your jurisdiction to inform the community of the plan update process. Examples may include local surveys on hazard awareness/preparedness, social media blasts, press releases, and outreach to local groups (CERT, senior citizen organizations, etc.) **This section is optional.**

INFORMATION SOURCES USED FOR THIS ANNEX

This section should describe what resources you used to complete the annex and how you used them. The sources used for Phases 1 and 2 should have been entered previously. List any additional sources used for the preparation of the Phase 3 annex. Review to ensure that all materials used in all three phases are identified. Providing this information is a requirement to pass the state and FEMA review process.

FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

In this section, identify any future studies, analyses, reports, or surveys your jurisdiction needs to better understand its vulnerability to identified or currently unidentified risks. These could be needs based on federal or state agency mandates. **This section is optional.**

ADDITIONAL COMMENTS

Use this section to add any additional information pertinent to hazard mitigation and your jurisdiction not covered in this template. **This section is optional.**

THIS COMPLETES PHASE 3

APPENDIX— Risk Ranking Calculation Methodology

The instructions below describe the methodology for how risk rankings were derived in the “Loss Matrix” spreadsheet provided with the annex preparation toolkit. The risk-ranking for each hazard assessed its probability of occurrence and its potential impact on people, property, and the economy. Refer to the Loss Matrix spreadsheet in order to follow along.

Probability of Occurrence

A probability factor is assigned based on how often a hazard is likely to occur. The probability of occurrence of a hazard event is generally based on past hazard events in an area, although weight can be given to expected future probability of occurrence based on established return intervals and changing climate conditions. For example, if your jurisdiction has experienced two damaging floods in the last 25 years, the probability of occurrence is high for flooding and scores a 3 under this category. If your jurisdiction has experienced no damage from landslides in the last 100 years, your probability of occurrence for landslide is low, and scores a 1 under this category. Each hazard was assigned a probability factor as follows:

- High—Hazard event is likely to occur within 25 years (Probability Factor = 3)
- Medium—Hazard event is likely to occur within 100 years (Probability Factor = 2)
- Low—Hazard event is not likely to occur within 100 years (Probability Factor = 1)
- None—There is no exposure to the hazard and no probability of occurrence (Probability Factor = 0)

Potential Impacts of Each Hazard

The impact of each hazard is divided into three categories: impacts on people, impacts on property, and impacts on the economy. These categories are also assigned weighted values. Impact on people was assigned a weighting factor of 3, impact on property was assigned a weighting factor of 2 and impact on the economy was assigned a weighting factor of 1.

Impact factors for each category (people, property, economy) are described below:

- **People**—Values are assigned based on the percentage of the total *population exposed* to the hazard event. The degree of impact on individuals will vary and is not measurable, so the calculation assumes for simplicity and consistency that all people exposed to a hazard because they live in a hazard zone will be equally impacted when a hazard event occurs. Impact factors were assigned as follows:
 - High—25 percent or more of the population is exposed to a hazard (Impact Factor = 3)
 - Medium—10 percent to 24 percent of the population is exposed to a hazard (Impact Factor = 2)
 - Low—9 percent or less of the population is exposed to the hazard (Impact Factor = 1)
 - No impact—None of the population is exposed to a hazard (Impact Factor = 0)
- **Property**—Values are assigned based on the percentage of the total *property value exposed* to the hazard event:
 - High—25 percent or more of the total replacement value is exposed to a hazard (Impact Factor = 3)
 - Medium—10 percent to 24 percent of the total replacement value is exposed to a hazard (Impact Factor = 2)
 - Low—9 percent or less of the total replacement value is exposed to the hazard (Impact Factor = 1)

- No impact—None of the total replacement value is exposed to a hazard (Impact Factor = 0)
- **Economy**—Values were assigned based on the percentage of the total *property value vulnerable* to the hazard event. Values represent estimates of the loss from a major event of each hazard in comparison to the total replacement value of the property exposed to the hazard. For some hazards, such as wildland fire and landslide, vulnerability may be considered to be the same or a portion of exposure due to the lack of loss estimation tools specific to those hazards.
 - High—Estimated loss from the hazard is 10 percent or more of the total replacement value (Impact Factor = 3)
 - Medium—Estimated loss from the hazard is 5 percent to 9 percent of the total replacement value (Impact Factor = 2)
 - Low—Estimated loss from the hazard is 4 percent or less of the total replacement value (Impact Factor = 1)
 - No impact—No loss is estimated from the hazard (Impact Factor = 0).

Impacts on People

The percent of the total population exposed to each hazard of concern with a defined extent and location (e.g. floodplain) can be found in the loss estimate matrix in the **green highlighted column**. For those hazards that do not have a defined extent and location the entire population or a portion of the population is considered to be exposed, depending on the hazard. For the drought hazard, it is common for jurisdictions to list “low” or “none,” because all people in the planning area would be exposed to drought, but impacts to the health and safety of individuals are expected to be minimal.

Impacts on Property

The percent of the total value exposed to each hazard of concern with a defined extent and location (e.g. floodplain) can be found in the loss estimate matrix in the **blue highlighted column**. For those hazards that do not have a defined extent and location (e.g. severe weather) the entire building stock is generally considered to be exposed. For the drought hazard, it is common for jurisdictions to list “low” or “none,” because all structures in the planning area would be exposed to drought, but impacts to structures are expected to be minimal.

Impacts on the Economy

The loss estimates for each hazard of concern that was modeled (i.e. dam failure, flood, earthquake) can be found in the loss estimate matrix in the **purple highlighted column**. For those hazards that have a defined extent and location, but do not have modelled loss results, loss estimates can be the same as exposure or a portion thereof. For example, a large percentage of the building stock may be exposed to landslide or wildland fire risk, but it would not be expected that one event that resulted in loss to all exposed structures would occur. For those hazards that do not have a defined extent and location, exposure is based on the hazard type.

Risk Rating for Each Hazard

A risk rating for each hazard was determined by multiplying the assigned probability factor by the sum of the weighted impact factors for people, property and the economy:

$$\text{Risk Rating} = \text{Probability Factor} \times \text{Weighted Impact Factor \{people + property + economy\}}$$

This is the number that is shown in the risk ranking table in your template. Generally, score of 30 or greater receive a “high” rating, score between 15 and 30 receive a “medium” rating, and score of less than 15 receives a “low” rating.

1. JURISDICTION NAME

1.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Name, Title
Street Address
City, State ZIP
Telephone: xxx-xxx-xxxx
e-mail Address: xxx@xxx.xxx

Alternate Point of Contact

Name, Title
Street Address
City, State ZIP
Telephone: xxx-xxx-xxxx
e-mail Address: xxx@xxx.xxx

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 1-1.

Table 1-1. Local Hazard Mitigation Planning Team Members

Name	Title

1.2 JURISDICTION PROFILE

1.2.1 Location and Features

[jurisdiction name] is in [general location description]

The current boundaries generally extend from [describe], encompassing an area of [area in square miles].

[general description of key features]

1.2.2 History

[jurisdiction name] was incorporated in [date]. [brief historical summary]

1.2.3 Governing Body Format

[general description].

The [name of adopting body] assumes responsibility for the adoption of this plan; [name of oversight agency] will oversee its implementation.

1.3 CURRENT TRENDS

1.3.1 Population

According to [identify data source], the population of [jurisdiction name] as of [month year] was [population]. Since [year], the population has grown at an average annual rate of [number] percent.

1.3.2 Development

DESCRIBE TRENDS IN GENERAL.

Identifying previous and future development trends is achieved through a comprehensive review of permitting since completion of the previous plan and in anticipation of future development. Tracking previous and future growth in potential hazard areas provides an overview of increased exposure to a hazard within a community. Table 1-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 1-2. Recent and Expected Future Development Trends

Criterion	Response																														
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? <i>If yes, give the estimated area annexed and estimated number of parcels or structures.</i>	Yes/No																														
Is your jurisdiction expected to annex any areas during the performance period of this plan? <i>If yes, describe land areas and dominant uses. If yes, who currently has permitting authority over these areas?</i>	Yes/No																														
Are any areas targeted for development or major redevelopment in the next five years? <i>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</i>	Yes/No																														
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?	<table border="1"> <thead> <tr> <th></th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Multi-Family</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		2016	2017	2018	2019	2020	Single Family						Multi-Family						Other						Total					
	2016	2017	2018	2019	2020																										
Single Family																															
Multi-Family																															
Other																															
Total																															
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> • Special Flood Hazard Areas: # • Landslide: # • High Liquefaction Areas: # • Tsunami Inundation Area: # • Wildfire Risk Areas: # 																														

Criterion	Response
Describe the level of buildout in the jurisdiction, based on your jurisdiction’s buildable lands inventory. If no such inventory exists, provide a qualitative description.	

