

# **SAN JOAQUIN COUNTY** **Multi-Jurisdictional** **Hazard Mitigation Plan** **2026**

**PUBLIC COMMENT DRAFT**

**VOLUME 2 | PLANNING PARTNER ANNEXES**



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# 1. INTRODUCTION

## 1.1 Background

San Joaquin County's initial hazard mitigation plan (HMP) was developed and adopted as a single-jurisdictional HMP in 2022. While the prior plan focused only on San Joaquin County (County), the 2026 update is a multi-jurisdictional hazard mitigation plan (MJHMP) that includes annexes for jurisdictions throughout County to address their specific capabilities, vulnerabilities, and mitigation opportunities.

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 2026 San Joaquin County Multi-Jurisdictional Hazard Mitigation Plan, a planning partnership was formed and was made up of jurisdictional representatives seeking Disaster Mitigation Act of 2000 (DMA 2000) compliance. They were responsible for participating throughout the process, reviewing information and providing input, informing the risk assessment, developing mitigation strategies, and adopting the MJHMP. The DMA 2000 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 2026 San Joaquin County Multi-Jurisdictional Hazard Mitigation Plan include the following:

- 8 municipalities
- 9 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.

## 1.2 The Planning Partnership

### 1.2.1 Initial Solicitation and Letters of Commitment

The 2026 Multi-Jurisdiction Local Hazard Mitigation Plan is being led by the San Joaquin County Office of Emergency Services in partnership with the following Planning Partners:

In September 2024, the City of Rolling Hills Estates notified its municipality and special service districts of the planning process and invited them to participate. They were asked to formally notify the County by letter of intent to participate and to identify points of contact to represent the municipality and participate throughout the planning process. The contacts each jurisdiction identified in the letter of intent to participate were informed of the planning process, attended meetings, provided direct input, and reviewed plan documents. In all, the planning team received formal commitment from 18 planning partners in addition to the County.

#### **Municipalities**

San Joaquin County (Unincorporated Area)  
City of Escalon  
City of Lathrop  
City of Lodi  
City of Manteca  
City of Mountain House  
City of Ripon  
City of Stockton  
City of Tracy

#### **Special-Purpose Districts**

Byron-Bethany Irrigation District  
Linden-Peters Rural County Fire Protection District  
Mokelumne Rural County Fire District  
Port of Stockton  
San Joaquin Area Flood Control Agency (SJAFCA)  
San Joaquin County Office of Education  
Reclamation District 348 (New Hope)  
Waterloo-Morada Rural County Fire Protection District  
Woodbridge Rural County Fire Protection District

Risk assessment maps for the planning areas are provided in Volume 1 of this MJHMP while maps showing the risk assessment results for each of the participating jurisdictions are provided in the individual annexes for each jurisdiction.

### 1.2.2 Planning Partner Expectations

The planning team and consultant, Black & Veatch Corporation (Black & Veatch), developed the following list of planning partner expectations, which were provided and discussed at a formal kickoff meeting held in October 2024:

- 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 the following:
  - Steering Committee meetings
  - Public meetings and outreach efforts
  - Workshops and planning partner-specific training sessions, and
  - 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 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 MJHMP.

By adopting the MJHMP, 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 planning partner being dropped from the planning 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.

### 1.2.3 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 2026 San Joaquin County Multi-Jurisdiction Hazard Mitigation Plan upon FEMA's approval of the plan and adoption of the plan by their individual governing bodies.

## 1.3 Annex Development

### 1.3.1 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 cities.

#### *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 the County and cities.

### ***Participation in Voluntary Programs***

Participation in voluntary programs, such as the National Weather Service's StormReady 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 to create a more resilient community. The programs reviewed here are only applicable to the County and municipality, 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.

## **1.3.2 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. The municipality 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 February 2025, each planning partner was provided with a toolkit 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 toolkits were used during the mandatory Phase 2 workshops and in follow-up work conducted by the planning partners. Planning partners reviewed the following information included in the toolkit 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.
- NFIP 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 using the same prioritization method in the 2023 California State HMP. Each action is reviewed and scored based on 15 questions, as presented in Table 1-1.

**Table 1-1 Mitigation Action Prioritization Categories**

Category	Question
Life Safety	Will the action result in life safety?
Property Protection	Will the action result in property protection?
Cost-Effective	Will the action be cost-effective (future benefits exceed cost)?
Technically Feasible	Is the action technically feasible?
Legal Authority	Does the jurisdiction have the legal authority to implement?

Category	Question
Funding Available	Is funding available for the action?
Environmental	Will the action have a positive impact on the natural environment?
Climate Change	Will the action mitigate impacts from climate change?
Equity Priority Community	Does the action benefit equity priority communities?
Administrative Capacity	Does the jurisdiction have the administrative capability to execute the action?
Multi-Hazard	Will the action reduce risk to more than one hazard?
Timeline	Can the action be completed in less than 5 years?
Stakeholder Support	Is there stakeholder (outside of jurisdiction staff) support for the action?
Other Local Objective	Will the action meet other local objectives (such as capital improvements, economic development, environmental quality, or open space preservation?)
Support Policies	Does the action support the policies of other plans and programs?

The answers to each of these questions are weighted as follows:

- Yes = 3 points
- Not sure/could be either yes or no/question is difficult to quantify = 1 point
- No = 0 points

After the scoring of each action, priorities are assigned based on the following:

- 31 or more = High Priority
- 15 to 30 = Medium Priority
- 0 to 14 = Low Priority

### ***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:

- **Local Plans and Regulations**—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.
- **Structure and Infrastructure Projects**—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.
- **Education and Awareness Programs**—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.

- **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.

### 1.3.3 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 two phases during the course of the plan update process as follows:

- Phase 1—Team, Profile, Trends, Capability Assessment, Integration Review, and Information Sources
  - Deployed: February 4, 2025
  - Due: March 28, 2025
- Phase 2—Risk Assessment, Action Plan, Information Sources, Future Needs, and Additional Comments
  - Deployed: June 18, 2025
  - Workshop: June 16 and 17, 2025
  - Due: September 5, 2025

The templates were designed to lead all planning partners through the necessary steps to generate the Disaster Mitigation Act-required elements specific to their jurisdictions. The templates and accompanying instructions were used by every planning partner to develop the jurisdictional annexes.

#### **Toolkit**

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

- Information on past hazard events that have impacted the planning area.
- The risk assessment results developed for the plan update.
- Jurisdiction-specific annex templates, with instructions for completing them.
- A catalog of mitigation best practices and suggested actions to enhance adaptive capacity.
- The results of the public survey on community awareness of hazards conducted as part of the public involvement strategy.

#### **Workshop**

All partners were required to attend and participate in a virtual technical assistance workshop held June 16 and June 17, 2025, where key elements of the annex template were discussed. The workshops focused on how the toolkit 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 toolkit.
- Natural events history.
- Jurisdiction-specific issues.
- Risk ranking.
- Status of prior actions.
- Developing the action plan.
- Benefit-cost review.
- Prioritization protocol.
- Next steps.
- Following the conclusion of the workshop, a copy of the presentation given at the workshop session was provided to each of the planning partners.

## 2. SAN JOAQUIN COUNTY (UNINCORPORATED AREAS)



Source: County of San Joaquin, California

### 2.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the unincorporated area of San Joaquin County. Members are listed below in Table 2-1.

**Table 2-1 Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Jordan DeStefans, Sr. Emergency Planner, OES	Name and Title:	Tiffany Cacho, Director, OES
Address:	2101 E. Earhart Ave. Stockton, CA 95206	Address:	2101 E. Earhart Ave. Stockton, CA 95206
Phone Number:	209-953-6200	Phone Number:	209-953-6200
Email:	<a href="mailto:jdestefans@sjgov.org">jdestefans@sjgov.org</a>	Email:	<a href="mailto:tcacho@sjgov.org">tcacho@sjgov.org</a>
<b>NFIP Floodplain Administrator</b>			
Name and Title:	Ashley Couch		
Address:	1810 E. Hazelton Ave. Stockton, CA 95205		
Phone Number:	209-953-3746		
Email:	<a href="mailto:acouch@sjgov.org">acouch@sjgov.org</a>		

Primary Point of Contact		Alternate Point of Contact
<b>Additional Planning Team Members</b>		
Name and Title:	Venki Narasimhalu, Senior Water Resources Engineer, Public Works	
Method of Participation:	Attended meetings, provided content for the annex, including flood and repetitive loss data	
Name and Title:	Kia Xiong, Public Information Officer, OES	
Method of Participation:	Attended meetings, provided content for the annex, public outreach coordination	
Name and Title:	Chris Boyer, Project Manager, Public Works	
Method of Participation:	Attended meetings, provided content for the annex	
Name and Title:	Megan Aguirre, Principal Planner, Community Development	
Method of Participation:	Provided content for the annex	

## 2.2 Jurisdictional Profile

### 2.2.1 Location and Features

San Joaquin County occupies a central location in California's vast agricultural heartland, the San Joaquin Valley. The County encompasses nearly 920,000 acres (or about 1,440 square miles) of agriculturally productive lands. The foothills of the Diablo Range define the southwest corner of the County, and the foothills of the Sierra Nevada lie along the County's eastern boundary (San Joaquin County General Plan, 2016). The County's jurisdiction covers approximately 90 percent of all land, the vast majority of which is designated General Agriculture. However, there are more intensive residential and urban uses in the County's surrounding cities and within unincorporated communities (San Joaquin County, 2023).

The County's economy is diverse and robust in its global role as a source of food and agricultural commodities, a destination for tourists, and a supply of high-tech and "green" manufactured products. Expanded educational opportunities and a highly interconnected shipping system provide a broad range of jobs across diverse industries, including those related to small, local businesses and start-ups (San Joaquin County General Plan, 2016).

San Joaquin County benefits from its location along two of California's primary north-south roadways, State Route 99 and Interstate 5, providing access in both directions. Interstates 205 and 580 offer direct connections to the San Francisco Bay Area to the west. The County's transportation network is enhanced by three transcontinental railroads, Amtrak Service, ACE Train service, an intercity bus line, a metropolitan airport, and a port that connects to the Pacific Ocean. This strategic location continues to play a major role in intra- and interstate trade, attracting non-agricultural industrial development due to relatively low land costs. Historically, food processing has been one of the area's largest manufacturing activities (San Joaquin County General Plan, 2016).

### 2.2.2 History

San Joaquin County was originally inhabited by the Northern Valley Yokuts, a Native American tribe. In the early 1800s, French-Canadian trappers and hunters arrived, marking the arrival of Europeans. At the same time, Mexican land grants covering over 100,000 acres were given, with Campo de los Franceses being the largest. These grants were characterized by the dominance of cattle and horses and were a significant part of the State's economy until the Gold Rush in the late 1840s and 1850s. San Joaquin County was a frequent stop along the

main stagecoach roads during the mid-1800s, connecting several cities. Many of the County's communities have developed along former transportation and trade routes (San Joaquin County General Plan, 2016).

Today, the County is a major agricultural producer but is transitioning towards a more industrial and service-based economy. The population is concentrated in eight cities. Several unincorporated communities, which originally served surrounding agricultural activities, are now important residential and employment centers (San Joaquin County General Plan, 2016). The unincorporated communities in San Joaquin County are:

- Acampo
- Banta
- Chrisman
- Clements
- Collierville
- Coopers Corner
- Farmington
- French Camp
- Glenwood
- Lammersville
- Linden
- Lockeford
- Morada
- New Jerusalem
- Noble Acres
- Peters
- Stoneridge
- Thornton
- Vernalis
- Victor
- Woodbridge

### 2.2.3 Governance

The County government is composed of the elected five-member Board of Supervisors, several other elected offices including the Sheriff, District Attorney, and Assessor, and numerous county departments and entities under the supervision of the County Administrator. The County serves as the local government for all unincorporated areas.

The San Joaquin County Board of Supervisors assumes responsibility for the adoption of this plan; the San Joaquin County Office of Emergency Services will oversee its implementation.

## 2.3 Growth and Development Trends

### 2.3.1 Population

According to the California Department of Finance 2025 estimates, San Joaquin County has a population of 805,856. The county has experienced steady population growth over the past decade, with an increase of approximately 12.5% from 2010 to 2021. This growth is attributed to both natural increase and net migration.

San Joaquin County's population is diverse, with a significant proportion of residents identifying as Hispanic or Latino (42.9%), followed by White (32.8%), Asian (15.6%), and African American (7.6%)<sup>1</sup>. The county also has a relatively young population, with a median age of 34.8 years.

The county's population density is approximately 541.5 people per square mile, reflecting both urban and rural characteristics. The largest cities in the county include Stockton, Tracy, Manteca, and Lodi, which together account for a significant portion of the county's population.

### 2.3.2 Equity Priority Communities

Vulnerable populations include groups that experience disproportionate impacts of disasters as they often cannot protect themselves during disaster and may require assistance with daily activities. Identified vulnerable

populations include the population that is 65 years and older, Children under 5, and the socially vulnerable parts of the County identified in this plan.

### 2.3.3 Development

San Joaquin County is experiencing significant growth in both residential and commercial properties. Recent development trends indicate a focus on infill development, with an emphasis on affordable housing and secondary units. The County's 2035 General Plan guides future growth, ensuring that actions related to land use, annexations, zoning, subdivision and design review, redevelopment, and capital improvements are consistent with the plan.

The County's strategic location along major transportation routes, including State Route 99 and Interstate 5, continues to attract non-agricultural industrial development due to relatively low land costs. This has led to an increase in commercial and industrial projects, particularly in areas with access to the County's robust transportation network, which includes railroads, an intercity bus line, a metropolitan airport, and a port that connects to the Pacific Ocean.

Future development is expected to be managed following the County's general plan, with a focus on sustainable growth.

**Table 2-2 Recent and Expected Future Development Trends**

Criterion	Response				
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?	No				
If yes, give the estimated area annexed and estimated number of parcels or structures.	N/A				
Is your jurisdiction expected to annex any areas during the performance period of this plan?	No				
If yes, describe land areas and dominant uses.	N/A				
If yes, who currently has permitting authority over these areas?	N/A				
Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.	Currently, the county does not track this.				
Are any areas targeted for development or major redevelopment in the next five years?	No				
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	We do have applications that have been submitted to our department for various development projects.				
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?					
	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Single Family	606	517	251	279	263
Multi-Family	56	43	44	15	43

Criterion	Response					
	Other (mobile homes, accessory dwellings, mixed use, etc.)	75	80	48	34	31
	Commercial	65	75	57	63	40
	Total	802	715	400	391	377
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>According to the General Plan Housing Element, recent development in residential areas shows an average development capacity of 75 percent of the maximum allowed by the General Plan.</p> <p>The County will ensure that any projects approved with fewer housing units and/or at lower densities than assumed in the Housing Element will not affect the County’s ability to meet, at a minimum, its remaining share of regional housing needs.</p>					

## 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 or improve upon 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.

### 2.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop policies and programs and to implement rules and regulations to protect and serve community members. Local policies are typically identified in a variety of community plans, implemented via a local ordinance, and enforced through a governmental body. An assessment of planning and regulatory capabilities is presented in Table 2-3.

**Table 2-3 Planning and Regulatory Capabilities**

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>				
Building Code	Yes	No	Yes	Yes
Comment:	2022 California Building Standards Code, California Code of Regulations Title 24, Parts 1-12			
Zoning Code	Yes	No	Yes	Yes
Comment:	Ordinance Code of San Joaquin County, California Chapter 9-901 Planning and Review Authorities			
Subdivisions	Yes	No	Yes	Yes
Comment:	Ordinance Code of San Joaquin County, California Chapter 9-500 Subdivision Regulations			
Stormwater Management	Yes	No	Yes	Yes
Comment:	Ordinance Code of San Joaquin County, California Chapter 9-600 Infrastructure Standards: General Provisions			
Post-Disaster Recovery	Yes	Yes	No	Yes
Comment:	San Joaquin County Long-Term Recovery Plan; County of San Joaquin Emergency Operations Plan			
Real Estate Disclosure	Yes	Yes	No	Yes
Comment:	Ordinance Code of San Joaquin County, California 6-9003 Real Estate Transfer Disclosure Statement			
Growth Management	No	No	Yes	No
Comment:	California law requires every city and county to have a "general plan" that serves as a long-term blueprint for future development. The San Joaquin County General Plan was last updated in 2016.			
Site Plan Review	Yes	Yes	Yes	Yes
Comment:	Ordinance Code of San Joaquin County, California Chapter 9-303 Planned Development Zone			
Environmental Protection	Yes	No	Yes	Yes
Comment:	Ordinance Code of San Joaquin County, California Title 5 Health and Sanitation			
Flood Damage Prevention	Yes	No	Yes	Yes
Comment:	Ordinance Code of San Joaquin County, California Chapter 9-703 - Flood Hazards			
Emergency Management	Yes	No	No	Yes
Comment:	County of San Joaquin Emergency Operations Plan			
Climate Change	Yes	No	Yes	No
Comment:	Action Plan In development in partnership with the City of Stockton			
<b>Planning Documents</b>				
General Plan	Yes	No	Yes	Yes

		Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Is the General Plan compliant with Assembly Bill 2140?		Yes			
Comment:	2035 General Plan, December 2016				
Capital Improvement Plan		Yes	No	No	Yes
How often is the plan updated?		Enter number of years.			
Comment:	Updated annually; published every 3-5 years.				
Disaster Debris Management Plan		No	Yes	No	Yes/No
Comment:	Regional plan under development should be completed by the publishing of this plan.				
Floodplain or Watershed Plan		Yes	No	Yes	Yes
Comment:	Ordinance Code of San Joaquin County, California Chapter 9-703 - Flood Hazards				
Stormwater Plan		Yes	No	No	Yes
Comment:	The San Joaquin County Region Stormwater Resource Plan				
Urban Water Management Plan		No	No	Yes	No
Comment:	Ordinance Code of San Joaquin County, California Chapter 9-703 - Flood Hazards				
Habitat Conservation Plan		Yes	Yes	No	Yes
Comment:	Signatory on SJCOG's plan				
Economic Development Plan		Yes	No	No	Yes
Comment:	San Joaquin County, CA Comprehensive Economic Development Strategy Plan				
Community Wildfire Protection Plan		No	No	No	No
Comment:	Partnership with fire districts for community material.				
Forest Management Plan		No	Yes	No	No
Comment:	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan				
Climate Action Plan		Yes	No	Yes	Yes
Comment:	In development in partnership with the City of Stockton				
Threat & Hazard Identification & Risk Assessment (THIRA)		Yes	No	No	Yes
Comment:	Completed 2025				
Post-Disaster Recovery Plan		Yes	No	No	Yes
Comment:	Long-term and short-term plans				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Continuity of Operations Plan	Yes	No	No	Yes
Comment:	Development in progress			
Public Health Plan	Yes	No	Yes	Yes
Comment:	Community Health Improvement Plan for San Joaquin County			

***Opportunities to Expand Planning and Regulatory Capabilities***

The planning and regulatory capabilities of the City can be expanded by integrating the County-wide hazard mitigation plan into the City’s various plans as listed in

Table 2-14 and below:

- Building Code
- Zoning Code
- Subdivision Ordinance
- Municipal Code (Stormwater Management, Real Estate Disclosure, Site Plan Review, Environmental Protections, Flood Damage Prevention, Floodplain or Watershed Plan,
- Regional Stormwater Plan
- Climate Action Plan
- Economic Development Plan
- Capital Improvement Plan
- San Joaquin County Long-Term Recovery Plan; County of San Joaquin Emergency Operations Plan
- General Plan
- Disaster Debris Management Plan
- San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)
- Threat and Hazard Identification and Risk Assessment (THIRA)
- Community Health Improvement Plan for San Joaquin County
- Continuity of Operations Plan (In progress)

The updated Hazard Mitigation Plan (HMP) serves as a foundational framework for enhancing resilience. By integrating the HMP into the Building and Zoning Codes, Subdivision Ordinance, and Municipal Code, the county can enforce risk-reducing design standards, promote flood-resilient development, and ensure site plans account for environmental vulnerabilities. Alignment with the Regional Stormwater Plan and Climate Action Plan supports proactive adaptation to extreme weather and hydrological shifts. The HMP also informs strategic investments in the Capital Improvement Plan and guides sustainable growth in the Economic Development and General Plans. Coordination with the Emergency Operations Plan, Long-Term Recovery Plan, and Disaster Debris Management Plan ensures continuity and rapid recovery post-disaster. Further, embedding HMP priorities into the SJMSCP, THIRA, and Community Health Improvement Plan strengthens ecological protections and public health preparedness. Finally, incorporating mitigation strategies into the Continuity of Operations Plan ensures essential services remain functional during disruptions, reinforcing countywide resilience.

### 2.4.2 Development and Permitting Capabilities

Jurisdictions 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 lead to hazard mitigation. Development and permitting capabilities are presented in Table 2-4.

**Table 2-4 Development and Permitting Capabilities**

Criterion	Response
Does your jurisdiction issue development permits?	Yes
If no, who does? If yes, which department?	Community Development Dept.
Does your jurisdiction track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	No

### 2.4.3 Fiscal Capabilities

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. An assessment of fiscal capabilities is presented in Table 2-5.

**Table 2-5 Fiscal Capabilities**

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

#### ***Opportunities to Expand Fiscal Capabilities***

The fiscal capabilities listed above indicate that the County can provide the funding match for mitigation grants that may be leveraged through the development of this mitigation plan update. The primary opportunity to expand fiscal capabilities is through an updated, approved mitigation plan.

### 2.4.4 Administrative and Technical Capabilities

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 2-6.

**Table 2-6 Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	Yes
If Yes, Department /Position:	Community Development Dept. – Asst., Assoc., Sr., Prin., Deputy

Staff/Personnel Resource		Available?
Engineers or professionals trained in building or infrastructure construction practices		Yes
If Yes, Department /Position:		
Planners or engineers with an understanding of natural hazards		Yes
If Yes, Department /Position:	OES, PW, CDD	
Staff with training in benefit-cost analysis		Yes
If Yes, Department /Position:	OES, PW, CDD	
Surveyors		Yes
If Yes, Department /Position:	PW	
Personnel skilled or trained in GIS applications		Yes
If Yes, Department /Position:	Office of Emergency Services, Public Works, Information Systems Division, Assessor-Recorder-County Clerk Office	
Scientist familiar with natural hazards in local area		No
If Yes, Department /Position:		
Emergency manager		Yes
If Yes, Department /Position:	Office of Emergency Services, Director of Emergency Operations	
Grant writers		Yes
If Yes, Department /Position:	OES, PW, CDD	
Procurement Services and Management		Yes
If Yes, Department /Position:	Purchasing, Individual department finance	

### ***Opportunities to Expand Administrative and Technical Capabilities***

Administrative and technical capabilities are a community’s staff, skills and tools. These capabilities can be used for mitigation planning and to carry out specific mitigation actions. They also include the ability to access, coordinate and implement these resources effectively (FEMA 2023). An assessment of administrative and technical capabilities is presented in Table 2-6.

#### **2.4.5 Education and Outreach Capabilities**

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 2-7.

**Table 2-7 Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes

Criterion		Response
Do you have hazard mitigation information available on your website?		Yes
If yes, briefly describe:	Website dedicated to the development of the MJHMP	
Do you use social media for hazard mitigation education and outreach?		Yes
If yes, briefly describe:	Social media posts	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?		No
If yes, briefly describe:		
Do you have any other programs in place that could be used to communicate hazard-related information?		Yes
If yes, briefly describe:		
Do you have any established warning systems for hazard events?		Yes
If yes, briefly describe:	SJReady Alerts, WEA/EAS	

### **Opportunities to Expand Education and Outreach Capabilities**

As of July 1, 2025, the Office of Emergency Services was awarded \$50,000 in general funds to support language translation and interpretation services. This funding enhances OES’s outreach capabilities and strengthens efforts to ensure equitable access to critical information for all San Joaquin County community members.

Additional opportunities for OES to continue advancing accessibility for community members who may have access and functional needs (AFN), including individuals who are blind or have low vision would be to procuring assistive reading devices for use during press conferences and town hall meetings.

OES will continue collaborating with community-based organizations (CBOs) and faith-based organizations (FBOs) to ensure the needs of individuals with access and functional needs (AFN) are effectively addressed.

### **2.4.6 Community Classifications**

Other programs, such as the Community Rating System and StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 2-8.

**Table 2-8 Community Classifications**

	Participating?	Classification or Number	Date Classified
Federal Information Processing Standards (FIPS) Code	Yes	06077	N/A
Unique Identity ID (UEI)	No	N/A	N/A
Community Rating System (CRS)	Yes	7	10/01/2018
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	4	01/01/2019

	Participating?	Classification or Number	Date Classified
Public Protection (ISO for Fire Districts)	Yes	Listed in individual Fire District Annexes	
NWS StormReady®	Yes	N/A	N/A
Firewise USA	No	N/A	N/A

## 2.4.7 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The community’s adaptive capacity for the impacts of climate change is presented in Table 2-9.

**Table 2-9 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	Medium
<b>Comment:</b> Understanding of impacts, but no formal actions underway.	
Jurisdiction-level monitoring of climate change impacts	Medium
<b>Comment:</b> Monitoring programs for climate change indicators are in place including the following: High water marks from increased flood activity Drought and water usage monitoring	
Technical resources to assess proposed strategies for feasibility and externalities	Medium
<b>Comment:</b> Regional partnerships	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Medium
<b>Comment:</b>	
Capital planning and land use decisions informed by potential climate impacts	High
<b>Comment:</b>	
Participation in regional groups addressing climate risks	Medium
<b>Comment:</b>	
<b>Implementation Capacity</b>	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Medium
<b>Comment:</b>	
Identified strategies for greenhouse gas mitigation efforts	High
<b>Comment:</b>	

Criterion	Jurisdiction Rating <sup>a</sup>
Identified strategies for adaptation to impacts	Medium
<b>Comment:</b>	
Champions for climate action in local government departments	Medium
<b>Comment:</b>	
Political support for implementing climate change adaptation strategies	Medium
<b>Comment:</b>	
Financial resources devoted to climate change adaptation	Low
Local authority over sectors likely to be negative impacted	Medium
<b>Comment:</b>	
<b>Public Capacity</b>	
Residents' knowledge of and understanding of climate risk	Medium
<b>Comment:</b>	
Residents' support of adaptation efforts	Medium
<b>Comment:</b>	
Residents' capacity to adapt to climate impacts	Medium
<b>Comment:</b>	
Local economy current capacity to adapt to climate impacts	Medium
<b>Comment:</b>	
Local ecosystems capacity to adapt to climate impacts	Medium
<b>Comment:</b>	

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 National Flood Insurance Program Compliance

Flooding is the costliest natural hazard in the United States. Community participation in the NFIP opens up opportunity for additional grant funding associated specifically with flooding issues. Assessment of the jurisdiction's current NFIP status and compliance provides planners with a greater understanding of the local flood management program, opportunities for improvement, and available grant funding opportunities. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 2-10.

**Table 2-10 National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Public Works Water Resources

Criterion		Response
Who is your floodplain administrator? (department/position)		Fritz Buchman, C.E., T.E., CFM [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?		10/11/2016
Does your floodplain management program meet or exceed minimum requirements?		Yes
When was the most recent Community Assistance Visit or Community Assistance Contact?		12/6/2022
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
If so, what type of assistance/training is needed?	CFM	
Does your jurisdiction have a Substantial Damage Response Plan?		No
How does your jurisdiction assess substantial damages after a hazard event?		Yes
Does your jurisdiction participate in the Community Rating System (CRS)?		Yes
If yes, is your jurisdiction interested in improving its CRS Classification?		Yes
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup>		2,652
What is the insurance in force?		\$775,010,000
What is the premium in force?		\$2,584,654
How many total loss claims have been filed in your jurisdiction? <sup>a</sup>		305
What were the total payments for losses?		\$7,351,797

a. According to FEMA statistics as of 12/2025

## 2.6 Integration

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.

## 2.6.1 Existing Integration

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

- CIP – Projects span both plans
- General Plan Safety Element – The current HMP is integrated in the Safety Element
- THIRA – This MJHMP update was used as a foundation for the THIRA
- Countywide Drought Plan Update – Integrated in this MJHMP and checked for consistency with data in this MJHMP

## 2.6.2 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:

- Regional Stormwater Plan – The risk assessment in this MJHMP can inform the next update
- Climate Action Plan – The capabilities assessment in this MJHMP can be referenced if the County develops a Climate Action Plan
- Capital Improvement Plan – The mitigation action plan in this MJHMP included projects from the CIP
- General Plan – This MJHMP will be integrated by reference in the Safety Element

## 2.7 Risk Assessment

### 2.7.1 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	Declaration Title	Disaster # (Federal or State)	Declaration Date (Federal or State)	Damage Assessment
Levee Failure	Victoria Island Levee Incident		5/28/25	Approx. \$1.75 million in repair costs
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	\$771,672 in impacts to the County due to extreme storm activity and precipitation
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	DR-4683-CA CA23-1	1/4/23	\$5.85 million in impacts to the County due to intense storm activity and atmospheric river event
Extreme Heat	Heat/Energy Extreme Temp Response Plan		8/31/22	Impacted the entire County, stressed the power grid and caused sporadic instances of power loss.
Tornado	-	-	2022	Tornado touchdown 8 miles ESE of Isleton
Flood	-	-	10/2021	Atmospheric river event created flooding issues as local pumps and storm drains were unable to keep pace with the precipitation across the County
Wildfire	SCU Complex Fire	CA20-2	8/18/20	396,624 acres burned along the Coastal Range from Merced County into San Joaquin County
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	\$6.6 million

### 2.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for Unincorporated San Joaquin County is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the City in identifying hazards that pose the most significant threat. 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.

While dam failure and levee failure are listed as low-ranked hazards, the potential impacts of these hazards may be significant. The County’s primary hazard risks include dam and levee failure, so mitigation initiatives will be prioritized for these hazards.

**Table 2-12 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability (1-4 index value with 30% weighting factor)	Impact (1-4 index value with 30% weighting factor)	Spatial Extent (1-4 index value with 20% weighting factor)	Warning Time (1-4 index value with 10% weighting factor)	Climate Change (1-4 index value with 10% weighting factor)		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.3	.9	.2	.1	.3	1.8	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

Notes:

- PRI Value 1 to 1.9 = Low Hazard Risk Ranking
- PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking
- PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### **2.7.3 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: 11
- Number of FEMA-identified Severe-Repetitive-Loss Properties: None
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 1

#### ***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:

- Unhoused population digging into the levees which creates increased flood risk, encampments and associated accumulations of debris in the delta area contribute to flooding issues

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

## 2.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Status of Prior Plan Actions
- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 2-13 Status of Prior Plan Actions**

Project Number	Project Name and Description	Responsible Party	Status (No Progress, In Progress, Complete, Ongoing Capability)  Provide a brief explanation of implementation process.	Should the action be included in the Plan Update (i.e., there is still a need, this is still a priority)?	
				Yes/No  If no, explain why not including in Plan Update	Action # in Update
Action 1	Howard Road - Northeast side on the eastern approach to the bridge over the San Joaquin River - The embankment on Howard Road bridge approach over the San Joaquin River suffered a slip-out failure on the upper most portion of the northeast side of the eastern approach to bridge. The scope of work for the project is to provide embankment reinforcement.	County Department of Public Works	In Progress – work plans are finished, and the project is ready to start. The County has received funding to move forward and is now waiting for the funds to be released.	Yes	8
Action 2	Kennefick Road - Flooding resulting from heavy rains washed away the culverts and destroyed over 100 feet of Kennefick Road eliminating access to properties north of Liberty Road. The project is to increase the drainage capacity beneath Kennefick Road with a larger diameter culvert or a box culvert.	County Department of Public Works	Complete – the County completed this project using FEMA HMGP funding. The project started in July 2023 and was completed in January 2024	No – project is complete	-

Project Number	Project Name and Description	Responsible Party	Status (No Progress, In Progress, Complete, Ongoing Capability)  Provide a brief explanation of implementation process.	Should the action be included in the Plan Update (i.e., there is still a need, this is still a priority)?	
				Yes/No  If no, explain why not including in Plan Update	Action # in Update
Action 3	North Frontage Road (backflow valve at North 99 Frontage Road) - Flooding poses a safety risk for users of the roadway and has caused damage to the structural section of the roadway. The Project is to reduce the flooding of the roadway section with the design and construction of improved backflow prevention valve and theft proof enclosure. In addition, repair of the roadway section that has been flooded.	County Department of Public Works	In Progress – work plans are finished, and the project is ready to start. The County has received funding to move forward and is now waiting for the funds to be released.	Yes	9
Action 4	Larch Road - Between South Corral Hollow Road North Tracy Boulevard - Larch Road between South Corral Hollow Road North Tracy Boulevard, concerning the southern ditch that runs along the length of the project (approx. 5,200 feet). The objective of this project is to mitigate the impact of flooding. Poor drainage on the rural residential and mix-use properties along the south side of west Larch Road results in sheet flow runoff towards the north that finds its way into the County's southern conveyance ditch on the south side of West Larch Road. This runoff overwhelms this ditch's current capacity, reduced by encroachment and undersized culvert crossings. The trench is approximately 5,200 feet long and drains to southerly flowing drainage along north Tracy Boulevard. The project is to reduce the flooding of the roadway section with the	County Department of Public Works	In Progress – work plans are finished, and the project is ready to start. The County has received funding to move forward and is now waiting for the funds to be released.	Yes	10

Project Number	Project Name and Description	Responsible Party	Status (No Progress, In Progress, Complete, Ongoing Capability)  Provide a brief explanation of implementation process.	Should the action be included in the Plan Update (i.e., there is still a need, this is still a priority)?	
				Yes/No  If no, explain why not including in Plan Update	Action # in Update
	design and construction of an improved backflow prevention valve and theft-proof enclosure. In addition, repair the roadway section that flooded.				
Action 5	Purdy Culvert Replacement - Installation of an additional storm drain culvert	Engineer and County Department of Public Works	Completed with local funds	No – project is complete	
Action 6 (8 in HMP)	Corral Hollow Creek (Chrisman Road Elevation of residences) - Elevation of Homes	Engineer and County Department of Public Works	No action	No – elevation project is deemed not needed at this time due to other mitigation efforts to reduce flood risk	
Action 7	San Joaquin County Climate Change Plan - Develop a county wide climate change plan	County Office of Emergency Services	No action to develop this plan, but a severe weather plan discussed the amplification of severe weather hazards due to climate change. County is including climate considerations across planning efforts rather than a stand-alone plan.	Remove as a separate action, due to already being included in other plans.	
Action 8 (12 in HMP)	Vegetation Management Coordination (Fire Wise Community Coordination) - Two incidents involving the Wildland Urban Interface have occurred in the County, prompting participants to recommend this	County Coordinator and Fire Agencies Chiefs	In Progress – Partially funded by fire safety grants; no Fire Wise communities have been started yet, but local communities are considering their	Yes	11

Project Number	Project Name and Description	Responsible Party	Status (No Progress, In Progress, Complete, Ongoing Capability)  Provide a brief explanation of implementation process.	Should the action be included in the Plan Update (i.e., there is still a need, this is still a priority)?	
				Yes/No  If no, explain why not including in Plan Update	Action # in Update
	project to address this low occurrence threat. The anticipated outcome of the County Coordinator grant program is to create a report establishing a baseline of all fire mitigation agencies inclusive of contact information, area represented, and a gap analysis identifying needs and improvements. Establish information for fire mitigation agencies that could take the form of a newsletter, information portal or website, as determined by the collective group. Quantifying the coordination efforts for meetings, trainings, and coordinated events by increased participation from various groups. County Coordinator will work on grant applications, identification of regional mitigation efforts, and completion of reports required for grant progress and management of this grant. This program would also look to strengthen the relationships with the Cal FIRE Units with State Responsibility Areas within the County, creating collaboration opportunities for vegetation management or additional mitigation efforts.		next steps. The County will seek more funding to support these communities in joining the Fire Wise program.		
Action 9 (13 in HMP)	Drought Awareness Campaign - Develop a Public Awareness Campaign to advertise and promote on the SJReady webpage to encourage water conservation during drought conditions.	County Office of Emergency Services	Ongoing Capability – on OES’s SJReady website ( <a href="https://sjready.org/">https://sjready.org/</a> ), there is information on disasters and emergencies that can impact the County. The County provides important	No - this is an ongoing capability for the County and an action they are	-

Project Number	Project Name and Description	Responsible Party	Status (No Progress, In Progress, Complete, Ongoing Capability)  Provide a brief explanation of implementation process.	Should the action be included in the Plan Update (i.e., there is still a need, this is still a priority)?	
				Yes/No  If no, explain why not including in Plan Update	Action # in Update
			links and information for homeowners on the different hazards (power outages, flood, extreme weather, earthquake, etc.). They provide a link to sign up for the County's emergency alert notification system as well. This information is shared on the County's website and social media platforms.	continually updating and improving.	
Action 10 (14 in HMP)	Dam Partnerships - Continue to partner with dam operators to identify projected flood path of travel as if total loss of dam occurs. Additionally, implement an alert system capable of notifying residents of emergencies through landlines, cell phones, and emails in the immediate path of a failure	County Office of Emergency Services	In Progress/Ongoing Capability – County continues to work with dam owners/operators regarding dam safety.  The County has implemented an alert system through identifying pre-defined zones for the inundations areas of high hazard dams. Warnings range from 24-48 hours.	Yes	12

**Table 2-14 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, Hydration, Shelter Energy Communications Transportation	Existing	1, 3, 4	Lead: DPW Support: OES	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund, Grant Funding	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including: <ul style="list-style-type: none"> <li>• Building Code</li> <li>• Zoning Code</li> <li>• Subdivision Ordinance</li> <li>• Municipal Code (Stormwater Management, Real Estate Disclosure, Site Plan Review, Environmental Protections, Flood Damage Prevention, Floodplain or Watershed Plan,</li> </ul>	Safety And Security Communications Transportation Water Systems	New	6	Lead: OES, Support: CDD, DPW	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	<ul style="list-style-type: none"> <li>Regional Stormwater Plan</li> <li>Economic Development Plan</li> <li>Capital Improvement Plan</li> <li>San Joaquin County Long-Term Recovery Plan; County of San Joaquin Emergency Operations Plan</li> <li>General Plan</li> <li>Disaster Debris Management Plan</li> <li>Threat and Hazard Identification and Risk Assessment (THIRA)</li> <li>Community Health Improvement Plan for San Joaquin County</li> <li>Continuity of Operations Plan (In progress)</li> </ul>								
3	Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a	N/A	New	6	Lead: DPW	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	<p>minimum, meet the NFIP requirements:</p> <ul style="list-style-type: none"> <li>Enforce the flood damage prevention ordinance.</li> <li>Participate in floodplain identification and mapping updates.</li> <li>Provide public assistance/information on floodplain requirements and impacts.</li> </ul>								
4	<p>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"> <li>Climate Action Plan</li> <li>San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)</li> </ul>	<p>Communications</p> <p>Safety and Security</p>	<p>New, Existing</p>	<p>1, 3</p>	<p>Lead: CDD</p>	<p>Yes</p>	<p>Low (\$0-\$50,000)</p>	<p>Staff Time, General Fund</p>	<p>Short-Term (less than 5 years)</p>
5	<p>Purchase generators for City-owned critical facilities and infrastructure that lack adequate backup power.</p>	<p>Safety and Security</p> <p>Energy</p> <p>Communications</p>	<p>Existing</p>	<p>3, 5</p>	<p>Lead: DPW</p> <p>Support: OES</p>	<p>Yes</p>	<p>Low (\$0-\$50,000)</p>	<p>Staff Time, General Fund</p>	<p>Short-Term (less than 5 years)</p>

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
6	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	Safety and Security, Energy, Communications, Transportation, Water Systems	Existing	3, 5	Lead: OES Support: All Planning Partners	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
7	Remnant Creek through Kenefick, Dustin, and Collier: Road elevation, culvert replacements, & channel regrade.	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)
8	Howard Road - Northeast side on the eastern approach to the bridge over the San Joaquin River - The embankment on Howard Road bridge approach over the San Joaquin River suffered a slip-out failure on the upper most portion of the northeast side of the eastern approach to bridge. The scope of work for the project is to provide embankment reinforcement.	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)
9	North Frontage Road (backflow valve at North 99 Frontage Road) - Flooding poses a safety risk for users of the roadway and	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	has caused damage to the structural section of the roadway. The Project is to reduce the flooding of the roadway section with the design and construction of improved backflow prevention valve and theft proof enclosure. In addition, repair of the roadway section that has been flooded.								
10	Larch Road - Between South Corral Hollow Road North Tracy Boulevard - Larch Road between South Corral Hollow Road North Tracy Boulevard, concerning the southern ditch that runs along the length of the project (approx. 5,200 feet). The objective of this project is to mitigate the impact of flooding. Poor drainage on the rural residential and mix-use properties along the south side of west Larch Road results in sheet flow runoff towards the north that finds its way into the County's southern	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	conveyance ditch on the south side of West Larch Road. This runoff overwhelms this ditch's current capacity, reduced by encroachment and undersized culvert crossings. The trench is approximately 5,200 feet long and drains to southerly flowing drainage along north Tracy Boulevard. The project is to reduce the flooding of the roadway section with the design and construction of an improved backflow prevention valve and theft-proof enclosure. In addition, repair the roadway section that flooded.								
11	Vegetation Management Coordination (Fire Wise Community Coordination) - Two incidents involving the Wildland Urban Interface have occurred in the County, prompting participants to recommend this project to address this low occurrence threat. The	All	New, Existing	1, 4, 7	Lead: County Coordinator Support: Fire Agencies Chiefs	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	<p>anticipated outcome of the County Coordinator grant program is to create a report establishing a baseline of all fire mitigation agencies inclusive of contact information, area represented, and a gap analysis identifying needs and improvements. Establish information for fire mitigation agencies that could take the form of a newsletter, information portal or website, as determined by the collective group. Quantifying the coordination efforts for meetings, trainings, and coordinated events by increased participation from various groups. County Coordinator will work on grant applications, identification of regional mitigation efforts, and completion of reports required for grant progress and management of this grant. This program would also look to strengthen the</p>								

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	relationships with the Cal FIRE Units with State Responsibility Areas within the County, creating collaboration opportunities for vegetation management or additional mitigation efforts.								
12	Dam Partnerships - Continue to partner with dam operators to identify projected flood path of travel as if total loss of dam occurs. Additionally, implement an alert system capable of notifying residents of emergencies through landlines, cell phones, and emails in the immediate path of a failure.	Safety and Security	New, Existing	1, 2, 3, 6	Lead: OES	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
13	Linne Rd & Bird Rd: Remove sediment, regrade channel, & extend channel	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)
14	Gill Creek: (West of CA 99) Channel re-establishment, & ROW acquisition	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
15	Temple Creek & Van Allen: Vegetation removal, & overtopping bridge replacement	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)
16	Calaveras River & DeMartini Ln: Vegetation and channel work, & bridge replacement	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)
17	Potter Creek & Escalon-Bellota: Channel reinforcement and repair; & vegetation management	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)
18	Copperopolis, between Duncan & Dietrich: Channel vegetation, regrading, & reinforcement	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)
19	Little Johns Creek South of Gawne: Culvert resize, erosion protection, & channel regrade	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)
20	Lone Tree Creek Above Zumwalt: Bridge/road	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time,	Short-Term (less

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	elevation, vegetation removal, & channel grading							General Fund	than 5 years)
21	Lone Tree Creek on Van Allen & Blackmore: Bridge replacement, channel regrade, vegetation & blockage removal	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)
22	Temple Creek and Biedman: Bridge widening, vegetation management, & channel regrade	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)
23	Lone Tree Creek and Jack Tone Rd: Channel regrading, vegetation, sediment, and debris removal, & H&H analysis of the bridge	Transportation	Existing	1, 4, 5,	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)
24	North San Joaquin County Area Local Floodplain Delineation: Lower Sacramento Road, west of Acampo; Peltier Road, Adjacent to Mokelumne River; Unnamed Dry Creek Tributary, east of CA 99; Coyote Creek Watershed near Dry Creek Road &	-	New and Existing	2, 6, 7	Lead: DPW	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	Liberty Road; and SE of Liberty & Sowles Rd								

**Table 2-15 Mitigation Action Prioritization**

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	0	3	3	3	3	1	0	3	3	3	1	3	3	3	3	35	High
#4	1	1	3	1	1	1	1	3	3	1	3	3	1	3	3	30	High
#5	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium
#6	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#7																	TBD
#8																	TBD
#9																	TBD
#10																	TBD
#11																	TBD
#12																	TBD
#13																	TBD
#14																	TBD

#15																		TBD
#16																		TBD
#17																		TBD
#18																		TBD
#19																		TBD
#20																		TBD
#21																		TBD
#22																		TBD
#23																		TBD
#24																		TBD

Table 2-16 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards											
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire	
#1		■			■		■		■		■	■	■	■	■	■	■	■

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■	■	■		■		■					■		■	■		
#4	■				■			■		■	■			■	■		■
#5					■		■		■	■			■	■	■		■
#6	■		■				■	■	■	■	■	■	■	■	■	■	■
#7																	
#8																	
#9																	
#10																	
#11																	
#12																	
#13																	
#14																	

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#15																	
#16																	
#17																	
#18																	
#19																	
#20																	
#21																	
#22																	
#23																	
#24																	

## 2.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 2-17.

**Table 2-17 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Mailers for A Zone and Repetitive Loss Properties in accordance with CRS activities 300 and 500	Annually in the Fall	Varies
In 2025, the Office of Emergency Services (OES) participated in 19 community events, promoting the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) public survey through a QR code. These events collectively reached and served more than 9,500 San Joaquin County community members.	2025	9,500
OES distributed the MJHMP digital toolkit to members of the Operational Area Joint Information System, which consists of 101 public information officers and communicators across San Joaquin County. The OA JIS serves as the primary mechanism for coordinating public messaging countywide.	Throughout the planning process	N/A
During 2025, OES delivered nine community presentations to partner agencies and local organizations, including the French Camp Municipal Advisory Council, Kennedy Community Center, Lathrop Senior Center, Linden Lions Club, Little Manila Rising Community Resilience Workshop, Manteca Senior Center, Native CORE – Men’s Warrior Circle and Youth Group, and the Ripon Library.	2025	N/A
The top-performing MJHMP social media post in 2025 was the Community Meeting announcement shared on January 28, achieving an engagement rate of 13.2%, 157 link clicks, 1,289 impressions, and a reach of 1,220 people.	2025	1,289

## 2.10 Information Sources Used for This Annex

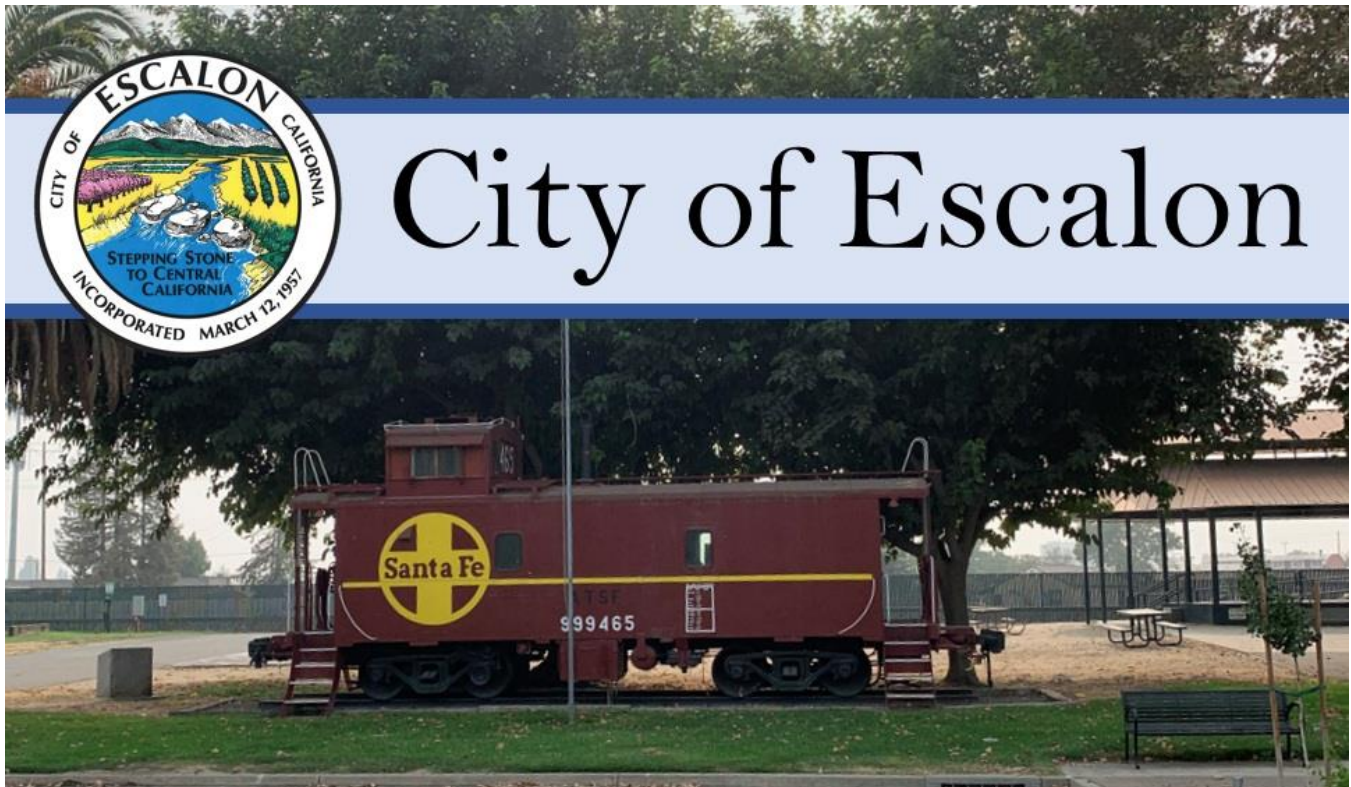
The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **General Plan December 2016** – Used for the community profile

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.

### 3. CITY OF ESCALON



Source: City of Escalon

#### 3.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the City of Escalon. Members are listed below in Table 3-1.

Table 3-1 Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Robert Hardgraves, Chief of Police	Name and Title:	Diana Trejo, Assistant Planner
Address:	2040 McHenry Avenue Escalon, CA 95320	Address:	2040 McHenry Avenue Escalon, CA 95320
Phone Number:	209-691-7358	Phone Number:	209-691-7422
Email:	rhardgraves@cityofescalon.org	Email:	dtrejo@cityofescalon.org

Primary Point of Contact		Alternate Point of Contact
<b>NFIP Floodplain Administrator</b>		
Name and Title:	Diana Trejo, Assistant Planner	
Address:	2040 McHenry Avenue Escalon, CA 95320	
Phone Number:	209-691-7422	
Email:	<a href="mailto:dtrejo@cityofescalon.org">dtrejo@cityofescalon.org</a>	
<b>Additional Planning Team Members:</b>		
Name and Title:	Diana Trejo, Assistant Planner	
Method of Participation:	Provided support documentation, references, and general information as needed	
Name and Title:	Juston Collins, Public Works Superintendent	
Method of Participation:	Roundtable meeting to complete document Information regarding water & sewer infrastructure	
Name and Title:	Jaylen French, City Manager	
Method of Participation:	Roundtable meeting to complete document	
Name and Title:	Ceinda Bickner, Finance Director	
Method of Participation:	Roundtable meeting to complete document	
Name and Title:	Trevin Barber, CALED-ACE, Development and Community Services Manager	
Method of Participation:	Reviewed the annex and provided mitigation strategies	

## 3.2 Jurisdictional Profile

### 3.2.1 Location and Features

According to the California Department of Finance 2025 estimates, Escalon has a population of 7,232. The City is located in San Joaquin County in California’s Central Valley. It is situated along the San Joaquin River and is surrounded by agricultural land and orchards. The City is dominated primarily by the agricultural industries and is home to the largest walnut processing facility in the world, DeRuosi Nut (City of Escalon 2025).

The City is located near several major highways, including Highway 120 and Highway 99. California State Route 120 runs through Escalon connecting it to the Bay Area and to the west through Oakdale where it merges with California State Route 108 to the Sierra Nevada. McHenry Avenue runs south towards Modesto crossing the Stanislaus River over the newly rebuilt McHenry Bridge (City of Escalon 2025).

The Tidewater Southern Railway and BNSF Railway Stockton Subdivision run through Escalon and divide the town northwest to southeast. Escalon has a large agricultural industry that primarily supports the City. The largest walnut processing facilities in the world are in Escalon (City of Escalon 2025).

### 3.2.2 History

Escalon came into being in the late 1800s because of agricultural production in the immediate area and the need to get the products of that agriculture to market by railroad. John Wheeler Jones settled here with his family in the

1850s, and his son, James Wesley Jones, laid out the community of Escalon 40-plus years later. Although Escalon was incorporated in 1957 and celebrated its 50-year anniversary in 2007 by proclamation of Escalon's city council, 1994 was officially acknowledged as the year to celebrate the Escalon centennial (Willis 2008).

In 1898, the Santa Fe Depot was constructed (along the San Francisco and San Joaquin Valley Railroad line) and operated until 1970. It was located alongside the Santa Fe Railroad Tracks that bisect the heart of Escalon near Main Street's intersections with Second Street (Willis 2008).

### 3.2.3 Governance

Escalon is a full-service General Law City and is managed utilizing the Council-Manager form of government. All five Council members are elected at large to four years terms, with the Mayor and Mayor Pro Tem appointed by Council every two years (City of Escalon 2024).

The Chief of Police assumes responsibility for the adoption of this plan; the Chief of Police will oversee its implementation.

### 3.2.4 Assets

**Table 3-2 Assets**

Asset	Value
Property	
Land owned for all City Buildings	\$14,684,718
Equipment	
Total length of pipe 34 miles ( \$1.32 million per mile X 34 miles)	\$44,880,000
Water Assets	\$ 8,258,632
Sewer Assets	\$ 128,002
Wastewater Assets	\$ 3,674,117
Stormwater Assets	\$ 2,018,724
Transportation Assets	\$ 140,870
<i>Total:</i>	<i>\$59,100,345</i>
Critical Facilities	
Administrative Building – 2040 Mchenry Ave	\$ 1,753,813
Administrative Building – 2060 Mchenry Ave	\$ 1,964,923
Community Center – 1010 Mchenry Ave	\$ 1,985,331
Library Building – 1540 2 <sup>nd</sup> Street	\$ 2,114,213
Animal Shelter Building – 2100 E River Road	\$ 1,690,999
Waste Water Treatment Plant – 25100 River Road	\$ 3,728,379

Public Works Building – 2103 Main Street	\$ 780,000
Pump Stations – City Wide (10 x \$43,000)	\$ 430,000
<i>Total:</i>	<i>\$ 14,447,658</i>

### 3.3 Growth and Development Trends

#### 3.3.1 Population

Escalon’s population as of 2023 was 7,429 (U.S. Census Bureau n.d.).

#### 3.3.2 Equity Priority Communities

The City identified three community locations that may require additional assistance in an emergency/ disaster situation:

- 1) Almond Grove Mobile Home Park, 2505 Jackson Avenue, is a senior living community.
- 2) Heritage House Senior Housing, 1100 Escalon Avenue, is a senior living community
- 3) Golden Acres Home and Care, 1101 California Street, is an assisted living care facility.

#### 3.3.3 Development

Anticipated future development for Escalon is low. In the recent past, Escalon has experienced little growth. There is a proposed annexation and development of an approximate 17-acre subdivision consisting of around 75 homes, but that is still in the planning and permitting phase. Other than that, the City is focusing on economic and business development rather than residential.

**Table 3-3 Recent and Expected Future Development Trends**

Criterion	Response
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?	No
If yes, give the estimated area annexed and estimated number of parcels or structures.	N/A
Is your jurisdiction expected to annex any areas during the performance period of this plan?	Yes
If yes, describe land areas and dominant uses.	~17-acre lot on the southeast corner of Hwy 120 and Brennan Road for residential subdivision.
If yes, who currently has permitting authority over these areas?	San Joaquin County
Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.	N/A

Criterion	Response					
Are any areas targeted for development or major redevelopment in the next five years?	Yes					
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	Development of a land parcel into a residential neighborhood, not in a hazard risk area.					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
	Single Family	11	6	2	1	1
	Multi-Family	0	0	0	0	0
	Other (mobile homes, accessory dwellings, mixed use, etc.)	1	1	2	1	1
	Commercial	1	2	0	2	0
	Total	13	9	4	4	2
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.	90% buildout					

### 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 or improve upon 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.

#### 3.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop policies and programs and to implement rules and regulations to protect and serve community members. Local policies are typically identified in a variety of community plans, implemented via a local ordinance, and enforced through a governmental body. An assessment of planning and regulatory capabilities is presented in Table 3-4.

**Table 3-4 Planning and Regulatory Capabilities**

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>				
Building Code	Yes	No	Yes	No
Comment:	Escalon Municipal Code §15.08 (Adopted 1985)			
Zoning Code	Yes	No	Yes	No
Comment:	Escalon Municipal Code §17 (Adopted 2005)			
Subdivisions	Yes	No	Yes	No
Comment:	Escalon Municipal Code §16 (Adopted 2007)			
Stormwater Management	Yes	No	Yes	No
Comment:	Escalon Municipal Code §13.15 (Adopted 2014)			
Post-Disaster Recovery	No	Yes	No	No
Comment:	-			
Real Estate Disclosure	No	Yes	Yes	No
Comment:	California Civil Code §1102 (Adopted 1/1/2020)			
Growth Management	Yes	No	Yes	No
Comment:	Escalon Municipal Code §15.04 (Adopted 2008)			
Site Plan Review	Yes	Yes	Yes	No
Comment:	Escalon Municipal Code §17.54.030 (Adopted 2005)			
Environmental Protection	Yes	No	Yes	No
Comment:	Escalon Municipal Code §17.58 (Adopted 2005)			
Flood Damage Prevention	Yes	No	Yes	No
Comment:	Escalon Municipal Code §17.32 (Adopted 2005)			
Emergency Management	Yes	No	No	No
Comment:	City of Escalon Emergency Disaster Plan (Adopted September 1992)			
Climate Change	No	No	Yes	No
Comment:	-			

		Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Planning Documents</b>					
General Plan		Yes	No	Yes	No
Is the General Plan compliant with Assembly Bill 2140?			Yes		
Comment:	Escalon General Plan (Amended 12/2/2019)				
Capital Improvement Plan		Yes	No	No	No
How often is the plan updated?		1 year			
Comment:	Capital Improvement Program 2018-2019 Through 2020-2021				
Disaster Debris Management Plan		No	Yes	No	No
Comment:	-				
Floodplain or Watershed Plan		Yes	No	Yes	No
Comment:	Escalon Municipal Code §17.32 (Adopted 2005)				
Stormwater Plan		Yes	No	No	No
Comment:	Escalon Municipal Code §13.15 (Adopted 2014)				
Urban Water Management Plan		Yes	No	Yes	No
Comment:	Escalon Municipal Code §13.04 (Adopted 1985)				
Habitat Conservation Plan		No	Yes	No	No
Comment:	Use SJCOG plan				
Economic Development Plan		No	No	No	Yes
Comment:	-				
Community Wildfire Protection Plan		No	No	No	No
Comment:	-				
Forest Management Plan		No	Yes	No	No
Comment:	-				
Climate Action Plan		No	No	Yes	No
Comment:	During the next General Plan Safety Element update, the City will integrate climate adaptation or pursue grants to develop a climate action, resilience, and adaptation plan.				
Threat & Hazard Identification & Risk Assessment (THIRA)		No	No	No	No
Comment:	-				
Post-Disaster Recovery Plan		Yes	No	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Comment:	City of Escalon Emergency Disaster Plan (Adopted September 1992)			
Continuity of Operations Plan	Yes	No	No	No
Comment:	City of Escalon Emergency Disaster Plan (Adopted September 1992)			
Public Health Plan	No	No	Yes	No
Comment:	-			
Emergency Plan	Yes	No	Yes	No
Comment:	City of Escalon Emergency Disaster Plan (Adopted September 1992)			

### Opportunities to Expand Planning and Regulatory Capabilities

The City has identified numerous opportunities to integrate the HMP into plans, codes, and ordinances. The Economic Development Plan can be updated to include plans for community solvency in the aftermath of disaster. Additionally, the City is reviewing its growth model to determine if changes are required or desired. Refer to Table 3-14 for a mitigation action to integrate the following plans and codes:

- Economic Development Plan

### 3.4.2 Development and Permitting Capabilities

Jurisdictions 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 lead to hazard mitigation. Development and permitting capabilities are presented in Table 3-5.

**Table 3-5 Development and Permitting Capabilities**

Criterion	Response
Does your jurisdiction issue development permits?	Yes
If no, who does? If yes, which department?	Building & Planning
Does your jurisdiction track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	No

### 3.4.3 Fiscal Capabilities

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. An assessment of fiscal capabilities is presented in Table 3-6.

**Table 3-6 Fiscal Capabilities**

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
If yes, specify:	Water, sewer, garbage	
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

**Opportunities to Expand Fiscal Capabilities**

The City passed Measure P, a 1% General Fund tax measure that took effect in 2025. The City also charges developmental impact fees. Through building new residences and expanding the tax base, as well as growing local business, the City can expand its fiscal capabilities.

**3.4.4 Administrative and Technical Capabilities**

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 3-7.

**Table 3-7 Administrative and Technical Capabilities**

Staff/Personnel Resource		Available?
Planners or engineers with knowledge of land development and land management practices		Yes
If Yes, Department /Position:	Planning and Engineering / Development & Community Services Manager Planning and Engineering / Assistant Planner	
Engineers or professionals trained in building or infrastructure construction practices		Yes
If Yes, Department /Position:	Planning and Engineering / Development & Community Services Manager Planning and Engineering / Assistant Planner	
Planners or engineers with an understanding of natural hazards		Yes

Staff/Personnel Resource		Available?
If Yes, Department /Position:	Planning and Engineering / Development & Community Services Manager Planning and Engineering / Assistant Planner	
Staff with training in benefit-cost analysis		Yes
If Yes, Department /Position:	Finance / Finance Director	
Surveyors		No
If Yes, Department /Position:	-	
Personnel skilled or trained in GIS applications		Yes
If Yes, Department /Position:	Escalon supplements limited in-house capacity with consultant support and regional partnerships.	
Scientist familiar with natural hazards in local area		No
If Yes, Department /Position:	-	
Emergency manager		Yes
If Yes, Department /Position:	City Manager Police Department / Chief of Police Public Works / Public Works Superintendent	
Grant writers		No
If Yes, Department /Position:	-	
Procurement Services and Management		No
If Yes, Department /Position:	-	

### ***Opportunities to Expand Administrative and Technical Capabilities***

Due to Escalon’s small size, hiring dedicated personnel to fill certain positions is cost prohibitive; however, more cross training of current personnel to fulfil other duties may be accomplished.

### **3.4.5 Education and Outreach Capabilities**

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 3-8.

**Table 3-8 Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	No
Do you have personnel skilled or trained in website development?	Yes

Criterion		Response
Do you have hazard mitigation information available on your website?		Yes
If yes, briefly describe:	Website, social media, newsletter	
Do you use social media for hazard mitigation education and outreach?		Yes
If yes, briefly describe:	Repost and share county OES notices	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?		No
If yes, briefly describe:	-	
Do you have any other programs in place that could be used to communicate hazard-related information?		Yes
If yes, briefly describe:	Everbridge Resident Connect	
Do you have any established warning systems for hazard events?		Yes
If yes, briefly describe:	Everbridge Resident Connect	

### ***Opportunities to Expand Education and Outreach Capabilities***

The City can expand its outreach via currently utilized platforms, such as Facebook, X, Instagram, the City website, as well as the cities quarterly newsletter.

### **3.4.6 Community Classifications**

Other programs, such as the Community Rating System and NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 3-9.

**Table 3-9 Community Classifications**

	Participating?	Classification or Number	Date Classified
Federal Information Processing Standards (FIPS) Code	Yes	060771190	N/A
Unique Entity Identifier (UEI)	Yes	UF1GHMDHMRK9	N/A
Community Rating System (CRS)	No	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	N/A	N/A
Public Protection (ISO for Fire Districts)	No	N/A	N/A
NWS StormReady	No	N/A	N/A
Firewise USA	No	N/A	N/A

### 3.4.7 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The community’s adaptive capacity for the impacts of climate change is presented in Table 3-10.

**Table 3-10 Adaptive Capacity for Climate Change**

Criterion		Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>		
Jurisdiction-level understanding of potential climate change impacts		High
Comment:	The earth’s climate has fluctuated significantly over its multi-billion year history from global tropical climates to global ice ages. We are currently in a warming trend that is believed to be accelerated by human caused emission. Current estimates predict global average temperature will increase ~3.5° F over the next century. This will result in hotter summer months and could increase water use and evaporation, leading to faster depletion of ground water reservoirs.	
Jurisdiction-level monitoring of climate change impacts		Low
Technical resources to assess proposed strategies for feasibility and externalities		Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory		Low
Capital planning and land use decisions informed by potential climate impacts		Low
Participation in regional groups addressing climate risks		Low
<b>Implementation Capacity</b>		
Clear authority/mandate to consider climate change impacts during public decision-making processes		Low
Identified strategies for greenhouse gas mitigation efforts		Low
Identified strategies for adaptation to impacts		High
Comment:	Cooling centers on extreme heat days; connection to surface water (Woodward Reservoir)	
Champions for climate action in local government departments		Low
Political support for implementing climate change adaptation strategies		Low
Financial resources devoted to climate change adaptation		Low
Local authority over sectors likely to be negative impacted		Low
<b>Public Capacity</b>		
Residents’ knowledge of and understanding of climate risk		Unsure
Residents’ support of adaptation efforts		Unsure

Criterion		Jurisdiction Rating <sup>a</sup>
Residents' capacity to adapt to climate impacts		High
Comment:	Air Conditioning; Outdoor watering schedule	
Local economy current capacity to adapt to climate impacts		High
Comment:	Cooling centers on extreme heat days; connection to surface water (Woodward Reservoir)	
Local ecosystems capacity to adapt to climate impacts		High
Comment:	The earth's flora and fauna has adapted over millions of years and will continue to adapt	

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 National Flood Insurance Program Compliance

Flooding is the costliest natural hazard in the United States. Community participation in the NFIP opens up opportunities for additional grant funding associated specifically with flooding issues. Assessment of the jurisdiction's current NFIP status and compliance provides planners with a greater understanding of the local flood management program, opportunities for improvement, and available grant funding opportunities. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 3-11.

**Table 3-11 National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Planning and Development
Who is your floodplain administrator? (department/position)	Planning & Development / City Planner
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	2005
Does your floodplain management program meet or exceed minimum requirements?	Yes
When was the most recent Community Assistance Visit or Community Assistance Contact?	10/16/2009
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
If so, what type of assistance/training is needed?	-

Criterion	Response
Does your jurisdiction have a Substantial Damage Response Plan?	No
How does your jurisdiction assess substantial damages after a hazard event?	Building Official conducts inspections after a hazard event
How many structures in your jurisdiction’s Special Flood Hazard Area (SFHA) have been determined to be substantially damaged from any hazard event?	0
Does your jurisdiction maintain a list of properties that have been damaged from a hazard event, including flooding?	No
Does your jurisdiction maintain a list of property owners interested in flood mitigation?	No
If so, how many property owners are interested in mitigation (elevation or acquisition)?	N/A
How many properties have already been mitigated (elevation or acquisition)?	0
Does your jurisdiction participate in the Community Rating System (CRS)?	No
If yes, is your jurisdiction interested in improving its CRS Classification?	-
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup>	4
What is the insurance in force?	\$1,050,000
What is the premium in force?	\$3,339
How many total loss claims have been filed in your jurisdiction? <sup>a</sup>	0
What were the total payments for losses?	\$0

a. According to FEMA statistics as of 12/2025

## 3.6 Integration

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.

### 3.6.1 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:

- Economic Development Plan update for business post disaster contingency plans. Refer to Action #2 in Table 3-14.
- Emergency Management Plan update for policies to address hazards and risks identified in this plan before, during, and after disaster. Refer to Action #2 in Table 3-14.
- Climate Adaptation Plan integrated into the General Plan Safety Element or a standalone plan. Refer to Action #15 in Table 3-14.

## 3.7 Risk Assessment

### 3.7.1 Jurisdiction-Specific Natural Hazard Event History

Table 3-12 lists past occurrences (since 2020) of natural hazards for which specific impacts were 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 3-12 Past Natural Hazard Events**

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Local Impacts
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/2023	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February-Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Local Impacts
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022-January 2023 Storms	CA23-1	1/4/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	The City was subject to closures and social distancing/masking requirements.

### 3.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for the City of Escalon is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the City in identifying hazards that pose the most significant threat. Table 3-13 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.

**Table 3-13 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability (1-4 index value with 30% weighting factor)	Impact (1-4 index value with 30% weighting factor)	Spatial Extent (1-4 index value with 20% weighting factor)	Warning Time (1-4 index value with 10% weighting factor)	Climate Change (1-4 index value with 10% weighting factor)		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.3	.9	.2	.1	.3	1.8	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

Notes:  
 PRI Value 1 to 1.9 = Low Hazard Risk Ranking  
 PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking  
 PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### 3.7.3 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 City noted their reliance on the wastewater treatment plan (flood and erosion vulnerability), regional power grid, rail crossings, and the Highway 120 corridor.

### 3.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 3-14 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas (e.g., earthquake), prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter; Energy; Communications; Transportation	Existing	1, 3, 4	Lead: Assistant Planner Support: City Manager	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including: <ul style="list-style-type: none"> <li>• Economic Development Plan</li> <li>• Emergency Management Plan</li> </ul>	Safety and Security; Communications; Transportation; and Water Systems	New	6	Lead: City Manager Support: Assistant Planner	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
3	<p>Continue to maintain good standing and compliance with the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:</p> <ul style="list-style-type: none"> <li>Evaluate the current floodplain ordinance to determine if updates are needed</li> <li>Update and adopt the City's floodplain ordinance to meet the minimum requirements of the NFIP</li> </ul>	All located in the floodplain	New, Existing	1, 2	Lead: Assistant Planner Support: City Manager	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
4	<p>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"> <li>Public outreach</li> <li>Integrate into the appropriate plans</li> </ul>	Communications Safety and Security	New and Existing	1, 3	Lead: Assistant Planner Support: City Manager	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
5	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	N/A	New	6	Lead: Police Chief Support: Assistant Planner	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
6	Purchase generators for City-owned critical facilities and infrastructure that lack adequate backup power.	Safety and security; Energy; Communications	Existing	1, 3, 4, 5	Lead: Public Works Director	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
7	Wastewater Treatment Plant Flood & Power Resilience Upgrades to action plan. The WWTP is one of Escalon’s highest value assets (\$3.7M) and is located near River Road – a known hazard corridor. As a community lifeline and critical facility, the City will floodproof, berm, elevate electrical equipment, harden the SCADA system, and install a backup generator at this WWTP.	Safety and Security; Water Systems	Existing	1, 3, 4, 5	Lead: Public Works Director	Yes	Very High (\$1,000,000 and above)	FEMA FMA and HMGP, General Fund	Short-Term (less than 5 years)
8	Stormwater System Capacity Improvements (Citywide Priority Basins). Stormwater assets are valued at \$2M+ and are aging; climate driven intense rainfall is increasing. The City proposes to upsize culverts, add inlets, detention retrofits, and green infrastructure to protect the system from future storm-related events.	Safety and Security; Water Systems	Existing	1, 3, 4, 5	Lead: Public Works Director	Yes	High (\$250,001 - \$1,000,000)	FEMA FMA and HMGP, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
9	Backup Power for All Critical Pump Stations (10 total). The City's 10 pump stations do not have backup power. During a power outage, there is a disruption in operations and	Safety and Security; Water Systems	Existing	1, 3, 4, 5	Lead: Public Works Director	Yes	Moderate (\$50,001 - \$250,000)	FEMA HMGP, General Fund	Short-Term (less than 5 years)
10	Emergency Operations Center (EOC) Modernization / Hardening. The City lacks a modern EOC. This projects includes the hardening of the current EOC, upgrades to current communication systems, and installation of redundant power including backup generators.	Safety and Security	Existing	1, 2, 3, 4, 5	Lead: Police and Fire	Yes	Very High (\$1,000,000 and above)	General Fund	Long-Term (5 or more years)
11	Railroad Crossing Safety & Emergency Access Improvements. The BNSF line bisects the City. At times, there are blocked crossings that pose a hazard to the City and its residents for evacuation and emergency response. The City proposes signal upgrades, preemption, and alternative access routes.	Safety and Security; Transportation	Existing	1, 2, 3, 4, 5	Lead: City Council Support: BNSF	Yes	Very High (\$1,000,000 and above)	FEMA HMGP, General Fund	Long-Term (5 or more years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
12	Citywide Wildfire Resistant Landscaping & Fuel Reduction at Critical Facilities. While the City is not in a WUI, several critical facilities (public works yard, WWTP, and pump stations) are still in need of defensible space. This project includes vegetation management, installing fire resistant landscaping, and hardscape buffers around each of the critical facilities in the City.	Safety and Security; Energy; Water Systems	Existing	1, 3, 4, 5, 7	Lead: Public Works Director	Yes	High (\$250,001 - \$1,000,000)	FEMA HMGP, General Fund, Staff Time	Short-Term (less than 5 years)
13	Well & Water System Seismic Resilience Upgrades. Water assets in the City are valued at \$8.2M and in need of seismic retrofits. This project includes the installation of anchors and flexible couplings at the systems, telemetry upgrades, and the installation of backup power at each.	Safety and Security; Water Systems	Existing	1, 3, 4, 5	Lead: Public Works Director	Yes	High (\$250,001 - \$1,000,000)	FEMA HMGP, General Fund, Staff Time	Long-Term (5 or more years)
14	Update the City's Emergency Disaster Plan. The Current plan is from 1992 and in need of updating. As part of the update, the City will review the HMP and integrate where appropriate into the Emergency Disaster Plan.	N/A	N/A	3	Lead: Police and Fire	Yes	Low (less than \$50,000)	General Fund, Staff Time	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
15	Climate Adaptation Plan. The City is in need of a climate adaptation plan. During the next update of the City's General Plan Safety Element, the City will integrate climate adaptation into the safety element. If funding becomes available prior to the update, the City will prepare a standalone climate adaptation plan.	N/A	N/A	4, 6	Lead: City Council	Yes	Low (less than \$50,000)	General Fund, Staff Time	Short-Term (less than 5 years)

**Table 3-15 Mitigation Action Prioritization**

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	0	1	1	1	1	26	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	37	High
#3	0	3	3	3	3	1	0	3	3	3	1	3	3	3	3	35	High
#4	1	1	3	1	1	1	1	3	3	1	3	3	1	3	3	29	Medium

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#5	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#6	3	3	3	3	3	3	3	3	3	3	3	3	1	1	1	39	High
#7	3	3	3	3	3	1	0	3	3	3	3	3	1	3	1	36	High
#8	3	3	3	3	3	1	0	3	3	3	3	3	1	3	1	36	High
#9	3	3	3	3	3	1	0	1	3	3	3	3	1	3	1	34	High
#10	3	3	3	3	3	1	0	1	3	3	3	1	1	3	1	32	High
#11	3	3	3	3	1	1	0	1	3	3	3	1	1	3	1	30	Medium
#12	3	3	3	3	3	1	1	3	3	3	3	3	1	3	1	37	High
#13	3	3	3	3	3	1	0	1	3	3	1	1	1	3	1	30	Medium
#14	3	0	3	3	3	1	0	1	3	3	3	3	1	3	1	31	High
#15	1	1	3	3	3	1	0	3	3	3	3	3	1	1	1	30	Medium

Notes:  
31 or more = High Priority  
15 to 30 = Medium Priority  
0 to 14 = Low Priority

Table 3-16 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■				■								
#2	■		■			■	■	■	■	■	■	■	■	■	■	■	■
#3	■	■	■		■	■	■					■		■	■		
#4	■				■			■	■	■	■			■	■		■
#5	■				■	■	■		■	■			■	■	■		■
#6	■	■			■		■					■		■	■		
#7		■			■	■	■					■		■			
#8		■			■	■	■	■				■		■	■		
#9		■			■	■	■	■	■	■	■	■	■	■	■	■	■
#10		■				■	■	■	■	■	■	■	■	■	■	■	■
#11		■				■	■	■	■	■	■	■	■	■	■	■	■
#12		■		■	■	■											■
#13		■			■				■		■					■	
#14	■					■	■	■	■	■	■	■	■	■	■	■	■
#15	■				■	■	■	■	■	■	■	■	■	■	■	■	■

### 3.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 3-17.

**Table 3-17 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Share San Joaquin OES alerts with residents via social media	Ongoing	-
Advertise heat advisories & Cooling centers via social media	When appropriate	-
Watering schedule sent out with water bills	Monthly	-
City Newsletter	Quarterly	-
Supported the countywide outreach efforts for this plan including promoting the public survey.	Throughout the planning process	TBD

### 3.10 Information Sources Used for This Annex

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

- Escalon Municipal Code – Used to develop the capability assessment
- California Civil Code (leginfo.ca.gov) – Used to develop the capability assessment
- City of Escalon Emergency Disaster Plan – Used to develop 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.

### 3.11 Hazard Mapping

Jurisdiction-specific risk maps of the hazards are provided on the following pages. For a complete description of each hazard, please see the applicable chapters in Volume 1 of this plan. These maps are based on the vulnerability and risk assessment results for this plan.