1.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 1-3.
- Development and permitting capabilities are presented in Table 1-4.
- An assessment of fiscal capabilities is presented in Table 1-5.
- An assessment of administrative and technical capabilities is presented in Table 1-6.
- An assessment of education and outreach capabilities is presented in Table 1-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 1-8.
- Classifications under various community mitigation programs are presented in Table 1-9.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 1-10.

Table 1-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Zoning Code <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Subdivisions <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Stormwater Management <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Post-Disaster Recovery <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Real Estate Disclosure <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Growth Management <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Site Plan Review <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Environmental Protection <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Flood Damage Prevention <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Emergency Management <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Climate Change <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Other <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? Yes/No</i> <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Capital Improvement Plan <i>How often is the plan updated? [Redacted]</i> <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Disaster Debris Management Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Floodplain or Watershed Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Stormwater Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Urban Water Management Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Habitat Conservation Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Economic Development Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Shoreline Management Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Community Wildfire Protection Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Forest Management Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Climate Action Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Emergency Operations Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Post-Disaster Recovery Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Continuity of Operations Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Public Health Plan <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No
Other <i>Comment: Enter Comment</i>	Yes/No	Yes/No	Yes/No	Yes/No

Table 1-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department? Enter Response</i>	Yes/No
Does your jurisdiction have the ability to track permits by hazard area?	Yes/No
Does your jurisdiction have a buildable lands inventory?	Yes/No

Table 1-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes/No
Capital Improvements Project Funding	Yes/No
Authority to Levy Taxes for Specific Purposes	Yes/No
User Fees for Water, Sewer, Gas or Electric Service	Yes/No
<i>If yes, specify:</i> Enter Response	
Incur Debt through General Obligation Bonds	Yes/No
Incur Debt through Special Tax Bonds	Yes/No
Incur Debt through Private Activity Bonds	Yes/No
Withhold Public Expenditures in Hazard-Prone Areas	Yes/No
State-Sponsored Grant Programs	Yes/No
Development Impact Fees for Homebuyers or Developers	Yes/No
Other	Yes/No
<i>If yes, specify:</i> Enter Response	

Table 1-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	Yes/No
<i>If Yes, Department /Position:</i> Enter Response	
Engineers or professionals trained in building or infrastructure construction practices	Yes/No
<i>If Yes, Department /Position:</i> Enter Response	
Planners or engineers with an understanding of natural hazards	Yes/No
<i>If Yes, Department /Position:</i> Enter Response	
Staff with training in benefit/cost analysis	Yes/No
<i>If Yes, Department /Position:</i> Enter Response	
Surveyors	Yes/No
<i>If Yes, Department /Position:</i> Enter Response	
Personnel skilled or trained in GIS applications	Yes/No
<i>If Yes, Department /Position:</i> Enter Response	
Scientist familiar with natural hazards in local area	Yes/No
<i>If Yes, Department /Position:</i> Enter Response	
Emergency manager	Yes/No
<i>If Yes, Department /Position:</i> Enter Response	
Grant writers	Yes/No
<i>If Yes, Department /Position:</i> Enter Response	
Other	Yes/No
<i>If Yes, Department /Position:</i> Enter Response	

Table 1-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes/No
Do you have personnel skilled or trained in website development?	Yes/No
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> Enter Response	Yes/No
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> Enter Response	Yes/No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i> Enter Response	Yes/No
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> Enter Response	Yes/No
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> Enter Response	Yes/No

Table 1-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Enter Response
Who is your floodplain administrator? (department/position)	Enter Response
Are any certified floodplain managers on staff in your jurisdiction?	Yes/No
What is the date that your flood damage prevention ordinance was last amended?	Enter Response
Does your floodplain management program meet or exceed minimum requirements? <i>If exceeds, in what ways?</i> Enter Response	Meets/Exceeds
When was the most recent Community Assistance Visit or Community Assistance Contact?	Enter Response
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If so, state what they are.</i> Enter Response	Yes/No
Are any RiskMAP projects currently underway in your jurisdiction? <i>If so, state what they are.</i> Enter Response	Yes/No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i> Enter Response	Yes/No
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If so, what type of assistance/training is needed?</i> Enter Response	Yes/No
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If yes, is your jurisdiction interested in improving its CRS Classification?</i> Yes/No <i>If no, is your jurisdiction interested in joining the CRS program?</i> Yes/No	Yes/No
How many flood insurance policies are in force in your jurisdiction? ^a <i>What is the insurance in force?</i> \$ _____ <i>What is the premium in force?</i> \$ _____	Enter Response

Criterion	Response
How many total loss claims have been filed in your jurisdiction? ^a	Enter Response
How many claims are still open or were closed without payment?	Enter Response
What were the total payments for losses? \$	

a. According to FEMA statistics as of MONTH XX, 20XX

Table 1-9. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes/No		Date
DUNS #	Yes/No		Date
Community Rating System	Yes/No		Date
Building Code Effectiveness Grading Schedule	Yes/No		Date
Public Protection	Yes/No		Date
Storm Ready	Yes/No		Date
Firewise	Yes/No		Date
Tsunami Ready	Yes/No		Date

Table 1-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Enter Comment</i>	High/Medium/Low
Jurisdiction-level monitoring of climate change impacts <i>Comment: Enter Comment</i>	High/Medium/Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: Enter Comment</i>	High/Medium/Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: Enter Comment</i>	High/Medium/Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment: Enter Comment</i>	High/Medium/Low
Participation in regional groups addressing climate risks <i>Comment: Enter Comment</i>	High/Medium/Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: Enter Comment</i>	High/Medium/Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment: Enter Comment</i>	High/Medium/Low
Identified strategies for adaptation to impacts <i>Comment: Enter Comment</i>	High/Medium/Low
Champions for climate action in local government departments <i>Comment: Enter Comment</i>	High/Medium/Low

Criterion	Jurisdiction Rating ^a
Political support for implementing climate change adaptation strategies <i>Comment: Enter Comment</i>	High/Medium/Low
Financial resources devoted to climate change adaptation <i>Comment: Enter Comment</i>	High/Medium/Low
Local authority over sectors likely to be negative impacted <i>Comment: Enter Comment</i>	High/Medium/Low
Public Capacity	
Local residents knowledge of and understanding of climate risk <i>Comment: Enter Comment</i>	High/Medium/Low
Local residents support of adaptation efforts <i>Comment: Enter Comment</i>	High/Medium/Low
Local residents' capacity to adapt to climate impacts <i>Comment: Enter Comment</i>	High/Medium/Low
Local economy current capacity to adapt to climate impacts <i>Comment: Enter Comment</i>	High/Medium/Low
Local ecosystems capacity to adapt to climate impacts <i>Comment: Enter Comment</i>	High/Medium/Low

a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

1.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

1.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Plan or Program Name**—Description
- **Plan or Program Name**—Description
- **Plan or Program Name**—Description
- **Plan or Program Name**—Description
- **Plan or Program Name**—Description

1.5.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- Plan or Program Name—Description
- Plan or Program Name—Description
- Plan or Program Name—Description
- Plan or Program Name—Description
- Plan or Program Name—Description

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan presented in this annex.

1.6 RISK ASSESSMENT

1.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 1-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Type of Event	FEMA Disaster #	Date	Damage Assessment
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$

1.6.2 Hazard Risk Ranking

Table 1-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Mitigation actions target hazards with high and medium rankings.

Table 1-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1			High/Medium/Low
2			High/Medium/Low
3			High/Medium/Low
4			High/Medium/Low
5			High/Medium/Low
6			High/Medium/Low
7			High/Medium/Low
8			High/Medium/Low
9			High/Medium/Low

1.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: XX
- Number of FEMA-identified Severe-Repetitive-Loss Properties: XX
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: XX

Other Noted Vulnerabilities

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Insert as appropriate.
- Insert as appropriate.
- Insert as appropriate.