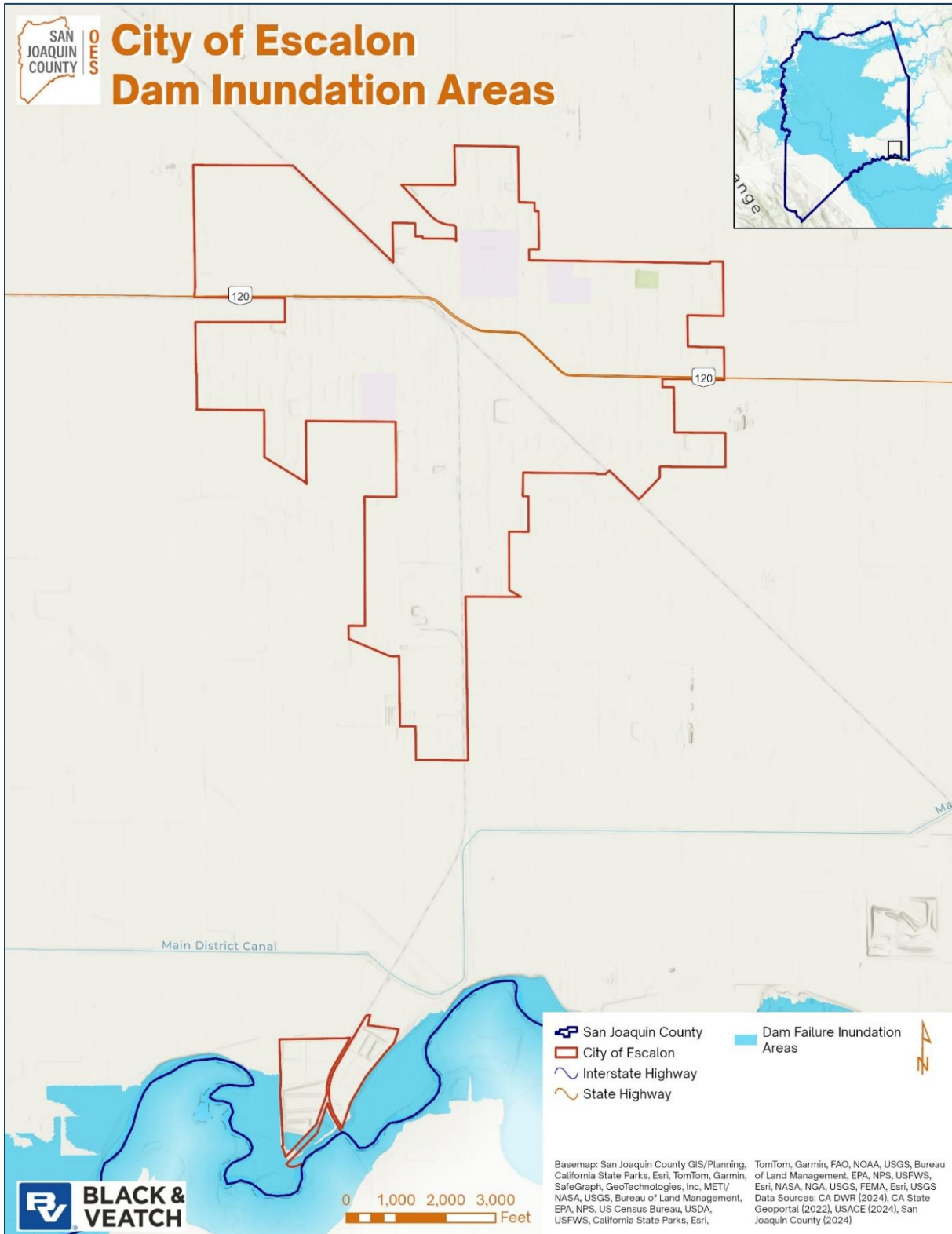


Figure 3-1 Dam Inundation Areas

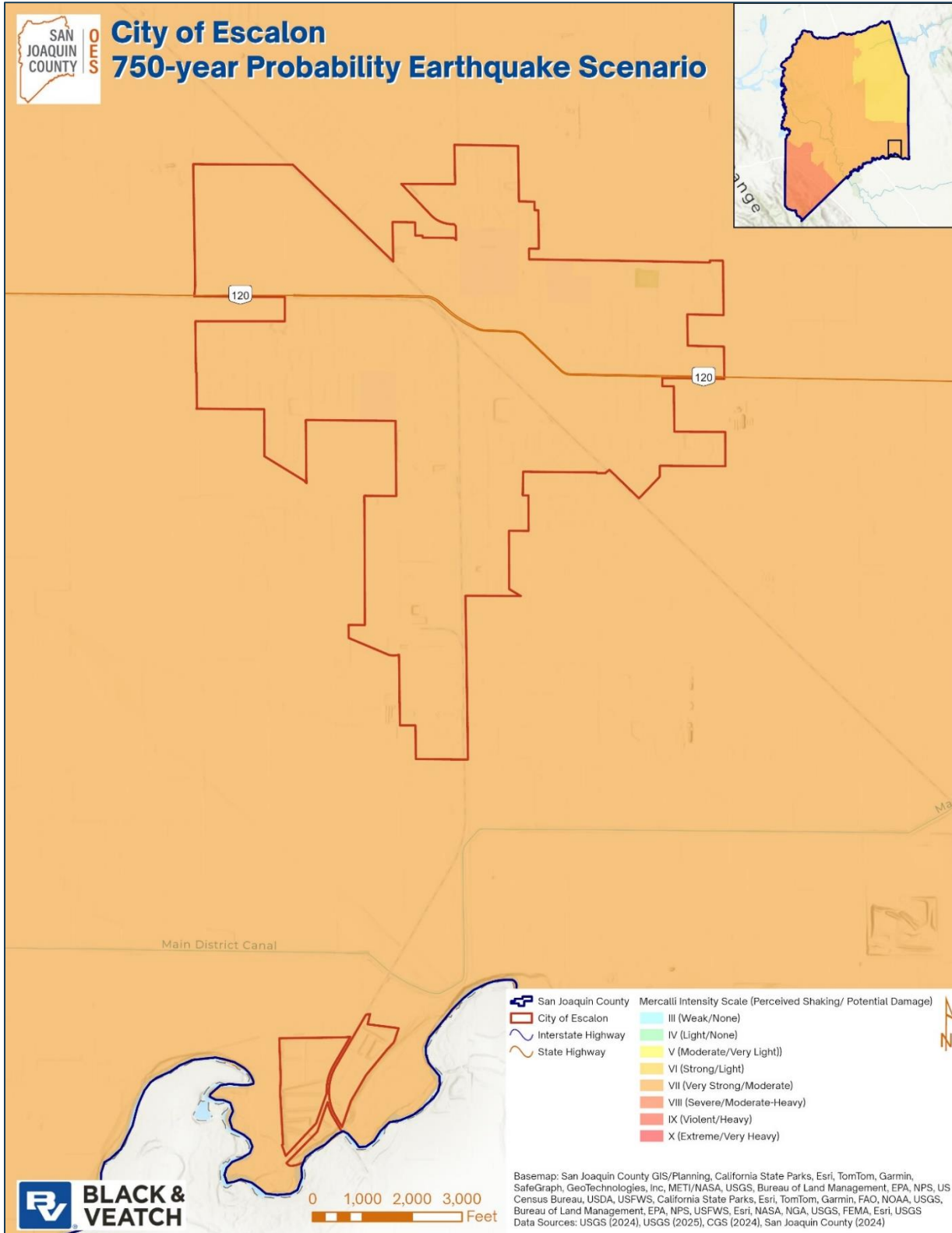


Figure 3-2 750-Year Probability Earthquake Scenario

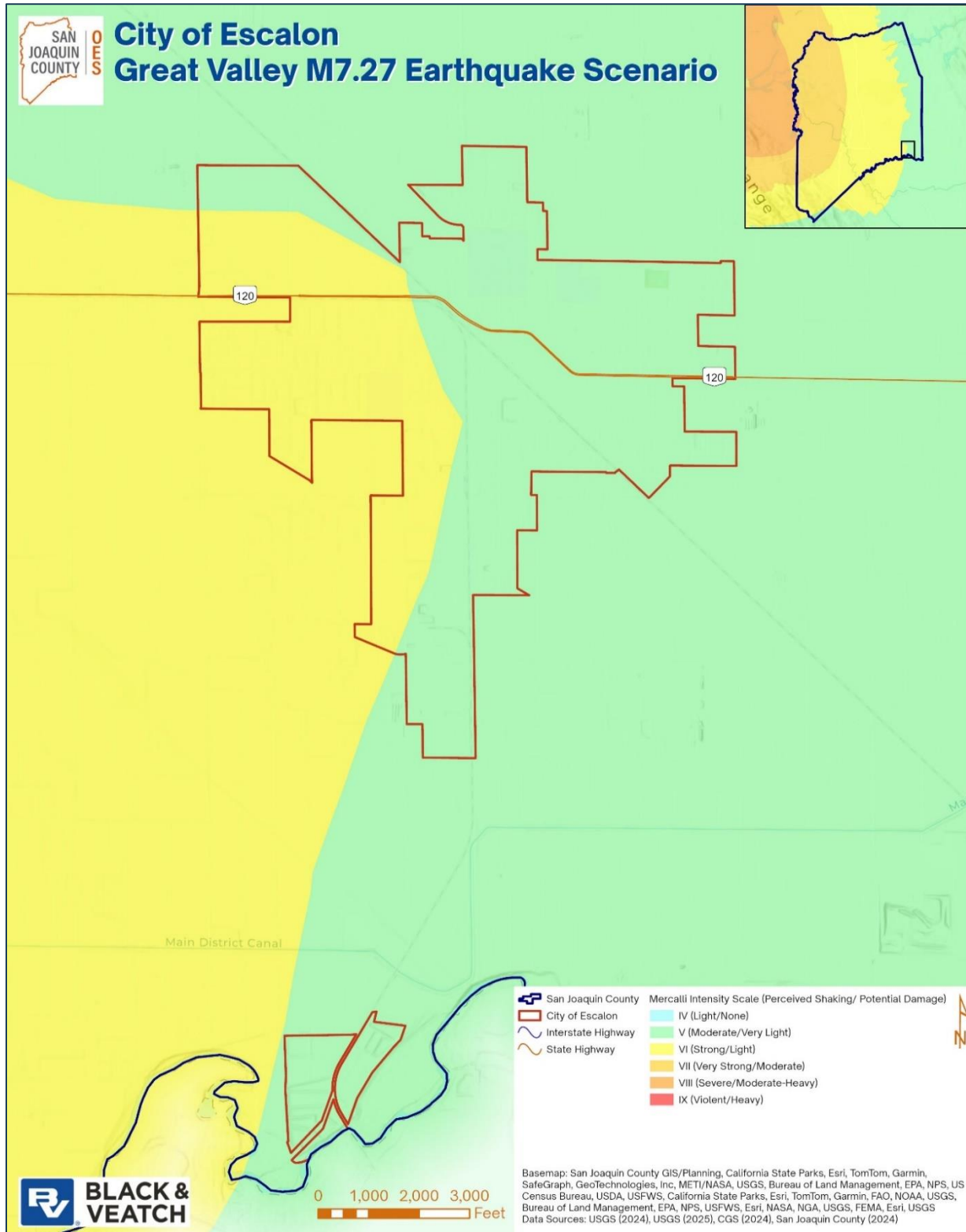


Figure 3-3 Great Valley M7.27 Earthquake Scenario

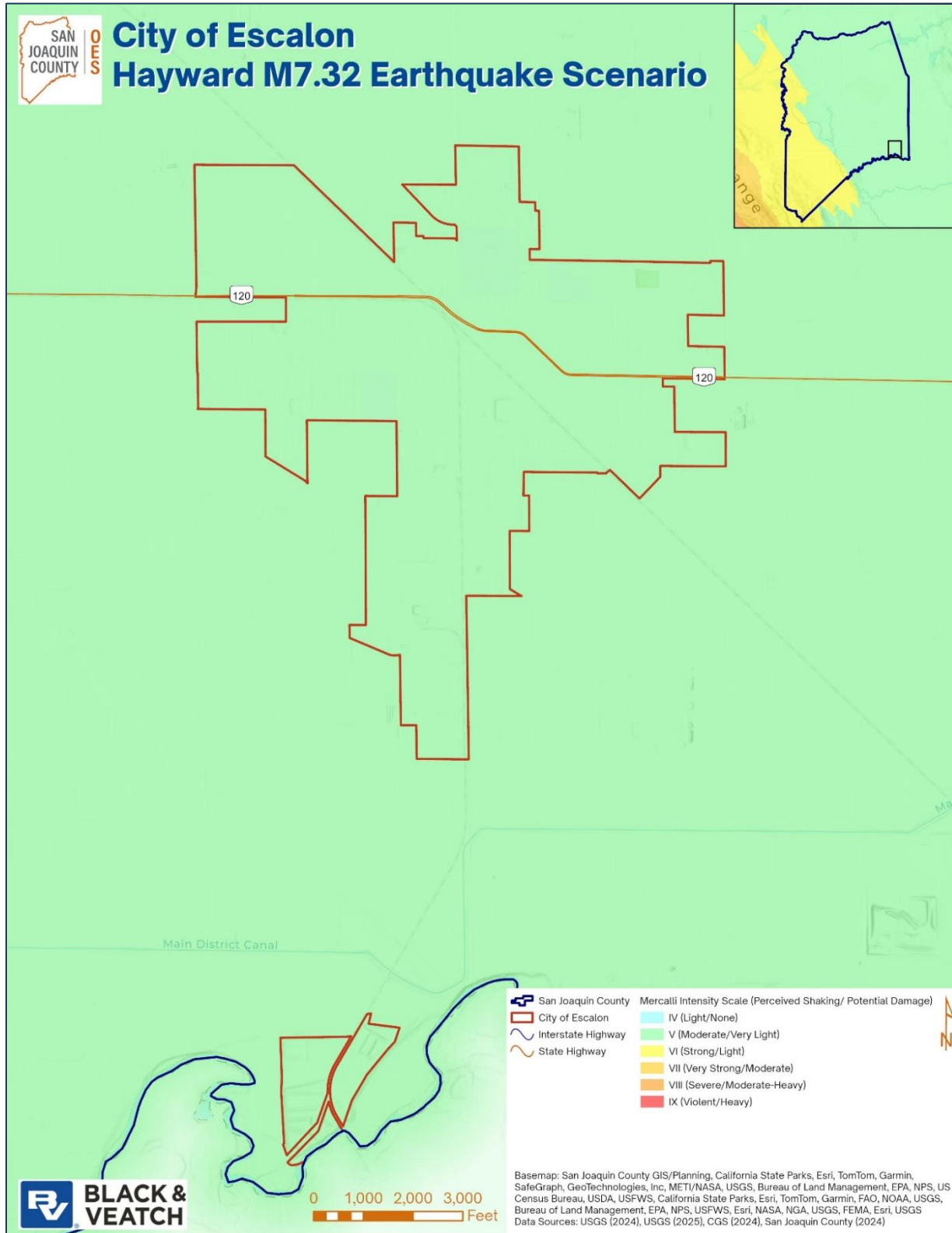


Figure 3-4 Hayward M7.32 Earthquake Scenario

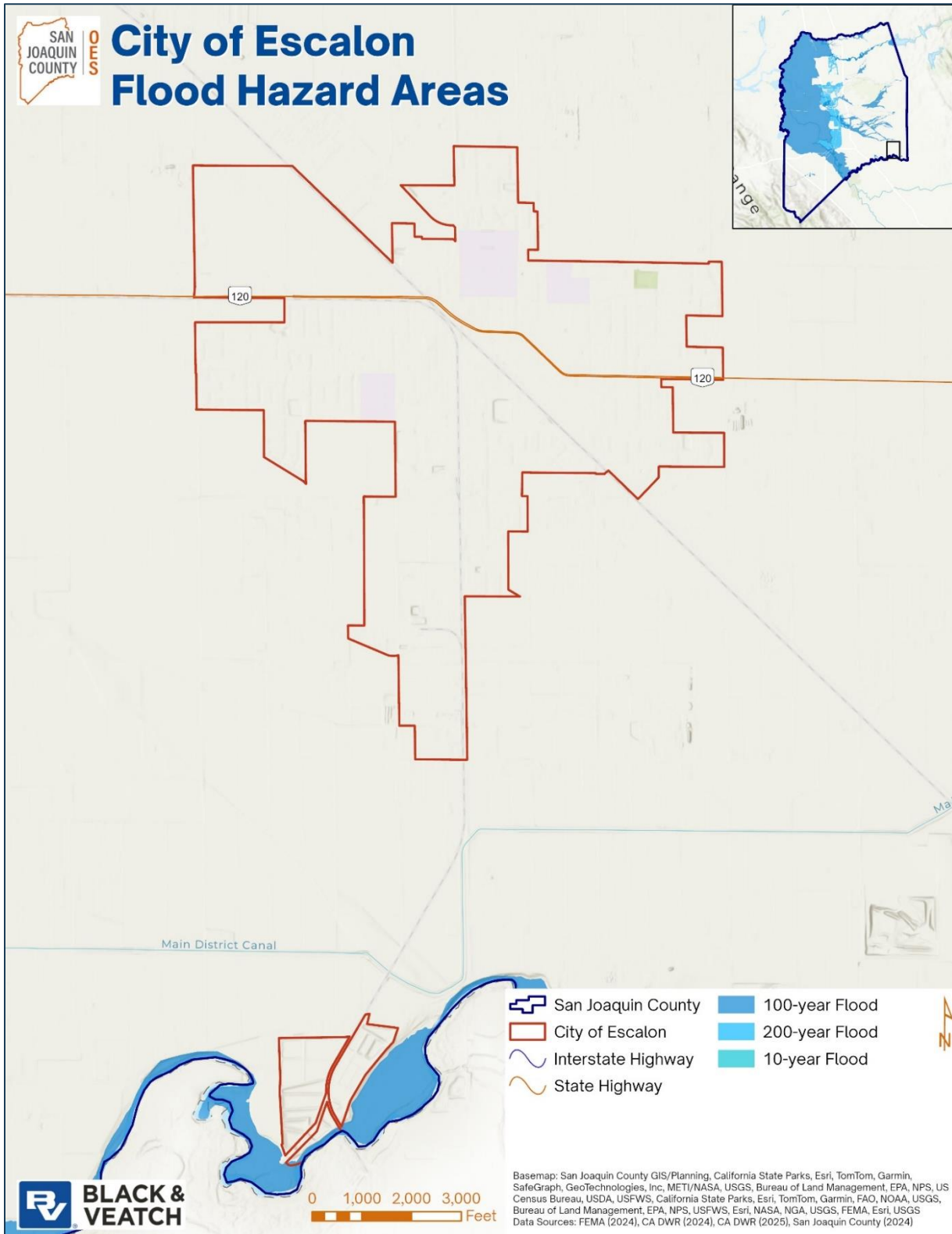


Figure 3-5 Flood Hazard Areas

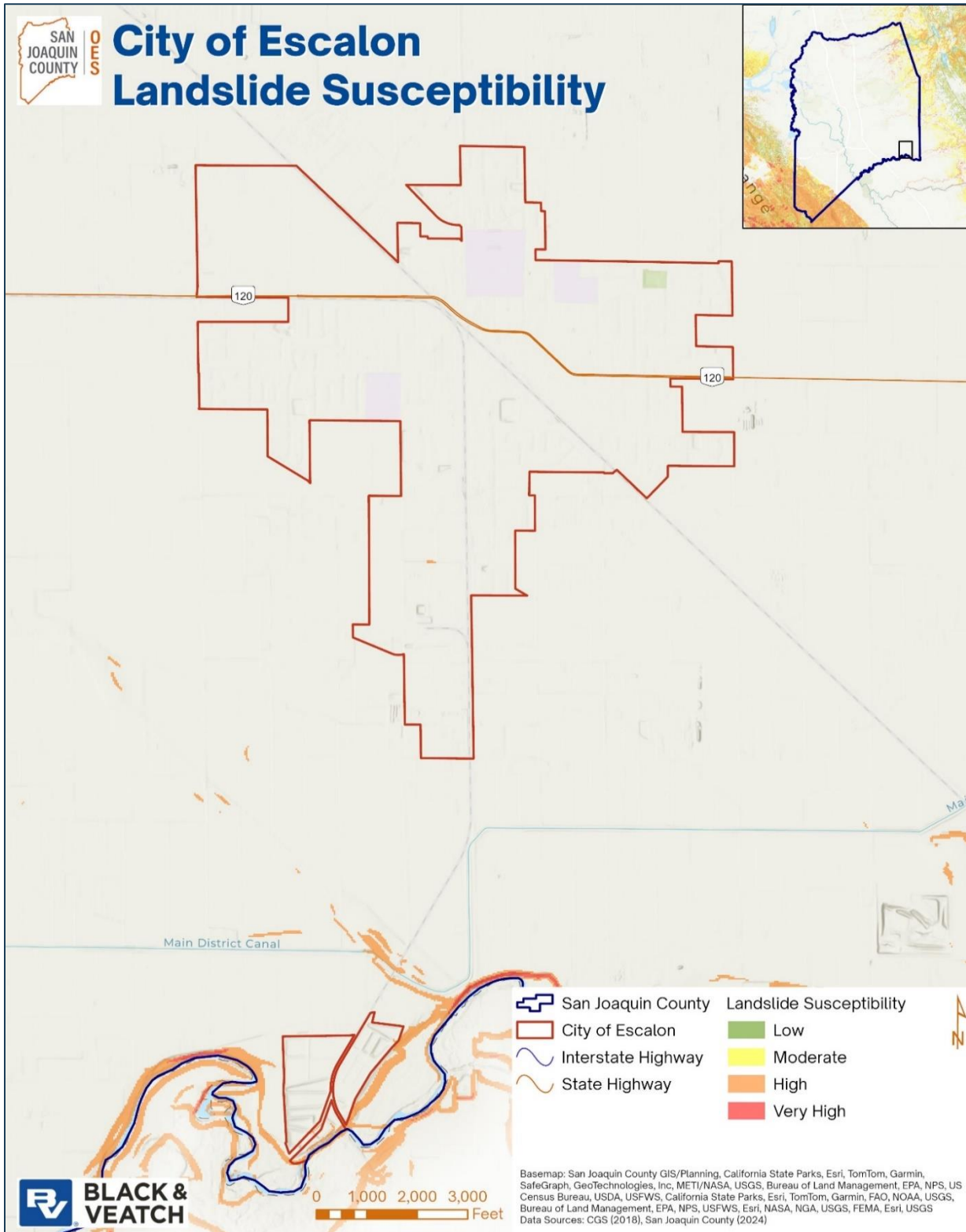


Figure 3-6 Landslide Susceptibility Areas

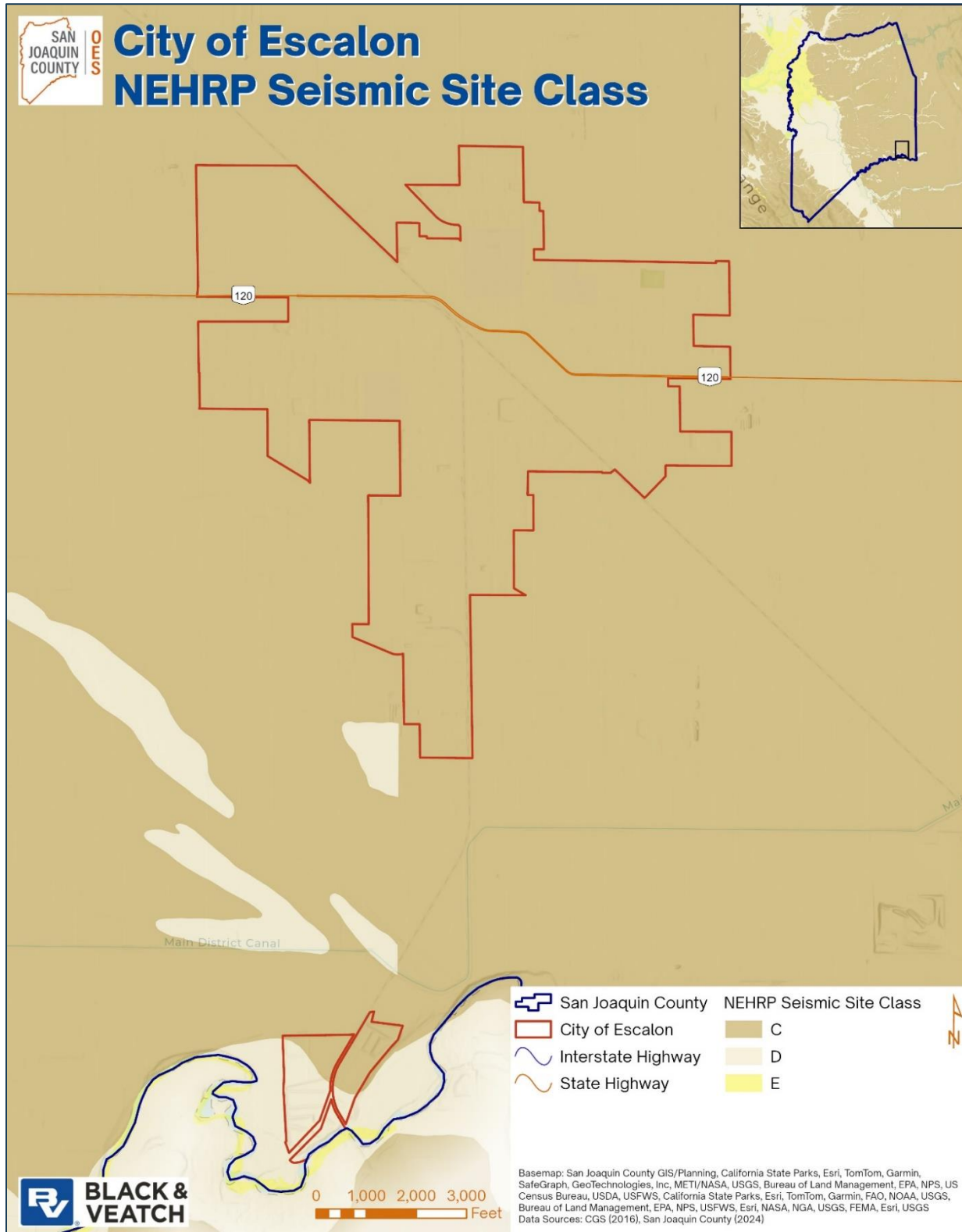


Figure 3-7 NEHRP Seismic Site Class Soils

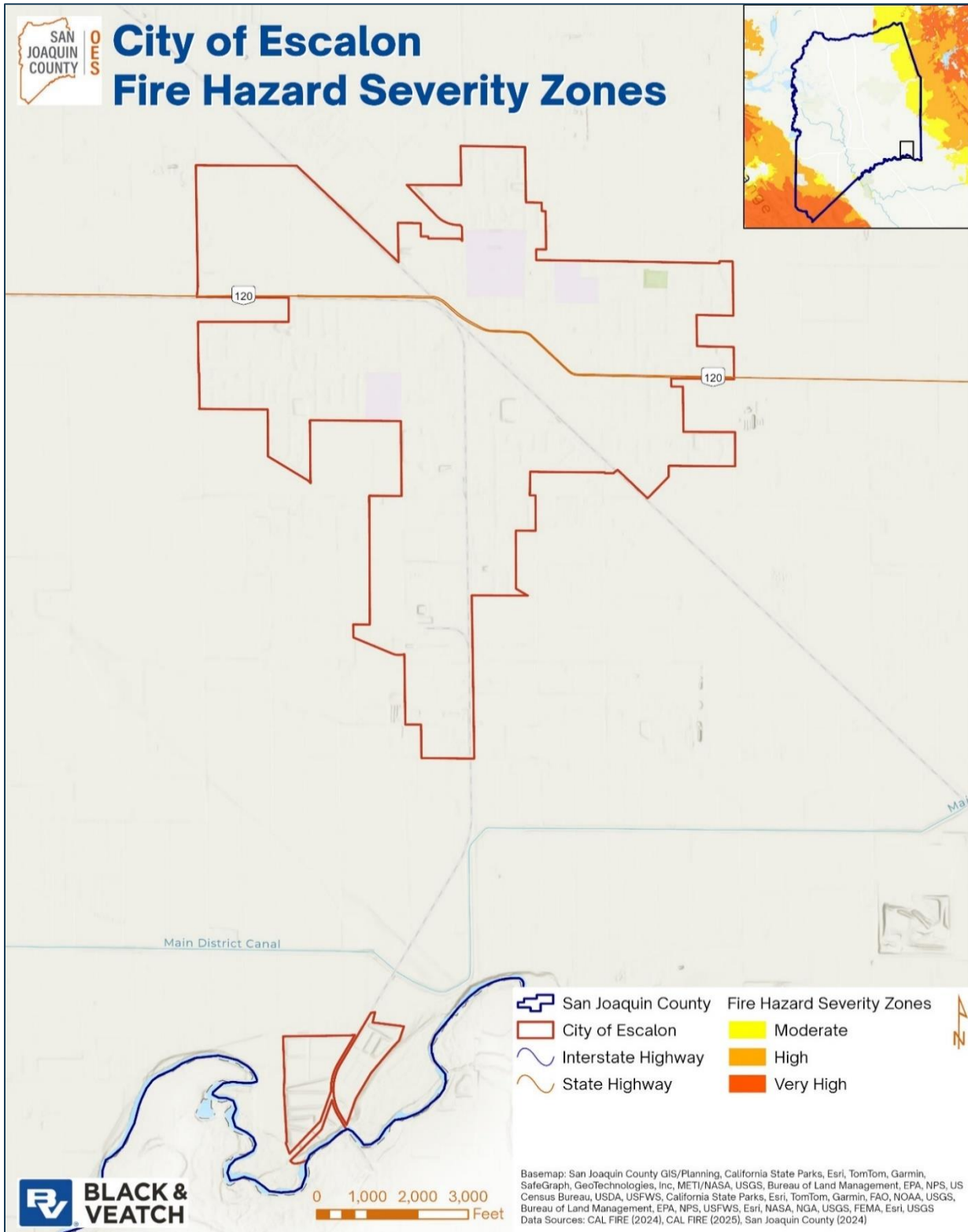
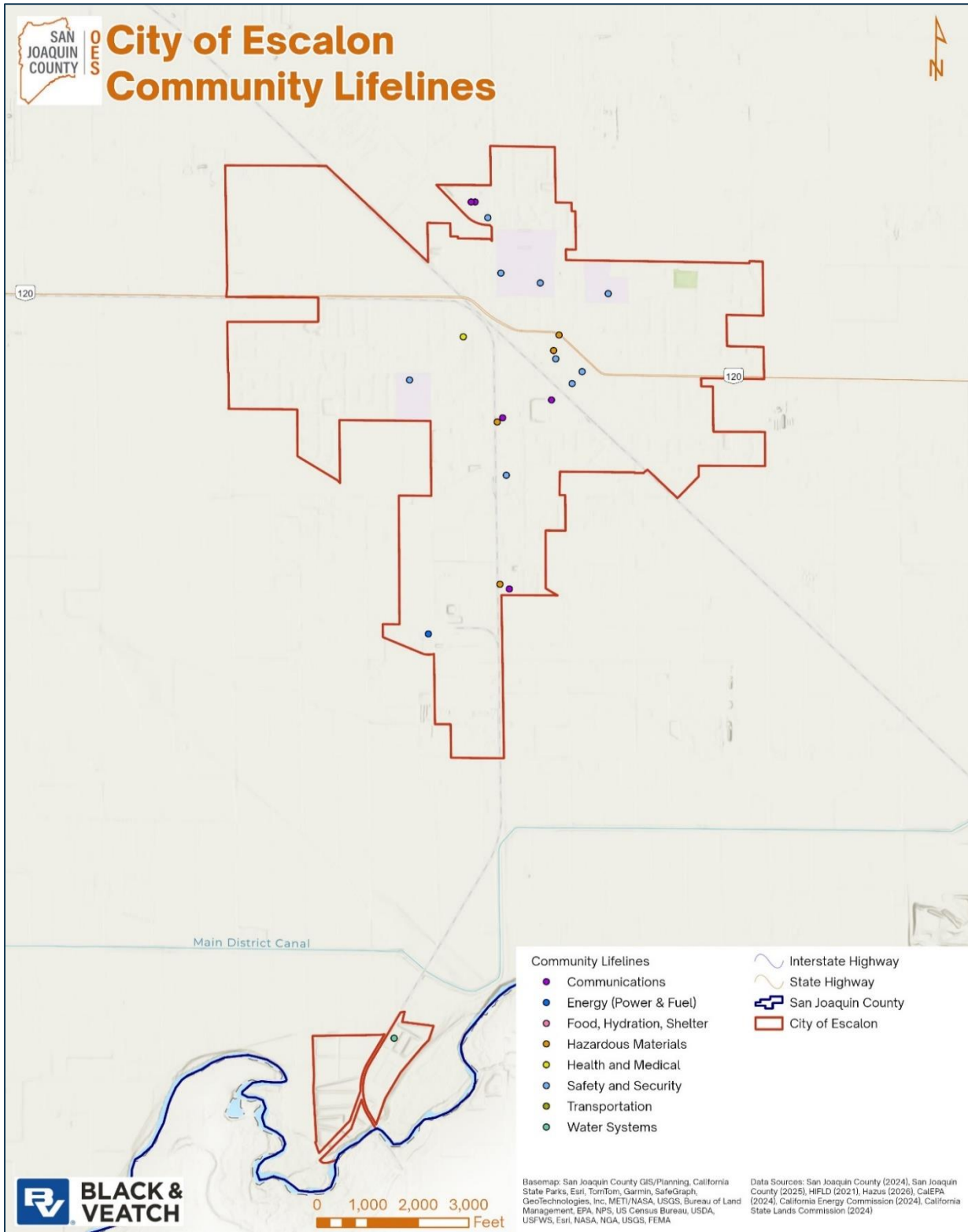


Figure 3-8 Fire Hazard Severity Zones



**Figure 3-9 Community Lifelines**

## 4. CITY OF LATHROP



Source: City of Lathrop

### 4.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the City of Lathrop. Members are listed in Table 4-1.

**Table 4-1 Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Gregory W. Gibson, Senior Civil Engineer	Name and Title:	Bellal Nabizadah, Assistant Engineer
Address:	390 Towne Centre Drive, Lathrop, California 95330	Address:	390 Towne Centre Drive, Lathrop, California 95330
Phone Number:	(209) 941-7442	Phone Number:	(209) 941-7421
Email:	ggibson@ci.lathrop.ca.us	Email:	bnabizadah@ci.lathrop.ca.us

Primary Point of Contact		Alternate Point of Contact
<b>NFIP Floodplain Administrator</b>		
Name and Title:	Brad Taylor, City Engineer	
Address:	390 Towne Centre Drive, Lathrop, California 95330	
Phone Number:	(209) 941-7438	
Email:	btaylor@ci.lathrop.ca.us	
<b>Additional Planning Team Members:</b>		
Name and Title:	Rick Caguiat, Community Development Director	
Method of Participation:	CDD/Planning Department input and review	
Name and Title:	Thomas Hedegard, Deputy City Manager	
Method of Participation:	City Manager’s Office/Finance Department input and review	
Name and Title:	Juliana Burns, Human Resources Director	
Method of Participation:	Human Resources Department input and review	
Name and Title:	Ed Short, Chief Building Official	
Method of Participation:	Building Department input and review	
Name and Title:	Stephen Sealy, Chief of Police	
Method of Participation:	Police Department/Public Safety input and review	
Name and Title:	Larry Madoski, Deputy Fire Marshal and Larry Madoski, Division Chief	
Method of Participation:	LMFD/Public Safety input and review	
Name and Title:	Salvador Navarrette, City Attorney	
Method of Participation:	City Attorney input and review	
Name and Title:	Teresa Vargas, City Clerk	
Method of Participation:	City Clerk input and review	
Name and Title:	Barbara Harb, Economic Development Administrator	
Method of Participation:	Economic Development input and review	

## 4.2 Jurisdictional Profile

### 4.2.1 Location and Features

The City of Lathrop is in the Northern San Joaquin Valley, east and west of the San Joaquin River. Interstate 5, Interstate 205 and State Route 120 intersect within the City. Lathrop is centrally located within a 30-minute commute of Tracy, Manteca, Stockton, Lodi, Modesto, Livermore and Pleasanton (City of Lathrop 2024).

### 4.2.2 History

Lathrop started as a small town with a store and schoolhouse before the construction of the Central Pacific Railroad in 1870. It was initially founded by Leland Stanford because of political disagreements with Stockton.

The town grew steadily through the 1870s, reaching a population of around 600 by 1879, but entered a period of decline in the 1880s (City of Lathrop 2024).

During World War II, Lathrop experienced a period of growth as Permanente Metals and the Sharpe Army Depot set up operations in the town. Large industrial employers like Best Fertilizer and Libby-Owens-Ford also moved in, and residential growth accelerated in the '70s and '80s. By 1990, Lathrop had expanded to a population of over 6,800, and the town became a municipality in 1989 (City of Lathrop 2024).

In the early 1990s, Lathrop's General Plan Program was expanded to include the Stewart Tract, a nearly 5,000-acre area west of the San Joaquin River. Today, the town remains an important center of industry in San Joaquin County and is home to a diverse population of around 37,000 people (City of Lathrop 2024).

### 4.2.3 Governance

The City Council consists of the Mayor and four Council Members and acts as the policy-making body for the City of Lathrop. The City Council members are the elected representatives of the citizens of the City of Lathrop (City of Lathrop 2024).

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

## 4.3 Growth and Development Trends

### 4.3.1 Population

According to the California Department of Finance 2025 estimates, Lathrop has a population of 38,596.

### 4.3.2 Equity Priority Communities

Equity means equal opportunity for all. Low-income residents, communities of color, tribal nations, and immigrant communities have historically disproportionately experienced environmental burdens and related health problems. This inequity has resulted from many factors, including inappropriate zoning and incomplete land use planning, which have led to development patterns that concentrate pollution emissions and environmental hazards near communities that have not had the political wherewithal to protect themselves. As many of these "disadvantaged" or "environmental justice" communities continue to face significant barriers to their overall health, livelihood, and sustainability, State law now requires that general plans address environmental justice through Senate Bill (SB) 1000. The Environmental Justice element of the City's General Plan identifies potential policy solutions to address disparities in disadvantaged communities.

According to the 2024 San Joaquin County Homelessness Point-In-Time Count, 4,732 people are experiencing homelessness within the County. Over 70 percent have experienced homelessness for over a year, with 10 reported to be unsheltered in Lathrop.

### 4.3.3 Development

The following table provides a summary of recent and expected future development trends in the City of Lathrop.

**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?	Yes					
If yes, give the estimated area annexed and estimated number of parcels or structures.	26.79 acres (4 parcels) and 22.42 acres (2 parcels).					
Is your jurisdiction expected to annex any areas during the performance period of this plan?	Yes					
If yes, describe land areas and dominant uses.	There might be a possibility of an annexation of a 13.95-acre site area located south of the Roth/Manthey Road intersection (existing agriculture/residential use – potentially converting to Commercial zoned parcels) in the next 5 years.					
If yes, who currently has permitting authority over these areas?	Currently - San Joaquin County has jurisdictional authority					
Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.	All future development is within the City Limit boundary lines and Sphere of Influence in the Lathrop General Plan. All growth will take place within approved and anticipated areas.					
Are any areas targeted for development or major redevelopment in the next five years?	Yes					
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	Commercial and Residential in Central Lathrop Specific Plan (west of Interstate 5), Commercial and Residential in River Islands at Lathrop (west of Interstate 5 and north of Interstate 205), and Residential in Mossdale Landing West Specific Plan (west of Interstate 5). These 3 areas of future development are not known to be in hazard risk areas.					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
	Single Family	647	880	900	525	679
	Multi-Family	38	79	26	42	52
	Other (mobile homes, accessory dwellings, mixed use, etc.)	5	8	6	12	13
	Commercial	4	14	15	38	6
	Total	694	981	947	617	750
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.	According to the 2019-2023 General Plan Housing Element, the City is one of Northern California’s fastest growing master planned communities and will be developing primarily residential development in the future.					

## 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 or improve upon 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.

### 4.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop policies and programs and to implement rules and regulations to protect and serve community members. Local policies are typically identified in a variety of community plans, implemented via a local ordinance, and enforced through a governmental body. An assessment of planning and regulatory capabilities is presented in Table 4-3.

**Table 4-3 Planning and Regulatory Capabilities**

		Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>					
Building Code		Yes	No	Yes	Yes
Comment:	2022 California Building Code (CBC) (Part 2 of the Title 24 of the California Code of Regulations) is adopted by reference and made part of the municipal code of the city of Lathrop as if fully set forth herein. LMC Title 15				
Zoning Code		Yes	No	Yes	Yes
Comment:	There is adopted, as provided herein, a zoning code for the city, which is a part of the city code. (Ord. 92-73); LMC Title 17				
Subdivisions		Yes	No	Yes	Yes
Comment:	LMC Title 16				
Stormwater Management		Yes	No	Yes	Yes
Comment:	LMC Chapter 13.26				
Post-Disaster Recovery		Yes	Yes	No	Yes
Comment:	LMC Chapter 2.32				
Real Estate Disclosure		Yes	No	No	No
Comment:	In California, the duty to disclose is codified in the California Civil Code Section 1102 which mandates a Real Estate Transfer Disclosure Statement (TDS). The TDS is a comprehensive disclosure statement that sellers must provide to potential buyers, covering the property’s condition, known defects, relevant environmental hazards, and other neighborhood nuisances.				

		Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Growth Management		Yes	No	Yes	No
Comment:	The City participates in the San Joaquin County Regional Transportation Impact Fee (RTIF) Program, which includes "Measure K" (a local transportation improvement plan/ordinance) addressing growth management through establishing and implementing retail transactions and use tax.				
Site Plan Review		Yes	Yes	Yes	No
Comment:	Discretionary projects involve site plan review as part of the planning and approval process conducted by the City's Community Development Department. The Public Works/Engineering Division also provides review and permit processing. This division reviews subdivision maps, construction plans, public improvement, and grading plans for all residential, commercial, and industrial projects.				
Environmental Protection		Yes	No	Yes	No
Comment:	The City Planning Division reviews project entitlement requests that are discretionary in nature to ensure such projects comply with the requirements of the California Environmental Quality Act (CEQA).				
Flood Damage Prevention		Yes	No	Yes	Yes
Comment:	LMC Chapter 15.56				
Emergency Management		Yes	No	No	Yes
Comment:	LMC Chapter 2.32				
Climate Change		Yes	No	Yes	Yes
Comment:	The City's General Plan incorporates multiple goals, policies, and implementation actions to address climate change, continuing to work cooperatively with applicable government agencies to address issues with climate change.				
<b>Planning Documents</b>					
General Plan		Yes	No	Yes	Yes
Is the General Plan compliant with Assembly Bill 2140?			Yes		
Comment:	The City's General Plan was last updated and amended in September 2022. The Housing Element was last updated and amended in February 2025. Both planning documents are the City's most comprehensive land use and development tools. Together, they establish the vision for the buildout of the City of Lathrop through 2031. They also include a set of broad-based goals and policies to guide development in the City. Upon adoption of the Multi-Jurisdictional Hazard Mitigation Plan (HMP), the City should update the Public Safety Element of the General Plan to include the HMP.				
Capital Improvement Plan		Yes	No	No	Yes
How often is the plan updated?		Every 2 years			
Comment:	CIP is updated with the biennial budget every other year				
Disaster Debris Management Plan		Yes	Yes	No	No
Comment:	-				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Floodplain or Watershed Plan	Yes	No	Yes	No
Comment:	LMC Chapter 15.56			
Stormwater Plan	Yes	No	No	No
Comment:	Stormwater/Drainage Master Plans			
Urban Water Management Plan	Yes	No	Yes	No
Comment:	2020 Urban Water Management Plan			
Habitat Conservation Plan	Yes	No	No	No
Comment:	The City's General Plan has policies that encourage and support habitat conservation efforts to be set aside and preserve suitable habitats, and promote City programs that focus on habitat protection and biological conservation			
Economic Development Plan	Yes	No	No	No
Comment:	The City's General Plan includes an Economic Development Element.			
Community Wildfire Protection Plan	Yes	Yes	No	Yes
Comment:	Lathrop Irrigation District 2024 Wildfire Mitigation Plan			
Forest Management Plan	No	Yes	No	No
Comment:	-			
Climate Action Plan	Yes	No	Yes	Yes
Comment:	The City's General Plan has an implementation action to consider adopting a climate action plan to establish a formal strategy for reducing GHG emissions.			
Threat & Hazard Identification & Risk Assessment (THIRA)	No	No	No	Yes
Comment:	-			
Post-Disaster Recovery Plan	No	No	No	Yes
Comment:	The City's General Plan includes disaster recovery actions in the Safety Element.			
Continuity of Operations Plan	No	No	No	Yes
Comment:	-			
Public Health Plan	No	No	Yes	Yes
Comment:	-			

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Emergency Operations Plan	Yes	No	No	No
Comment	-			
Other Reclamation District 17 Mossdale Tract EOP	Yes	Yes	No	No
Comment	Available on City's website			

### Opportunities to Expand Planning and Regulatory Capabilities

The City proposes opportunities to integrate the HMP into various chapters of the Code of Ordinances such as stormwater management, flood damage prevention, emergency management, and post disaster recovery. Additionally, the planning and regulatory capabilities of the City can be created or expanded by integrating the County-wide hazard mitigation plan into the City's various plans as listed in Table 4-13 and below:

- Emergency Services Organization Code
- General Plan Economic Development Element
- General Plan Safety Element
- Capital Improvement Plan
- Wildfire Mitigation Plan
- Municipal Code (Stormwater Management, Post-Disaster Recovery Plan, Flood Damage Prevention, Emergency Management, Subdivisions, Zoning Code, Building Code).
- Threat and Hazard Identification and Risk Assessment (THIRA)
- Climate Action Plan
- Continuity of Operations Plan (Once developed)
- Public Health Plan

#### 4.4.2 Development and Permitting Capabilities

Jurisdictions 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 lead to hazard mitigation. Development and permitting capabilities are presented in Table 4-4.

**Table 4-4 Development and Permitting Capabilities**

Criterion	Response
Does your jurisdiction issue development permits?	Yes
If no, who does? If yes, which department?	Lathrop Building Division
Does your jurisdiction track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	Yes

### 4.4.3 Fiscal Capabilities

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. An assessment of fiscal capabilities is presented in Table 4-5.

**Table 4-5 Fiscal Capabilities**

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
If yes, specify:	Water, Sewer	
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

### *Opportunities to Expand Fiscal Capabilities*

One of the primary objectives in developing the 2026 MJHMP is to establish eligibility to pursue FEMA HMA grant funding opportunities (e.g., FMA and HMGP). HMA funding streams typically require up to a 25 percent local match. The City has identified local funding resources in Table 4-5 that can provide the local match for projects in the mitigation action plan that list HMA grants as a potential primary funding source.

### 4.4.4 Administrative and Technical Capabilities

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 4-6.

**Table 4-6 Administrative and Technical Capabilities**

Staff/Personnel Resource		Available?
Planners or engineers with knowledge of land development and land management practices		Yes
If Yes, Department /Position:	CDD/Planning, Public Works	
Engineers or professionals trained in building or infrastructure construction practices		Yes
If Yes, Department /Position:	Public Works, Building	
Planners or engineers with an understanding of natural hazards		Yes
If Yes, Department /Position:	CDD/Planning, Public Works	
Staff with training in benefit-cost analysis		Yes
If Yes, Department /Position:	Finance, Public Works	
Surveyors		No
If Yes, Department /Position:	-	
Personnel skilled or trained in GIS applications		Yes
If Yes, Department /Position:	ISD, Public Works	
Scientists familiar with natural hazards in local area		No
If Yes, Department /Position:	-	
Emergency manager		Yes
If Yes, Department /Position:	City Manager, Public Works	
Grant writers		Yes
If Yes, Department /Position:	CDD/Planning, Public Works	
Procurement Services and Management		Yes
If Yes, Department /Position:	Finance, Public Works	

### ***Opportunities to Expand Administrative and Technical Capabilities***

Administrative and technical capabilities are a community’s staff, skills and tools. These capabilities can be used for mitigation planning and to carry out specific mitigation actions. They also include the ability to access, coordinate and implement these resources effectively (FEMA 2023). An assessment of administrative and technical capabilities is presented in Table 4-6.

#### **4.4.5 Education and Outreach Capabilities**

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 4-7.

**Table 4-7 Education and Outreach Capabilities**

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
If yes, briefly describe:	The City’s website is used to share information and post news and announcements.	
Do you use social media for hazard mitigation education and outreach?		Yes
If yes, briefly describe:	The City manages a Facebook page to share information and post news and announcements.	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?		No
If yes, briefly describe:	-	
Do you have any other programs in place that could be used to communicate hazard-related information?		Yes
If yes, briefly describe:	Website, social media, quarterly newsletter	
Do you have any established warning systems for hazard events?		Yes
If yes, briefly describe:	Everbridge Nixle	

**Opportunities to Expand Education and Outreach Capabilities**

The City currently has an outreach program that provides information regarding hazards and their impacts to their residents via social media and the website. The City will update their outreach programs as needed.

**4.4.6 Community Classifications**

Other programs, such as the Community Rating System and StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 4-8.

**Table 4-8 Community Classifications**

	Participating?	Classification	Date Classified
Federal Information Processing Standards (FIPS) Code	Yes	060771865	-
Unique Identity ID (UEI)	No	-	-
Community Rating System (CRS)	No	-	-
Building Code Effectiveness Grading Schedule (BCEGS)	No	-	-
Public Protection (ISO for Fire Districts)	No	-	-
NWS StormReady®	No	-	-
Firewise USA	No	-	-

### 4.4.7 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The community’s adaptive capacity for the impacts of climate change is presented in Table 4-9.

**Table 4-9 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	Low
Jurisdiction-level monitoring of climate change impacts	Low
Technical resources to assess proposed strategies for feasibility and externalities	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
Capital planning and land use decisions informed by potential climate impacts	Low
Participation in regional groups addressing climate risks	Low
<b>Implementation Capacity</b>	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
Identified strategies for greenhouse gas mitigation efforts	Low
Identified strategies for adaptation to impacts	Low
Champions for climate action in local government departments	Low
Political support for implementing climate change adaptation strategies	Low
Financial resources devoted to climate change adaptation	Low
Local authority over sectors likely to be negative impacted	Low
<b>Public Capacity</b>	
Residents’ knowledge of and understanding of climate risk	Unsure
Residents’ support of adaptation efforts	Unsure
Residents’ capacity to adapt to climate impacts	Unsure
Local economy current capacity to adapt to climate impacts	Low
Local ecosystems capacity to adapt to climate impacts	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.

## 4.5 National Flood Insurance Program Compliance

Flooding is the costliest natural hazard in the United States. Community participation in the NFIP opens up opportunities for additional grant funding associated specifically with flooding issues. Assessment of the jurisdiction’s current NFIP status and compliance provides planners with a greater understanding of the local flood management program, opportunities for improvement, and available grant funding opportunities. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 4-10.

**Table 4-10 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/City 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?	2/12/2024
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
If so, what type of assistance/training is needed?	-
Does your jurisdiction have a Substantial Damage Response Plan?	No
How does your jurisdiction assess substantial damages after a hazard event?	Unknown
Does your jurisdiction participate in the Community Rating System (CRS)?	No
If yes, is your jurisdiction interested in improving its CRS Classification?	-
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup>	113
What is the insurance in force?	\$39,988,000
What is the premium in force?	\$90,384
How many total loss claims have been filed in your jurisdiction? <sup>a</sup>	1
What were the total payments for losses?	\$7,061

a. According to FEMA statistics as of 01/31/2025

## 4.6 Integration

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.

### 4.6.1 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:

- Drought and enhanced water supply reliability and/or resiliency projects, e.g. development of alternative water supplies such as expansion of recycled water program, water conservation, etc.
- Flood mitigation projects with SJAFCA; e.g. 200 year ULOP, Paradise Cut Bypass Expansion & Multi-Benefit Project, Lower San Joaquin River & Delta South Regional Flood Management Planning, Reducing Flood Risk for Mossdale Tract Area
- Delta Adapts by Delta Stewardship Council; climate change initiative

## 4.7 Risk Assessment

### 4.7.1 Jurisdiction-Specific Natural Hazard Event History

Table 4-11 lists past occurrences of natural hazards for which specific impacts were 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	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Local Impacts
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Local Impacts
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/2023	Unknown
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	Unknown
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	CA23-1	1/4/23	Unknown
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	Unknown
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Local Impacts
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	Staff physical and mental wellbeing, workplace safety concerns, work from home issues.

### 4.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for the City of Lathrop is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the City in identifying hazards that pose the most significant threat. 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.

**Table 4-12 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability (1-4 index value with 30% weighting factor)	Impact (1-4 index value with 30% weighting factor)	Spatial Extent (1-4 index value with 20% weighting factor)	Warning Time (1-4 index value with 10% weighting factor)	Climate Change (1-4 index value with 10% weighting factor)		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.3	.9	.2	.1	.3	1.8	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability (1-4 index value with 30% weighting factor)	Impact (1-4 index value with 30% weighting factor)	Spatial Extent (1-4 index value with 20% weighting factor)	Warning Time (1-4 index value with 10% weighting factor)	Climate Change (1-4 index value with 10% weighting factor)		
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

Notes:  
 PRI Value 1 to 1.9 = Low Hazard Risk Ranking  
 PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking  
 PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### 4.7.3 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:

- Groundwater supply vulnerabilities including PFAS and other constituents of concern.
- Surface water vulnerabilities include reduced availability of SSJID water from Bay Delta Amendment implementation.

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

## 4.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 4-13 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas (e.g., dam failure, flood, and earthquake), prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter; Energy; Communications; Transportation	Existing	1, 3, 4	Lead: City Engineer/Emergency Services Support: Public Works	Yes	Very High (\$1,000,000 and above)	Staff Time, FEMA HMGP and FMA, General Fund	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including: <ul style="list-style-type: none"> <li>• Emergency Services Organization Code</li> <li>• General Plan Economic Development Element</li> <li>• General Plan Safety Element</li> </ul>	Safety and Security; Communications; Transportation; Water Systems	New	6	Lead: City Engineer/Emergency Services Support: Public Works	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	<ul style="list-style-type: none"> <li>Capital Improvement Plan</li> <li>Wildfire Mitigation Plan</li> <li>Municipal Code (Stormwater Management, Post-Disaster Recovery Plan, Flood Damage Prevention, Emergency Management, Subdivisions, Zoning Code, Building Code).</li> <li>Threat and Hazard Identification and Risk Assessment (THIRA)</li> <li>Climate Action Plan</li> <li>Public Health Plan</li> <li>Continuity of Operations Plan (Once developed)</li> </ul>								
3	<p>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"> <li>Conduct flood mitigations projects in</li> </ul>	Any lifelines exposed to flooding	New, Existing	1, 2	Lead: City Engineer/Emergency Services Support: Public Works	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	conjunction with SJAFCA								
4	Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following: <ul style="list-style-type: none"> <li>Working with the Delta Stewardship Council's on climate change initiatives</li> <li>Initiate drought and enhanced water supply reliability/ resilience projects</li> </ul>	Communications; Safety and security	New, Existing	1, 3	Lead: CDD/Planning Support: Public Works/City Engineer:	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
5	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	N/A	New	6	Lead: City Engineer/Emergency Services Support: Public Works:	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
6	Purchase generators for City-owned critical facilities and infrastructure that lack adequate backup power.	Safety and security; Energy; Communications	Existing	6	Lead: Public Works Director	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

**Table 4-14 Mitigation Action Prioritization**

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	37	High
#3	0	3	3	3	3	1	0	3	3	3	1	3	3	3	3	35	High
#4	1	1	3	1	1	1	1	3	3	1	3	3	1	3	3	29	Medium
#5	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#6	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium

Notes:  
 31 or more = High Priority  
 15 to 30 = Medium Priority  
 0 to 14 = Low Priority

Table 4-15 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■		■		■		■			■	■		
#2	■		■			■	■	■	■	■	■	■	■	■	■	■	■
#3	■	■	■		■	■	■					■		■	■		
#4	■				■			■		■	■			■	■		■
#5	■				■	■	■	■	■	■	■	■	■	■	■	■	■
#6	■	■			■		■				■	■	■	■		■	■

## 4.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 4-16.

**Table 4-16 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
General Plan Update Visioning Workshops	April - July, 2019	N/A
Supported the countywide outreach efforts for this plan including promoting the public survey	Throughout the planning process	TBD

## 4.10 Information Sources Used for This Annex

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

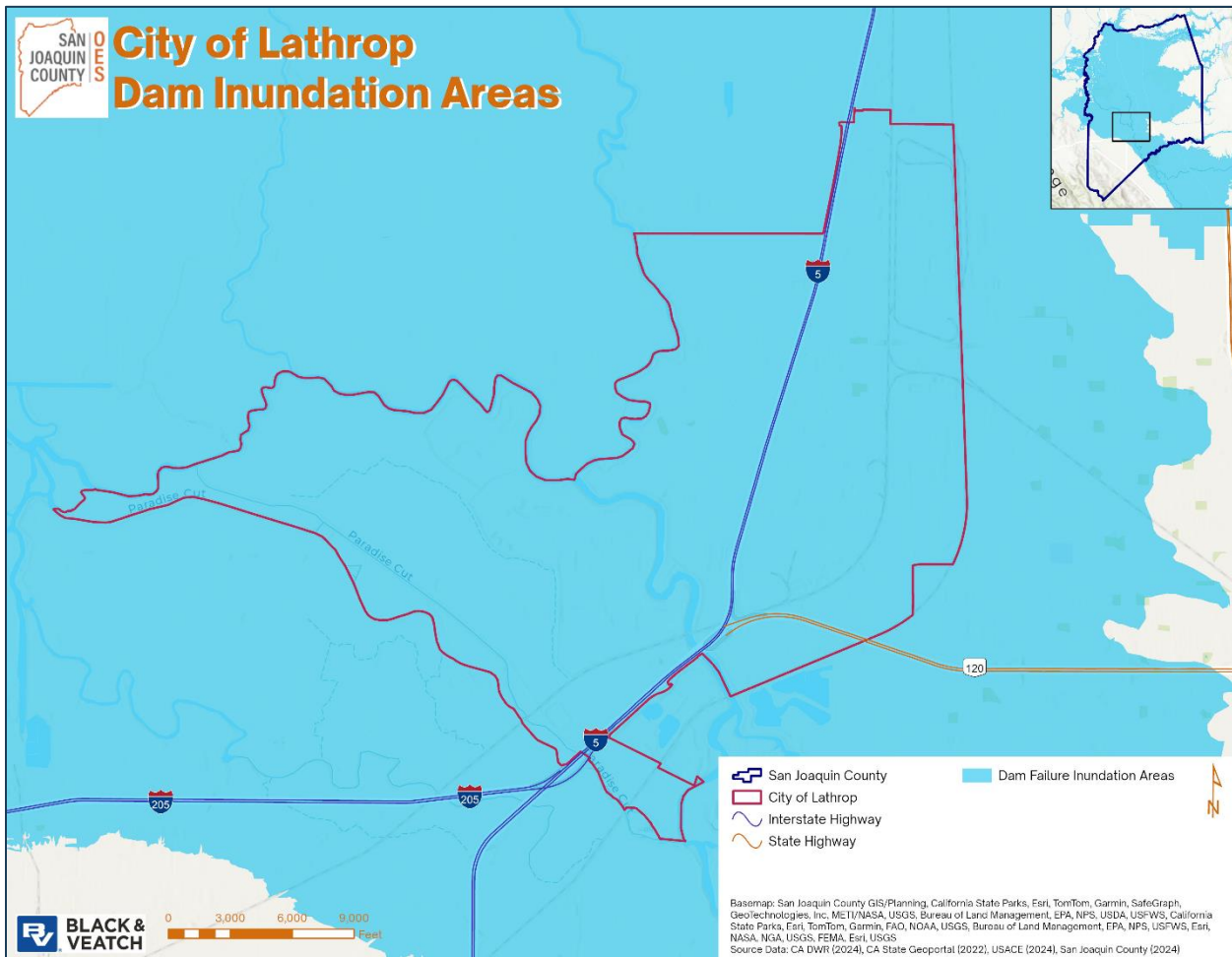
- Lathrop Municipal Code: <https://ecode360.com/LA4956/home> used to research and complete section on planning and regulatory capabilities
- City of Lathrop – Emergency Preparedness webpage: <https://www.ci.lathrop.ca.us/city-manager/page/emergency-preparedness>; used to research and complete section on Education and Outreach Capabilities
- City of Lathrop-General Plan website: <https://www.ci.lathrop.ca.us/planning/page/lathrop-general-plan>: used to research and complete section on planning and regulatory capabilities
- City of Lathrop – Urban Water Management Plan website: <https://www.ci.lathrop.ca.us/publicworks/page/urban-water-management-plan>: used to research and complete section on planning and regulatory capabilities
- City of Lathrop – Flood Information website: <https://www.ci.lathrop.ca.us/com-dev/page/flood-information>: used to research and complete sections on NFIP Compliance, planning and regulatory capabilities

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.

## 4.11 Hazard Mapping

Jurisdiction-specific risk maps of the hazards are provided on the following pages. For a complete description of each hazard, please see the applicable chapters in Volume 1 of this plan. These maps are based on the vulnerability and risk assessment results for this plan.



**Figure 4-1 Dam Inundation Areas**

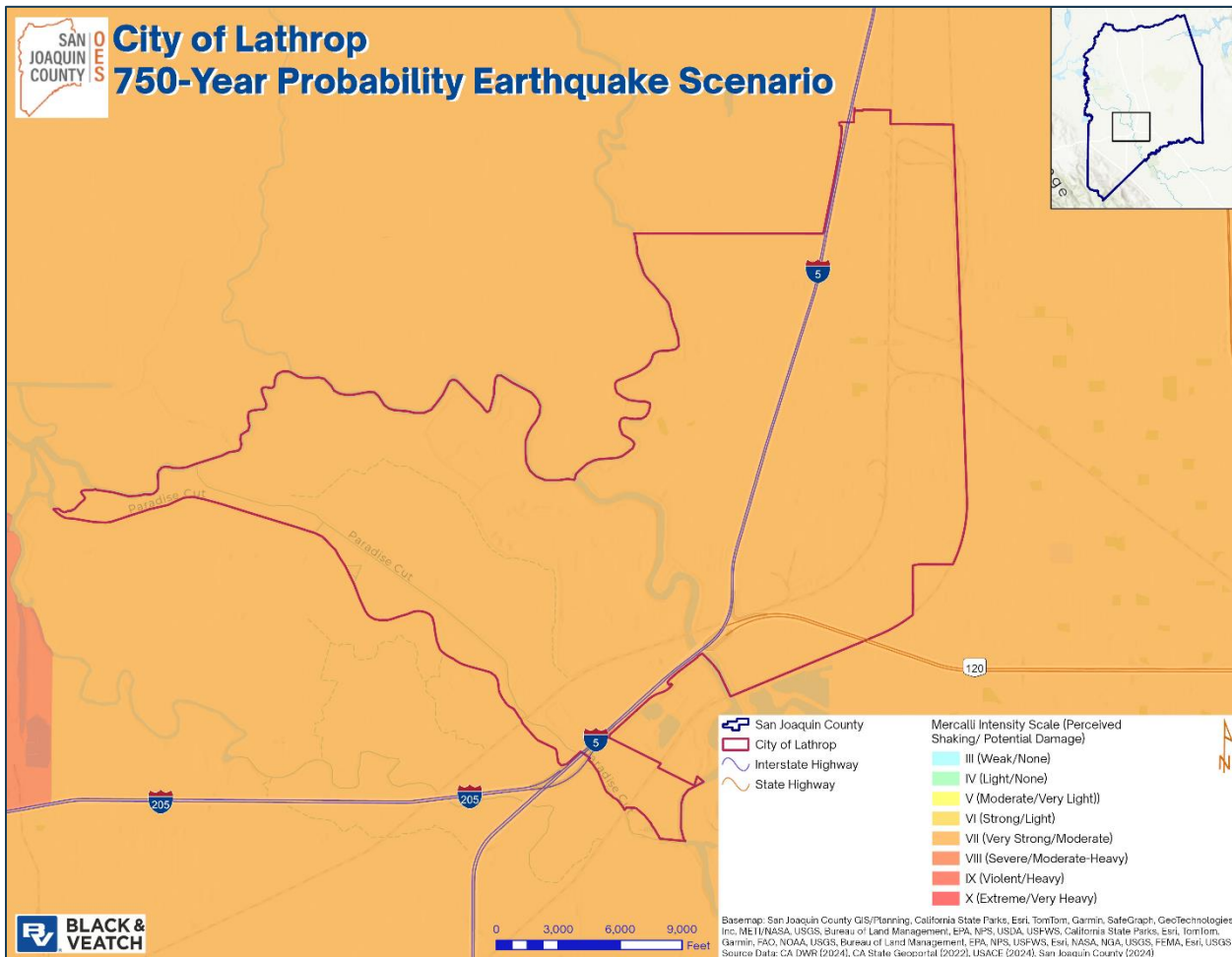


Figure 4-2 750-Year Probability Earthquake Scenario

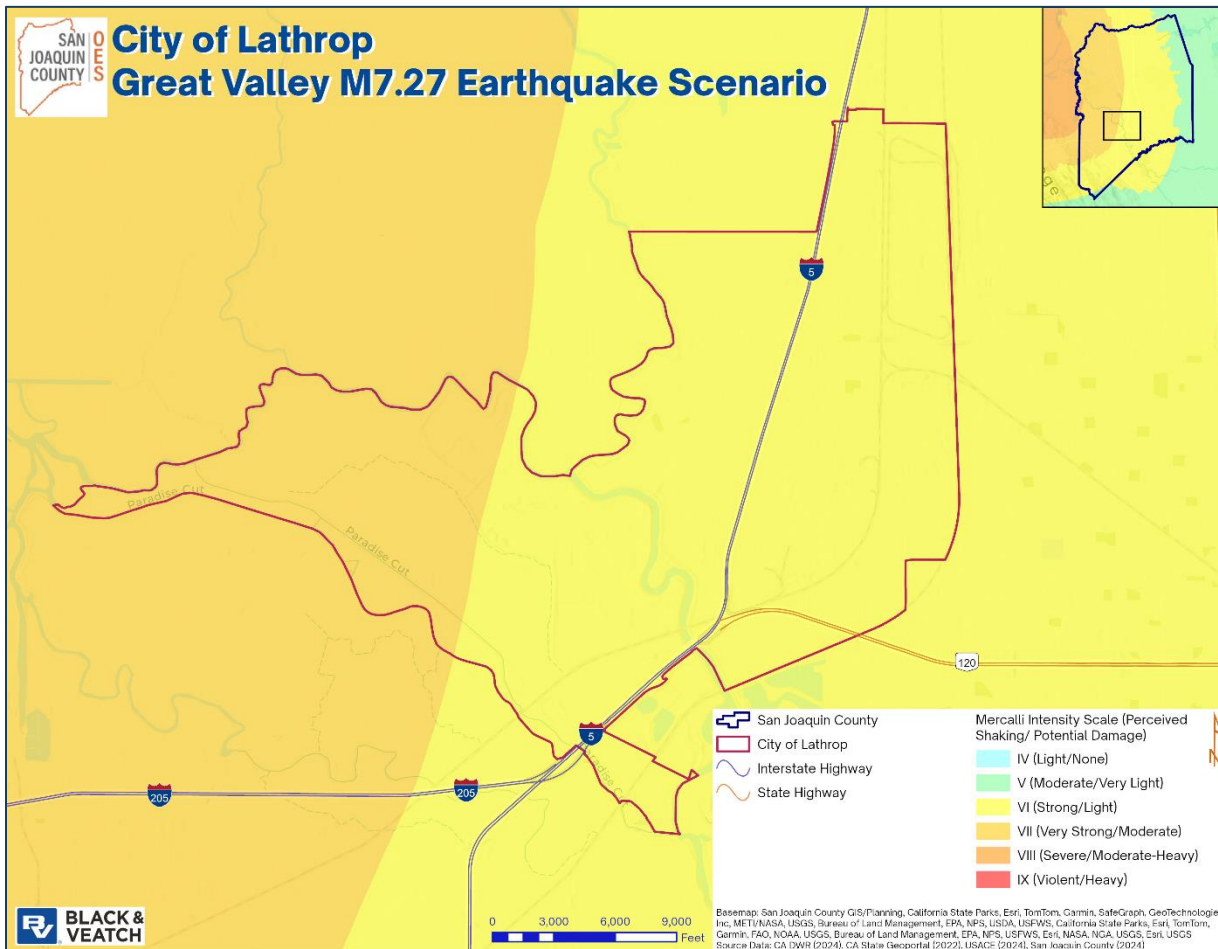


Figure 4-3 Great Valley M7.27 Earthquake Scenario

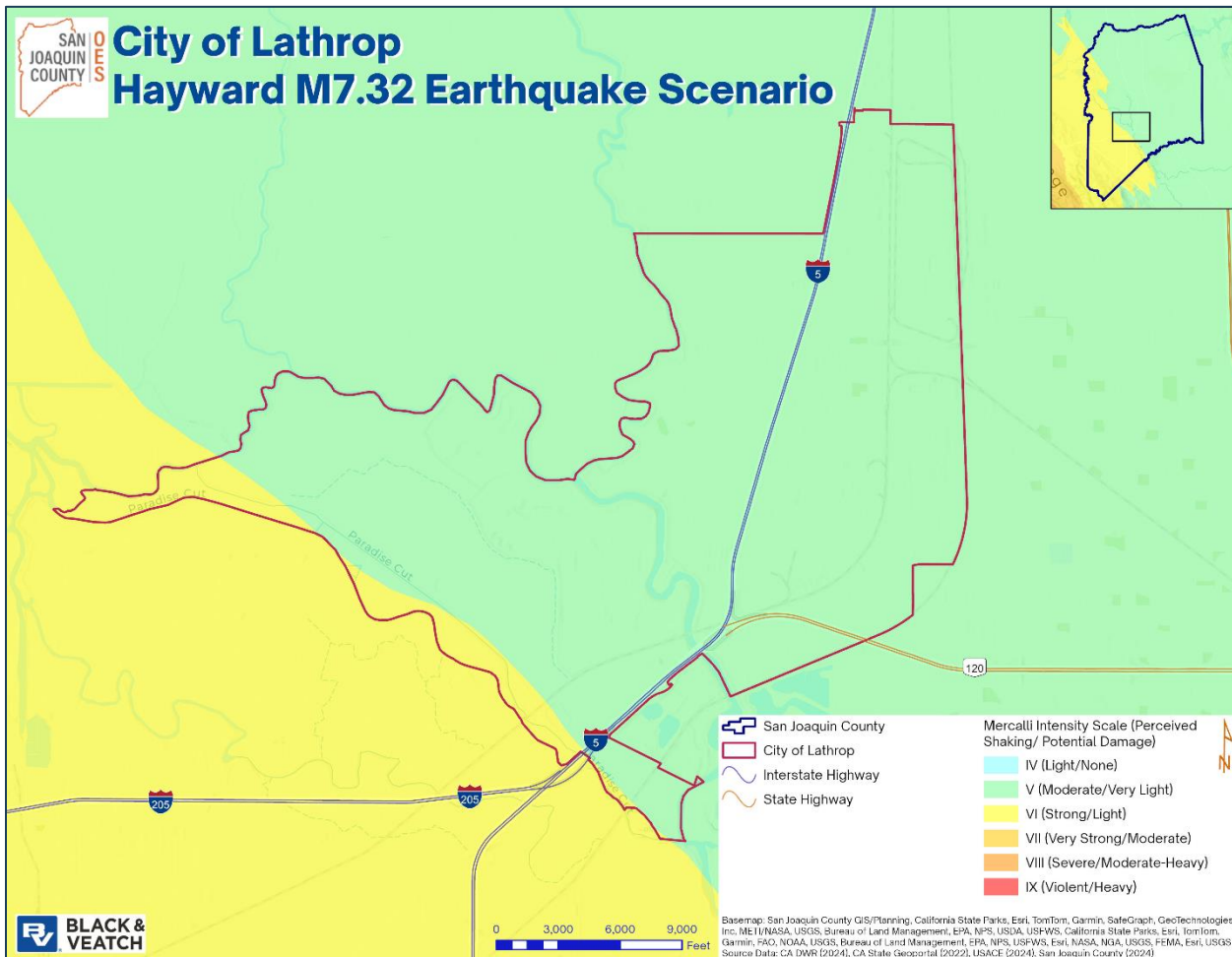
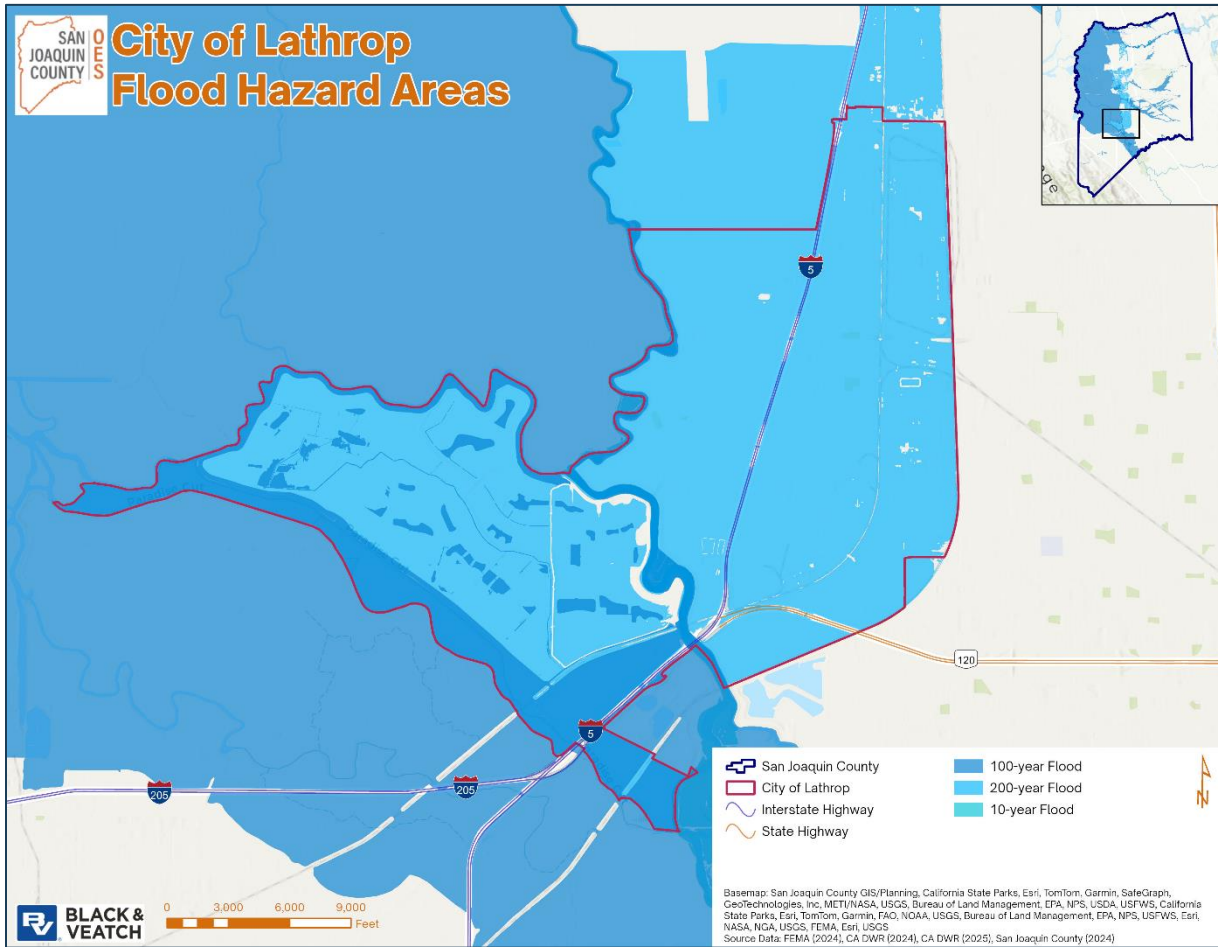
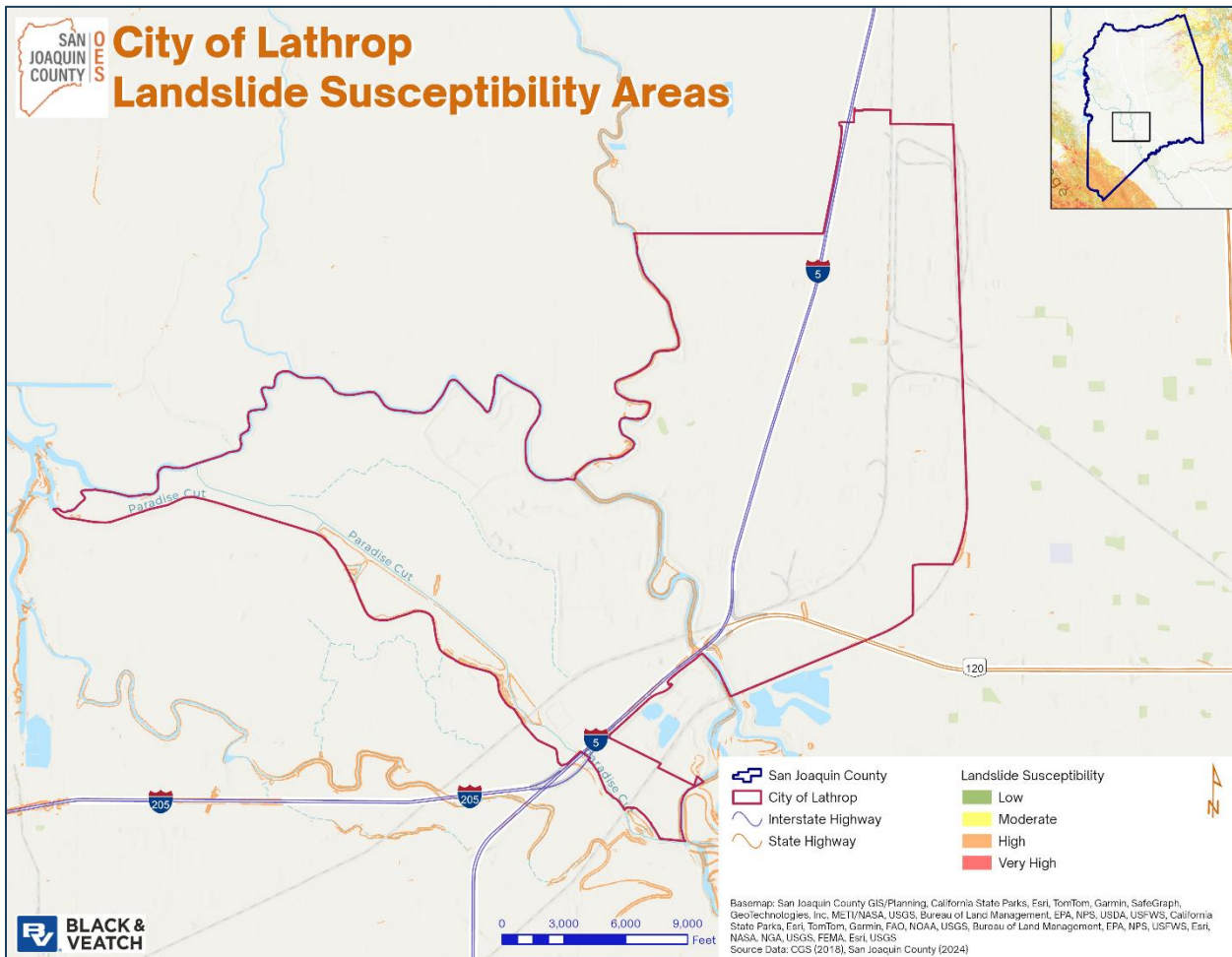


Figure 4-4 Hayward M7.32 Earthquake Scenario



**Figure 4-5 Flood Hazard Areas**



**Figure 4-6 Landslide Susceptibility Areas**

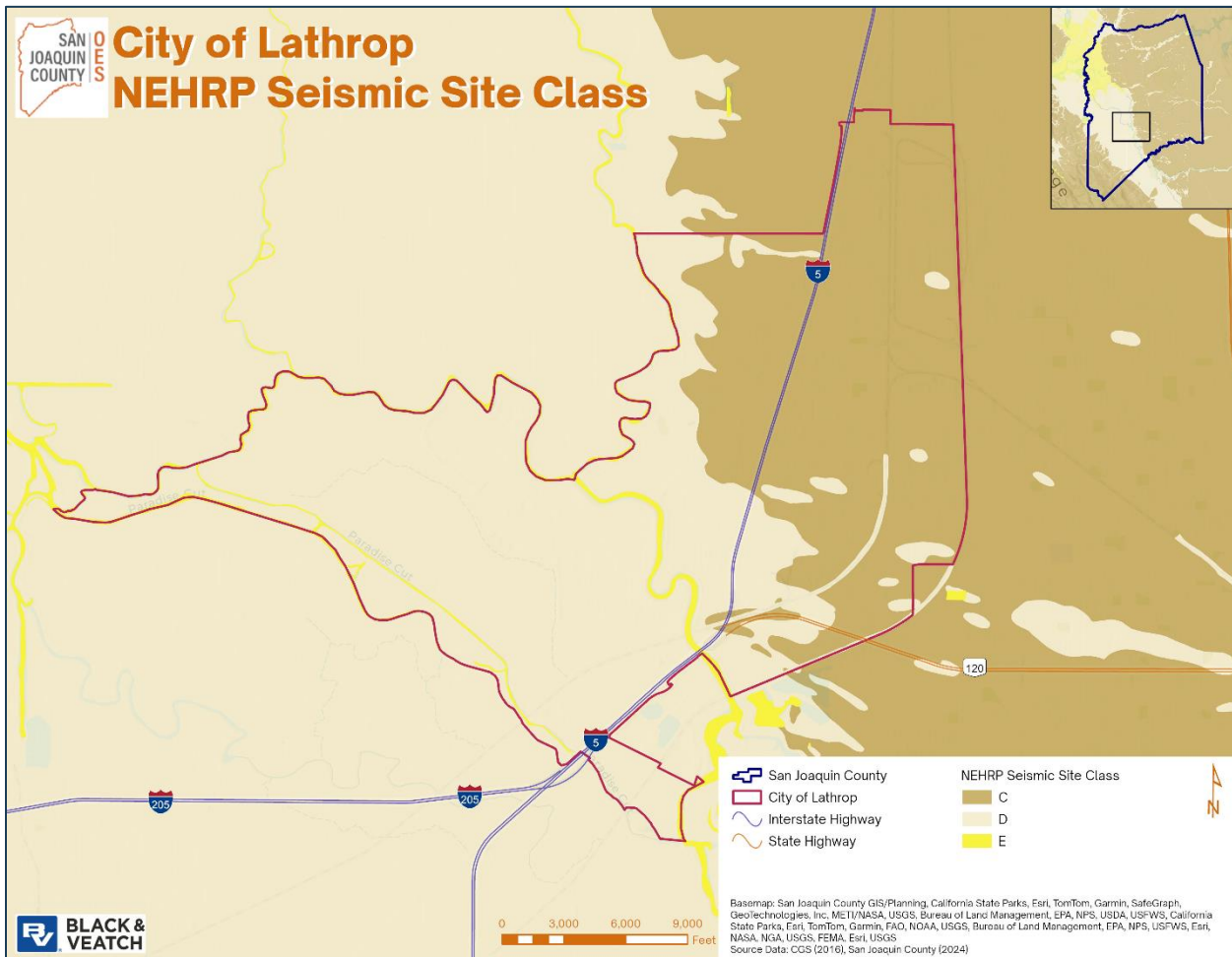
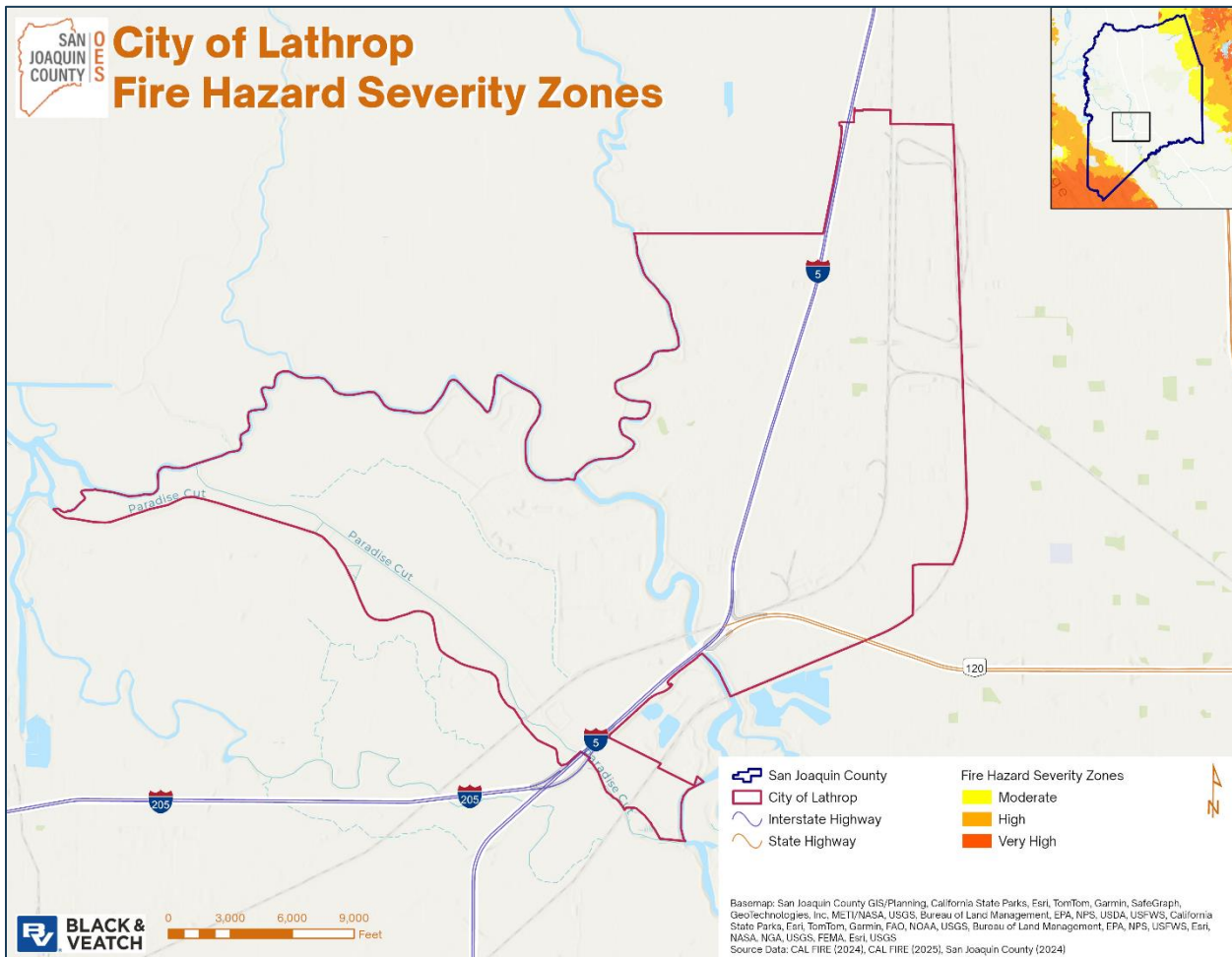


Figure 4-7 NEHRP Seismic Site Class Soils



**Figure 4-8 Fire Hazard Severity Zones**

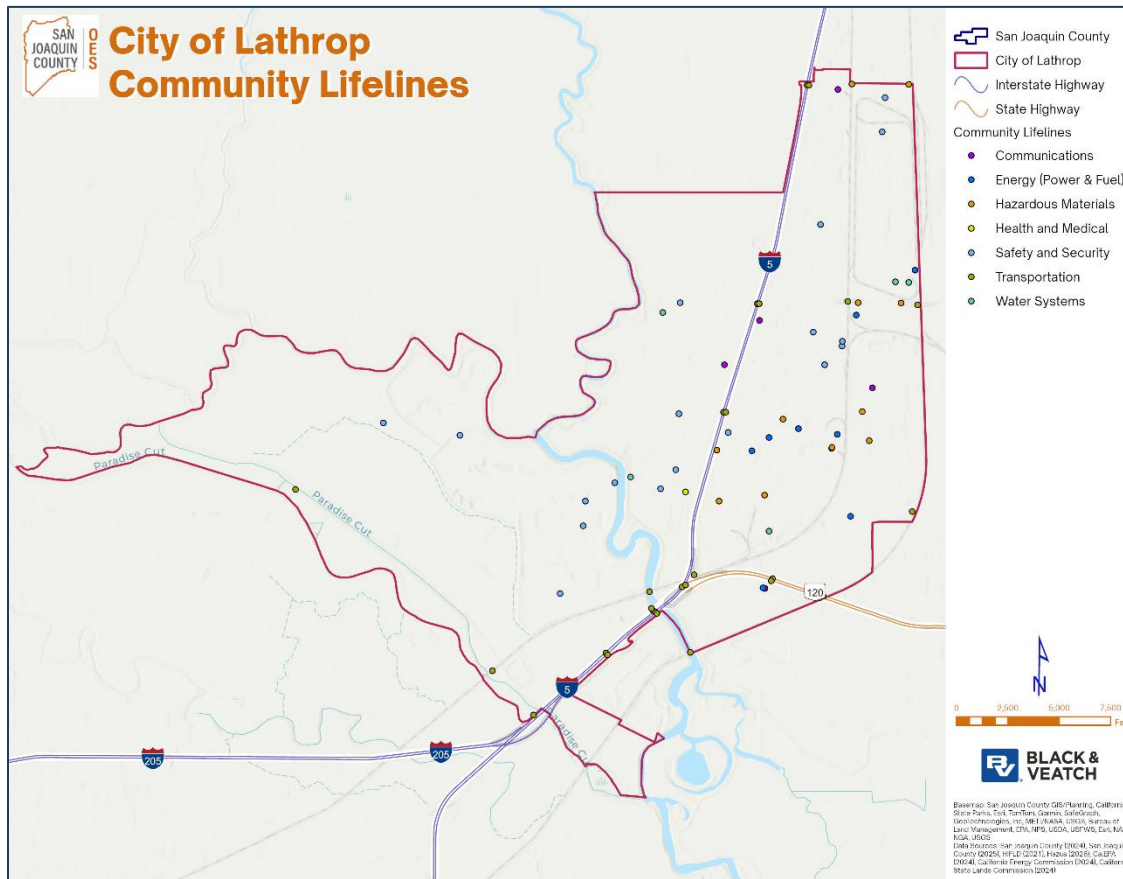


Figure 4-9 Community Lifelines

## 5. CITY OF LODI



Source: City of Lodi

### 5.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the City of Lodi. Members are listed in Table 5-1.

Table 5-1 Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Tim Ortegel, Deputy Chief Lodi FD	Name and Title:	Eric Versteeg, Captain Lodi PD
Address:	210 W. Elm St, Lodi	Address:	215 W. Elm St, Lodi
Phone Number:	(209) 333-5552	Phone Number:	(209) 333-5517
Email:	tortegel@lodi.gov	Email:	eversteeg@lodi.gov
<b>NFIP Floodplain Administrator</b>			
Name and Title:	Sean Nathan, Interim Public Works Director		
Address:	221 W. Pine St, Lodi		
Phone Number:	(209) 269-4909		
Email:	snathan@lodi.gov		
<b>Additional Planning Team Members:</b>			
Name and Title:	Sean Nathan, City Engineer / Deputy Public Works Director		
Method of Participation:	Provided data from Public Works Department		
Name and Title:	Kevin Kent, Captain Lodi Police Department		
Method of Participation:	Alternate point of contact		
Name and Title:	Cynthia Marsh, Interim Community Development Director		
Method of Participation:	Provided information from Community Development		

Primary Point of Contact		Alternate Point of Contact
Name and Title:	Hasan Shahriar, Engineering & Operation Manager Electric Utility	
Method of Participation:	Provided data on electric utility infrastructure	
Name and Title:	Nancy Sarieh, Public Information Officer	
Method of Participation:	Provided information on education and outreach	

## 5.2 Jurisdictional Profile

### 5.2.1 Location and Features

Located along the Mokelumne River, adjacent to the Sacramento River Delta, Lodi is situated in the San Joaquin Valley between Stockton, six miles to the south; Sacramento, 35 miles to the north; and along SR-99. The city is located on the main line of the Union Pacific Railroad and is within five miles of I-5 via SR-12. The city is largely flat, distinguished by Lodi Lake and the Mokelumne River that form the northern edge of the city. The White Slough Water Pollution Control Facility (White Slough) is located within City limits but is separated from the urbanized area of Lodi. Lodi’s incorporated limits (exclusive of White Slough) encompass an area of about 12 square miles (City of Lodi 2020).