Mitigation actions addressing these issues were prioritized for consideration in the action plan presented in this annex.

1.7 STATUS OF PREVIOUS PLAN ACTIONS

If your jurisdiction has no previous hazard mitigation plan, please enter an “X” in the box at right and do not complete this section.

Table 1-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 1-13. Status of Previous Plan Actions				
Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
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Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				

1.8 HAZARD MITIGATION ACTION PLAN

Table 1-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 1-15 identifies the priority for each action. Table 1-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 1-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
<p>Action xxx-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.</p> <p><u>Hazards Mitigated:</u> Enter Response</p>						
Existing	Enter Response	Enter Response	Enter Response	High	HMGP, PDM, FMA	Short-term
<p>Action xxx-2— Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including [REDACTED]</p> <p><u>Hazards Mitigated:</u> Enter Response</p>						
New & Existing	Enter Response	Enter Response	Enter Response	Low	Staff Time, General Funds	Ongoing
<p>Action xxx-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.</p> <p><u>Hazards Mitigated:</u> Enter Response</p>						
New & Existing	Enter Response	Enter Response	Enter Response	Low	Staff Time, General Funds	Short-term
<p>Action xxx-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:</p> <ul style="list-style-type: none"> • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts. <p><u>Hazards Mitigated:</u> Enter Response</p>						
New & Existing	Enter Response	Enter Response	Enter Response	Low	Staff Time, General Funds	Ongoing
<p>Action xxx-5—Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:</p> <ul style="list-style-type: none"> • [REDACTED] <p><u>Hazards Mitigated:</u> Enter Response</p>						
New & Existing	Enter Response	Enter Response	Enter Response	Low	Staff Time, General Funds	Short-term
<p>Action xxx-6— Purchase generators for critical facilities and infrastructure that lack adequate backup power, including [REDACTED].</p> <p><u>Hazards Mitigated:</u> Dam failure, earthquake, flooding, landslide, severe weather, tsunami, wildfire</p>						
Existing	Enter Response	Enter Response	Enter Response			
<p>Action xxx-7—Description</p> <p><u>Hazards Mitigated:</u> Enter Response</p>						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
<p>Action xxx-8—Description</p> <p><u>Hazards Mitigated:</u> Enter Response</p>						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action xxx-9—Description						
<i>Hazards Mitigated:</i> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-10—Description						
<i>Hazards Mitigated:</i> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-11—Description						
<i>Hazards Mitigated:</i> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-12—Description						
<i>Hazards Mitigated:</i> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-13—Description						
<i>Hazards Mitigated:</i> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-14—Description						
<i>Hazards Mitigated:</i> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-15—Description						
<i>Hazards Mitigated:</i> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-16—Description						
<i>Hazards Mitigated:</i> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-17—Description						
<i>Hazards Mitigated:</i> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-18—Description						
<i>Hazards Mitigated:</i> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-19—Description						
<i>Hazards Mitigated:</i> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-20—Description						
<i>Hazards Mitigated:</i> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 1-15. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1	3	High	High	Yes	Yes	No	Medium	High
2	7	Medium	Low	Yes	No	Yes	High	Low
3	3	Low	Low	Yes	No	Yes	High	Low
4	6	Medium	Low	Yes	No	Yes	High	Low
5	7	Medium	Low	Yes	No	Yes	High	Medium
6	3	High	Medium	Yes	Yes	No	Medium	High
7								
8								
9								
10								
11								

a. See the introduction to this volume for explanation of priorities.

Table 1-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Medium-Risk Hazards								
Low-Risk Hazards								

a. See the introduction to this volume for explanation of mitigation types.

1.9 PUBLIC OUTREACH

Table 1-17 lists public outreach activities in connection with this hazard mitigation plan update for this jurisdiction.

Table 1-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

1.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **[jurisdiction name] Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **[jurisdiction name] Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- <INSERT DOCUMENT NAME AND DESCRIPTION OF HOW IT WAS USED>
- <INSERT DOCUMENT NAME AND DESCRIPTION OF HOW IT WAS USED>
- <INSERT DOCUMENT NAME AND DESCRIPTION OF HOW IT WAS USED>
- <INSERT DOCUMENT NAME AND DESCRIPTION OF HOW IT WAS USED>
- <INSERT DOCUMENT NAME AND DESCRIPTION OF HOW IT WAS USED>

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- <INSERT DOCUMENT NAME AND DESCRIPTION OF HOW IT WAS USED>

1.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Insert text, if any; otherwise, delete section

1.12 ADDITIONAL COMMENTS

Insert text, if any; otherwise, delete section

INSTRUCTIONS FOR COMPLETING SPECIAL-PURPOSE DISTRICT ANNEX TEMPLATE

Jurisdictional annex templates for the 2022 Ventura County Multi-Jurisdictional Hazard Mitigation Plan update will be completed in three phases. **This document provides instructions for completing all phases of the template for special-purpose districts.**

The target timeline for completion is as follows:

- **Phase 1**—Team, Profile, Trends, and Previous Plan Status
 - **Deploy:** May 10, 2021
 - **Due:** June 21, 2021 by close of business
- **Phase 2**—Capability Assessment, Integration Review, and Information Sources
 - **Deploy:** July 6, 2021
 - **Due:** August 20, 2021 by close of business
- **Phase 3**—Risk Assessment, Action Plan, Information Sources, Future Needs, and Additional Comments
 - **Deploy:** September 9, 2021
 - **Mandatory Phase 3 Workshop:** September 23, 2021
 - **Due:** October 25, 2021 by close of business, Pacific Time. **No due date extensions!**

Please direct any questions and return your completed Phase 3 template in electronic format to:

Megan Brotherton
Tetra Tech
Phone: (808) 339-9119
E-mail: megan.brotherton@tetrattech.com

A Note About Formatting

The template for the annex is a Microsoft Word document in a format that will be used in the final plan. Partners are asked to use this template so that a uniform product will be completed for each partner.

Content should be entered directly into the template rather than creating text in another document and pasting it into the template. Text from another source may alter the formatting of the document.

The section and table numbering in the document will be updated when completed annexes are combined into the final document. Please do not adjust any of the numbering.

For planning partners who participated in the 2015 planning effort, relevant information has been brought over to the 2022 template. Fields that require attention have been highlighted using the following color coding:

- **Yellow:** Text has been brought over from 2015 Plan and should be reviewed and updated as needed.
- **Pink:** This is a new field that will require information that was not included in 2015.

Please un-highlight each field that you update so that reviewers will know an edit has been made.

New planning partners will need to complete the template in its entirety.

Appendix B.2
Instructions and Templates for
Special Purpose District Annexes

PHASE 1 INSTRUCTIONS

CHAPTER TITLE

In the chapter title at the top of Page 1, type in the complete official name of your district (e.g. West County Fire Protection District #1, Johnsonville Flood Protection District). Do not change the chapter number. Revise only the jurisdiction name. If your jurisdiction's name has already been entered, verify that wording and spelling are correct; revise as needed.

LOCAL HAZARD MITIGATION PLANNING TEAM

Points of Contact

Provide the name, title, mailing address, telephone number, and e-mail address for the primary point of contact for your jurisdiction. This should be the person responsible for monitoring, evaluating, and updating the annex for your jurisdiction. This person should also be the principle liaison between your jurisdiction and the Steering Committee overseeing development of this plan.

In addition, designate an alternate point of contact. This would be a person to contact should the primary point of contact be unavailable or no longer employed by the jurisdiction.

Note: Both of these contacts should match the contacts that were designated in your jurisdiction's letter of intent to participate in this planning process. If you have changed the primary or secondary contact, let the planning team know by inserting a comment into the document.

Participating Planning Team

Populate Table 1-1 with the names of staff from your jurisdiction who participated in preparing this annex or otherwise contributed to the planning process for this hazard mitigation plan.

JURISDICTION PROFILE

Overview

Provide a brief summary description of the following:

- The purpose of the jurisdiction
- The date of inception
- The type of organization
- The number of employees
- Funding sources
- The type of governing body, and who has adoptive authority.

This should be information that is specific to your jurisdiction and will not be provided in the overall, planning area-wide mitigation plan document. Provide a statement similar to the example below:

EXAMPLE: *The Johnsonville Community Services District is a special district created in 1952 to provide water and sewer service. A five-member elected Board of Directors governs the District. The Board assumes responsibility for the adoption of this plan; the General Manager will oversee its implementation. The District currently employs a staff of 21. Funding comes primarily through rates and revenue bonds.*

Service Area

Provide a brief description of the following:

- Who the District’s customers are and an approximation of how many are currently served
- The area served, in square miles
- The geographic extent of the service area

This should be information that is specific to your jurisdiction and will not be provided in the overall, planning area-wide mitigation plan document. Provide a statement similar to the example below:

EXAMPLE: *The Johnsonville Community Services District serves unincorporated areas of Jones County east of the City of Smithburg, including the communities of Johnsonville, Creeks Corner, Jones Hill, Fields Landing, King Salmon, and Freshwater. The current total service area is 3.3 square miles. As of April 30, 2020, the District serves 7,305 water connections and 6,108 sewer connections.*

Assets

List District-owned assets in the categories shown on the table (and described in the sections below). Include an approximate value for each asset and a subtotal value for identified assets in each category.

Property

Provide an approximate value for any land owned by the District.

Equipment

List equipment owned by the District that is used in times of emergency or that, if incapacitated, could severely impact the service area (vehicles, generators, pumps, etc.). Provide an approximate replacement value for each item. Equipment of similar type may be listed as a single category (e.g., “3 diesel-powered generators”). For water and sewer districts, include mileage of pipeline under this category.

Critical Facilities

List District-owned facilities that are vital to maintain services to the service area. Include the address of each facility. Provide an approximate replacement value for each line. Critical facilities are generally defined as facilities owned by the District that are critical to District operations and to public health or safety and that are especially important following hazard events, including but not limited to the following:

- Structures or facilities that produce, use, or store hazardous materials (highly volatile, flammable, explosive, toxic and/or water-reactive materials)

- Hospitals, nursing homes, and housing facilities likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a natural hazard event
- Mass gathering facilities that may be used as evacuation shelters (such as schools or community centers)
- Transportation infrastructure such as roads, bridges and airports that provide sources for evacuation before, during and after natural hazard events
- Police stations, fire stations, government facilities, vehicle equipment and storage facilities, and emergency operation centers that are needed for response activities before, during and after a natural hazard event
- Public utility facilities such as drinking water, stormwater, and wastewater systems that are vital to providing normal services to damaged areas before, during and after natural hazard events.

The table below shows an example of assets to be listed in this section.

Sample Completed Table – Special District Assets	
Asset	Value
Property	
11.5 Acres	\$5,750,000
Equipment	
Total length of pipe 40 miles (\$1.32 million per mile X 40 miles)	\$52,800,000
4 Emergency Generators	\$250,000
Total:	\$53,050,000
Critical Facilities	
Administrative Buildings – 357 S. Jones Street	\$2,750,000
Phillips Pump Station – 111 Fifth Avenue N.	\$377,000
Total:	\$3,127,000

NOTE: Placeholders in the table of assets request **ADDRESSES** for critical facilities. These addresses will not be included in the final published annex, but are needed in order to perform risk mapping and risk analysis for the hazard mitigation plan. Include the addresses in the table if convenient. If not, then provide a separate document listing all critical facilities and addresses for use in development of the hazard mitigation plan.

CURRENT TRENDS

Provide a brief description of previous growth trends in the service area and anticipated future increase or decrease in services (if applicable). This should be information that is specific to your jurisdiction and will not be provided in the overall, planning area-wide mitigation plan document. Provide a statement similar to the example below:

EXAMPLE: *The Johnsonville Community Services District originally was formed to serve only the Johnsonville area. The District’s service area expanded throughout the years to include the full area served today. Total customers have increased by 3 percent since 2010. Population in the service area is not projected to change significantly over the next 10 years, and the District has no plans to expand its service area.*

STATUS OF PREVIOUS PLAN ACTIONS

Note that this section applies only to jurisdictions that are conducting updates to previously approved hazard mitigation plans. If your jurisdiction has not previously participated in an approved plan, enter an “X” in the box at the beginning of this section and do not complete the section. We will remove this section from your final annex.

Also note that this section is further back in the annex than the rest of the Phase 1 content. Some Phase 2 sections are included before it.

The hazard mitigation plan update must describe the status of all action items from each jurisdiction’s previous hazard mitigation plan. Each action item must be marked as ONE of the options below by checking the appropriate box (place an X) and providing the following information:

- **Completed**—If an action has been completed since the prior plan was prepared, check the “Completed” box and **provide a date of completion in the comment section**. If an action has been initiated and is an ongoing program (e.g. annual outreach event), you may mark it as completed and **note that it is ongoing in the comments**. If an action addresses an ongoing program you would like to continue to include in your action plan, see the “Carried Over to Plan Update” bullet below.
- **Removed**—If action items are to be removed because they are no longer feasible, a reason must be given. Lack of funding does not mean that it is no longer feasible, unless the sole source of funding for an action is no longer available. **Place a comment in the comment section explaining why the action is no longer feasible or barriers that prevented the action from being implemented (e.g., “Action no longer considered feasible due to lack of political support.”)**. If the wording and/or intent of a previously identified action is unclear, this can be a reason for removal. A change in community priorities may also be a reason for removal and should be discussed in the comments.
- **Carried Over to Plan Update**—If an action is in progress, is ongoing, or has not been initiated and you would like to carry it over to the plan update, check the “Check if Yes” column under “Carried Over to Plan Update.” Selecting this option indicates that the action will be included in the mitigation action plan for this update. If you are carrying over an action to the update, **include a comment describing any action that has been taken or why the action was not taken** (specifically, any barriers or obstacles that prevented the action from moving forward or slowed progress). Leave the last column, “Action # in Update,” blank at this point. This will be filled in after completing the updated action plan in Phase 3.

Ensure that you have provided **a status and a comment for each action**.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, all action items from your jurisdiction’s previous hazard mitigation plan that are marked as “Carried Over to Plan Update” will need to be included in the action plan.

THIS COMPLETES PHASE 1

PHASE 2 INSTRUCTIONS

CAPABILITY ASSESSMENT

Note that it is unlikely that one person will be able to complete all sections of the capability assessment alone. The primary preparer will likely need to reach out to other departments within the local government for information. It may be beneficial to provide these individuals with background information about this planning process, as input from them will be needed again during Phase 3 of the annex development.

Planning and Regulatory Capability

List any federal, state, local or district ordinances, plans, or policies that apply to your jurisdiction and relate to hazard mitigation. Provide the date of last update and any comments as appropriate. The table below shows an example of items to be listed in this section.

Sample Completed Table – Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
District Design Standards	2010	
Capital Improvement Program	Updated annually	covers 5 year timeframe
Emergency Operations Plan	2000	
Facility Maintenance Manual	1990	
State Building Code	2016	
Division of State Architects		Review of all building and site design features is required prior to construction

Fiscal Capability

Complete the table titled “Fiscal Capability” by indicating whether each of the listed financial resources is accessible to your jurisdiction. Enter “Yes” if the resource is fully accessible to your jurisdiction. Enter “No” if there are limitations or prerequisites that may hinder your use of this resource.

Administrative and Technical Capability

Complete the table titled “Administrative and Technical Capability” by indicating whether your jurisdiction has access to each of the listed personnel resources. Enter “Yes” or “No” in the column labeled “Available?”. If yes, then enter the department and position title. If you have contract support with these capabilities, you can still answer “Yes.” Indicate in the department row that this resource is provided through contract.

Education and Outreach Capability

Complete the table titled “Education and Outreach.”

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, review all the above capability assessment tables and consider including actions to provide a capability that your jurisdiction does not currently have, update a capability that your jurisdiction does have, or implement an action that is recommended in an existing plan or program.