### 5.2.2 History

Lodi was first called Mokelumne. It was founded in August 1869 when the Central Pacific Railroad chose the site for a station on its new route. The town consisted of a store/post office building, a hotel, and the station. In the spring of 1870, people from neighboring towns moved to Mokelumne until, by October, there were 56 houses (City of Lodi 2024).

The first school in town was built in 1872. The first newspaper, the Valley Review, began publishing in 1878. Lodi kept progressing even though a fire in 1887 destroyed the downtown area along Sacramento Street. In 1891, water and gas service was provided and electric service came ten years later. By 1895, Lodi had a volunteer fire department, but law enforcement was supplied by the county and the township until 1906. A library was finally established in 1901 (City of Lodi 2024).

In 1906, by a vote of two to one, the citizens incorporated the city. Prior to this time, the government had been provided by the county and the township. George Lawrence was elected as the first mayor in 1906 (City of Lodi 2024).

### 5.2.3 Governance

The City of Lodi is a general law city, governed primarily by the laws of the State of California and by its own ordinances and regulations. The City Council establishes local laws, sets policies, approves programs, appropriates funds, and supervises the operations of City government. City Council Members are elected on a by-district basis from five single-member Council districts. Council Members hold four-year terms (City of Lodi 2024).

The City owns its Electric Utility Department, Water Department, and Wastewater Departments.

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

### 5.2.4 Assets

Table 5-2 Assets

Asset	Value
Electric Utility	
4 Substations	\$34,000,000
Police Station	
215 W. Elm St.	\$30,000,000
Fire Stations	
Station 1, 210 W. Elm St.	\$6,000,000
Station 2, 2 S. Cherokee Ln.	\$6,000,000
Station 3, 2141 S. Ham Ln.	\$6,000,000
Station 4, 180 N. Lower Sacramento Rd.	\$6,000,000
Public Works	
Wastewater Treatment Plant	\$50,000,000
Surface Water Treatment Plant	\$40,000,000
28 Wells	\$90,000,000.00
4 Storage Tanks	\$180,000,000.00
Storm Water Pump Stations	
19 Pump Stations	\$28,500,000
<i>Total:</i>	<i>\$316,500,000</i>

## 5.3 Growth and Development Trends

### 5.3.1 Population

According to the California Department of Finance 2025 estimates, Lodi has a population of 67,093, an increase from 63,589 in 2015. The community saw consistent growth until 2021, when the population declined. Between 2023 and 2024, however, population growth was positive. Lodi’s median age is 37, with the 65-and-older group representing the largest share of its population.

### 5.3.2 Equity Priority Communities

Equity means equal opportunity for all. Low-income residents, communities of color, tribal nations, and immigrant communities have historically disproportionately experienced environmental burdens and related health

problems. This inequity has resulted from many factors, including inappropriate zoning and incomplete land use planning, which have led to development patterns that concentrate pollution emissions and environmental hazards near communities that have not had the political wherewithal to protect themselves. As many of these “disadvantaged” or “environmental justice” communities continue to face significant barriers to their overall health, livelihood, and sustainability, State law now requires that general plans address environmental justice through Senate Bill (SB) 1000. Policies and actions throughout the Environmental Justice Element of the General Plan help aim to reduce health risks in disadvantaged communities.

According to the City of Lodi’s General Plan, much of the eastern half of the City is identified as disadvantaged or “Communities of Focus.”

### 5.3.3 Development

The City of Lodi’s population increased five percent between 2015 and 2020.

**Table 5-3 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?	Yes					
If yes, describe land areas and dominant uses.	+/- 96 acres Residential/Mixed Use					
If yes, who currently has permitting authority over these areas?	County of San Joaquin					
Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.	N/A					
Are any areas targeted for development or major redevelopment in the next five years?	Yes					
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	No hazard risks identified					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
	Single Family	267	353	141	123	229
	Multi-Family	0	6	0	0	0
	Other (mobile homes, accessory dwellings, mixed use, etc.)	4	19	30	28	0
	Commercial	9	14	29	10	5

Criterion	Response					
	Total	280	392	200	161	234
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.	Approximately 85% built out					

## 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 or improve upon 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.

### 5.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop policies and programs and to implement rules and regulations to protect and serve community members. Local policies are typically identified in a variety of community plans, implemented via a local ordinance, and enforced through a governmental body. An assessment of planning and regulatory capabilities is presented in Table 5-4.

**Table 5-4 Planning and Regulatory Capabilities**

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>				
Building Code	Yes	No	Yes	Yes
Comment:	2022 California Building Code. Lodi Municipal Code 15.04.010			
Zoning Code	Yes	No	Yes	Yes
Comment:	Lodi Municipal Code 15.36.050			
Subdivisions	Yes	No	Yes	Yes
Comment:	Lodi Municipal Code 17.46			
Stormwater Management	Yes	No	Yes	Yes
Comment:	Lodi Municipal Code 13.14			
Post-Disaster Recovery	No	Yes	No	Yes
Comment:	-			

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Real Estate Disclosure	Yes	No	No	Yes
Comment:	Lodi Municipal Code 8.18			
Growth Management	Yes	No	Yes	No
Comment:	Lodi Municipal Code 15.34			
Site Plan Review	Yes	Yes	Yes	No
Comment:	Lodi Municipal Code 17.40.020			
Environmental Protection	Yes	No	Yes	No
Comment:	-			
Flood Damage Prevention	Unsure	No	Yes	Yes
Comment:	Lodi Municipal Code 15.60			
Emergency Management	Yes	No	No	Yes
Comment:	Fire/Police share Emergency Management/EOC preparedness Lodi Muni Code 2.32			
Climate Change	Yes	No	Yes	Yes
Comment:	Environmental Justice Element & Climate Action Plan - 2014			
<b>Planning Documents</b>				
General Plan	Yes	No	Yes	Yes
Is the General Plan compliant with Assembly Bill 2140?	Yes			
Comment:	General Plan will be amended in the next few years			
Capital Improvement Plan	Yes	No	No	
How often is the plan updated?	CIPs are updated annually with the Budget, and are typically on a 5-year cycle			
Comment:	California Government Code § 65401: This state law requires the Planning Commission to review the City's Capital Projects Program (CIP) for conformity with the General Plan.			
Disaster Debris Management Plan	No	Yes	No	No
Comment:	California Disaster Recovery Framework, 2019			
Floodplain or Watershed Plan	Yes	No	Yes	No
Comment:	-			
Stormwater Plan	Yes	No	No	No
Comment:	-			
Urban Water Management Plan	Yes	No	Yes	Yes
Comment:	Water Infrastructure and Supply Memorandum			

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Habitat Conservation Plan	Yes	No	No	Yes
Comment:	General Plan Conservation Element			
Economic Development Plan	No	No	No	No
Comment:	-			
Community Wildfire Protection Plan	Yes	No	No	Yes
Comment:	Wildfire Mitigation Plan			
Forest Management Plan	Yes	Yes	No	No
Comment:	-			
Climate Action Plan	Yes	No	Yes	Yes
Comment:	City of Lodi Climate Action Plan			
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	No	No	Yes
Comment:	Participating in the County's THIRA update			
Post-Disaster Recovery Plan	No	No	No	No
Comment:	-			
Continuity of Operations Plan	No	No	No	No
Comment:	-			
Public Health Plan	No	No	Yes	No
Comment:	-			
Emergency Operations Plan	Yes	No	Yes	Yes
Comment:	Emergency Operations Plan			

### ***Opportunities to Expand Planning and Regulatory Capabilities***

The planning and regulatory capabilities of the City can be expanded by integrating the County-wide hazard mitigation plan into the City's various plans as listed in Table 5-14 and below:

- General Plan
- Climate Action Plan
- Environmental Protection Measures
- Building Code
- Municipal Code (Zoning, Subdivisions, Stormwater Management, Real Estate Disclosure, Growth Management, Flood Damage Prevention, Emergency Management)

- Water Infrastructure and Supply Memorandum
- Wildfire Mitigation Plan
- Threat & Hazard Identification & Risk Assessment

The City has identified numerous opportunities to integrate the HMP into plans, codes, and ordinances. Updates to the building code with consideration for the hazards identified in this plan can help lessen damage to property. The municipal code outlines brief policies for zoning, subdivisions, stormwater management, real estate disclosure, growth management, flood damage prevention, emergency management, which can all be updated according to the findings of this plan to support resilience in the face of disaster. The Climate Action Plan can help the community reduce its impact on the changing climate and consider adaptations. The Safety Element of the General Plan identifies the natural and manmade hazards that exist within the city. Risk assessment information from this hazard mitigation plan can be incorporated in future updates to the Safety Element of the General Plan. The THIRA will be updated as part of this plan. Integrating the HMP into Water Infrastructure and Supply Memorandum can help update projections with future needs. The Wildfire Mitigation Plan can be updated with the findings of this plan’s vulnerability assessment.

### 5.4.2 Development and Permitting Capabilities

Jurisdictions 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 lead to hazard mitigation. Development and permitting capabilities are presented in Table 5-5.

**Table 5-5 Development and Permitting Capabilities**

Criterion	Response
Does your jurisdiction issue development permits?	Yes
If no, who does? If yes, which department?	Community Development, Building Division
Does your jurisdiction track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	No

### 5.4.3 Fiscal Capabilities

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. An assessment of fiscal capabilities is presented in Table 5-6.

**Table 5-6 Fiscal Capabilities**

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
If yes, specify:	Water, Sewer, and Electric Services	
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		No
Development Impact Fees for Homebuyers or Developers		Yes

### **Opportunities to Expand Fiscal Capabilities**

One of the primary objectives in developing the 2026 MJHMP is to establish eligibility to pursue FEMA HMA grant funding opportunities (e.g., FMA and HMGP). HMA funding streams typically require up to a 25 percent local match. The City has identified local funding resources in Table 5-6 that can provide the local match for projects in the mitigation action plan that list HMA grants as a potential primary funding source.

#### **5.4.4 Administrative and Technical Capabilities**

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 5-7.

**Table 5-7 Administrative and Technical Capabilities**

Staff/Personnel Resource		Available?
Planners or engineers with knowledge of land development and land management practices		Yes
If Yes, Department /Position:	Community Development Dept./ Senior Planner / Assistant Planner / Deputy Director/City Planner / Associate Transportation Planner	
Engineers or professionals trained in building or infrastructure construction practices		Yes
If Yes, Department /Position:	Public Works / City Engineer / Deputy PW Director	
Planners or engineers with an understanding of natural hazards		Yes

Staff/Personnel Resource		Available?
If Yes, Department /Position:	Community Development Dept. Senior Planner/City Planner	
Staff with training in benefit-cost analysis		No
If Yes, Department /Position:		
Surveyors		Yes
If Yes, Department /Position:	Public Works / Senior Civil Engineer / City Surveyor	
Personnel skilled or trained in GIS applications		Yes
If Yes, Department /Position:	Public Works / City Engineer & Engineering Technician	
Scientist familiar with natural hazards in local area		No
If Yes, Department /Position:		
Emergency manager		Yes
If Yes, Department /Position:	Acting City Manager James Lindsey	
Grant writers		Yes
If Yes, Department /Position:	Community Development Dept. Neighborhood Services Manager	
Procurement Services and Management		Yes
If Yes, Department /Position:	CDD Neighborhood Services Manager	

### **Opportunities to Expand Administrative and Technical Capabilities**

Administrative and technical capabilities are a community’s staff, skills and tools. These capabilities can be used for mitigation planning and to carry out specific mitigation actions. They also include the ability to access, coordinate, and implement these resources effectively (FEMA 2023). An assessment of administrative and technical capabilities is presented in Table 5-7.

The City identifies opportunities to strengthen fire and emergency response with regional partners, send members to Hazmat school, and prepare ordinances that support disaster preparedness and response. The fire department has identified funding in the Capital Improvement Plan to provide additional training to its employees.

#### **5.4.5 Education and Outreach Capabilities**

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 5-8.

**Table 5-8 Education and Outreach Capabilities**

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
If yes, briefly describe: Fire Department section – Heat Wave Safety information, Water Safety information		
Do you use social media for hazard mitigation education and outreach?		Yes
If yes, briefly describe:	Messages pushed out via Lodi Fire Department Instagram and Facebook accounts include: <ul style="list-style-type: none"> <li>• how to care for people, pets and seniors during heat waves</li> <li>• how to protect property from fire hazards such as dry weeds/grass, etc. during heat waves and especially combined with high winds, road closures due to flooding, accidents or for planned roadwork</li> <li>• warnings of the danger of swift, cold river water</li> <li>• promoting the use of life jackets when in the lake or river</li> </ul>	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?		No
If yes, briefly describe:	-	
Do you have any other programs in place that could be used to communicate hazard-related information?		No
If yes, briefly describe:	-	
Do you have any established warning systems for hazard events?		No
If yes, briefly describe:	-	

***Opportunities to Expand Education and Outreach Capabilities***

The City identifies opportunities to expand education and outreach capabilities by creating and maintaining public outreach/education through CI website updates, flyers, and other acceptable means.

**5.4.6 Community Classifications**

Other programs, such as the Community Rating System and StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 5-9.

**Table 5-9 Community Classifications**

	Participating?	Classification	Date Classified
Federal Information Processing Standards (FIPS) Code	Yes	49017	N/A
Unique Identity ID (UEI)	Yes	HA3AHF19FEM4	N/A
Community Rating System (CRS)	No	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	N/A	N/A
Public Protection (ISO for Fire Districts)	Yes	ISO Class 2	June 1, 2024
NWS StormReady®	No	N/A	N/A
Firewise USA	No	N/A	N/A

### 5.4.7 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The community’s adaptive capacity for the impacts of climate change is presented in Table 5-10.

**Table 5-10 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	Medium
Comment:	Environmental Justice Element & Climate Action Plan
Jurisdiction-level monitoring of climate change impacts	Low
Technical resources to assess proposed strategies for feasibility and externalities	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Medium
Comment:	Environmental Justice Element & Climate Action Plan
Capital planning and land use decisions informed by potential climate impacts	Medium
Comment:	Environmental Justice Element & Climate Action Plan
Participation in regional groups addressing climate risks	Medium
Comment:	Regional efforts are outlined in the Environmental Justice Element & Climate Action Plan

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Implementation Capacity</b>	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
Identified strategies for greenhouse gas mitigation efforts	Medium
Comment: Environmental Justice Element & Climate Action Plan	
Identified strategies for adaptation to impacts	Medium
Comment: Environmental Justice Element & Climate Action Plan	
Champions for climate action in local government departments	Medium
Comment: Environmental Justice Element & Climate Action Plan	
Political support for implementing climate change adaptation strategies	Medium
Comment: Environmental Justice Element & Climate Action Plan	
Financial resources devoted to climate change adaptation	Low
Comment: Environmental Justice Element & Climate Action Plan	
Local authority over sectors likely to be negative impacted	Low
<b>Public Capacity</b>	
Residents' knowledge of and understanding of climate risk	Low
Residents' support of adaptation efforts	Low
Residents' capacity to adapt to climate impacts	Low
Local economy current capacity to adapt to climate impacts	Low
Local ecosystems capacity to adapt to climate impacts	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.

## 5.5 National Flood Insurance Program Compliance

Flooding is the costliest natural hazard in the United States. Community participation in the NFIP opens up the opportunity for additional grant funding associated specifically with flooding issues. Assessment of the jurisdiction's current NFIP status and compliance provides planners with a greater understanding of the local flood management program, opportunities for improvement, and available grant funding opportunities. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 5-11.

**Table 5-11 National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Sean Nathan, Interim 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?	October 21, 2020
Does your floodplain management program meet or exceed minimum requirements?	Yes
When was the most recent Community Assistance Visit or Community Assistance Contact?	N/A
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
If so, what type of assistance/training is needed?	N/A
Does your jurisdiction have a Substantial Damage Response Plan?	No
How does your jurisdiction assess substantial damages after a hazard event?	N/A
Does your jurisdiction participate in the Community Rating System (CRS)?	No
If yes, is your jurisdiction interested in improving its CRS Classification?	N/A
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup>	156
What is the insurance in force?	\$48,686,000
What is the premium in force?	\$142,053
How many total loss claims have been filed in your jurisdiction? <sup>a</sup>	15
What were the total payments for losses?	\$ 14,394.44

a. According to FEMA statistics as of 12/2025

## 5.6 Integration

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.

### 5.6.1 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:

- Lodi General Plan Safety Element – Safety, Conservation, and Environmental Justice Elements have been adopted December 4<sup>th</sup>, 2024
  - The Safety Element identifies the natural and manmade hazards that exist within the city. It seeks to mitigate their potential impacts, through both preventative and response measures, to ensure the continued health and safety of Lodi community members. Risk assessment information from this hazard mitigation plan can be incorporated in future updates to the Safety Element
- Lodi participates in the San Joaquin Council of Governments Regional Climate Collaboratives program. Potential climate change impacts to natural hazards discussed in the hazard mitigation plan may be inform the initiatives of the program.

## 5.7 Risk Assessment

### 5.7.1 Jurisdiction-Specific Natural Hazard Event History

Table 5-12 lists past occurrences (since 2020) of natural hazards for which specific impacts 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 5-12 Past Natural Hazard Events**

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Local Impacts
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Local Impacts
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/2023	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	CA23-1	1/4/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	The City was subject to closures and masking and social distancing requirements.

### 5.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for the City of Lodi is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the City in identifying hazards that pose the most significant threat. Table 5-13 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.

**Table 5-13 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability (1-4 index value with 30% weighting factor)	Impact (1-4 index value with 30% weighting factor)	Spatial Extent (1-4 index value with 20% weighting factor)	Warning Time (1-4 index value with 10% weighting factor)	Climate Change (1-4 index value with 10% weighting factor)		
Dam Failure	.3	.9	.2	.1	.3	1.8	High
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.3	.9	.2	.1	.3	1.8	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

Notes:  
 PRI Value 1 to 1.9 = Low Hazard Risk Ranking  
 PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking  
 PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### 5.7.3 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 jurisdiction has not identified any other issues other than what is in the risk assessment.

## 5.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 5-14 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas (e.g., dam failure, earthquake, landslide), prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter Energy Communications Transportation	Existing	1, 3, 4	Lead: Community Development Dept Support: Public Works Dept	Yes	Very High (\$1,000,000 and above)	FEMA HMGP and FMA	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including: <ul style="list-style-type: none"> <li>• General Plan</li> <li>• Climate Action Plan</li> <li>• Environmental Protection Measures</li> </ul>	Safety and Security Communications Transportation Water Systems	New	6	Lead: Community Development Dept Support: Public Works Dept	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	<ul style="list-style-type: none"> <li>Building Code</li> <li>Municipal Code</li> <li>Water Infrastructure and Supply Memorandum</li> <li>Wildfire Mitigation Plan</li> <li>San Joaquin Council of Governments Regional Climate Collaboratives program</li> </ul>								
3	<p>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"> <li>Evaluate the current floodplain ordinance to determine if updates are needed</li> <li>Update and adopt the City's floodplain ordinance to meet the minimum requirements of the NFIP</li> </ul>	Food, hydration, shelter	New, Existing	1, 2	Lead: Public Works Dept Support: Community Development Dept	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
4	Identify and pursue strategies to increase adaptive capacity to climate	Communications Safety and security	New, Existing	1, 3	Lead: Community	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	change including but not limited to the following: <ul style="list-style-type: none"> <li>Public outreach</li> <li>Integrate into the appropriate plans</li> </ul>				Development Dept Support: Public Works Dept				than 5 years)
5	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	N/A	N/A	6	Lead: Community Development Dept Support: Public Works Dept	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
6	Purchase generators for City-owned critical facilities and infrastructure that lack adequate backup power.	Safety and security; Energy; Communications	Existing	6	Lead: Public Works Director	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

**Table 5-15 Mitigation Action Prioritization**

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	0	3	3	3	3	1	0	3	3	3	1	3	3	3	3	35	High
#4	1	1	3	1	1	1	1	3	3	1	3	3	1	3	3	30	Medium
#5	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#6	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium

Notes:

31 or more = High Priority  
 15 to 30 = Medium Priority  
 0 to 14 = Low Priority

Table 5-16 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■		■		■		■	■	■	■	■	■	■
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■	■	■		■		■					■		■	■		
#4	■				■			■	■	■				■	■		■
#5					■		■		■	■			■	■	■		■
#6	■	■			■		■				■	■	■	■		■	■

## 5.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 5-17.

**Table 5-17 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
EDSP Community Workshop Survey	August 2025	-
Supported the countywide outreach efforts for this plan including promoting the public survey.	Throughout the planning process	TBD

## 5.10 Information Sources Used for This Annex

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

- Provided Floodplain Mapping
- General Plan Safety Element

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.

## 5.11 Hazard Mapping

Jurisdiction-specific risk maps of the hazards are provided on the following pages. For a complete description of each hazard, please see the applicable chapters in Volume 1 of this plan. These maps are based on the vulnerability and risk assessment results for this plan.

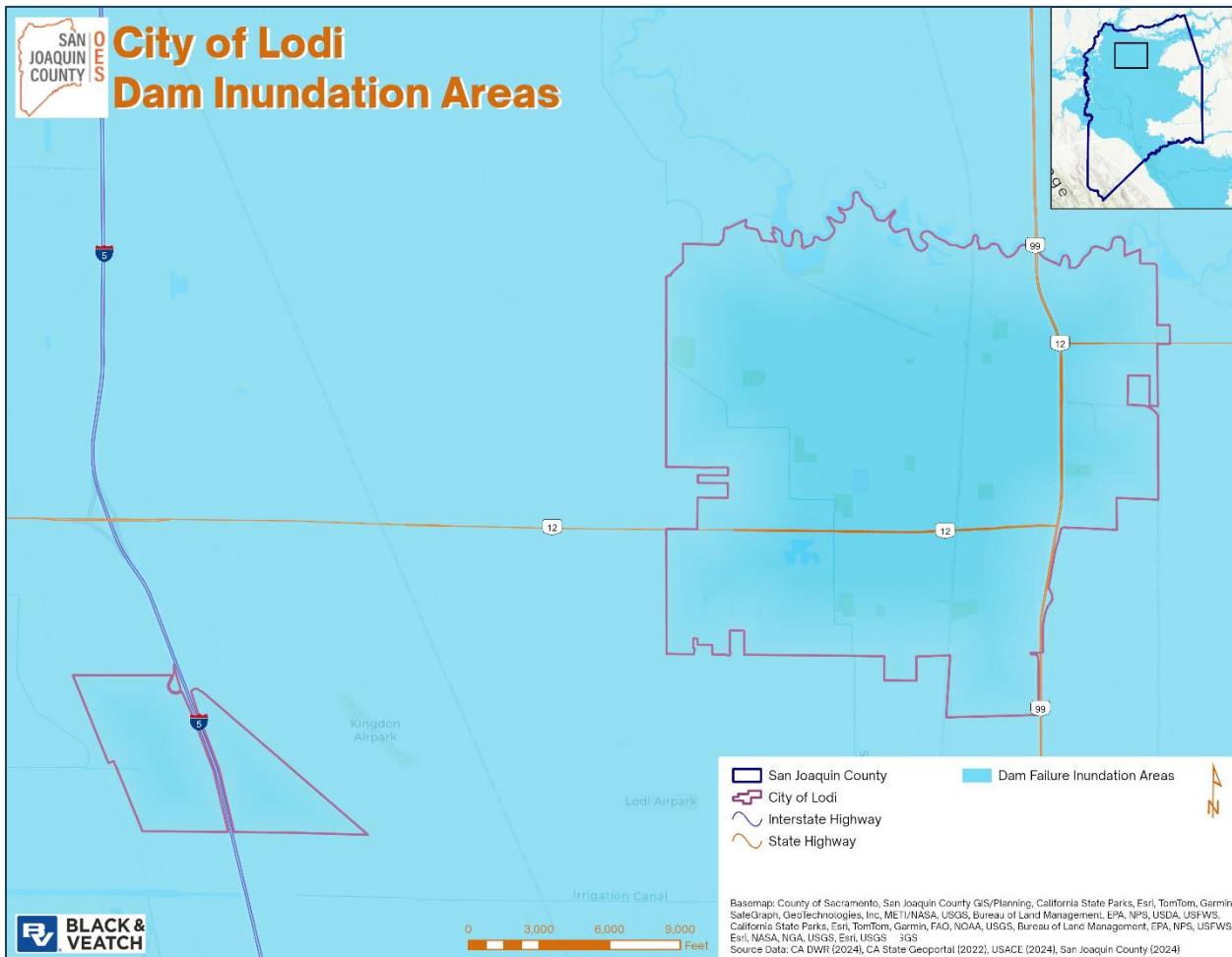
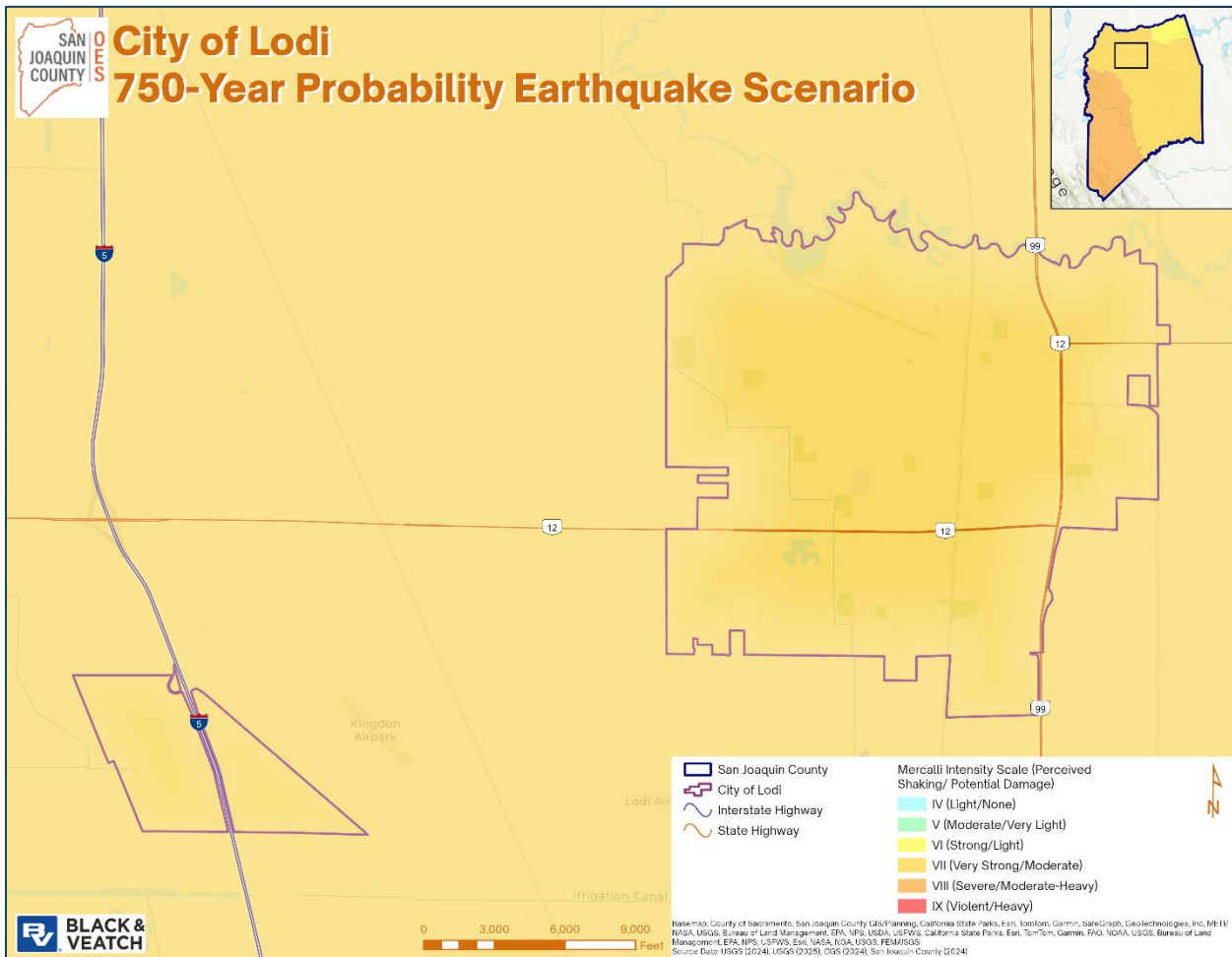


Figure 5-1 Dam Inundation Areas



**Figure 5-2 750-Year Probability Earthquake Scenario**

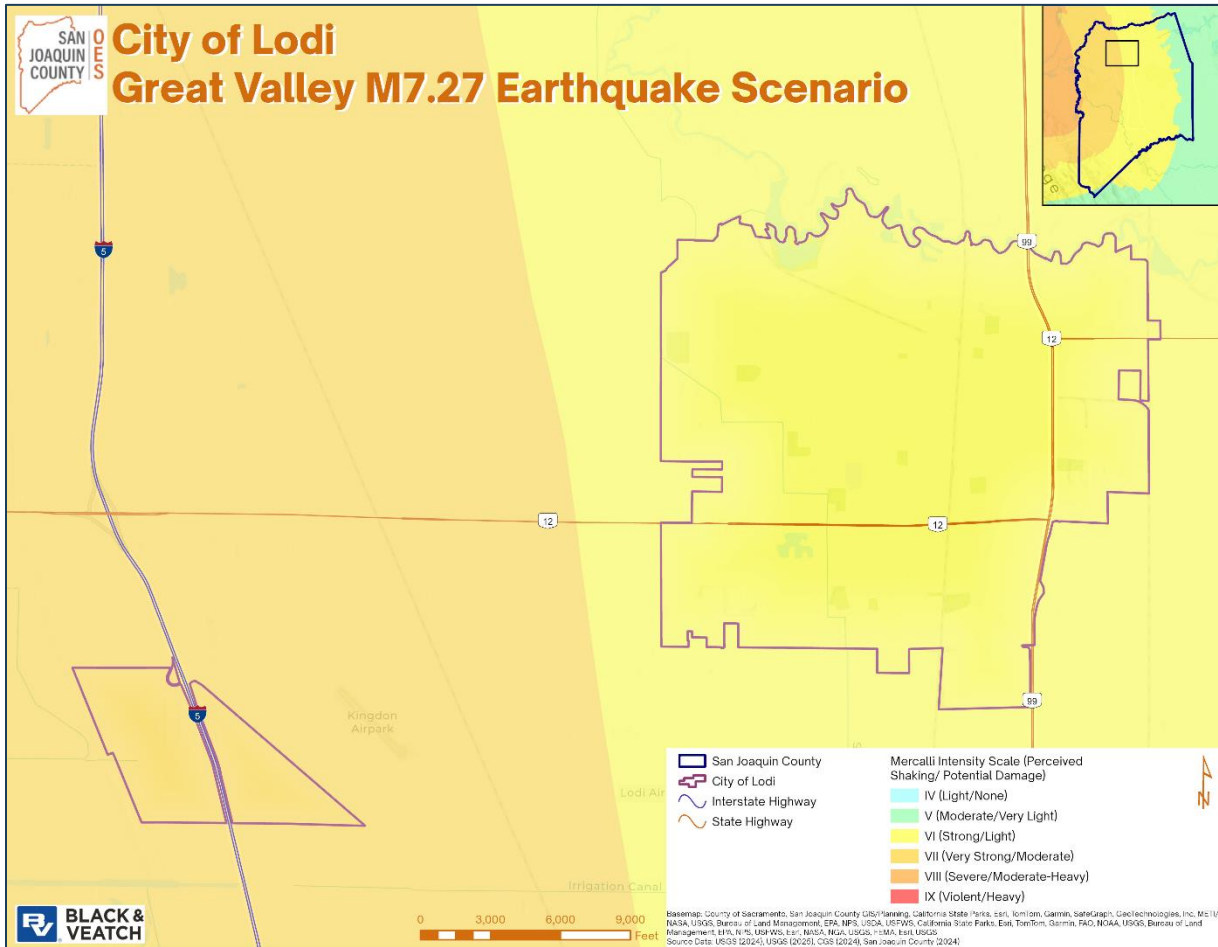
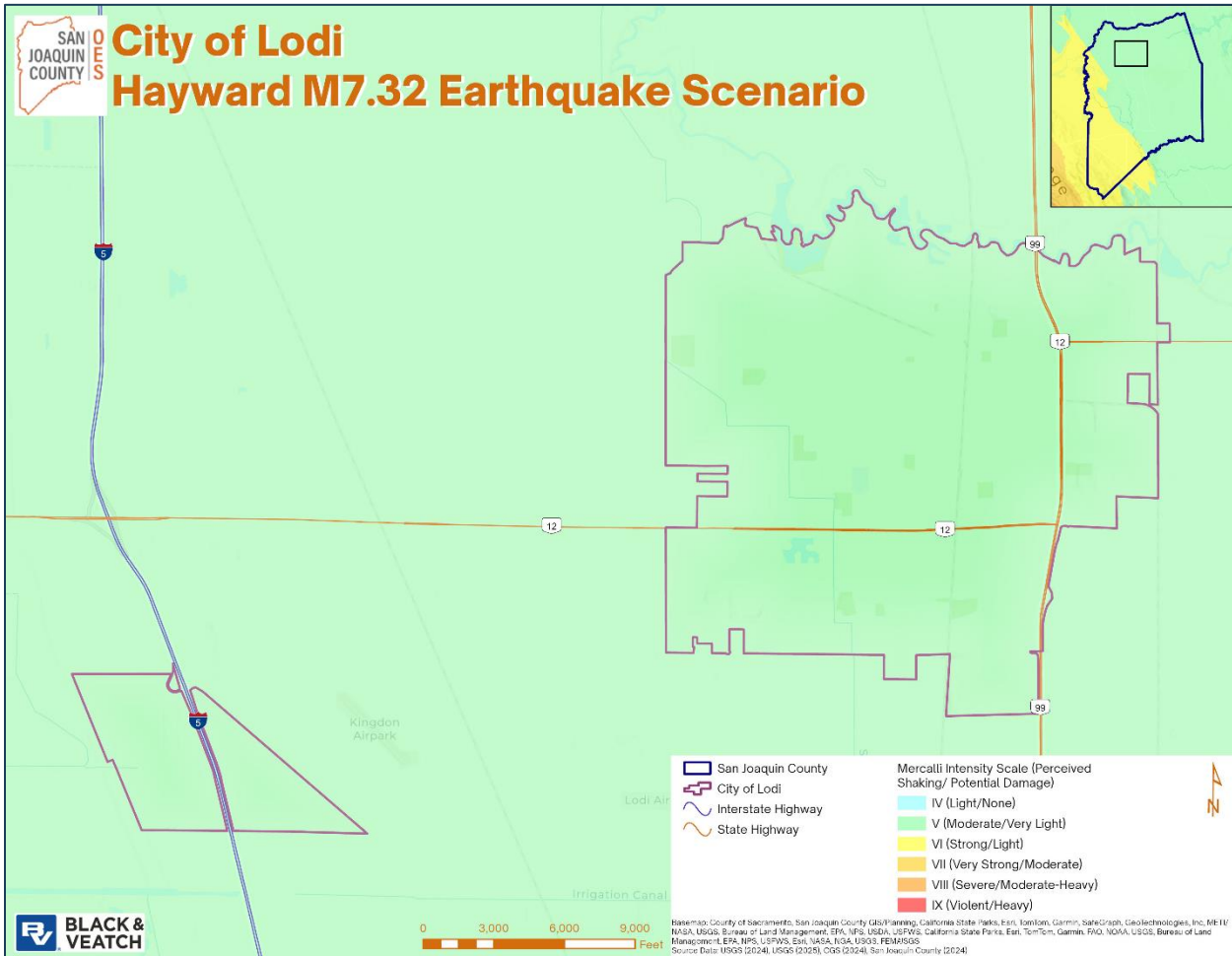


Figure 5-3 Great Valley M7.27 Earthquake Scenario



**Figure 5-4 Hayward M7.32 Earthquake Scenario**

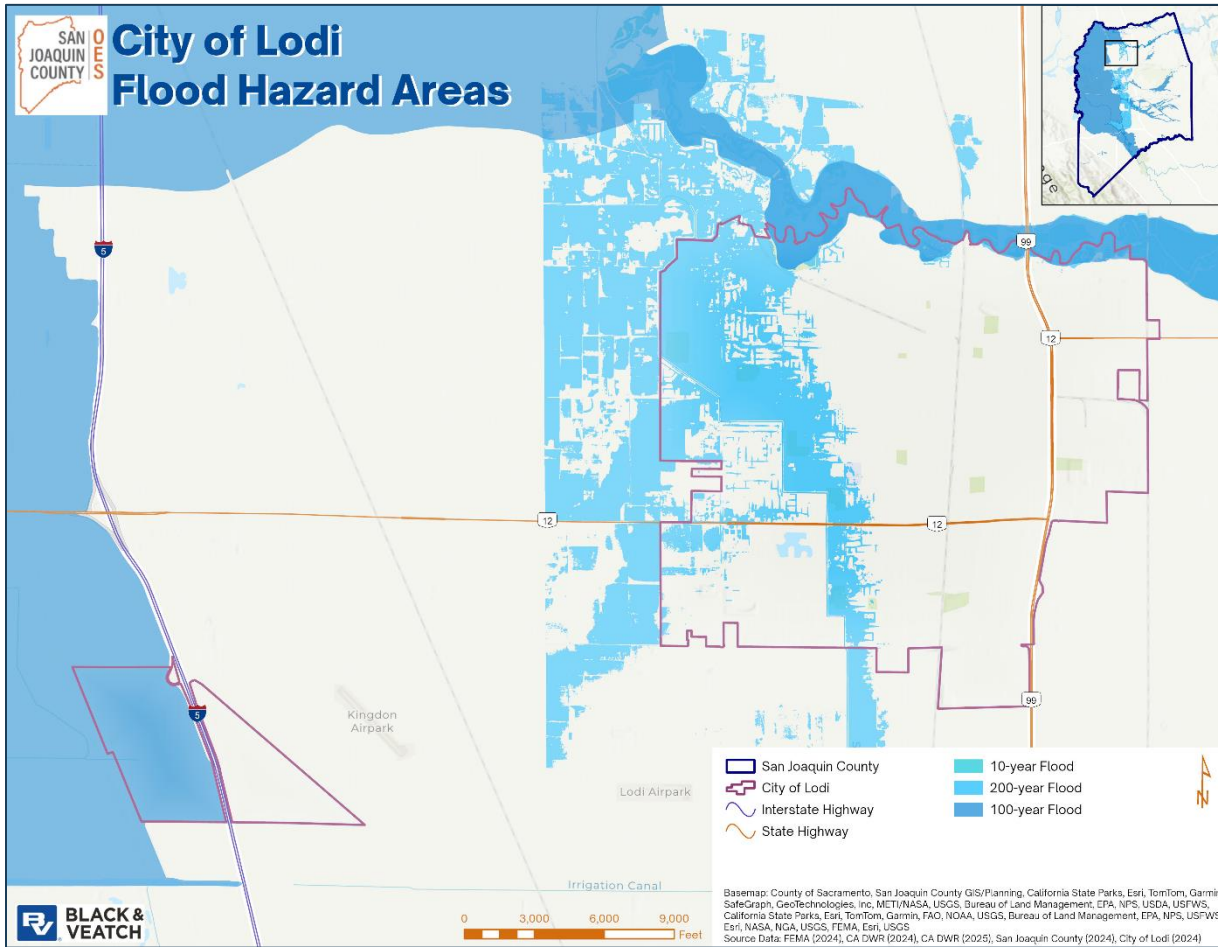
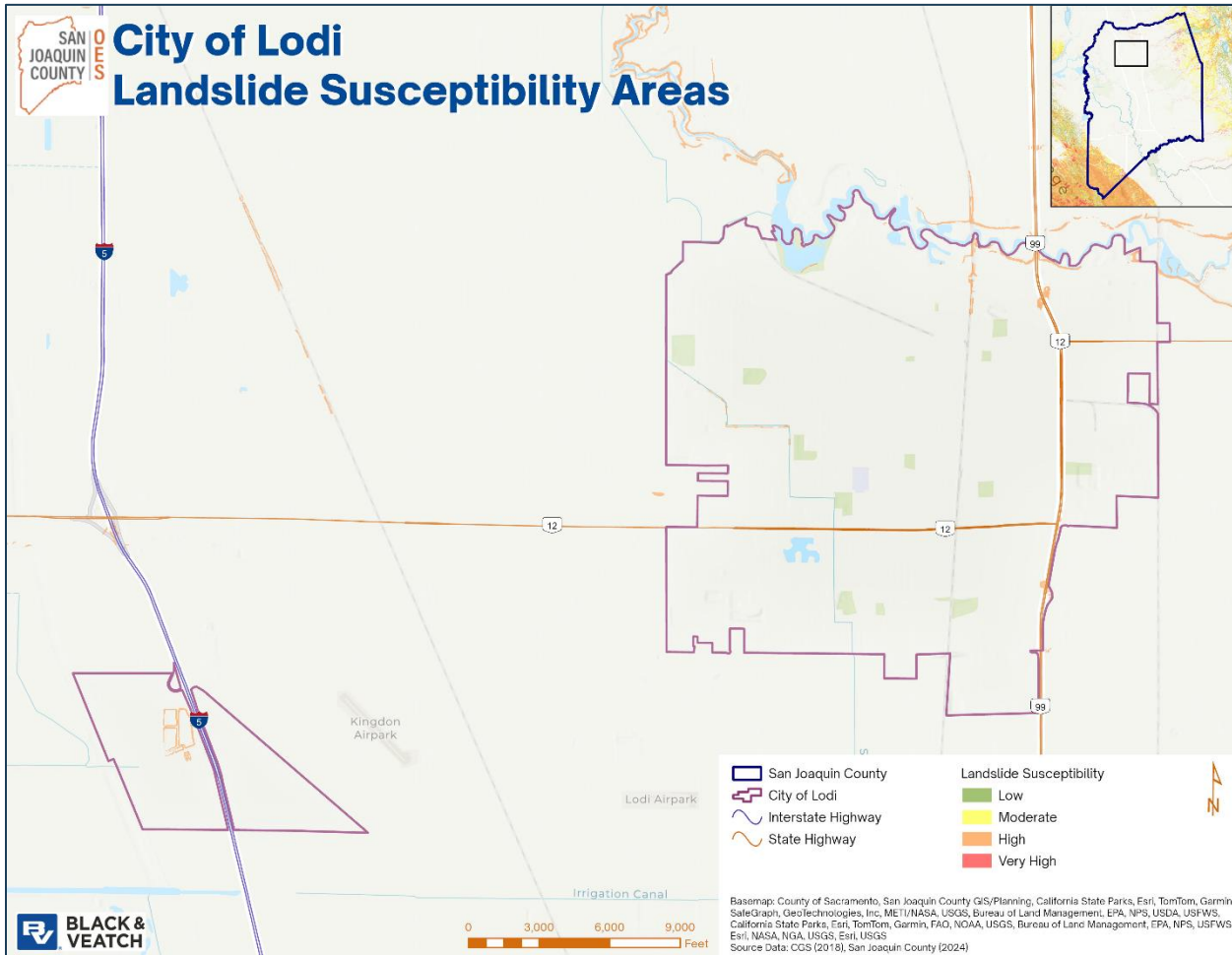
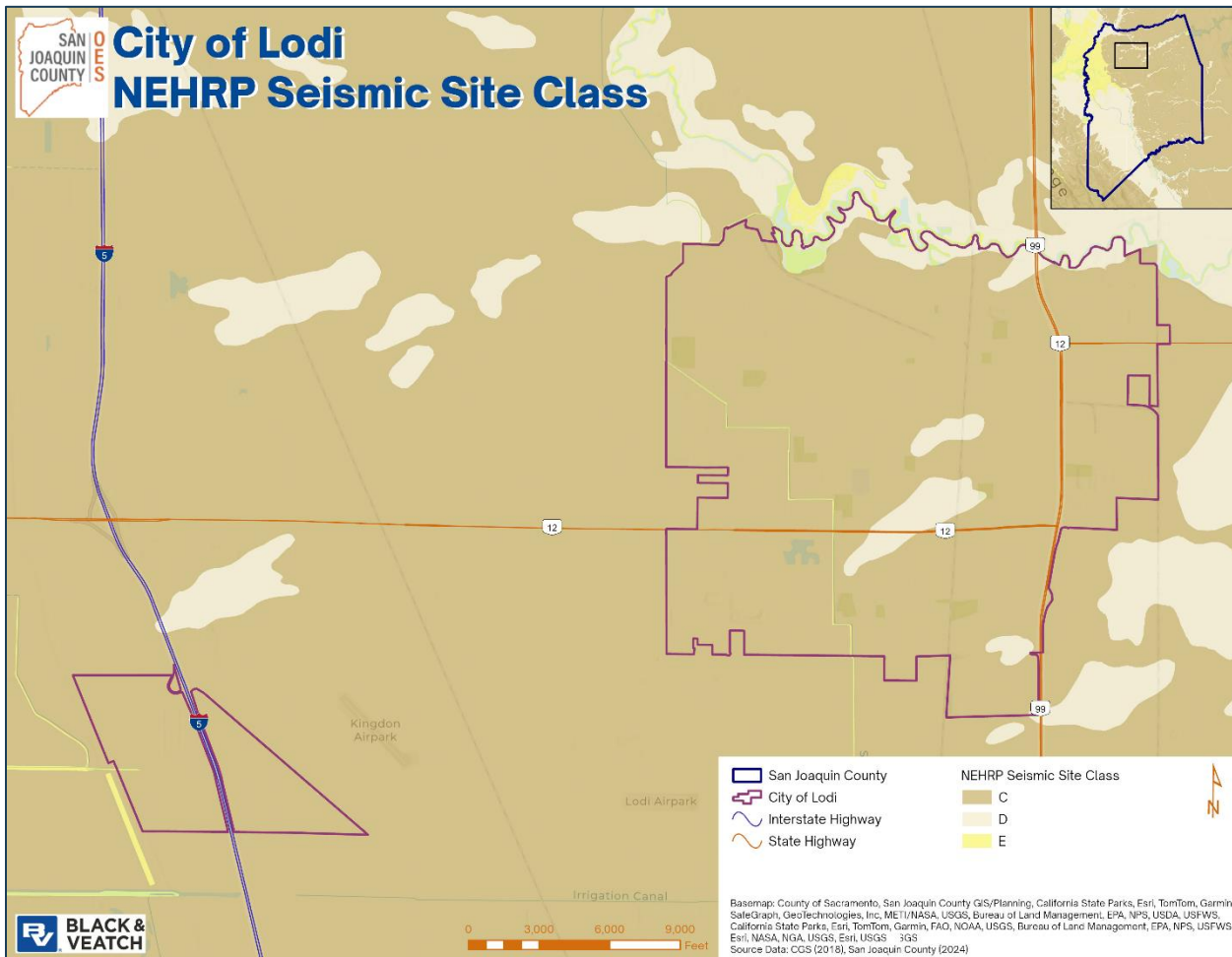