Community Classifications

Complete the table titled “Community Classifications” to indicate your jurisdiction’s participation in various national programs related to natural hazard mitigation. For each program enter “Yes” or “No” in the second column to indicate whether your jurisdiction participates. If yes, then enter the classification that your jurisdiction has earned under the program in the third column and the date on which that classification was issued in the fourth column; enter “N/A” in the third and fourth columns if your jurisdiction is not participating. If you do not know your current classification, information is available at the following websites:

- **FIPS Code**— <https://www.census.gov/geographies/reference-files/2018/demo/popest/2018-fips.html>
- **DUNS #**— <https://www.dnb.com/duns-number.html>
- **Community Rating System**— <https://www.fema.gov/floodplain-management/community-rating-system>
- **Building Code Effectiveness Grading Schedule**— <https://www.isomitigation.com/bcegs/iso-s-building-code-effectiveness-grading-schedule-bcegs.html>
- **Public Protection Classification**— <https://www.isomitigation.com/ppc/>
- **Storm Ready**— <https://www.weather.gov/stormready/communities>
- **Firewise**— <http://www.firewise.org/usa-recognition-program/map-of-active-participants.aspx>
- **Tsunami Ready**— <https://www.weather.gov/tsunamiready/communities>

Adaptive Capacity for Climate Change

Consider climate change impact concerns such as the following:

- Reduced snowpack
- Increased wildfires
- Sea level rise
- Inland flooding
- Threats to sensitive species
- Loss in agricultural productivity
- Public health and safety.

With those impacts in mind, complete the table titled “Adaptive Capacity for Climate Change” by indicating your jurisdiction’s capacity for each listed criterion as follows:

- **High**—The capacity exists and is in use.
- **Medium**—The capacity may exist, but is not used or could use some improvement.
- **Low**—The capacity does not exist or could use substantial improvement.
- **Unsure**—Not enough information is known to assign a rating.

This is a subjective assessment, but providing a few words of explanation is useful. It is highly recommended that you complete this table with an internal planning team after reviewing the results of the other capability assessment tables.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, review all the adaptive capacity criteria and consider including actions to improve the rating for those rated medium or low, to make use of the capacity for those rated high, or to acquire additional information for those rated unsure.

INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. FEMA recommends integration as follows:

- Integrate hazard mitigation plan goals with community objectives (e.g. incorporate the goals for risk reduction and safety into the policies of other plans).
- Use the risk assessment to inform plans and policies (e.g. incorporate risk assessment findings into emergency operations plans).
- Implement mitigation actions through existing mechanisms (e.g. include mitigation projects in the capital improvement plan).
- Think about mitigation before and after a disaster (e.g. build recovery planning on existing mitigation plans and goals).

After reviewing the plans, programs and ordinances identified in the capability assessment tables, identify all plans and programs that have already been integrated with the hazard mitigation plan, and those that offer opportunities for future integration.

Existing Integration

In the highlighted bullet list, provide a brief description of integrated plans or ordinances and how each is integrated. Consider listing items marked as Completed in the “Status of Previous Plan Actions” table if they were indicated as being ongoing actions. Examples are as follows:

- **Capital Improvement Plan**—The capital improvement plan includes projects that can help mitigate potential hazards. The District will act to ensure consistency between the hazard mitigation plan and the current and future capital improvement plans. The hazard mitigation plan may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment.
- **Emergency Operations Plan**—The results of the risk assessment were used in the development of the emergency operations plan.

- **Facilities Plan**—The results of the risk assessment and mapped hazard areas are used in facility planning for the District. Potential sites are reviewed for hazard risks, and appropriate mitigation measures are considered in building and site design.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, any plans that fall into the “Existing Integration” category should be reviewed and elements from them should be included in the action plan as appropriate.

Opportunities for Future Integration

List any plans or programs that offer the potential for future integration and describe the process by which integration will occur. Examples follow:

- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization.
- **Post-Disaster Recovery Plan**—The District does not have a recovery plan and intends to develop one as a mitigation planning action during the next five years. The plan will build on the mitigation goals and objectives identified in the mitigation plan.

Consider other programs you may have in place in your jurisdiction that include routine consideration and management of hazard risk. Examples of such programs may include: tree pruning programs, right-of-way mowing programs, erosion control or stream maintenance programs, etc. Add any such programs to the integration discussion and provide a brief description of how these program manage (or could be adapted to manage) risk from hazards.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, an action to integrate any identified “Opportunities for Future Integration” should be considered for inclusion in the action plan.

INFORMATION SOURCES USED FOR THIS ANNEX

Note that this section will ultimately describe all information sources used to develop this annex, but that only the sources used for Phases 1 and 2 will be listed at this point. Additional sources will be added with the preparation of the Phase 3 annex.

This section should describe what resources you used to complete the annex and how you used them. Several items are started for you, but be sure to update and enhance any descriptions. Providing this information is a requirement to pass the state and FEMA review process.

THIS COMPLETES PHASE 2

We recommend including most large-scale disasters, unless you know that there were no impacts on your jurisdiction. Specifically, we recommend that you include these events if you have damage estimate information or can provide a brief description of impacts that occurred within your community. In addition to these events, refer to the NOAA NCDC storm events database included in the toolkit. We recommend conducting a search for the name of your jurisdiction in order to identify events with known impacts. Other potential sources of damage information include the following

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data
- Newspaper archives
- Emergency management documents (general plan safety element, emergency response plan, etc.)
- Resident input.

If you do not have estimates for costs of damage caused, list “Not Available” in the “Damage Assessment” column or list a brief description of the damage rather than a dollar value (e.g., Main Street closed as a result of flooding, downed trees and residential damage). Note that tracking such damage is a valid and useful mitigation action if your jurisdiction does not currently track such information.

Hazard Risk Ranking

Risk ranking identifies which hazards pose the greatest risk to the community, based on how likely it is for each hazard to occur (this is called the community’s exposure) and how great an impact each hazard will have if it does occur (this is called the community’s vulnerability). Every jurisdiction has differing degrees of risk exposure and vulnerability and therefore needs to rank risk for its own area. Risk rankings for cities and the county have been calculated in the “Loss Matrix” spreadsheet included in the annex preparation toolkit. These rankings are on the basis of risk ranking scores for each hazard that were calculated based on the hazard’s probability of occurrence and its potential impact on people, property and the economy.

The risk ranking methodology used for cities and counties is not usable for special-purpose districts because the risk-related mapping generally does not align with the boundaries of districts. To rank risk for your District, use the following procedure:

- Find the risk ranking scores in the Loss Matrix spreadsheet (on the “Risk Ranking Summary” tab) for the county overall and for any cities whose area overlaps that of your District.
- For each hazard, generate a risk ranking score for your District by calculating the average of the scores for those other jurisdictions.
- Rank the hazards based on those average scores:
 - Assign the rank of 1 to the hazard with the highest risk ranking score, the rank of 2 to the hazard with the second highest ranking score; and so on.
 - Assign the same rank to any two hazards with equal risk ranking scores
- If the resulting ranking differs from what you know based on substantiated data and documentation, alter the scores and ranking as needed based on this knowledge.

- Assign each hazard to the risk category of “High,” “Medium,” or “Low” based on the risk rating score:
 - Low for scores of 0 to 15
 - Medium for scores of 16 to 30
 - High for scores greater than 30

Enter the results of this analysis in the “Hazard Risk Ranking” table in the template; enter the hazards in order of ranking, with 1 at the top of the table.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, you will need to have at least one mitigation action for each hazard ranked as “high” or “medium.”

Jurisdiction-Specific Vulnerabilities

Review the results of the risk assessment included in the toolkit, your jurisdiction’s natural events history, and any relevant public comments/input, then develop a few sentences that discuss specific hazard vulnerabilities. You do not need to develop a sentence for every hazard, but identify a few issues you would like to highlight. Also list any known hazard vulnerabilities in your jurisdiction that may not be apparent from the risk assessment and other information provided.

Spending some time thinking about the results of the risk assessment and other noted vulnerabilities will be a big help in the development of your hazard mitigation action plan. The following are examples of vulnerabilities you could identify through this exercise:

- Over the past 10 years, the jurisdiction has experienced more than \$1 million in damage to critical assets from severe storm events.
- 17 critical assets are in areas that would be permanently inundated with 12 inches of sea level rise.
- One significant District asset is not equipped with a generator and four District buildings are unreinforced masonry or soft-story construction.
- An area along the river is eroding and threatening a District-owned treatment facility.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, consider including actions to address the jurisdiction-specific vulnerabilities listed in this section.

HAZARD MITIGATION ACTION PLAN

Hazard Mitigation Action Plan Matrix

The hazard mitigation action plan is the heart of your jurisdictional annex. This is where you will identify the actions your jurisdiction would like to pursue with this plan.