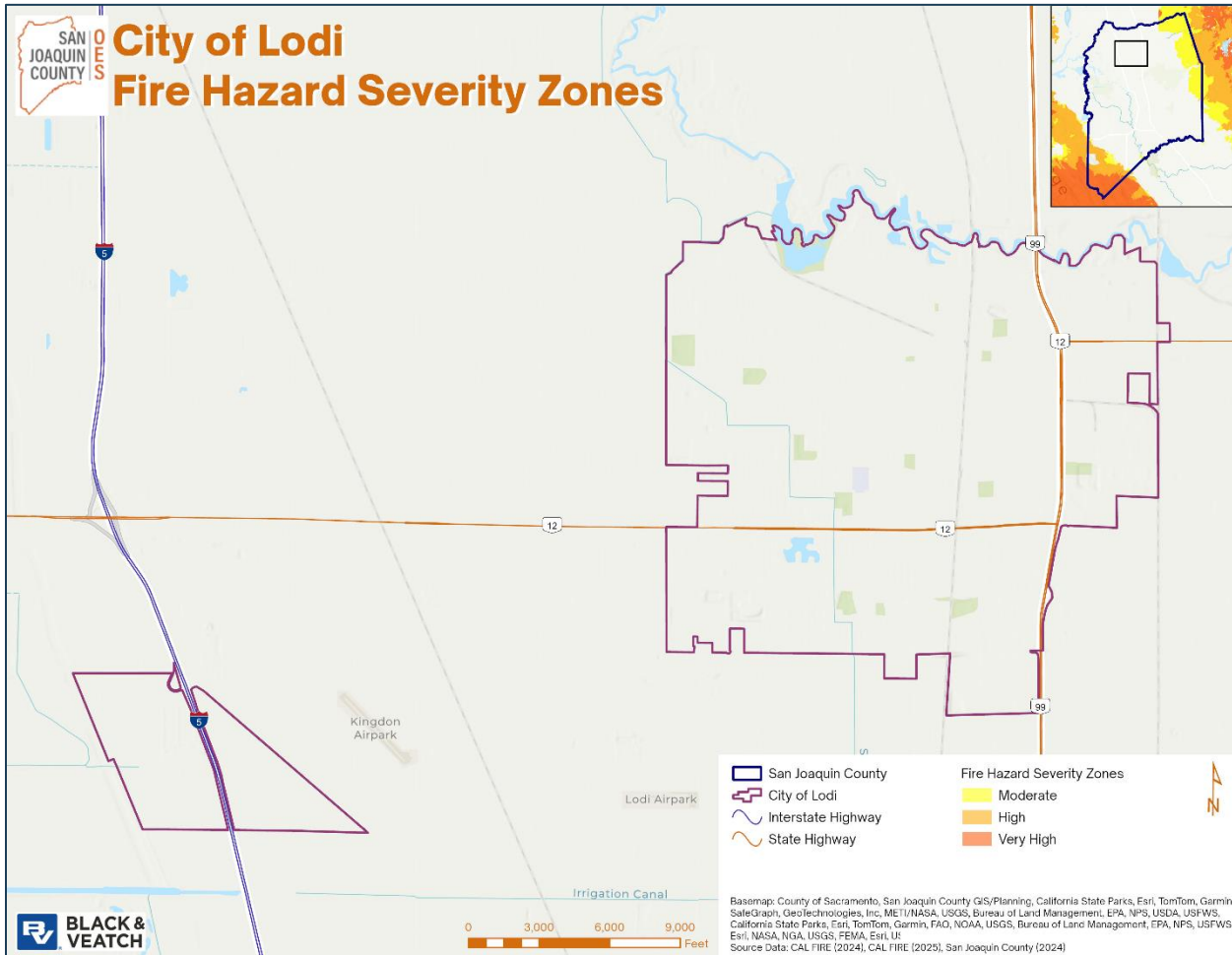
Figure 5-5 Flood Hazard Areas



**Figure 5-6 Landslide Susceptibility Areas**



**Figure 5-7 NEHRP Seismic Site Class Soils**



**Figure 5-8 Fire Hazard Severity Zones**

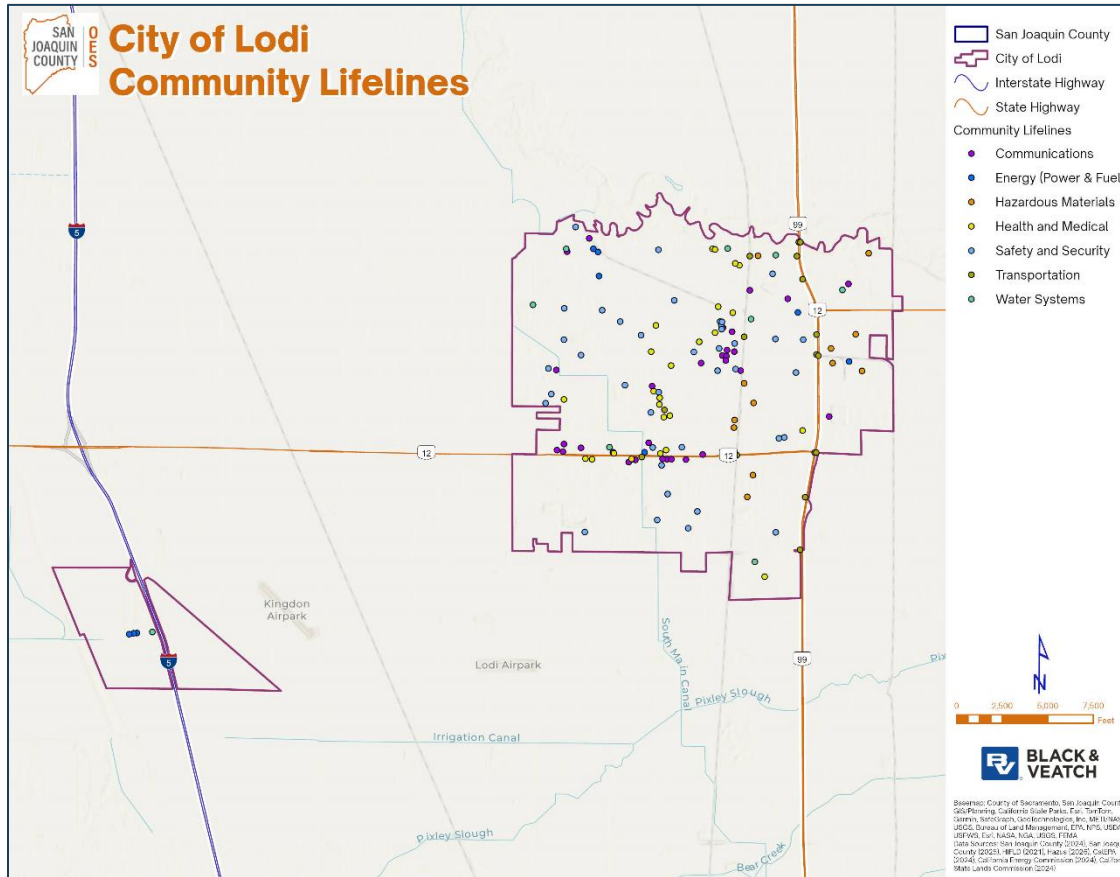


Figure 5-9 Community Lifelines



## 6. CITY OF MANTECA



Source: City of Manteca

### 6.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the City of Manteca. Members are listed in Table 6-1.

Table 6-1 Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Sterrie McLeod, Battalion Chief	Name and Title:	Jose Jasso, Public Works Director
Address:	1001 W. Center Street, Manteca, CA 95337	Address:	1001 W. Center Street, Manteca, CA 95337
Phone Number:	209-456-8373	Phone Number:	209-456-8400
Email:	<a href="mailto:Smcleod@manteca.gov">Smcleod@manteca.gov</a>	Email:	<a href="mailto:jjasso@manteca.gov">jjasso@manteca.gov</a>
<b>NFIP Floodplain Administrator</b>			
Name and Title:	Director of Engineering, Kevin Jorgensen		
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Phone Number:	209-456-8400		
Email:	<a href="mailto:kjorgensen@manteca.gov">kjorgensen@manteca.gov</a>		

Primary Point of Contact		Alternate Point of Contact
<b>Additional Planning Team Members:</b>		
Name and Title: Method of Participation:	Brad Wungluck, Director / Development Services Contributor	
Name and Title: Method of Participation:	Kevin Jorgensen, Director/ City Engineer Contributor	
Name and Title: Method of Participation:	Pennie Arounsack, Director of IT & Innovation Contributor	
Name and Title: Method of Participation:	Matt Boring, Finance Director Contributor	
Name and Title: Method of Participation:	Jose Jasso, Assistant City Manager/ Interim Public Works Director	

## 6.2 Jurisdictional Profile

### 6.2.1 Location and Features

Manteca is a city in the Central Valley of California, located 76 miles east of San Francisco and 18 miles northwest of Modesto. Manteca lies at a crossroads of major highways and railroads. As recently as the 1970s, Manteca existed primarily on agriculture and was still barely a stop between two freeways, Interstate 5, and State Route 99.

### 6.2.2 History

The Manteca area was first inhabited by Yokuts (Wyatt 2019). Manteca was formally established in 1861 by Joshua Cowell. Cowell claimed around 1,000 acres and built houses on what is now the corner of Main and Yosemite, where Bank of America now stands. In 1873, the Central Pacific Railroad laid track directly through the area (Escalante 2019).

Manteca is a prosperous farming center located in the heart of California’s Central Valley. It was first settled by a few pioneer farmers and developed due to a combination of good soil, excellent climate, and clean water. The town was called Cowell Station before the Central Pacific Railroad went through the area in 1873 and renamed it Manteca. The town was incorporated in 1918 with Joshua Cowell as the first Mayor (Manteca Chamber of Commerce 2024).

Cost-effective and reliable irrigation was essential for the development of the area, and it finally came in 1909 with the formation of the South San Joaquin Irrigation District. This marked the beginning of growth for the town. Manteca’s first school was built in 1857, and the first high school was established in 1920 after many years of discussion. The town also had several manufacturing and non-manufacturing companies, including the Manteca Canning Company, Spreckles Sugar Company, and Kraft Company (Manteca Chamber of Commerce 2024).

The continuing rise in Bay Area housing prices caused Bay Area families to look further eastward for more affordable places to live. Since the construction of the 120-bypass portion of State Route 120, Manteca has

become a popular choice for these commuters. The 1990s saw an increase in the city's population and the construction of its third high school (Sierra High School), joining Manteca High School and East Union High School.

### 6.2.3 Governance

The City of Manteca is a general law city and as such is governed by a council–manager form of government. The city council is made up of the Mayor and four council members. The Mayor is elected at large every four years in non-presidential elections in even-numbered years, while previously two council members were elected at-large every two years (City of Manteca 2024).

The City Council assumes responsibility for the adoption of this plan; the Public Works Director, or designee, will oversee its implementation.

## 6.3 Growth and Development Trends

### 6.3.1 Population

According to the California Department of Finance 2025 estimates, Manteca has a population of 93,733. Since April 1st, 2020, the population has increased by 12.9%.

### 6.3.2 Equity Priority Communities

Vulnerable populations include groups that experience disproportionate impacts of disasters as they often cannot protect themselves during disaster and may require assistance with daily activities. Identified vulnerable populations include the 13.5 percent of the population that is 65 years and older, Children under 5, and the socially vulnerable parts of the City identified in this plan.

### 6.3.3 Development

The central area of the City of Manteca is largely developed, while residential growth is expanding along the city's outer boundaries. Growth will take place primarily in the form of residential development and supporting land uses predominately in the south and southwest part of the City.

**Table 6-2 Recent and Expected Future Development Trends**

Criterion	Response
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?	No
If yes, give the estimated area annexed and estimated number of parcels or structures.	N/A
Is your jurisdiction expected to annex any areas during the performance period of this plan?	Yes
If yes, describe land areas and dominant uses.	Residential and Commercial

Criterion	Response					
If yes, who currently has permitting authority over these areas?	Authority: City of Manteca					
Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.	Over the past five years, 1,879 single-family dwelling and 14 commercial building permits have been issued in the 200-year flood zone.					
Are any areas targeted for development or major redevelopment in the next five years?	Yes					
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	In the southwest portion of the City					
How many permits for new construction were issued in your jurisdiction over the past five years?		<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
	Single Family	649	724	819	571	1,115
	Multi-Family	11	9	6	0	0
	Other (mobile homes, accessory dwellings, mixed use, etc.)	0	0	0	0	0
	Commercial	2	1	2	9	0
	Total	662	734	827	580	1,115
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.	Manteca is significantly built out in the city center with nearly 11,000 buildable lots near the perimeters of the city, primarily in the south and southwest areas.					

## 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 or improve upon 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.

### 6.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop policies and programs and to implement rules and regulations to protect and serve community members. Local policies are typically identified in a variety of community plans, implemented via a local ordinance, and enforced through a governmental body. An assessment of planning and regulatory capabilities is presented in Table 6-3.

**Table 6-3 Planning and Regulatory Capabilities**

		Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>					
Building Code		Yes	No	Yes	Yes
Comment:	Manteca Municipal Code, Title 15, Ord. 02019-15 § 1; Ord. 02021-08 § 1; Ord. 02022-22 § 1; <a href="#">Ord. 02024-13, 8/20/2024</a>				
Zoning Code		Yes	No	Yes	Yes
Comment:	Manteca Municipal Code, Title 17, Ord. 1501 § 1, 2011				
Subdivisions		Yes	No	Yes	Yes
Comment:	Manteca Municipal Code, Title 16, Ord. 936 § 1, 1992				
Stormwater Management		Yes	No	Yes	Yes
Comment:	Manteca Municipal Code, Title 13, Ord. 1253 § 1, 2004				
Post-Disaster Recovery		Yes	Yes	No	Yes
Comment:	Manteca Municipal Code, Title 15, Ord. 1067 § 1, 1997				
Real Estate Disclosure		Yes	No	No	Yes
Comment:	Manteca Municipal Code, Title 8, Ord. 871 § 1, 1990				
Growth Management		Yes	No	Yes	Yes
Comment:	Manteca Municipal Code, Title 18, Ord. 1251 § 1, 2004; Ord. 1316 §§ 2, 3, 2005				
Site Plan Review		Yes	Yes	Yes	Yes
Comment:	Manteca Municipal Code, Title 17, Ord. 1501 § 1, 2011				
Environmental Protection		Yes	No	Yes	Yes
Comment:	California Environmental Quality Act (CEQA)				
Flood Damage Prevention		Yes	No	Yes	Yes
Comment:	Manteca Municipal Code, Title 8, Ord. 1179 § 1, 2001				
Emergency Management		Yes	No	No	Yes
Comment:	General Plan Safety Element				
Climate Change		Yes	No	Yes	Yes
Comment:	City of Manteca Climate Action Plan Update, 2025				

		Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Planning Documents</b>					
General Plan		Yes	No	Yes	Yes
Is the General Plan compliant with Assembly Bill 2140?			Yes		
Comment:	Manteca General Plan Update, 2024				
Capital Improvement Plan		Yes	No	No	Yes
How often is the plan updated?		Annually			
Comment:	California Government Code § 65401: This state law requires the Planning Commission to review the City's Capital Projects Program (CIP) for conformity with the General Plan.				
Disaster Debris Management Plan		No	Yes	No	No
Comment:	California Disaster Recovery Framework, 2019				
Floodplain or Watershed Plan		No	No	Yes	No
Comment:	No formal plan but follow/managed by the SSJID Water Master Plan and Reclamation District no.17				
Stormwater Plan		Yes	No	No	Yes
Comment:	Storm Water Management Program (2003)				
Urban Water Management Plan		Yes	No	Yes	Yes
Comment:	City of Manteca 2020 Urban Water Management Plan				
Habitat Conservation Plan		No	Yes	No	No
Comment:	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)				
Economic Development Plan		No	Yes	No	No
Comment:	San Joaquin 2019-2024 Comprehensive Economic Development Strategy				
Community Wildfire Protection Plan		No	No	No	No
Comment:	No formal plan but follow the California Fire Code				
Forest Management Plan		Yes	Yes	No	Yes
Comment:	Not up to date				
Climate Action Plan		Yes	No	Yes	Yes
Comment:	City of Manteca Climate Action Plan Update, 2025				
Threat & Hazard Identification & Risk Assessment (THIRA)		Yes	No	No	Yes
Comment:	The City of Manteca is participating in the San Joaquin County OES led THIRA.				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Post-Disaster Recovery Plan	No	No	No	Yes
Comment:	No formal plan but follow the California Emergency Services Act			
Continuity of Operations Plan	No	No	No	No
Comment:	N/A			
Public Health Plan	No	No	Yes	No
Comment:	No formal plan but the City follows the guidance of the Stockton Hazard Annex: Human Health Hazards			
Emergency Operations Plan	Yes	No	Yes	Yes
Comment:	Manteca Emergency Operations Plan			

### ***Opportunities to Expand Planning and Regulatory Capabilities***

The planning and regulatory capabilities of the City can be expanded by integrating the County-wide hazard mitigation plan into the City’s various plans as listed in Table 6-13 and below:

- Building Code
- County level Integration through post-disaster recovery plans, disaster debris management, public health measures and emergency management plans
- Climate Action Plan
- Urban Stormwater Management Plan
- Capital Improvement Plan
- Municipal Code (Subdivision Ordinance, Site Plan Review, Growth Management, Real Estate Disclosure, Stormwater Management Plan, Flood Damage Prevention, Zoning Code,)
- General Plan (Safety Element)
- Forest Management Plan (Update)
- Threat and Hazard Identification and Risk Assessment (THIRA)

Integrating the updated San Joaquin County Hazard Mitigation Plan into other municipal and county-level plans strengthens the approach to reducing risk. Building Codes and Municipal Codes such as subdivision ordinances, site plan review, and flood damage prevention can adopt HMP standards to improve structural safety and limit hazard exposure. County-level plans for post-disaster recovery, debris management, public health, and emergency operations can align with HMP priorities to make response and recovery more efficient. Climate Action Plans and Urban Stormwater Management Plans can include strategies for flooding, extreme heat, and drought, supporting both resilience and sustainability goals. Capital Improvement Plans can focus on projects that strengthen infrastructure against hazards, while the General Plan Safety Element can reflect updated risk profiles and mitigation actions. Forest Management Plan updates can incorporate wildfire prevention measures, and THIRA assessments can use HMP data to refine threat scenarios and capability targets. This integration promotes consistency across regulations, improves access to funding, and builds a comprehensive resilience strategy for San Joaquin County.

### 6.4.2 Development and Permitting Capabilities

Jurisdictions 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 lead to hazard mitigation. Development and permitting capabilities are presented in Table 6-4.

**Table 6-4 Development and Permitting Capabilities**

Criterion	Response
Does your jurisdiction issue development permits?	Yes
If no, who does? If yes, which department?	Development Services
Does your jurisdiction track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	Yes

### 6.4.3 Fiscal Capabilities

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. An assessment of fiscal capabilities is presented in Table 6-5.

**Table 6-5 Fiscal Capabilities**

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
If yes, specify:	Water and Sewer
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

### Opportunities to Expand Fiscal Capabilities

One of the primary objectives in developing the 2026 MJHMP is to establish eligibility to pursue FEMA HMA grant funding opportunities (e.g., FMA and HMGP). HMA funding streams typically require up to a 25 percent local match. The City has identified local funding resources in Table 6-5 that can provide the local match for projects in the mitigation action plan that list HMA grants as a potential primary funding source.

#### 6.4.4 Administrative and Technical Capabilities

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 6-6.

**Table 6-6 Administrative and Technical Capabilities**

Staff/Personnel Resource		Available?
Planners or engineers with knowledge of land development and land management practices		Yes
If Yes, Department /Position:	Development Services – Deputy Director – Planning, Senior Planner, Associate Planner, Assistant Planner	
Engineers or professionals trained in building or infrastructure construction practices		Yes
If Yes, Department /Position:	Development Services – Deputy Director – Building Safety, Senior Plan Check Engineer	
Planners or engineers with an understanding of natural hazards		Yes
If Yes, Department /Position:	Development Services – Deputy Director – Planning, Senior Planner	
Staff with training in benefit-cost analysis		No
If Yes, Department /Position:	-	
Surveyors		Yes
If Yes, Department /Position:	Surveyors, Engineering	
Personnel skilled or trained in GIS applications		Yes
If Yes, Department /Position:	Engineering and IT Department	
Scientist familiar with natural hazards in local area		No
If Yes, Department /Position:	-	
Emergency manager		Yes
If Yes, Department /Position:	Office of the Fire Chief	
Grant writers		No
If Yes, Department /Position:	-	
Procurement Services and Management		Yes

Staff/Personnel Resource		Available?
If Yes, Department /Position:	City Manager's Office	

### ***Opportunities to Expand Administrative and Technical Capabilities***

Administrative and technical capabilities are a community's staff, skills and tools. These capabilities can be used for mitigation planning and to carry out specific mitigation actions. They also include the ability to access, coordinate and implement these resources effectively (FEMA n.d.) An assessment of administrative and technical capabilities is presented in Table 6-6.

### **6.4.5 Education and Outreach Capabilities**

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 6-7.

**Table 6-7 Education and Outreach Capabilities**

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
If yes, briefly describe:	Yes, when storms are expected, locations for sandbag stations are posted on the website.
Do you use social media for hazard mitigation education and outreach?	Yes
If yes, briefly describe:	The City utilizes Facebook, Instagram, and Next Door as well as the City website.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
If yes, briefly describe:	-
Do you have any other programs in place that could be used to communicate hazard-related information?	Yes
If yes, briefly describe:	The City utilizes Nixle and reverse 911
Do you have any established warning systems for hazard events?	Yes
If yes, briefly describe:	Social media and Nixle and reverse 911

### ***Opportunities to Expand Education and Outreach Capabilities***

The City currently has an outreach program that provides information regarding hazards and their impacts to their residents. The City will update their outreach programs as needed.

### 6.4.6 Community Classifications

Other programs, such as the Community Rating System and NWS StormReady®, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 6-8.

**Table 6-8 Community Classifications**

	Participating?	Classification or Number	Date Classified
Federal Information Processing Standards (FIPS) Code	Yes	06-45484	N/A
Unique Identity ID (UEI)	Yes	Z3QYMMG1QY99	N/A
Community Rating System (CRS)	No	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	2	2019
Public Protection (ISO for Fire Districts)	Yes	3	2025
NWS StormReady®	No	-	-
Firewise USA	No	-	-

### 6.4.7 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The community’s adaptive capacity for the impacts of climate change is presented in Table 6-9.

**Table 6-9 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	Medium
Comment:	Updated Climate Action Plan with regular reviews and updates.
Jurisdiction-level monitoring of climate change impacts	Low
Comment:	The City is currently updating the Climate Action Plan (2025); however, climate change impacts are not monitored except as part of the Climate Action Plan Update.
Technical resources to assess proposed strategies for feasibility and externalities	Low
Comment:	Updated Climate Action Plan with regular reviews and updates.

Criterion		Jurisdiction Rating <sup>a</sup>
Jurisdiction-level capacity for development of greenhouse gas emissions inventory		Medium
Comment:	The City is currently updating the Climate Action Plan (2025); however, a greenhouse gas emission inventory is not developed except as part of the Climate Action Plan Update.	
Capital planning and land use decisions informed by potential climate impacts		Medium
Comment:	Utilization of the Climate Action Plan for potential climate impacts along with CEQA compliance.	
Participation in regional groups addressing climate risks		Medium
Comment:	SJCOG Committee, partner with other City Departments.	
<b>Implementation Capacity</b>		
Clear authority/mandate to consider climate change impacts during public decision-making processes		High
Comment:	Included in Findings for Planning Commission and City Council, codified in Manteca Municipal Code.	
Identified strategies for greenhouse gas mitigation efforts		High
Comment:	Utilization of the Climate Action Plan for potential climate impacts along with CEQA compliance.	
Identified strategies for adaptation to impacts		High
Comment:	Utilization of the Climate Action Plan for potential climate impacts along with CEQA compliance.	
Champions for climate action in local government departments		Medium
Comment:	Development Services - Planning Division	
Political support for implementing climate change adaptation strategies		Medium
Comment:	Indirectly by adoption of the Climate Action Plan and also through their review and approval of projects at Planning Commission and City Council.	
Financial resources devoted to climate change adaptation		Medium
Comment:	Purchase of green fleet vehicles, the expansion of the use of the CNG for vehicles in City fleet.	
Local authority over sectors likely to be negative impacted		Low
Comment:	Implementation of AB98, through Conditional Use Permit process.	
<b>Public Capacity</b>		
Residents' knowledge of and understanding of climate risk		Medium
Comment:	Climate Action Plan outreach.	
Residents' support of adaptation efforts		Low
Comment:	Residents are primarily concerned with other matters.	
Residents' capacity to adapt to climate impacts		Low
Comment:	Residents are primarily concerned with other matters.	

Criterion	Jurisdiction Rating <sup>a</sup>
Local economy current capacity to adapt to climate impacts.	Low
Comment: The City has a somewhat diverse economy but needs to plan for future climate impacts	
Local ecosystems capacity to adapt to climate impacts	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.

## 6.5 National Flood Insurance Program Compliance

Flooding is the costliest natural hazard in the United States. Community participation in the NFIP opens up the opportunity for additional grant funding associated specifically with flooding issues. Assessment of the jurisdiction’s current NFIP status and compliance provides planners with a greater understanding of the local flood management program, opportunities for improvement, and available grant funding opportunities. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 6-10.

**Table 6-10 National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Brad Wungluck, Development Services
Who is your floodplain administrator? (department/position)	Kevin Jorgensen, 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?	2001
Does your floodplain management program meet or exceed minimum requirements?	Yes
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown due to staff turnover
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
If so, what type of assistance/training is needed?	NA
Does your jurisdiction have a Substantial Damage Response Plan?	No

Criterion	Response
How does your jurisdiction assess substantial damages after a hazard event?	Each City department assesses damages after hazard events and reports losses to the Battalion Chief and/or Fire Deputy.
Does your jurisdiction participate in the Community Rating System (CRS)?	No
If yes, is your jurisdiction interested in improving its CRS Classification?	No
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup>	98
What is the insurance in force?	\$33,973,000
What is the premium in force?	\$89,276
How many total loss claims have been filed in your jurisdiction? <sup>a</sup>	11
What were the total payments for losses?	\$438,951

a. According to FEMA statistics as of 12/2025

## 6.6 Integration

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.

### 6.6.1 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 Chapter 9 - Safety Element (Critical Facilities, Climate Adaptation, Geologic and Seismic)
- City-level Post-Disaster Recovery Plan

## 6.7 Risk Assessment

### 6.7.1 Jurisdiction-Specific Natural Hazard Event History

Table 6-11 lists past occurrences (since 2020) of natural hazards for which specific impacts were 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 6-11 Past Natural Hazard Events**

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Local Impacts
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/23	Fire Department personnel were assigned to the County EOC.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	CA23-1	1/4/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	The City opens a cooling center when extreme temps are expected. This is staffed by FD personnel.
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	The City sent fire resources for support.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	The City sent fire resources for support.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Local Impacts
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	City wide impact, sales tax lost, equipment purchased to adjust to new working conditions, PPE purchased for all EOC and any employee

### 6.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for City of Manteca is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the City in identifying hazards that pose the most significant threat. 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.

**Table 6-12 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability (1-4 index value with 30% weighting factor)	Impact (1-4 index value with 30% weighting factor)	Spatial Extent (1-4 index value with 20% weighting factor)	Warning Time (1-4 index value with 10% weighting factor)	Climate Change (1-4 index value with 10% weighting factor)		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	4	.9	.2	.1	.3	5.5	High
Lightning	.9	.3	.2	.1	.2	1.7	Low

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability (1-4 index value with 30% weighting factor)	Impact (1-4 index value with 30% weighting factor)	Spatial Extent (1-4 index value with 20% weighting factor)	Warning Time (1-4 index value with 10% weighting factor)	Climate Change (1-4 index value with 10% weighting factor)		
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

Notes:

PRI Value 1 to 1.9 = Low Hazard Risk Ranking

PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking

PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### 6.7.3 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: 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:

- Public Safety Power Shutoff (PSPS) events cause problems due to power outages with a lack of redundant emergency back-up power.

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

## 6.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 6-13 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas (e.g., Dam Failure and Earthquake) prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter; Energy; Communications; Transportation	Existing	1, 3, 4	Lead: Public Works Director Support: Development Services Director	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including: <ul style="list-style-type: none"> <li>• General Plan Safety Element</li> <li>• City-level Post-Disaster Recovery Plan</li> </ul>	Safety and Security; Communications; Transportation; Water Systems	New	6	Lead: Development Services Director	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	<ul style="list-style-type: none"> <li>• Building Code</li> <li>• County level Integration through post-disaster recovery plans, disaster debris management, public health measures and emergency management plans</li> <li>• Climate Action Plan</li> <li>• Urban Stormwater Management Plan</li> <li>• Capital Improvement Plan</li> <li>• Municipal Code (Subdivision Ordinance, Site Plan Review, Growth Management, Real Estate Disclosure, Stormwater Management Plan, Flood Damage Prevention, Zoning Code,)</li> <li>• General Plan (Safety Element)</li> <li>• Forest Management Plan (Update)</li> <li>• Threat and Hazard Identification and Risk Assessment (THIRA)</li> </ul>								

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
3	<p>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"> <li>Evaluate the current floodplain ordinance to determine if updates are needed</li> <li>Update and adopt the City's floodplain ordinance to meet the minimum requirements of the NFIP</li> </ul>	Any lifelines exposed to flooding	New, Existing	1,2	Lead: Director of Engineering	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
4	Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to initiatives in the City's Climate Action Plan update.	Communications; Safety and security	New, Existing	1,3	Lead: Development Services Director	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
5	Purchase generators for City-owned critical facilities and infrastructure that lack adequate backup power.	Safety and security; Energy; Communications	Existing	6	Lead: Public Works Director	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
6	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	N/A	N/A	1,3,4,7	Lead: Fire Department Battalion Chief	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
7	Conduct an update to the Urban Water Management Plan which includes considerations for climate change impacts through 2045.	Water Systems	New, Existing	1,4	Lead: Director of Engineering Support: Public Works Director	Yes	Moderate (\$50,000-\$250,000)	Staff Time, General Fund	Short-Term (less than 5 years)
8	Construct storm drain zone 36 & 39 backbone design to support planned development in South Manteca.	Water Systems	New, Existing	1,4	Lead: Director of Engineering Support: Public Works Director	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund	Long-Term (5 years or more)
9	Conduct an update to the Stormwater Management Plan which includes considerations for climate change impacts.	Water Systems	New, Existing	1,4	Lead: Director of Engineering Support: Public Works Director	Yes	Moderate (\$50,000-\$250,000)	Staff Time, General Fund	Short-Term (less than 5 years)
10	Secure off-site disaster recovery site which ensures business continuity in the event that servers go down during disaster or cyber attack.	Communications	New	3,5	Lead: IT Department	Yes	High (\$250,000-\$1,000,000)	Staff Time, General Fund	Short-Term (less than 5 years)

**Table 6-14 Mitigation Action Prioritization**

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	0	3	3	3	3	1	0	3	3	3	1	3	3	3	3	35	High
#4	1	1	3	1	1	1	1	3	3	1	3	3	1	3	3	30	Medium
#5	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium
#6	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#7	3	3	3	3	1	3	3	3	3	3	3	3	3	1	1	39	High
#8	3	3	3	1	3	1	1	3	3	1	3	1	1	1	1	29	Medium
#9	3	3	3	3	1	3	3	3	3	3	3	3	3	1	1	39	High
#10	3	1	1	1	3	1	1	3	3	3	3	3	1	1	1	29	Medium

Notes:  
 31 or more = High Priority  
 15 to 30 = Medium Priority  
 0 to 14 = Low Priority

Table 6-15 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■		■		■						■		
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■	■	■		■		■					■		■	■		
#4	■				■			■	■	■				■	■		■
#5	■	■			■		■			■	■	■	■	■		■	■
#6	■		■				■	■	■	■	■	■	■	■	■	■	■
#7	■	■			■		■					■		■	■		
#8		■			■		■					■		■	■		
#9	■	■			■		■					■		■	■		
#10		■			■		■		■			■	■	■	■		■

## 6.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 6-16.

**Table 6-16 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
CERT (Manteca Community Emergency Response Team) outreach academy	Several times a year	50+ annually
Manteca Fire Department “Flash” show, outreach to elementary age children TK-3 <sup>rd</sup> grade; Teaching about fire prevention, water safety, and bicycle safety.	Annually in February	Several hundred kids annually.
Social media blast for fireworks safety, Christmas tree safety	July/ December annually	Varies
Fire Department weed abatement program to residential and commercial properties.	May annually	Varies
Manteca Police Department Bicycle Rodeo, supporting safely riding bikes and road safety.	May annually	Varies
Supported the countywide outreach efforts for this plan including promoting the public survey.	Throughout the planning process	TBD

## 6.10 Information Sources Used for This Annex

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

- Climate Action Plan was used for the capability assessment.
- General Plan was used for 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.

## 6.11 Hazard Mapping

Jurisdiction-specific risk maps of the hazards are provided on the following pages. For a complete description of each hazard, please see the applicable chapters in Volume 1 of this plan. These maps are based on the vulnerability and risk assessment results for this plan.