Select Recommended Actions

All of the work that you have done thus far should provide you with ideas for actions. Throughout these instructions, green boxes labeled “Hazard Mitigation Action Plan Input” have indicated information that needs to be considered in the selection of mitigation actions. The following sections describe how to consider these and other information sources to develop a list of potential actions.

Be sure to consider the following factors in your selection of actions:

- Select actions that are consistent with the overall purpose, goals, and objectives of the hazard mitigation plan.
- Identify actions where benefits exceed costs.
- Include any action that your jurisdiction has committed to pursuing, regardless of grant eligibility.
- Know what is and is not grant-eligible under various federal grant programs (see the fact sheet on FEMA hazard mitigation grant programs in the toolkit and the table on the next page).

Material Previously Developed for This Annex

Capability Assessment Section—Planning and Regulatory Capability Table, Fiscal Capability Table, Administrative and Technical Capability Table, and Education and Outreach Table

Review these tables and consider the following:

- For any capability that you do not currently have, consider whether your jurisdiction should have this capability. If so, consider including an action to develop/acquire the capability.
- For any capability that you do currently have, consider whether this capability can be leveraged to increase or improve hazard mitigation in the jurisdiction.
- If any items listed in the Planning and Regulatory Capabilities table have not been updated in more than 10 years, consider an action to review and update the capability and, as appropriate, incorporate hazard mitigation principles or information obtained in the risk assessment.
- Consider including actions that are identified in other plans and programs (capital improvement plans, strategic plans, etc.) as actions in this plan.

Capability Assessment Section— Adaptive Capacity for Climate Change Table

Consider your responses to this section:

- For criteria that you listed as medium or low, think of ways you could improve this rating (see adaptive capacity portion of the mitigation best practices catalog).
- For criteria you listed as high, think about how you can leverage this capacity to improve or enhance mitigation or continue to improve this capacity.
- For criteria that you were unable to provide responses for, consider ways you could improve your understanding of this capacity (see mitigation best practices and adaptive capacity catalog).

Table 2. Federal Hazard Mitigation Grant Program Eligibility by Action Type

Eligible Activities	Hazard Mitigation Grant Program	BRIC	Flood Mitigation Assistance
Mitigation Projects			
Property Acquisition and Structure Demolition	√	√	√
Property Acquisition and Structure Relocation	√	√	√
Structure Elevation	√	√	√
Mitigation Reconstruction	√	√	√
Dry Floodproofing of Non-residential Structures	√	√	√
Generators	√	√	
Localized Flood Risk Reduction Projects	√	√	√
Non-Localized Flood Risk Reduction Projects	√	√	
Structural Retrofitting of Existing Buildings	√	√	√
Non-structural Retrofitting of Existing Buildings and Facilities	√	√	√
Safe Room Construction	√	√	
Infrastructure Retrofit	√	√	√
Soil Stabilization	√	√	√
Wildfire Mitigation	√	√	
Post-Disaster Code Enforcement	√		
Advance Assistance	√		
5 Percent Initiative Projects*	√		
Aquifer and Storage Recovery**	√	√	√
Flood Diversion and Storage**	√	√	√
Floodplain and Stream Restoration**	√	√	√
Green Infrastructure**	√	√	√
Miscellaneous/Other**	√	√	√
Hazard Mitigation Planning	√	√	√
Technical Assistance			√
Management Costs	√	√	√

* FEMA allows increasing the 5% initiative amount under the Hazard Mitigation Grant Program up to 10% for a presidential major disaster declaration. The additional 5% initiative funding can be used for activities that promote disaster-resistant codes for all hazards. As a condition of the award, either a disaster-resistant building code must be adopted or an improved Building Code Effectiveness Grading Schedule is required.

** Indicates that any proposed action will be evaluated on its own merit against program requirements. Eligible projects will be approved provided funding is available.

Integration Review Section

Review the items you identified in this section and consider an action that specifically says what the plan, code, ordinance etc. is and how it will be integrated.

Risk Ranking Section

You must identify at least one mitigation action that is clearly defined and actionable (i.e. not a preparedness or response action) for every hazard that is categorized in the risk ranking as “high” or “medium” risk.

Jurisdiction-Specific Vulnerabilities Section

Review the vulnerability issues that you identified in this section and consider actions to address them (see mitigation best practices catalog).

Status of Previous Plan Actions Section

If your jurisdiction participated in a previous hazard mitigation plan, be sure to include any actions that were identified as “carry over” actions.

Other Sources

Mitigation Best Practices Catalog

A catalog that includes best practices identified by FEMA and other agencies, as well as recommendations from the steering committee and other stakeholders, is included in your toolkit. Review the catalog and identify actions your jurisdiction should consider for its action plan.

Public Input

Review input received during the process, specifically the public survey results included in your toolkit.

Common Actions for All Partners

The following three actions have been prepopulated in your annex template; **these three actions should be included in every annex and should not be removed:**

- Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas, prioritizing those structures that have experienced repetitive losses and/or are located in high or medium ranked hazard.
- Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.
- Purchase generators for critical facilities and infrastructure that lack adequate back-up power.

In addition, the core planning team recommends that every planning partner strongly consider the following actions:

- Identify and pursue strategies to increase adaptive capacity to climate change.
- Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.
- Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.
- Develop a post-disaster recovery plan and a debris management plan.
- Develop and/or update plans that support or enhance continuity of operations following disasters.

The specifics of all these common actions should be adjusted as needed for the particulars of each community.

Complete the Table

Complete the table titled “Hazard Mitigation Action Plan Matrix” for all the actions you have identified and would like to include in the plan:

- Enter the action number (see box at right) and description. **If the action is carried over from your previous hazard mitigation plan, return to the “Status of Previous Plan Actions” table you completed in Phase 1 and enter the new action number in the column labeled “Action # in Update.”**
- Indicate whether the action mitigates hazards for new and/or existing assets.
- Identify the specific hazards the action will mitigate (note: you must list each hazard by name; simply indicating “all hazards” is not deemed acceptable).
- Identify by number the mitigation plan objectives that the action addresses (see toolkit).
- Indicate who will be the lead in administering the action. This will most likely be a department within your jurisdiction (e.g. planning or public works). If you wish to indicate more than one department as responsible for the action, clearly identify one as the lead agency and list the others in the “supporting agency” column.
- Enter an estimated cost in dollars if known; otherwise, enter “High,” “Medium,” or “Low,” as determined for the prioritization process described in the following section.
- Identify funding sources for the action. If it is a grant, include the grant-providing agency as well as funding sources for any required cost share. Refer to your fiscal capability assessment to identify possible sources of funding and refer to the table on page 14 of these instructions for project eligibility for FEMA’s hazard mitigation assistance grant programs.
- Indicate the time line as “short-term” (1 to 5 years) or “long-term” (5 years or greater) or “ongoing” (a continual program)

Action Numbering

Actions are to be numbered using the three-letter code for your jurisdiction shown below, followed by a hyphen and the action’s sequential number:

- Cal State/Channel Islands—CSU-1, CSU-2...
- Calleguas Municipal Water—CAL-1, CAL-2...
- Casitas Municipal Water—CAS-1, CAS-2...
- Channel Is. Beach CSD—CIB-1, CIB-2...
- Conejo Recreation & Park—CRP-1, CRP-2...
- Ojai Valley Sanitary—OVS-1, OVS-2...
- Pleasant Valley Recreation & Park—PLV-1, PLV-2...
- Saticoy Sanitary—SAT-1, SAT-2...
- Triunfo Water & Sanitation—TRI-1, TRI-2...
- United Water Conservation—UWC-1, UWC-2...
- Ventura County Fire Protection—VFP-1, VFP-2...
- Ventura County Office of Education—VOE-1, VOE-2...
- Ventura County Watershed Protection—VWP-1, VWP-2...
- Ventura County Emergency Services—VES-1, VES-2...
- Ventura Regional Sanitation—VRS-1, VRS-2

Mitigation Action Priority

Complete the information in the table titled “Mitigation Action Priority” as follows:

- **Action #**—Indicate the action number from the Hazard Mitigation Action Plan Matrix table.
- **# of Objectives Met**—Enter the number of objectives the action will meet.
- **Benefits**—Enter “High,” “Medium” or “Low” as follows:
 - High—Action will provide an immediate reduction of risk exposure for life and property.
 - Medium—Action will have a long-term impact on the reduction of risk exposure for life and property, or action will provide an immediate reduction in the risk exposure for property.
 - Low—Long-term benefits of the action are difficult to quantify in the short term.

- **Cost**—Enter “High,” “Medium” or “Low” as follows:
 - High—Existing funding will not cover the cost of the action; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
 - Medium—The action could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the action would have to be spread over multiple years.
 - Low—The action could be funded under the existing budget. The action is part of or can be part of an ongoing existing program.
- **Do Benefits Exceed the Cost?**—Enter “Yes” or “No.” This is a qualitative assessment. Enter “Yes” if the benefit rating (high, medium or low) is the same as or higher than the cost rating (high benefit/high cost; high benefit/medium cost; medium benefit/low cost; etc.). Enter “No” if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)
- **Is the Action Grant-Eligible?**—Enter “Yes” or “No.” Refer to the fact sheet on FEMA hazard mitigation grant programs in the annex preparation toolkit and the table on page 14 of these instructions.
- **Can Action Be Funded Under Existing Program Budgets?**—Enter “Yes” or “No.” In other words, is this action currently budgeted for, or would it require a new budget authorization or funding from another source such as grants?
- **Implementation Priority**— Enter “High,” “Medium” or “Low” as follows:
 - High Priority—An action that meets multiple objectives, has benefits that exceed costs, and has a secured source of funding. Action can be completed in the short term (1 to 5 years).
 - Medium Priority—An action that meets multiple objectives, has benefits that exceed costs, and is eligible for funding though no funding has yet been secured for it. Action can be completed in the short term (1 to 5 years), once funding is secured. Medium-priority actions become high-priority actions once funding is secured.
 - Low Priority—An action that will mitigate the risk of a hazard, has benefits that do not exceed the costs or are difficult to quantify, has no secured source of funding, and is not eligible for any known grant funding. Action can be completed in the long term (1 to 10 years). Low-priority actions may be eligible for grant funding from programs that have not yet been identified.
- **Grant Pursuit Priority**— Enter “High,” “Medium” or “Low” as follows:
 - High Priority—An action that meets identified grant eligibility requirements, has high benefits, and is listed as high or medium implementation priority; local funding options are unavailable or available local funds could be used instead for actions that are not eligible for grant funding.
 - Medium Priority—An action that meets identified grant eligibility requirements, has medium or low benefits, and is listed as medium or low implementation priority; local funding options are unavailable.
 - Low Priority—An action that has not been identified as meeting any grant eligibility requirements.

Actions identified as high-grant-pursuit priority actions should be closely reviewed for consideration when grant funding opportunities arise.

Note: If a jurisdiction wishes to identify an action as high priority that is outside of the prioritization scheme for high priorities, a note indicating so should be inserted and a rationale should be provided.

Analysis of Mitigation Actions

In the table titled “Analysis of Mitigation Actions,” for each combination of hazard type and mitigation type, enter the numbers of all recommended actions that address that hazard type and can be categorized as that mitigation type. The mitigation types are as follows:

- **Prevention**—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- **Public Education & Awareness**—Actions to inform residents and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, wetland restoration and preservation, and green infrastructure.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.
- **Climate Resilience**—Actions that incorporate methods to mitigate and/or adapt to the impacts of climate change. Includes aquifer storage and recovery activities, incorporating future conditions projections in project design or planning, or actions that specifically address jurisdiction-specific climate change risks, such as sea-level rise or urban heat island effect.
- **Community Capacity Building**—Actions that increase or enhance local capabilities to adjust to potential damage, to take advantage of opportunities, or to respond to consequences. Includes staff training, memorandums of understanding, development of plans and studies, and monitoring programs.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions. This table must show at least one action to address each “high” and “medium” ranked hazard. Planning partners should aim to identify at least one action for each mitigation type, but this is not required.

An example of a completed “Analysis of Mitigation Actions” table is provided below. Note that an action can be more than one mitigation type.

Sample Completed Table – Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Dam Failure	EX-2, 3, 4, 5, 6	EX-1, 6	EX-4, 6		EX-8, 11			EX-3, 4, 8, 9, 10
Drought	EX-2	EX-1	EX-4					EX-3, 4, 8, 9, 10
Medium-Risk Hazards								
Earthquake	EX-2, 3, 4, 5, 7	EX-1, 7	EX-4		EX-8, 11			EX-3, 4, 8, 9
Flooding	EX-2, 3, 4, 5, 6, 7	EX-1, 6, 7	EX-4, 6	EX-9	EX-8, 11	EX-6		EX-3, 4, 8, 9, 10
Landslide	EX-2, 3, 4, 5, 7	EX-1, 7	EX-4		EX-8, 11			EX-3, 4, 8, 9, 10
Low-Risk Hazards								
Severe Weather	EX-2, 3, 4, 5, 7	EX-1, 7, 9	EX-4		EX-8, 9, 11		EX-8, 7	EX-3, 4, 8, 9, 10
Wildfire	EX-2, 3, 4, 5, 7	EX-1, 7, 9	EX-4, 9	EX-9	EX-8, 11			EX-3, 4, 8, 9, 10

PUBLIC OUTREACH

FEMA requirements for public outreach will be met by the County’s engagement efforts and are included in the main part of the plan. These may include public meetings, a StoryMap, surveys, etc. If individual jurisdictions want to have a more robust outreach for their local community, the public outreach table in each annex may be used to memorialize those local efforts.

This table should record local public outreach efforts made by your jurisdiction to inform the community of this hazard mitigation plan update process. Examples may include local surveys on hazard awareness/preparedness, social media blasts, press releases, and outreach to local groups (CERT, senior citizen organizations, etc.) **This section is optional.**

INFORMATION SOURCES USED FOR THIS ANNEX

This section should describe what resources you used to complete the annex and how you used them. The sources used for Phases 1 and 2 should have been entered previously. List any additional sources used for the preparation of the Phase 3 annex. Review to ensure that all materials used in all three phases are identified. Providing this information is a requirement to pass the state and FEMA review process.

FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

In this section, identify any future studies, analyses, reports, or surveys your jurisdiction needs to better understand its vulnerability to identified or currently unidentified risks. These could be needs based on federal or state agency mandates. **This section is optional.**

ADDITIONAL COMMENTS

Use this section to add any additional information pertinent to hazard mitigation and your jurisdiction not covered in this template. **This section is optional.**

THIS COMPLETES PHASE 3

1. DISTRICT NAME

1.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Name, Title
Street Address
City, State ZIP
Telephone: xxx-xxx-xxxx
e-mail Address: xxx@xxx.xxx

Alternate Point of Contact

Name, Title
Street Address
City, State ZIP
Telephone: xxx-xxx-xxxx
e-mail Address: xxx@xxx.xxx

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 1-1.

Table 1-1. Local Hazard Mitigation Planning Team Members

Name	Title

1.2 JURISDICTION PROFILE

1.2.1 Overview

Insert Narrative Profile Information, per Instructions.

The [name of adopting body] assumes responsibility for the adoption of this plan; [name of oversight agency] will oversee its implementation.

All fire districts should include the following sentence (non-fire special purpose districts should delete the sentence):

The District participates/does not participate in the Public Protection Class Rating System and currently has a rating of #.

1.2.2 Service Area

The District service area covers [area in square miles] , serving a population of population .

1.2.3 Assets

Table 1-2 summarizes the assets of the District and their value.

Table 1-2. Special Purpose District Assets	
Asset	Value
Property	
<u> </u> number <u> </u> acres of land	\$ <u> </u> value <u> </u>
Equipment	
<u> </u> description <u> </u>	\$ <u> </u> value <u> </u>
<u> </u> description <u> </u>	\$ <u> </u> value <u> </u>
<u> </u> description <u> </u>	\$ <u> </u> value <u> </u>
<u> </u> description <u> </u>	\$ <u> </u> value <u> </u>
<u> </u> description <u> </u>	\$ <u> </u> value <u> </u>
<i>Total:</i>	\$ <u> </u> value <u> </u>
Critical Facilities	
<u> </u> description - Include Address <u> </u>	\$ <u> </u> value <u> </u>
<u> </u> description - Include Address <u> </u>	\$ <u> </u> value <u> </u>
<u> </u> description - Include Address <u> </u>	\$ <u> </u> value <u> </u>
<u> </u> description - Include Address <u> </u>	\$ <u> </u> value <u> </u>
<i>Total:</i>	\$ <u> </u> value <u> </u>

1.3 CURRENT TRENDS

 Insert summary description of service trends.