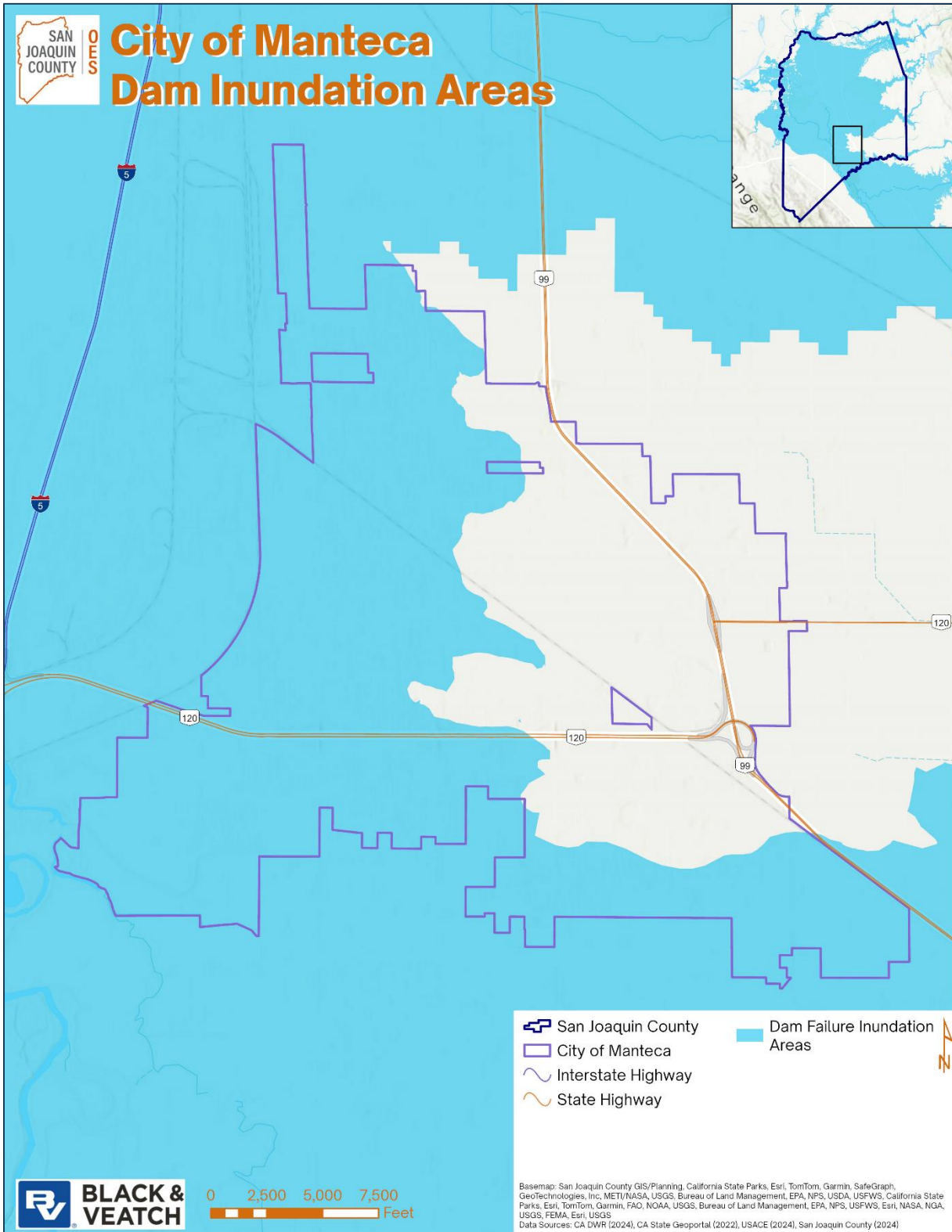
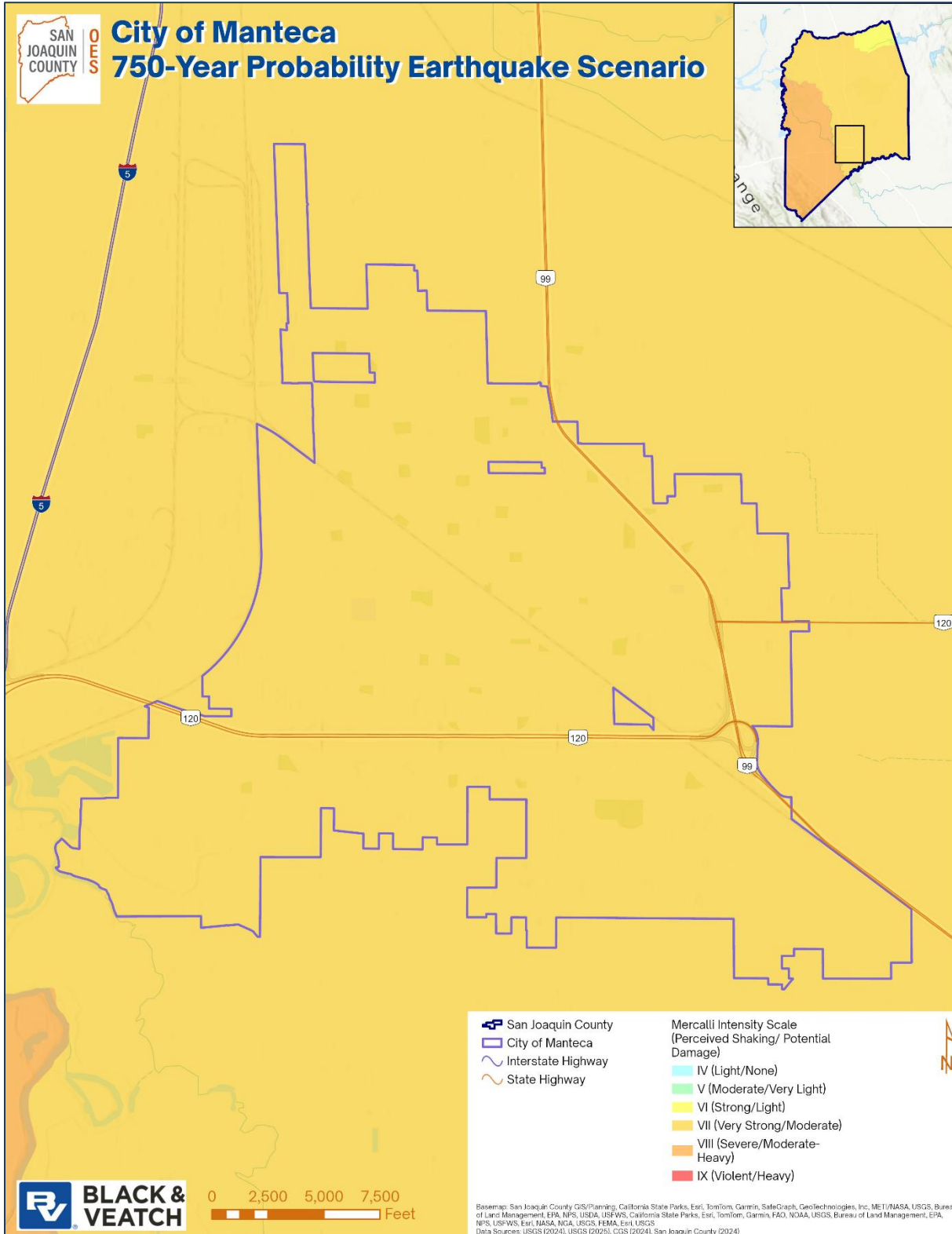


Figure 6-1 Dam Inundation Areas



**Figure 6-2 750-Year Probability Earthquake Scenario**

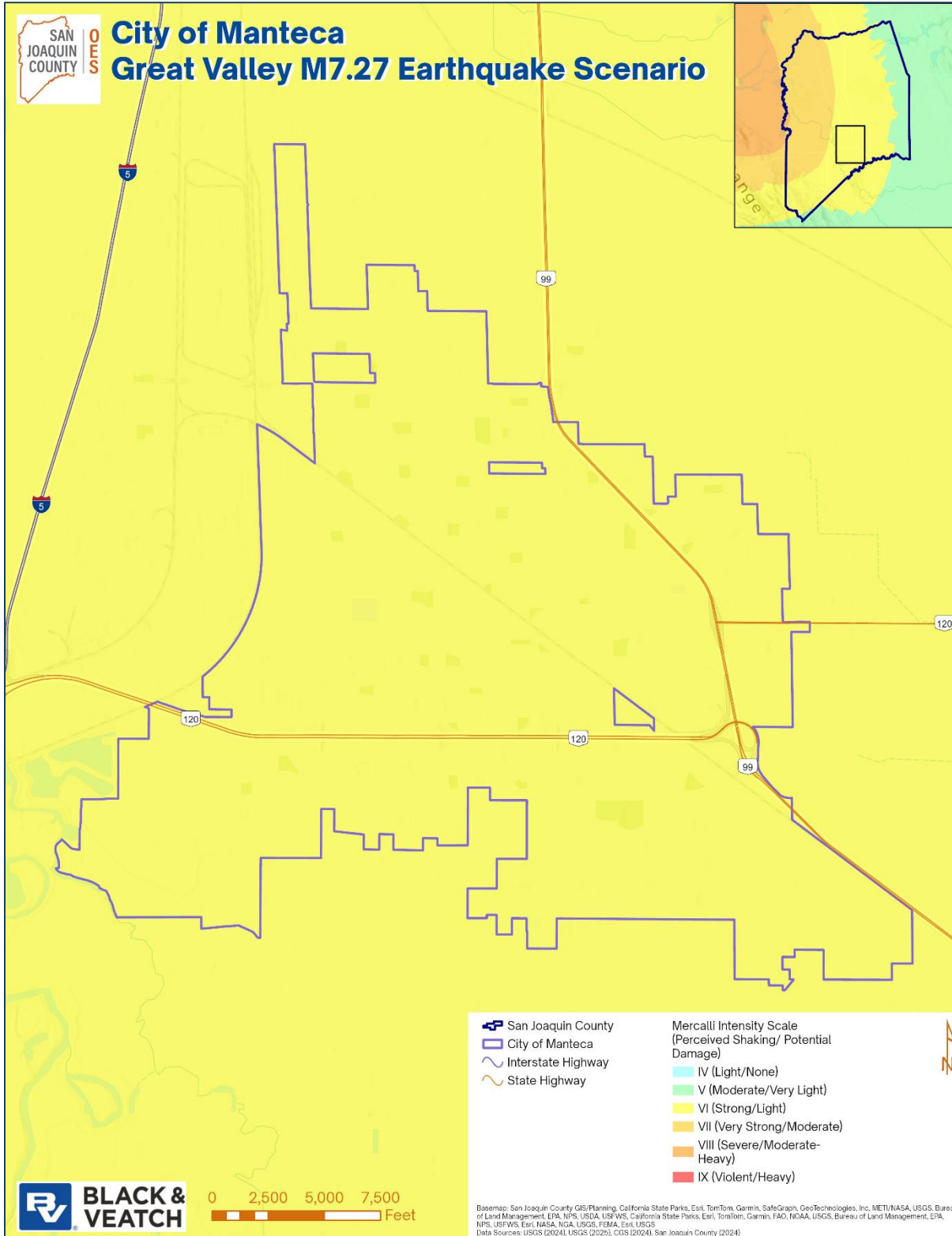


Figure 6-3 Great Valley M7.27 Earthquake Scenario

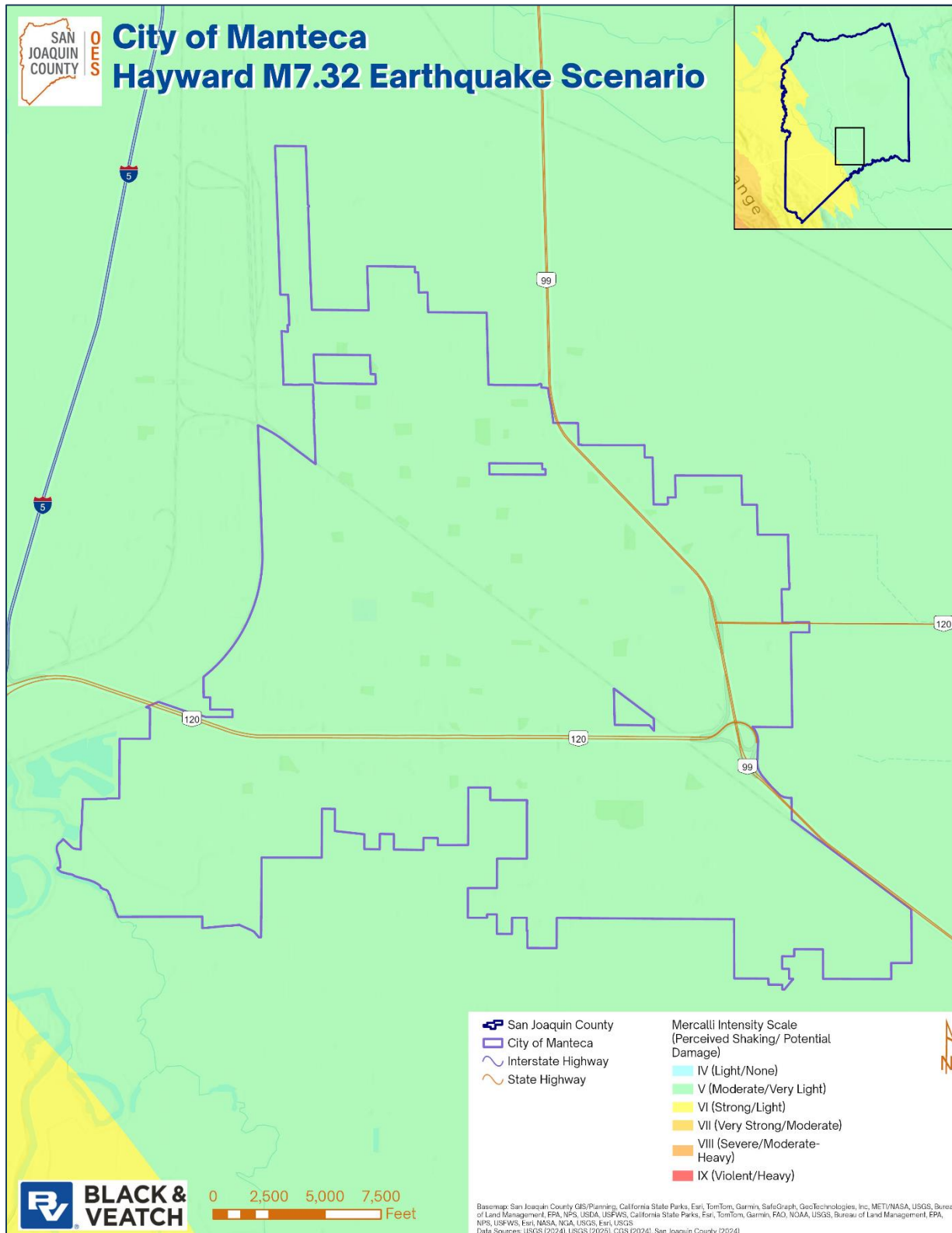


Figure 6-4 Hayward M7.32 Earthquake Scenario

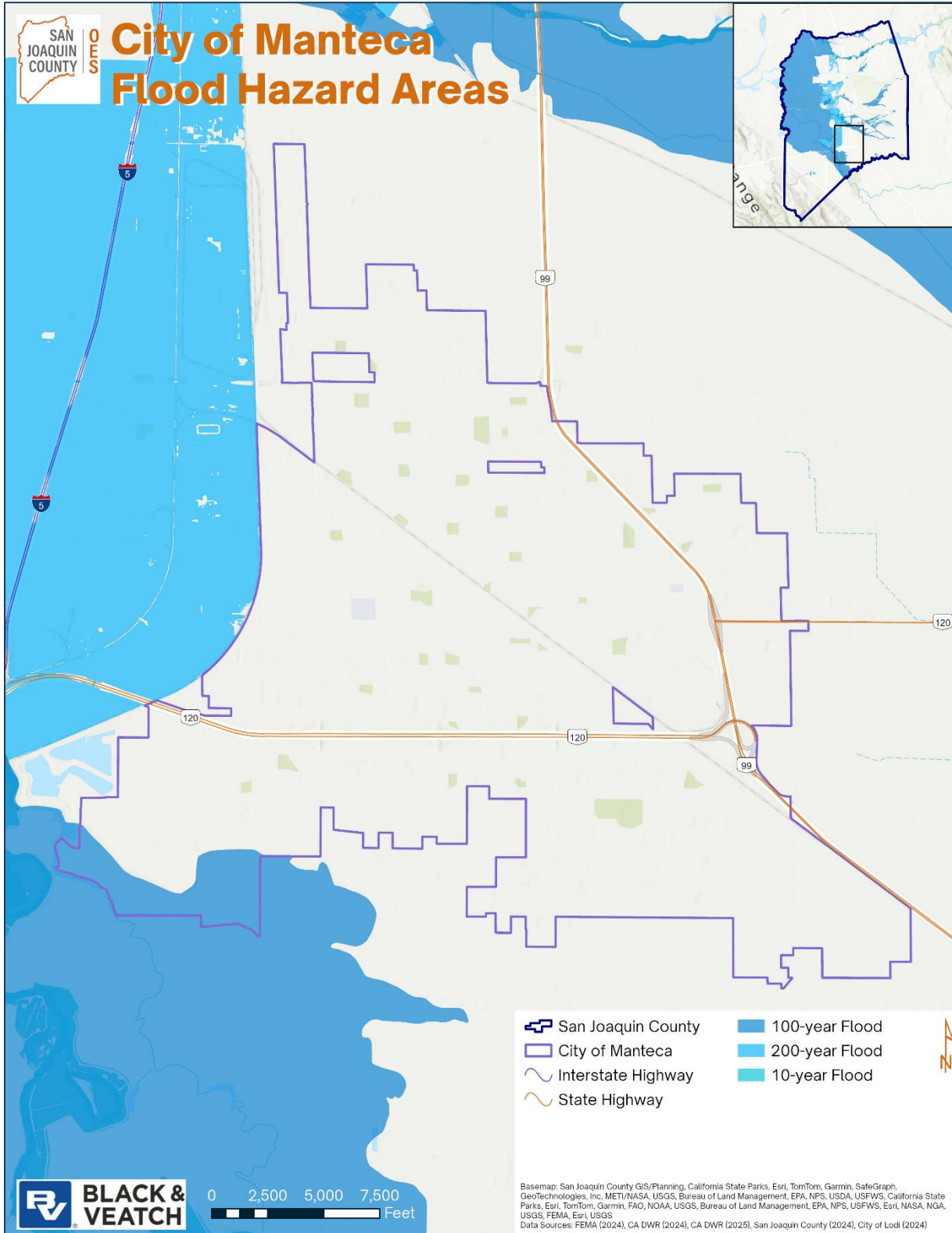


Figure 6-5 Flood Hazard Areas

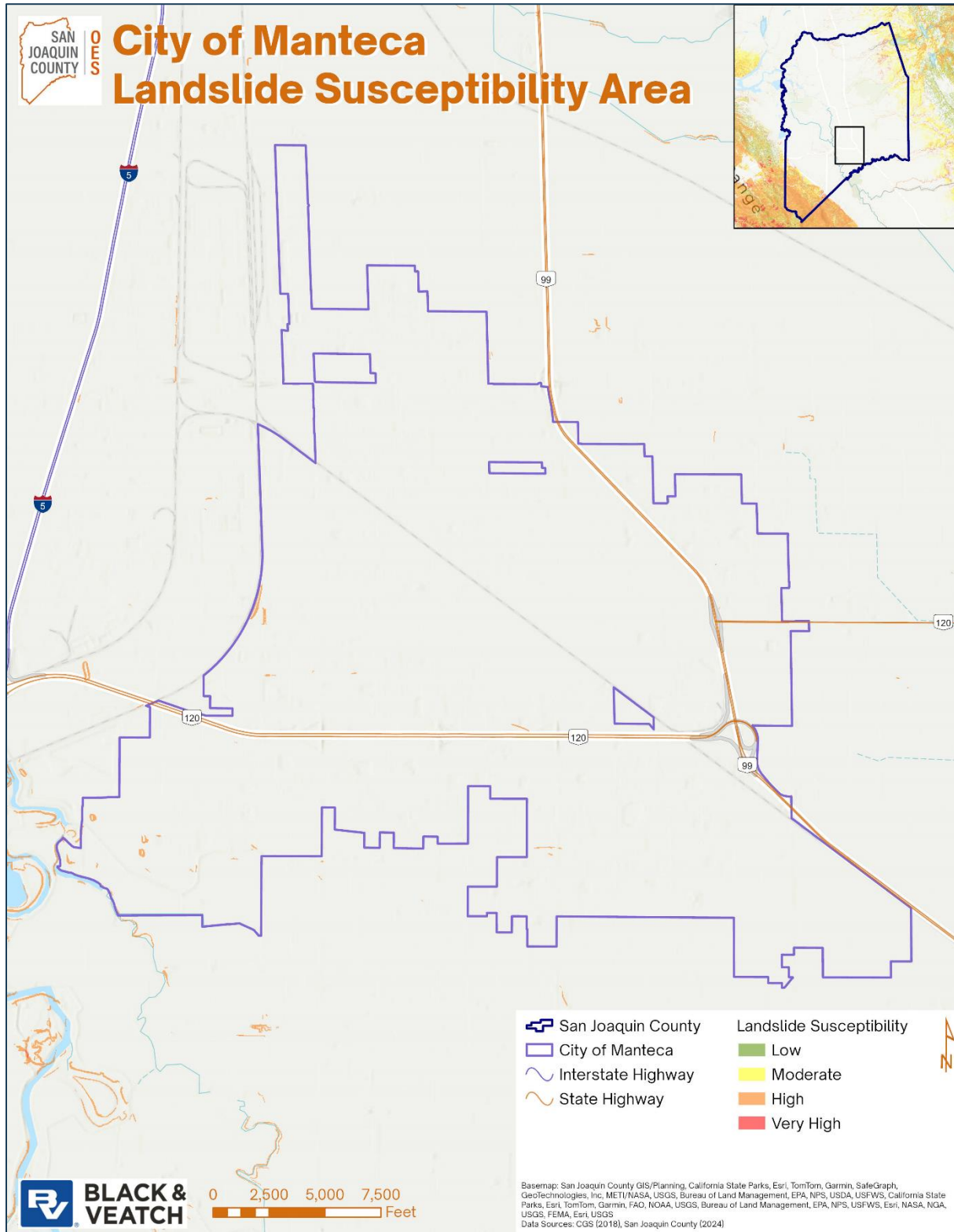


Figure 6-6 Landslide Susceptibility Areas

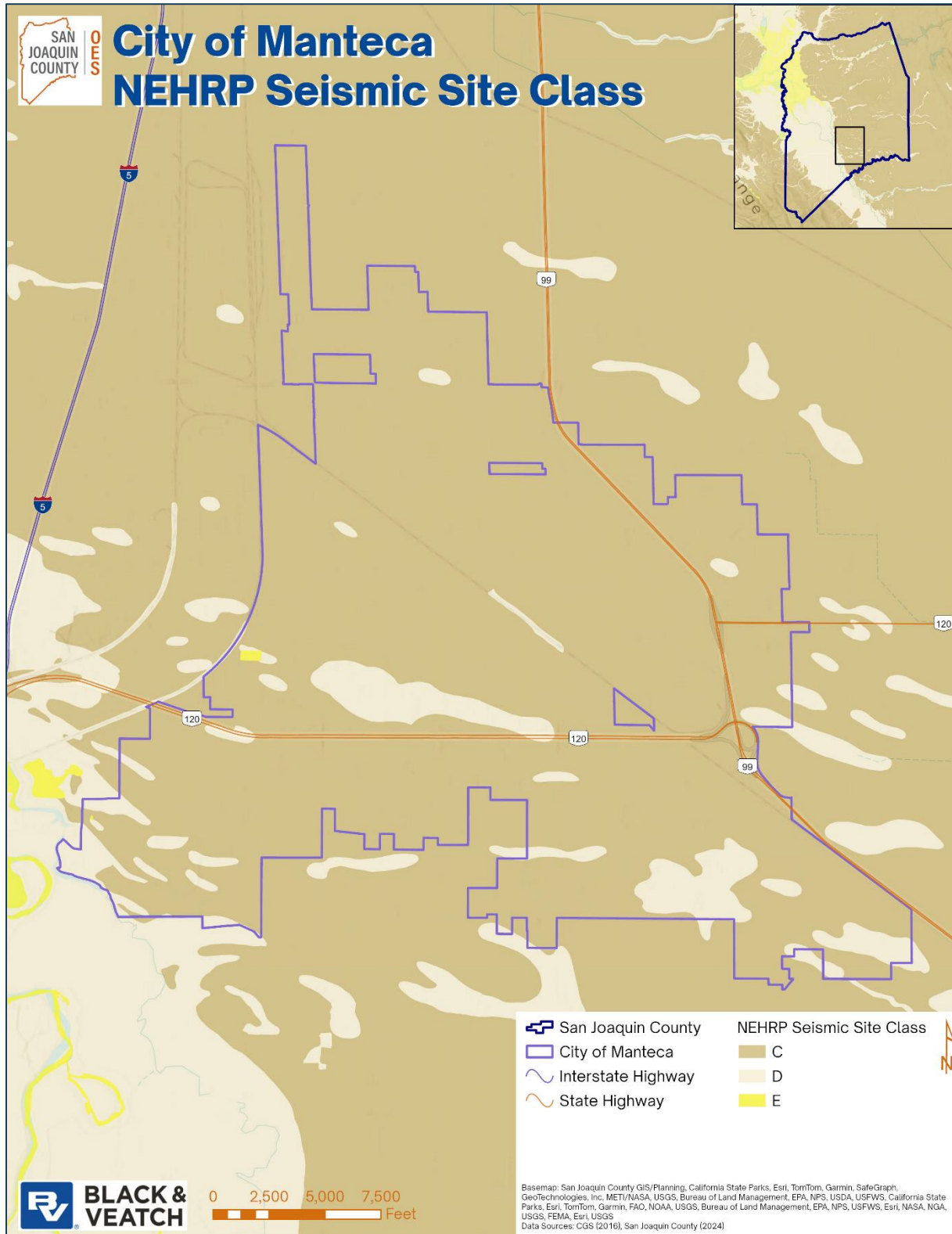
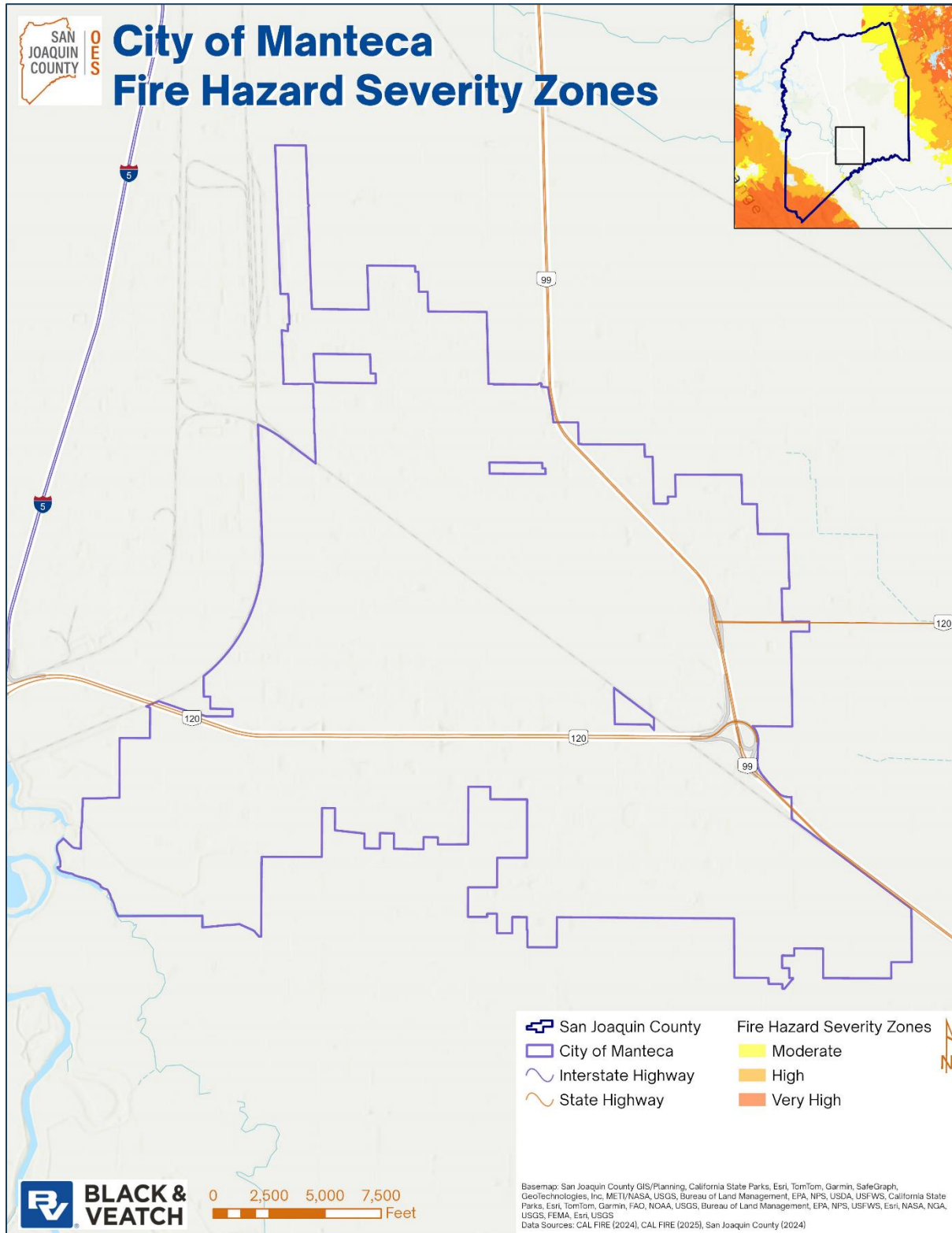
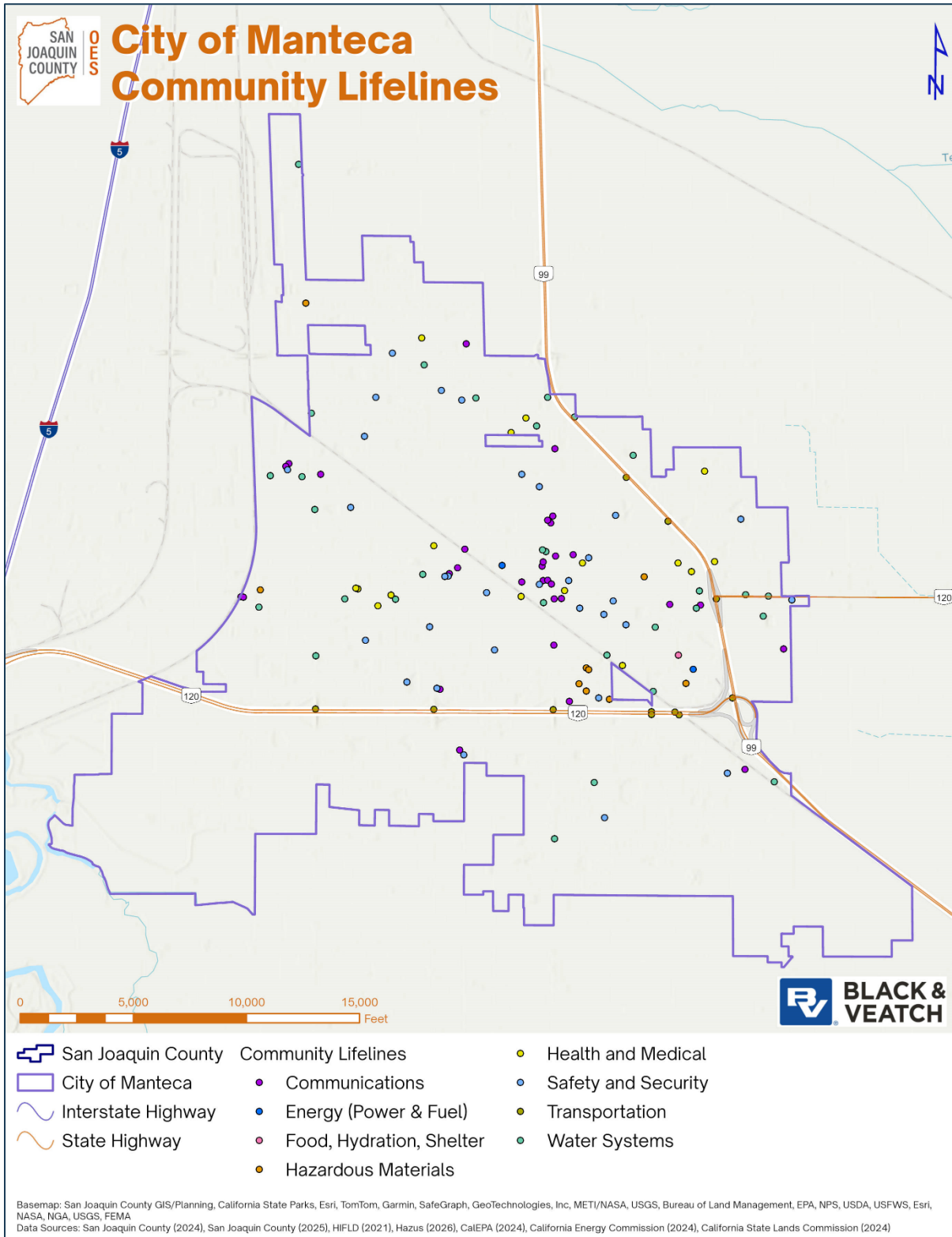


Figure 6-7 NEHRP Seismic Site Class Soils



**Figure 6-8 Fire Hazard Severity Zones**



**Figure 6-9 Community Lifelines**

## 7. CITY OF MOUNTAIN HOUSE



Source: City of Mountain House

### 7.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the City of Mountain House. Members are listed in Table 7-1.

Table 7-1 Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Rex Osborn, Dir Pub Safety Cons	Name and Title:	Chris Stevens, Consultant
Address:	251 E Main St, Mountain House, CA 95391	Address:	251 E Main St, Mountain House, CA 95391
Phone Number:	209-456-7297	Phone Number:	209-607-9113
Email:	rosborn@sjgov.org	Email:	chrismorethantalk@gmail.com
<b>NFIP Floodplain Administrator</b>			
Name and Title:	Jodi Almassy, Deputy City Manager		
Address:	251 E Main St., Mountain House, CA 95391		
Phone Number:	209-831-2300		
Email:	jalmassy@sjgov.org		

Primary Point of Contact		Alternate Point of Contact
<b>Additional Planning Team Members:</b>		
Name and Title:	Roger Alarez, Community Preservation Officer	
Method of Participation:	Ralvarez@sjgov.org	
Name and Title:	Marty Cornilsen, Fire Chief	
Method of Participation:	mcomilsn@frcfire.com	

## 7.2 Jurisdictional Profile

### 7.2.1 Location and Features

Mountain House consists of 4,784 acres or about 7.5 square miles located in southwestern San Joaquin County near the foothills of the Diablo range. Interstate 205 forms the southern boundary, Old River forms the northern boundary, and the Alameda County line runs along the western boundary. Along the eastern edge is Mountain House Parkway and the Wicklund Cut, an irrigation inlet off Old River. The 1993 city limits of Tracy are about 3.5 miles to the east, and the City of Livermore is located about nine miles to the west (City of Mountain House 2025).

Major highway access is available from Interstate 580 and Interstate 205. Local road access is available via Grant Line Road, Mountain House Parkway, and Byron Road, all of which connect to I-205 and other points. A Southern Pacific Railroad line (the Moco Line) traverses the northern portion of the Mountain House site, adjacent to the north side of Byron Road. The railroad is currently in limited use (San Joaquin County Board of Supervisors 2024).

### 7.2.2 History

In November 1994, the San Joaquin County Board of Supervisors officially approved the new community of Mountain House. In 1996, the master plan was approved. In August 2000, many of the documents controlling the development and growth of Mountain House were adopted and approved by the San Joaquin Board of Supervisors acting as the Mountain House Board of Directors (King 2024).

Mountain House was projected to be a small full-fledged city developed over a 30-year period by the Master Developer Trimark Communities. The community covers 4,784 acres. The town was planned for 12 distinct neighborhoods including 10 family neighborhoods and two age-restricted neighborhoods, each organized around a center containing a neighborhood park, a K-8 school, and a small commercial area (King 2024).

Construction began in 2001, but growth slowed down to about 50 permits per year because of the Great Recession in 2008. Development started again with increasing building permits and small land development projects in 2010 and 2011 and has continued at a high rate (Brinkley 2024).

Local control led Mountain House residents to seek incorporation as California's newest city in 2024. In the March primary election, more than 90 percent of voting residents voted for incorporation. The city officially came into existence on July 1, 2024.

### 7.2.3 Governance

The City of Mountain House is administered by four elected council members who each serve four-year terms and one mayor who serves a four-year term. The council appoints a city manager to manage city functions.

The City Manager, Steve Pinkerton assumes responsibility for the adoption of this plan; the Public Safety Team will oversee its implementation.

## **7.3 Growth and Development Trends**

### **7.3.1 Population**

The California Department of Finance estimates Mountain House's 2025 population at 28,795 (State of California Department of Finance 2025)

### **7.3.2 Equity Priority Communities**

Mountain House as a recently developed, master-planned community has limited legacy infrastructure gaps, newer housing stock and amenities, uniform development patterns, and high homeownership rates. Mountain House does not currently have concentrations of populations meeting traditional equity priority community criteria. However, the City seeks to ensure continued equitable access to services and infrastructure as the community grows and to prevent the emergence of service gaps that could create future disparities.

### **7.3.3 Development**

Mountain House is envisioned as a new self-sufficient community offering employment, goods, services, and recreation. Land use and circulation are designed to encourage walking, bicycling, and transit use in a highly landscaped, visually attractive community. Residential development at Mountain House consists of 12 neighborhoods, each organized around a Neighborhood Center containing a neighborhood park, a K-8 school, and a small commercial area. The neighborhoods will each have a separate identity, achieved through design and landscaping. Major shopping and other services will be met by the Village Centers and the Town Center, the civic and commercial focus of the community which is designated for mixed use commercial, office and residential development. Employment centers will include office and industrial parks. The Mountain House Creek corridor and the Old River edge will be enhanced as part of an overall parks and open space system.

The following assumptions provide the basic framework used in the formation of the Master Plan:

- Mountain House will have an ultimate population of approximately 44,000 people. It will include approximately 16,000 dwelling units in 12 separate neighborhoods organized around Neighborhood Centers.
- Approximately 16,815 jobs will be provided in Mountain House at full buildout of the community.
- Mountain House will develop over a 20 to 40-year period.
- People of all economic levels will be able to find homes and jobs within the community.
- Land uses will establish a balance of housing, employment, and provide a full range of services and infrastructure while minimizing impact on agriculture and sensitive environmental resources.

**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 – Mountain House is a new city as of 2024. This is the City’s first mitigation plan.					
If yes, give the estimated area annexed and estimated number of parcels or structures.	-					
Is your jurisdiction expected to annex any areas during the performance period of this plan?	No					
If yes, describe land areas and dominant uses.	-					
If yes, who currently has permitting authority over these areas?	City of Mountain House					
Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.	Development has occurred in the area bounded by the city limits but previously determined by the special services district. Hazard areas as listed below are located outside of the city limits with the exception of the canal. New construction permits are pending alongside the canal, as infrastructure is still under construction.					
Are any areas targeted for development or major redevelopment in the next five years?	Yes, it is approved for neighborhoods north of Byron Road and a development considered infill.					
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	The City has water / canal to the North of Byon Road. The City has an inactive railroad and major highways to the south. There is open space to the west in Alameda County that is subject to wildfires.					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
	Single Family	~200	710	428	~300	233
	Multi-Family	~10-20	0	0	0	~900-1000
	Other (mobile homes, accessory dwellings, mixed use, etc.)	137	0	0	~248-388	~120-170
	Commercial	~3-5	~5-7	~4-6	~4-6	~6-9
	Total	~350 - 352	~715-717	~432-434	~552 - 694	~1259-1412
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.	Numbers are primarily estimates due to transition from county permitting process for the special services district to the establishment of the City permit process. As a new city beginning in mid-2024, Mountain House is a planned community with several subdivisions which are in the approval process. The open space for building has reached its capacity without additional annexation. There are no immediate plans for annexation.					

## 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 or improve upon 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.

### 7.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop policies and programs and to implement rules and regulations to protect and serve community members. Local policies are typically identified in a variety of community plans, implemented via a local ordinance, and enforced through a governmental body. An assessment of planning and regulatory capabilities is presented in Table 7-3.

**Table 7-3 Planning and Regulatory Capabilities**

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>				
Building Code	Yes	No	Yes	Yes
Comment:	UBC and UFC			
Zoning Code	Yes	No	Yes	Yes
Comment:	Community Services District Ordinances are in the process of City codification.			
Subdivisions	Yes	No	Yes	Yes
Comment:	Community Services District Ordinances are in the process of City codification.			
Stormwater Management	Yes	No	Yes	Yes
Comment:	All less than 20 years old.			
Post-Disaster Recovery	Yes	Yes	No	Yes
Comment:	County of San Joaquin			
Real Estate Disclosure	Yes	No	No	No
Comment:	Master restrictions at time of sale.			
Growth Management	Yes	No	Yes	Yes
Comment:	Subdivision/permit process.			
Site Plan Review	Yes	Yes	Yes	No
Comment:	Completed during planning process and review.			

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Environmental Protection	Yes	No	Yes	No
Comment:	Completed during planning process and review.			
Flood Damage Prevention	Yes	No	Yes	No
Comment:	Chapter 2 – Flood Hazards. Basins and canals are in the water management plan.			
Emergency Management	Yes	Yes	No	Yes
Comment:	In the Development stages in conjunction with Police, Fire, and OES			
Climate Change	No	No	Yes	No
Comment:	Follow state mandates			
<b>Planning Documents</b>				
General Plan	Yes	No	Yes	Yes
Is the General Plan compliant with Assembly Bill 2140?				
Comment:	The general plan is under review.			
Capital Improvement Plan	Yes	No	No	Yes
How often is the plan updated?				
Comment:	CIP in progress			
Disaster Debris Management Plan	No	Yes	No	Yes
Comment:	County of San Joaquin			
Floodplain or Watershed Plan	Yes	No	Yes	No
Comment:	Local basins and canals are in the water management plan.			
Stormwater Plan	Yes	No	No	No
Comment:	Local basins and canals are in the water management plan.			
Urban Water Management Plan	Yes	No	Yes	No
Comment:	Local basins and canals are in the Water Management Plan.			
Habitat Conservation Plan	No	No	No	No
Comment:	-			
Economic Development Plan	Yes	No	No	No
Comment:	EDP Plan underway			
Community Wildfire Protection Plan	Yes	No	No	Yes
Comment:	Managed by the Fire Department			

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Forest Management Plan	N/A	Yes	No	No
Comment:	Operations and Public Works Maintenance			
Climate Action Plan	N/A	No	Yes	No
Comment:	In development			
Threat & Hazard Identification & Risk Assessment (THIRA)	No	No	No	No
Comment:	Currently in development with SJCOES			
Post-Disaster Recovery Plan	No	No	No	Yes
Comment:	In development			
Continuity of Operations Plan	No	No	No	No
Comment:	City coordinates with the County			
Public Health Plan	No	No	Yes	No
Comment:	City coordinates with the County			
Emergency Operations Plan	Yes	No	Yes	Yes
Comment:	Emergency Response Plan			

### ***Opportunities to Expand Planning and Regulatory Capabilities***

Mountain House's recent incorporation presents both challenges and strategic opportunities. Unlike established municipalities with legacy systems and entrenched processes, Mountain House has the advantage of building modern, efficient planning and regulatory frameworks from the ground up, ensuring they align with current best practices, emerging technologies, and 21st-century community needs. The City is currently developing many plans that can actively integrate the findings of this plan. Refer to the comments in the above table. Refer to Table 7-13 for a mitigation action to integrate the following plans and codes:

- General Plan
- City Ordinances (Building Code, Zoning, Subdivisions, Stormwater Management, Growth Management)
- Site Plan Review
- Capital Improvement Plan
- Future Economic Development Plan
- Water Management Plan
- Disaster Debris Management Plan
- County Post Disaster Recovery
- Community Wildfire Protection Plan
- Environmental Protection Planning
- Climate Change Planning
- Emergency Response Plan

### 7.4.2 Development and Permitting Capabilities

Jurisdictions 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 lead to hazard mitigation. Development and permitting capabilities are presented in Table 7-4.

**Table 7-4 Development and Permitting Capabilities**

Criterion	Response
Does your jurisdiction issue development permits?	Yes
If no, who does? If yes, which department?	Community Development
Does your jurisdiction track permits by hazard area?	In progress
Does your jurisdiction have a buildable lands inventory?	Yes

### 7.4.3 Fiscal Capabilities

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. An assessment of fiscal capabilities is presented in Table 7-5.

**Table 7-5 Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	No
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
If yes, specify:	Water and Sewer
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

### Opportunities to Expand Fiscal Capabilities

As a newly incorporated city with limited legacy revenue streams, Mountain House faces the dual challenge of establishing essential municipal services while building fiscal resilience for long-term sustainability. The City's current financial toolkit is constrained compared to established jurisdictions, creating an imperative to strategically expand fiscal capabilities during this formative period. Mountain House is considering a comprehensive approach to revenue diversification and fiscal capacity building, including exploring special districts, optimizing development impact fees, establishing systematic grant pursuit processes, and seeking voter support for necessary local revenue measures. By proactively developing these fiscal mechanisms now rather than during future budget crises, the City can ensure stable funding for core services, strategic infrastructure investment, and the financial flexibility necessary to respond to community needs as it matures. This foundation-building approach positions Mountain House to avoid the fiscal constraints that hamper many communities that failed to establish adequate revenue structures during their growth phases.

#### 7.4.4 Administrative and Technical Capabilities

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 7-6.

**Table 7-6 Administrative and Technical Capabilities**

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

Staff/Personnel Resource		Available?
Emergency manager		No
If Yes, Department /Position:	The City relies upon the Fire Department and County Sheriff.	
Grant writers		No
If Yes, Department /Position:	-	
Procurement Services and Management		Yes
If Yes, Department /Position:	Project Manager, Finance Department	

### Opportunities to Expand Administrative and Technical Capabilities

The City currently lacks in-house surveyors, GIS professionals, natural hazards specialists, emergency management personnel, and grant writing expertise—capabilities that established jurisdictions have built over decades. Mountain House has the strategic opportunity to develop these technical capacities deliberately and efficiently, building modern, integrated systems rather than inheriting fragmented departmental structures. The City is committed to expanding its administrative and technical workforce through a phased approach that prioritizes high-impact positions, leverages technology to maximize efficiency, and establishes cross-trained staff who can adapt to evolving community needs. If possible, strategically investing in surveying capabilities, GIS infrastructure, emergency preparedness coordination, natural hazards assessment, and dedicated grant management during this formative period, Mountain House can establish the technical foundation necessary for proactive governance. This approach positions the City to transition from heavy reliance on external consultants and neighboring jurisdictions to building sustainable internal expertise that provides continuity, institutional knowledge, and responsive service delivery as the community matures.

### 7.4.5 Education and Outreach Capabilities

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 7-7.