1.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 1-3.
- An assessment of fiscal capabilities is presented in Table 1-4.
- An assessment of administrative and technical capabilities is presented in Table 1-5.

- An assessment of education and outreach capabilities is presented in Table 1-6.
- Classifications under various community mitigation programs are presented in Table 1-7.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 1-8.

Table 1-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
Name of code, ordinance, policy, program or plan		
Name of code, ordinance, policy, program or plan		
Name of code, ordinance, policy, program or plan		
Name of code, ordinance, policy, program or plan		
Name of code, ordinance, policy, program or plan		

Table 1-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes/No
Capital Improvements Project Funding	Yes/No
Authority to Levy Taxes for Specific Purposes	Yes/No
User Fees for Water, Sewer, Gas or Electric Service	Yes/No
<i>If yes, specify:</i> Enter Response	
Incur Debt through General Obligation Bonds	Yes/No
Incur Debt through Special Tax Bonds	Yes/No
Incur Debt through Private Activity Bonds	Yes/No
Withhold Public Expenditures in Hazard-Prone Areas	Yes/No
State-Sponsored Grant Programs	Yes/No
Development Impact Fees for Homebuyers or Developers	Yes/No
Other	Yes/No
<i>If yes, specify:</i> Enter Response	

Table 1-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Enter Response	Yes/No
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Enter Response	Yes/No
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Enter Response	Yes/No
Staff with training in benefit/cost analysis <i>If Yes, Department /Position:</i> Enter Response	Yes/No
Surveyors <i>If Yes, Department /Position:</i> Enter Response	Yes/No
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Enter Response	Yes/No
Scientist familiar with natural hazards in local area <i>If Yes, Department /Position:</i> Enter Response	Yes/No
Emergency manager <i>If Yes, Department /Position:</i> Enter Response	Yes/No
Grant writers <i>If Yes, Department /Position:</i> Enter Response	Yes/No
Other <i>If Yes, Department /Position:</i> Enter Response	Yes/No

Table 1-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes/No
Do you have personnel skilled or trained in website development?	Yes/No
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> Enter Response	Yes/No
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> Enter Response	Yes/No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i> Enter Response	Yes/No
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> Enter Response	Yes/No
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> Enter Response	Yes/No

Table 1-7. Community Classifications

	Participating?	Classification	Date Classified
FIPS Code	Yes/No		Date
DUNS#	Yes/No		Date
Community Rating System	Yes/No		Date
Building Code Effectiveness Grading Schedule	Yes/No		Date
Public Protection	Yes/No		Date
Storm Ready	Yes/No		Date
Firewise	Yes/No		Date
Tsunami Ready	Yes/No		Date

Table 1-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Enter Comment</i>	High/Medium/Low
Jurisdiction-level monitoring of climate change impacts <i>Comment: Enter Comment</i>	High/Medium/Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: Enter Comment</i>	High/Medium/Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: Enter Comment</i>	High/Medium/Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment: Enter Comment</i>	High/Medium/Low
Participation in regional groups addressing climate risks <i>Comment: Enter Comment</i>	High/Medium/Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: Enter Comment</i>	High/Medium/Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment: Enter Comment</i>	High/Medium/Low
Identified strategies for adaptation to impacts <i>Comment: Enter Comment</i>	High/Medium/Low
Champions for climate action in local government departments <i>Comment: Enter Comment</i>	High/Medium/Low
Political support for implementing climate change adaptation strategies <i>Comment: Enter Comment</i>	High/Medium/Low
Financial resources devoted to climate change adaptation <i>Comment: Enter Comment</i>	High/Medium/Low
Local authority over sectors likely to be negative impacted <i>Comment: Enter Comment</i>	High/Medium/Low

Criterion	Jurisdiction Rating ^a
Public Capacity	
Local residents knowledge of and understanding of climate risk <i>Comment: Enter Comment</i>	High/Medium/Low
Local residents support of adaptation efforts <i>Comment: Enter Comment</i>	High/Medium/Low
Local residents' capacity to adapt to climate impacts <i>Comment: Enter Comment</i>	High/Medium/Low
Local economy current capacity to adapt to climate impacts <i>Comment: Enter Comment</i>	High/Medium/Low
Local ecosystems capacity to adapt to climate impacts <i>Comment: Enter Comment</i>	High/Medium/Low

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

1.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

1.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Plan or Program Name—Description**
- **Plan or Program Name—Description**
- **Plan or Program Name—Description**
- **Plan or Program Name—Description**
- **Plan or Program Name—Description**

1.5.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- Plan or Program Name—Description
- Plan or Program Name—Description
- Plan or Program Name—Description
- Plan or Program Name—Description
- Plan or Program Name—Description

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan presented in this annex.

1.6 RISK ASSESSMENT

1.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 1-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Type of Event	FEMA Disaster #	Date	Damage Assessment
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$
Insert event type		Date	\$

1.6.2 Hazard Risk Ranking

Table 1-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and district operations. Mitigation actions target hazards with high and medium rankings.

Table 1-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1			High/Medium/Low
2			High/Medium/Low
3			High/Medium/Low
4			High/Medium/Low
5			High/Medium/Low
6			High/Medium/Low
7			High/Medium/Low
8			High/Medium/Low
9			High/Medium/Low

1.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Insert as appropriate.
- Insert as appropriate.
- Insert as appropriate.

Mitigation actions addressing these issues were prioritized for consideration in the action plan presented in this annex.

1.7 STATUS OF PREVIOUS PLAN ACTIONS

If your jurisdiction has no previous hazard mitigation plan, please enter an “X” in the box at right and do not complete this section.

Table 1-11 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 1-11. Status of Previous Plan Actions

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				

Action Item from Previous Plan	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				
Insert Action Number & Text Comment: Enter Comment				

1.8 HAZARD MITIGATION ACTION PLAN

Table 1-12 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 1-13 identifies the priority for each action. Table 1-14 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 1-12. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action xxx-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas. <i>Hazards Mitigated:</i> Enter Response						
Existing	Enter Response	Enter Response	Enter Response	High	Grant Funding	Short-term
Action xxx-2 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan. <i>Hazards Mitigated:</i> All hazards						
New & Existing	Enter Response	Enter Response	Enter Response	Low	Staff Time, General Funds	Short-term
Action xxx-3 — Purchase generators for critical facilities and infrastructure that lack adequate backup power, including [redacted]. <i>Hazards Mitigated:</i> Dam failure, earthquake, flooding, landslide, severe weather, tsunami, wildfire						
Existing	Enter Response	Enter Response	Enter Response			

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action xxx-4—Description						
<u>Hazards Mitigated:</u> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-5—Description						
<u>Hazards Mitigated:</u> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-6—Description						
<u>Hazards Mitigated:</u> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-7—Description						
<u>Hazards Mitigated:</u> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response
Action xxx-8—Description						
<u>Hazards Mitigated:</u> Enter Response						
Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response	Enter Response

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 1-13. Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
1								
2								
3								
4								
5								
6								
7								
8								
9								

a. See the introduction to this volume for explanation of priorities.

Table 1-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilient	Community Capacity Building
High-Risk Hazards								
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
Medium-Risk Hazards								
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
Low-Risk Hazards								
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]

a. See the introduction to this volume for explanation of mitigation types.

1.9 PUBLIC OUTREACH

Table 1-15 lists public outreach activities for this jurisdiction.

Table 1-15. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]

1.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- <INSERT DOCUMENT NAME AND DESCRIPTION OF HOW IT WAS USED>
- <INSERT DOCUMENT NAME AND DESCRIPTION OF HOW IT WAS USED>
- <INSERT DOCUMENT NAME AND DESCRIPTION OF HOW IT WAS USED>

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- <INSERT DOCUMENT NAME AND DESCRIPTION OF HOW IT WAS USED>

1.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Insert text, if any; otherwise, delete section

1.12 ADDITIONAL COMMENTS

Insert text, if any; otherwise, delete section