**Table 7-7 Education and Outreach Capabilities**

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
If yes, briefly describe:	In development	
Do you use social media for hazard mitigation education and outreach?		Yes
If yes, briefly describe:	The City uses Everbridge and standard social platforms.	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?		No

Criterion		Response
If yes, briefly describe:	-	
Do you have any other programs in place that could be used to communicate hazard-related information?	No	
If yes, briefly describe:	-	
Do you have any established warning systems for hazard events?	Yes	
If yes, briefly describe:	The City uses Everbridge – but it is an “opt in” program.	

### **Opportunities to Expand Education and Outreach Capabilities**

Mountain House is committed to developing comprehensive education and engagement programs that build civic knowledge, foster participatory governance, and establish a culture of preparedness through citizen involvement in hazard mitigation and emergency planning. As a young city with residents transitioning from a developer-managed community to active civic participants, establishing communication infrastructure and educational resources during this formative period will cultivate an informed, engaged citizenry equipped with the knowledge and tools to prepare for, respond to, and recover from emergencies. These capabilities will create sustainable pathways for resident input, preparedness education, neighborhood-level resilience planning, and collaborative hazard mitigation that serve the community effectively as it matures.

### **7.4.6 Community Classifications**

Other programs, such as the Community Rating System and NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 7-8.

**Table 7-8 Community Classifications**

	Participating?	Classification	Date Classified
Federal Information Processing Standards (FIPS) Code	No	N/A	N/A
Unique Identity ID (UEI)	No	N/A	N/A
Community Rating System (CRS)	No	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	N/A	N/A
Public Protection (ISO for Fire Districts)	Yes	Unknown	N/A
NWS StormReady	No	OES	N/A
Firewise USA	No	Fire Dept	N/A

### 7.4.7 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The community’s adaptive capacity for the impacts of climate change is presented in Table 7-9.

**Table 7-9 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	Low
Jurisdiction-level monitoring of climate change impacts	Low
Technical resources to assess proposed strategies for feasibility and externalities	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
Capital planning and land use decisions informed by potential climate impacts	Low
Participation in regional groups addressing climate risks	Low
<b>Implementation Capacity</b>	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
Identified strategies for greenhouse gas mitigation efforts	Low
Identified strategies for adaptation to impacts	Low
Champions for climate action in local government departments	Low
Political support for implementing climate change adaptation strategies	Low
Financial resources devoted to climate change adaptation	Low
Local authority over sectors likely to be negative impacted	Low
<b>Public Capacity</b>	
Residents’ knowledge of and understanding of climate risk	Low
Residents’ support of adaptation efforts	Unsure
Residents’ capacity to adapt to climate impacts	Unsure
Local economy current capacity to adapt to climate impacts	Unsure
Local ecosystems capacity to adapt to climate impacts	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.

## 7.5 National Flood Insurance Program Compliance

Flooding is the costliest natural hazard in the United States. Community participation in the NFIP opens up the opportunity for additional grant funding associated specifically with flooding issues. Assessment of the jurisdiction’s current NFIP status and compliance provides planners with a greater understanding of the local flood management program, opportunities for improvement, and available grant funding opportunities.

The City of Mountain House is currently enrolled in the NFIP program under the emergency phase as it does not have flood mapping available yet. This phase offers limited, non-actuarial flood insurance coverage for residential and commercial properties while requiring adoption of basic floodplain management standards. NFIP statistics for communities under the emergency phase are not available and, therefore, Mountain House NFIP data is not included in the table below. Additional information on National Flood Insurance Program (NFIP) compliance is presented in Table 7-10.

**Table 7-10 National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Deputy City Manager/ PW
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	2025
Does your floodplain management program meet or exceed minimum requirements?	Yes
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?	County OES
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Unknown
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
If so, what type of assistance/training is needed?	
Does your jurisdiction have a Substantial Damage Response Plan?	No
How does your jurisdiction assess substantial damages after a hazard event?	N/A
Does your jurisdiction participate in the Community Rating System (CRS)?	No
If yes, is your jurisdiction interested in improving its CRS Classification?	-
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup>	N/A
What is the insurance in force?	N/A

Criterion	Response
What is the premium in force?	N/A
How many total loss claims have been filed in your jurisdiction? <sup>a</sup>	N/A
What were the total payments for losses?	N/A

a. According to FEMA statistics as of 12/2025

## 7.6 Integration

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.

### 7.6.1 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:

As Mountain House develops its planning documents, the City can embed hazard mitigation across all regulatory mechanisms from the start. Rather than retrofitting hazard considerations into established codes and plans (a challenge facing most jurisdictions) Mountain House can design integrated systems where hazard data informs building codes, zoning, subdivision requirements, capital investment, and public education simultaneously. By systematically integrating hazard mitigation into the General Plan, development review, infrastructure planning, and community outreach, Mountain House will build inherent resilience, reducing long-term costs and enhancing public safety.

Suggestions for integration are as follows:

#### General Plan

- Embed hazard mitigation goals, policies, and implementation measures throughout all General Plan elements.
- Include hazard mapping and vulnerability assessments in the Safety Element.
- Integrate climate adaptation and hazard resilience into Land Use, Circulation, and Open Space Elements.
- Establish consistency requirements between General Plan and Local Hazard Mitigation Plan.
- Building Code & Development Review.
- Incorporate seismic, flood, and wildfire hazard data into building permit review processes to ensure compliance with hazard-appropriate construction standards.

- Establish pre-application consultation protocols that address site-specific hazard considerations.
- Refer to Action #2 in Table 7-13.

### **City Ordinances**

- Embed hazard mitigation requirements into infrastructure standards for water, sewer, and drainage systems.
- Establish design criteria for public facilities that account for seismic and flood risks.
- Subdivision Map Act.
- Require hazard disclosure and mitigation measures as conditions of approval for new subdivisions.
- Mandate emergency access design that accounts for evacuation needs.
- Integrate stormwater management and flood prevention into subdivision infrastructure requirements.
- Growth Management.
- Incorporate hazard vulnerability assessments into growth area evaluation criteria.
- Use hazard data to inform phasing and sequencing of development.
- Establish growth policies that avoid or minimize development in high-hazard areas.
- Refer to Action #2 in Table 7-13.

### **Site Plan Review**

- Require site-specific hazard analysis for projects in identified risk areas.
- Integrate emergency vehicle access and evacuation considerations.
- Mandate on-site hazard mitigation features (detention basins, fire breaks, seismic design).
- Refer to Action #2 in Table 7-13.

### **Environmental Protection Planning**

- Integrate natural hazards data into CEQA/environmental review processes.
- Ensure environmental mitigation measures address hazard reduction.
- Coordinate habitat protection with wildfire fuel management strategies.
- Refer to Action #4 in Table 7-13.

### **Capital Improvement Program (CIP)**

- Prioritize infrastructure projects that reduce hazard vulnerability.
- Integrate hazard mitigation projects into annual CIP funding decisions.
- Coordinate utility upgrades with seismic retrofit and flood prevention improvements.
- Refer to Action #2 in Table 7-13.

### **Disaster Debris Management Plan**

- Reference in emergency operations procedures and site plan reviews.
- Integrate debris storage site identification into land use planning.
- Coordinate with waste management franchise agreements.
- Refer to Action #2 in Table 7-13.

### Water Management Plan

- Integrate drought preparedness and water supply resilience into emergency planning.
- Coordinate water infrastructure projects with hazard mitigation capital improvements.
- Include emergency water supply provisions in development review.
- Refer to Action #2 in Table 7-13.

### Climate Change Planning

- Integrate climate projections into long-range capital planning and infrastructure design.
- Update hazard vulnerability assessments to reflect changing risk profiles.
- Coordinate adaptation strategies across all planning mechanisms.
- Refer to Action #4 in Table 7-13.

### Economic Development Plan

- Consider hazard resilience as economic development criterion (business continuity, insurance costs).
- Market Mountain House's modern, hazard-resilient infrastructure to prospective businesses.
- Integrate emergency preparedness into business attraction and retention programs.

### Emergency Response Plan

- Incorporate hazard mapping and vulnerability assessments into emergency planning
- Refer to Action #2 in Table 7-13.

## 7.7 Risk Assessment

### 7.7.1 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	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	CA23-1	1/4/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	The City was subject to closures and social distancing/masking requirements.

### 7.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for the City of Mountain House is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the City in identifying hazards that pose the most significant threat. 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.

**Table 7-12 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability (1-4 index value with 30% weighting factor)	Impact (1-4 index value with 30% weighting factor)	Spatial Extent (1-4 index value with 20% weighting factor)	Warning Time (1-4 index value with 10% weighting factor)	Climate Change (1-4 index value with 10% weighting factor)		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.3	.3	.2	.1	.3	1.2	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	.3	.3	.3	.3	.4	1.6	Low
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

### 7.7.3 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:

- None noted at this time.

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

## 7.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 7-13 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas (e.g., Landslide, Earthquake, and Wildfire) prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter Energy Communications Transportation	Existing	1, 3, 4	Lead: Deputy City Manager Support: Director of Public Safety Consultant	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund, Grant Funding	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including: <ul style="list-style-type: none"> <li>• General Plan</li> <li>• City Ordinances (Building Code, Zoning,</li> </ul>	Safety and Security Communications Transportation Water Systems	New	6	Lead: Deputy City Manager Support: Director of Public Safety Consultant	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	Subdivisions, Stormwater Management, Growth Management <ul style="list-style-type: none"> <li>• Site Plan Review</li> <li>• Capital Improvement Plan</li> <li>• Economic Development Plan</li> <li>• Water Management Plan</li> <li>• Disaster Debris Management Plan</li> <li>• County Post Disaster Recovery</li> <li>• Community Wildfire Protection Plan</li> <li>• Emergency Response Plan</li> <li>• Outreach through City website</li> </ul>								
3	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"> <li>• Permitting</li> </ul>	Food, hydration, shelter	New, Existing	1, 2	Lead: Deputy City Manager Support: Director of Public Safety Consultant	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
4	Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following: <ul style="list-style-type: none"> <li>• Environmental Protection Planning</li> <li>• Climate Change Planning</li> </ul>	Communications Safety and security	New, Existing	1, 3	Lead: Deputy City Manager Support: Director of Public Safety Consultant	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
5	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	N/A	N/A	6	Lead: Deputy City Manager Support: Director of Public Safety Consultant	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
6	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.	Food, hydration, shelter	Existing and new	3, 5	Lead: Deputy City Manager Support: Director of Public Safety Consultant	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
7	Develop a post-disaster recovery plan and a debris management plan	Food, hydration, shelter Safety and Security	Existing	3, 5	Lead: Deputy City Manager Support: Director of Public Safety Consultant	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
8	Develop and/or update plans that support or enhance continuity of operations following disaster.	Food, hydration, shelter Safety and Security Communications	Existing	3, 5	Lead: Deputy City Manager Support: Director of Public Safety Consultant	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
9	Develop a plan to track building permits by hazard area	Food, hydration, shelter	New	3, 5	Lead: Deputy City Manager Support: Director of Public Safety Consultant	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
10	Purchase generators for City-owned critical facilities and infrastructure that lack adequate backup power.	Safety and security; Energy; Communications	Existing	6	Lead: Public Works Director	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Table 7-14 Mitigation Action Prioritization

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	0	3	3	3	3	1	0	3	3	3	1	3	3	3	3	35	High
#4	1	1	3	1	1	1	1	3	3	1	3	3	1	3	3	30	Medium
#5	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#6	3	3	1	3	3	1	1	3	3	1	3	3	1	1	3	33	High
#7	3	3	3	3	3	1	3	3	3	1	3	3	1	1	3	35	High
#8	3	3	3	3	3	1	3	3	3	1	3	3	1	3	3	39	High
#9	1	3	3	1	3	3	1	3	3	1	3	3	1	3	3	35	High
#10	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium

Notes:

- 31 or more = High Priority
- 15 to 30 = Medium Priority
- 0 to 14 = Low Priority

Table 7-15 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■				■		■				■	■	■
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■	■	■		■		■				■			■	■		
#4	■				■			■	■	■				■	■		■
#5					■		■		■				■	■	■		■
#6	■	■			■		■				■	■	■	■		■	■
#7	■	■			■		■				■		■	■			■
#8	■	■			■		■				■		■	■			■
#9	■				■		■				■		■	■			■
#10	■	■			■		■				■	■	■		■		■

## 7.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 7-16.

**Table 7-16 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Mountain House utilizes Everbridge, social media, and local signage to invite the public to all City Council meetings and planning sessions on an ongoing basis.	N/A	N/A
Supported the countywide outreach efforts for this plan including promoting the public survey.	Throughout the planning process	TBD

## 7.10 Information Sources Used for This Annex

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

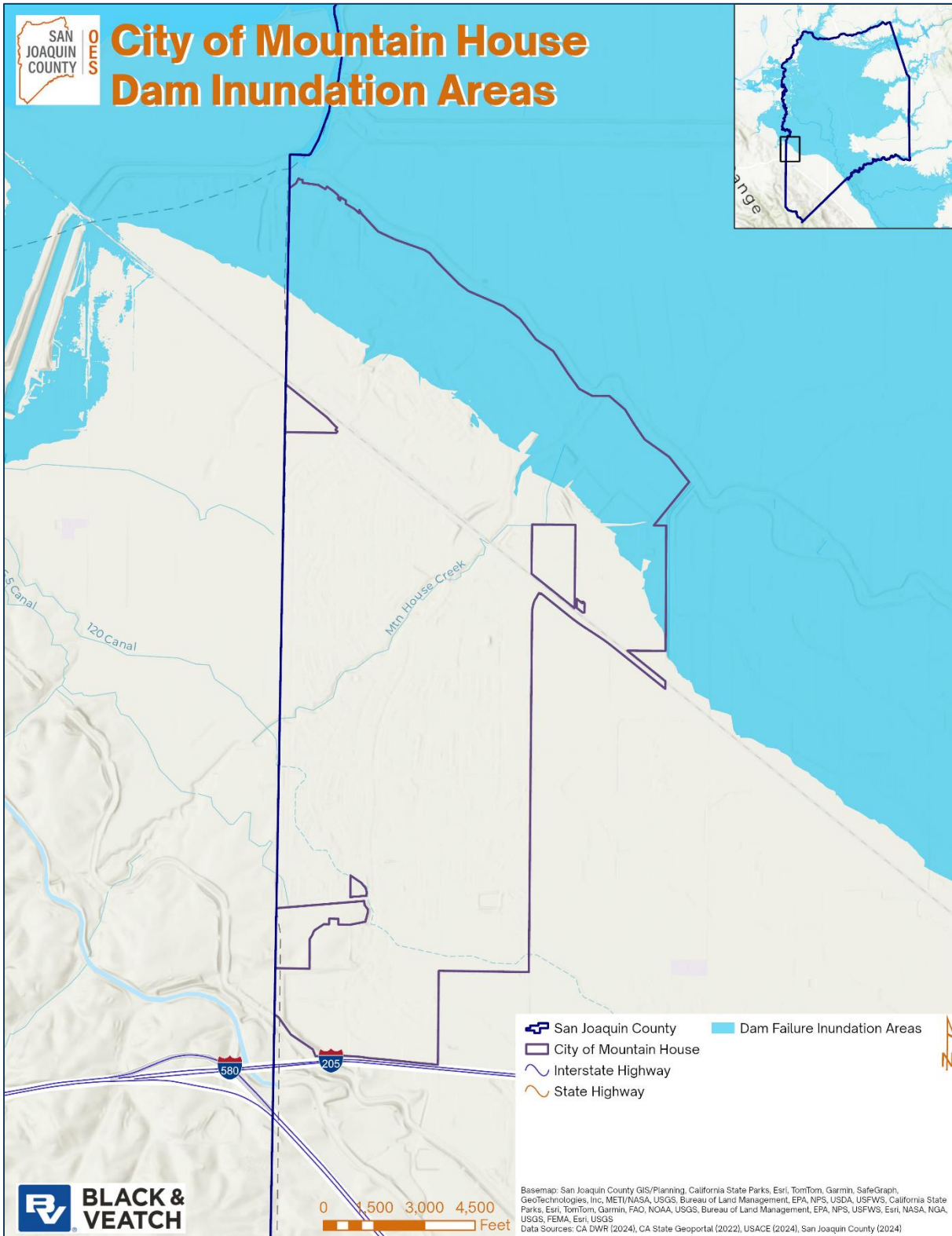
- City of Mountain House Municipal Code

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.

## 7.11 Hazard Mapping

Jurisdiction-specific risk maps of the hazards are provided on the following pages. For a complete description of each hazard, please see the applicable chapters in Volume 1 of this plan. These maps are based on the vulnerability and risk assessment results for this plan.



**Figure 7-1 Dam Inundation Areas**

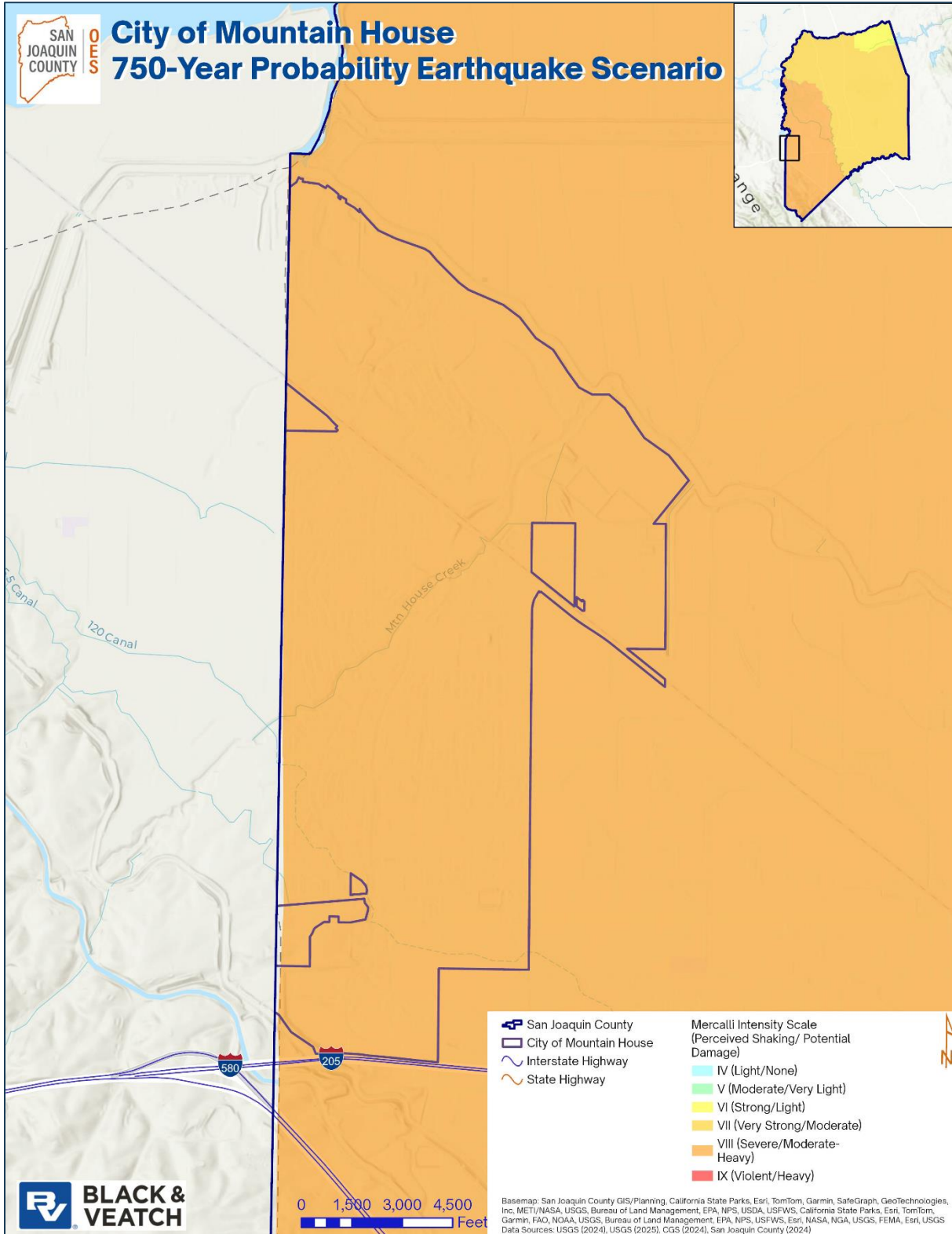


Figure 7-2 750-Year Probability Earthquake Scenario

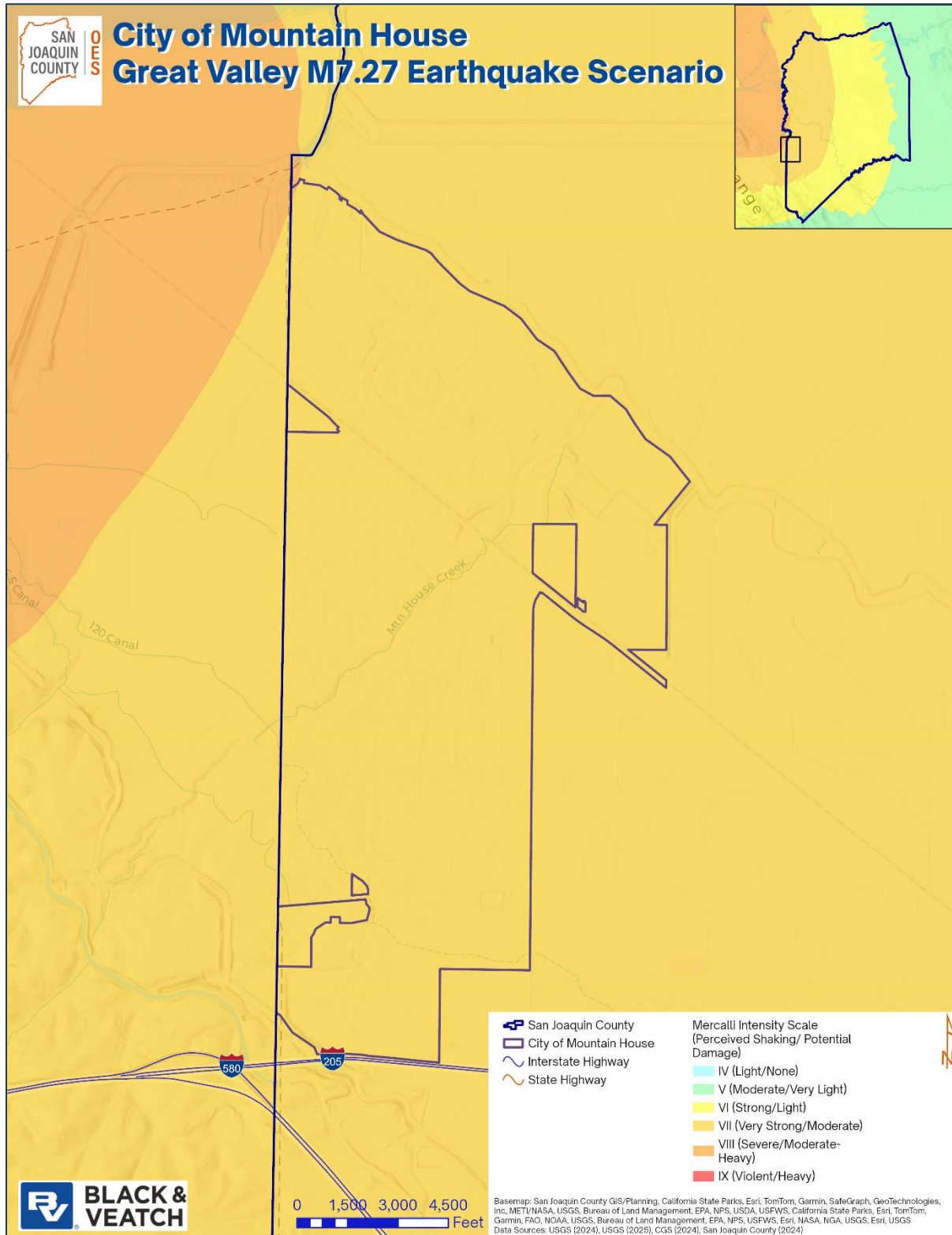


Figure 7-3 Great Valley M7.27 Earthquake Scenario

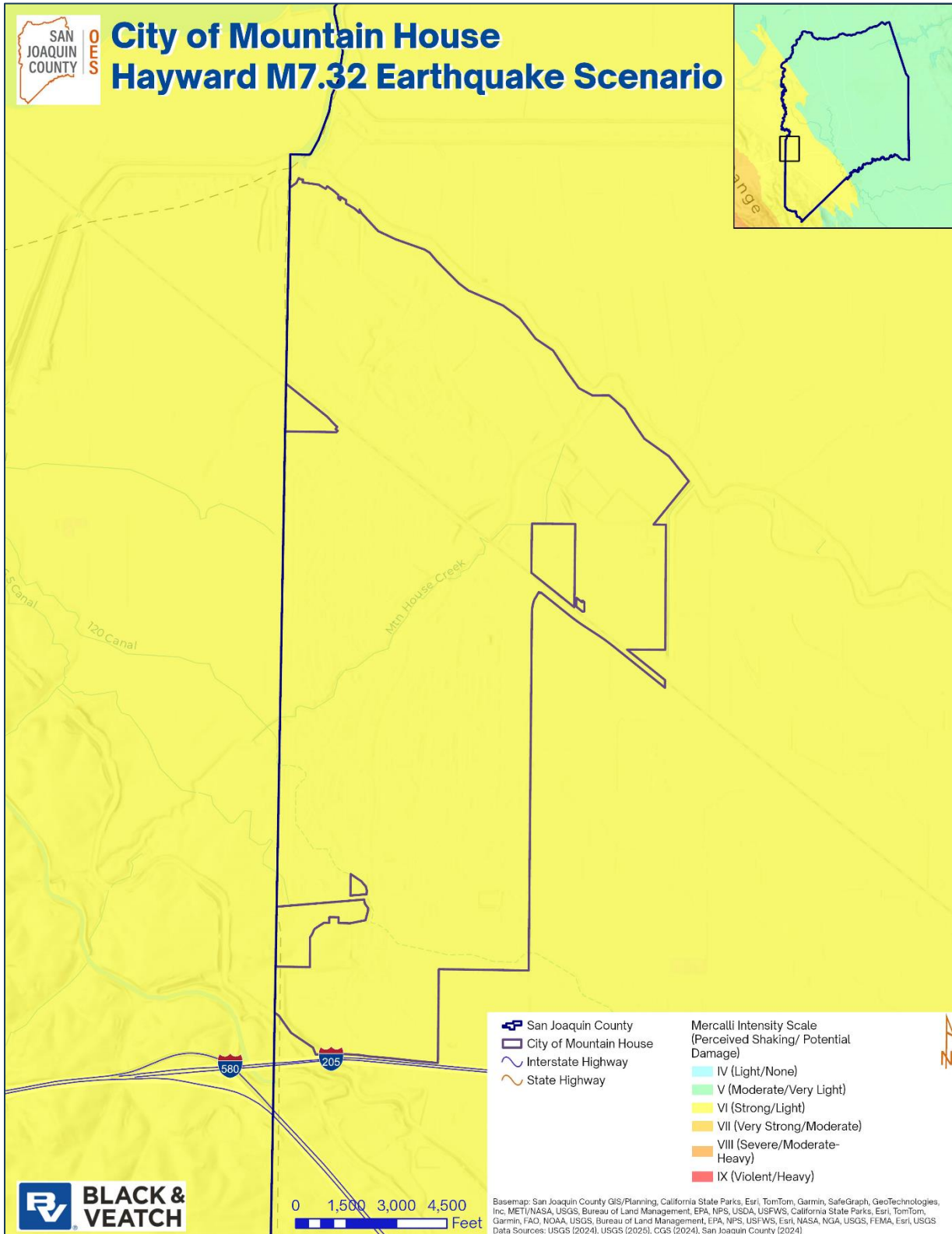
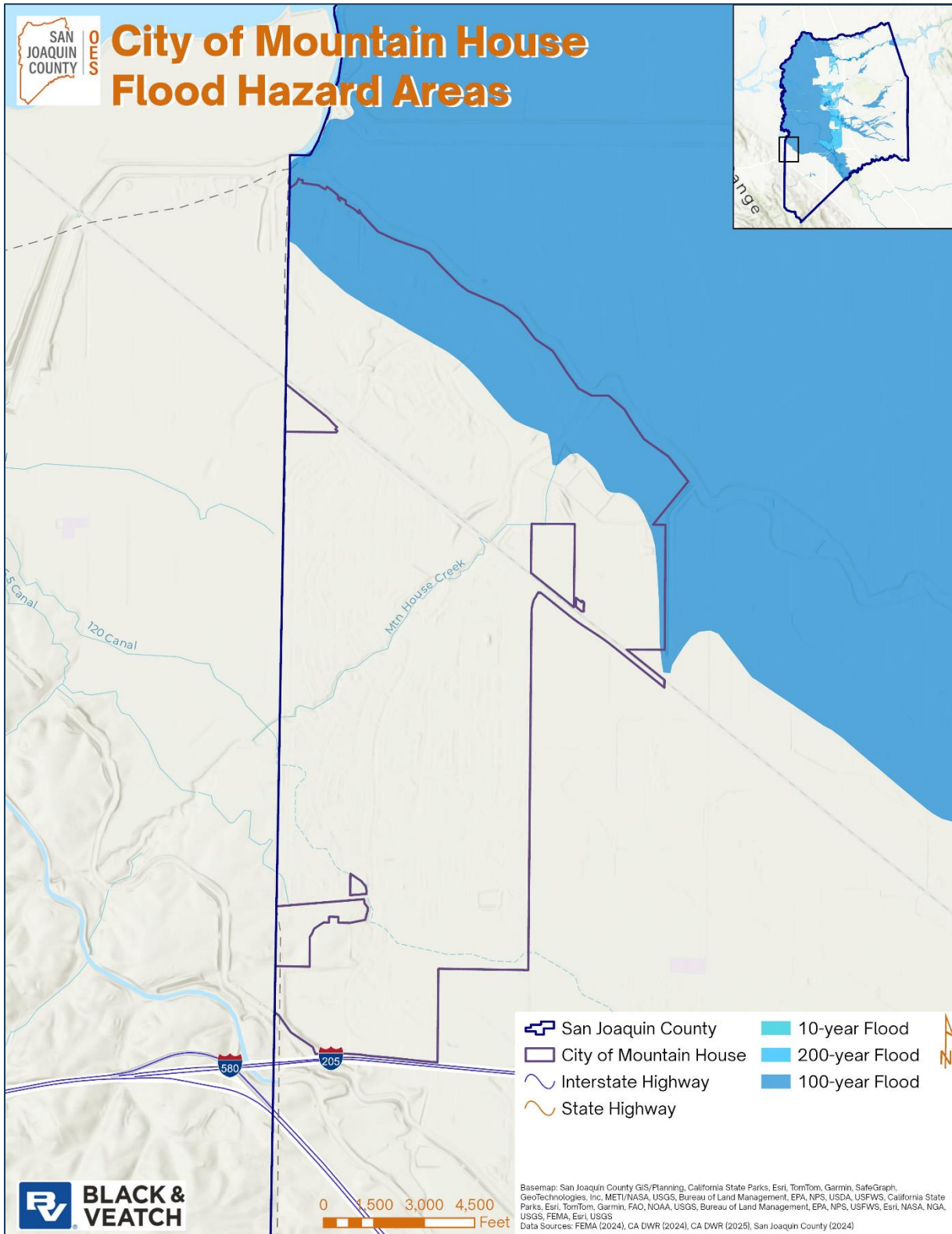


Figure 7-4 Hayward M7.32 Earthquake Scenario



**Figure 7-5 Flood Hazard Areas**

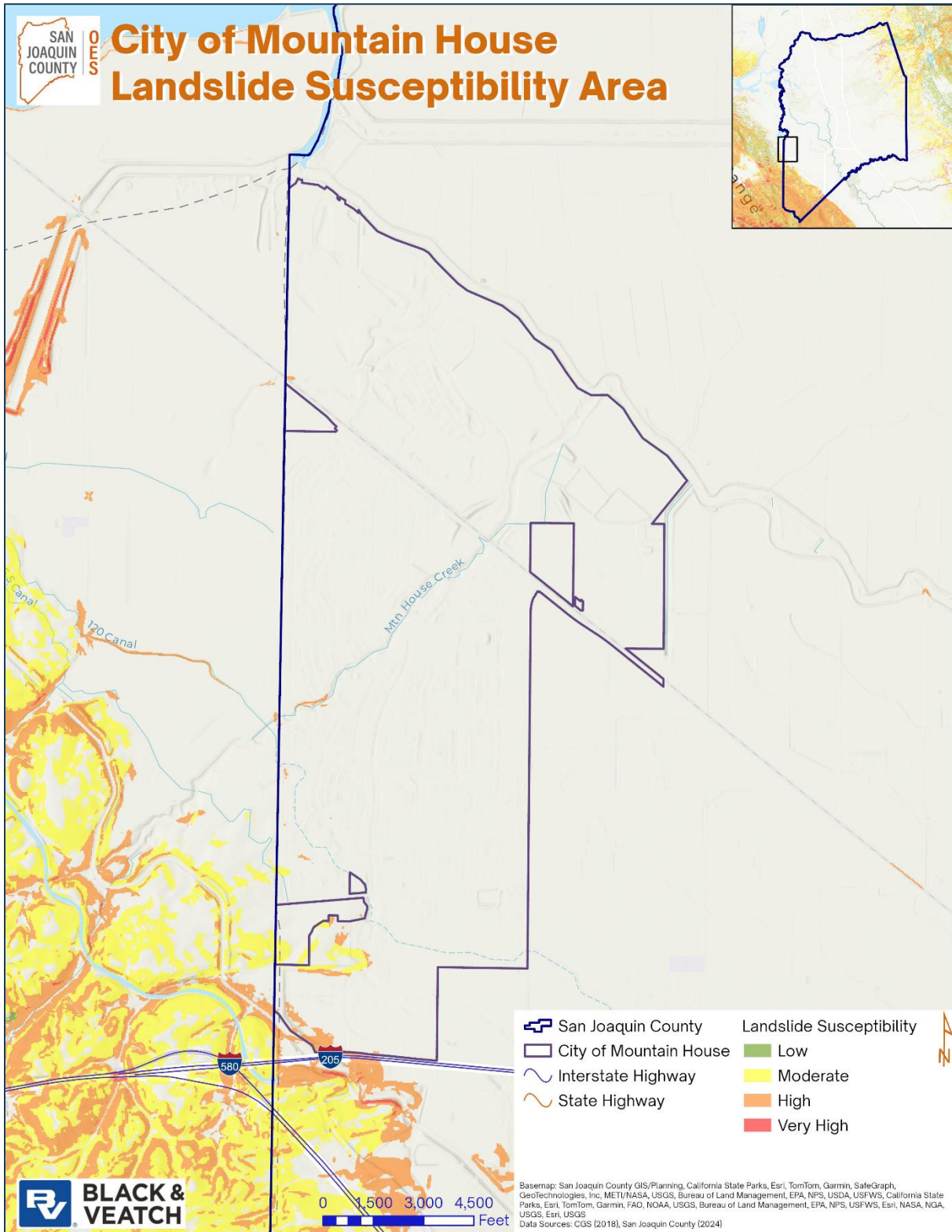


Figure 7-6 Landslide Susceptibility Areas

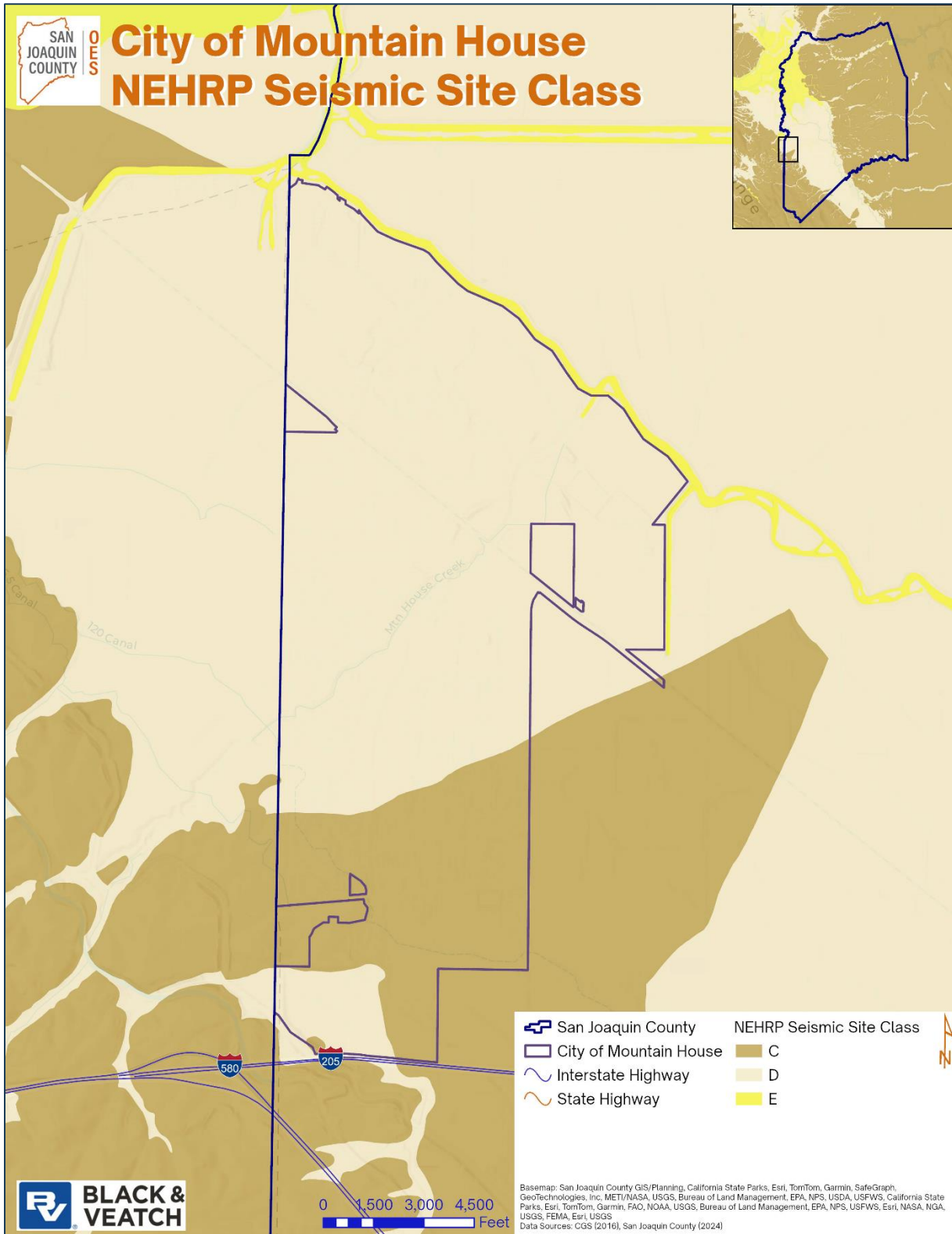


Figure 7-7 NEHRP Seismic Site Class Soils

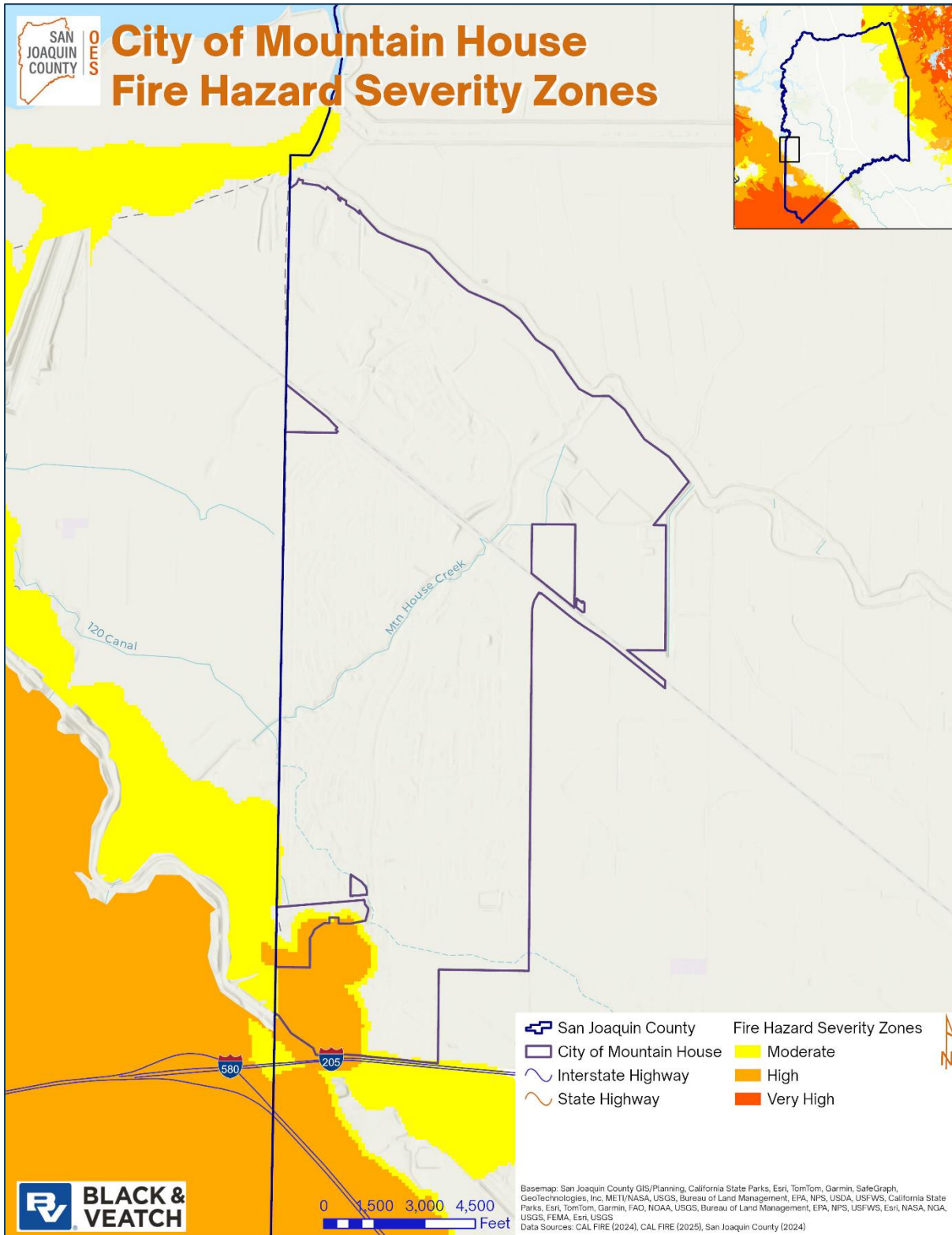
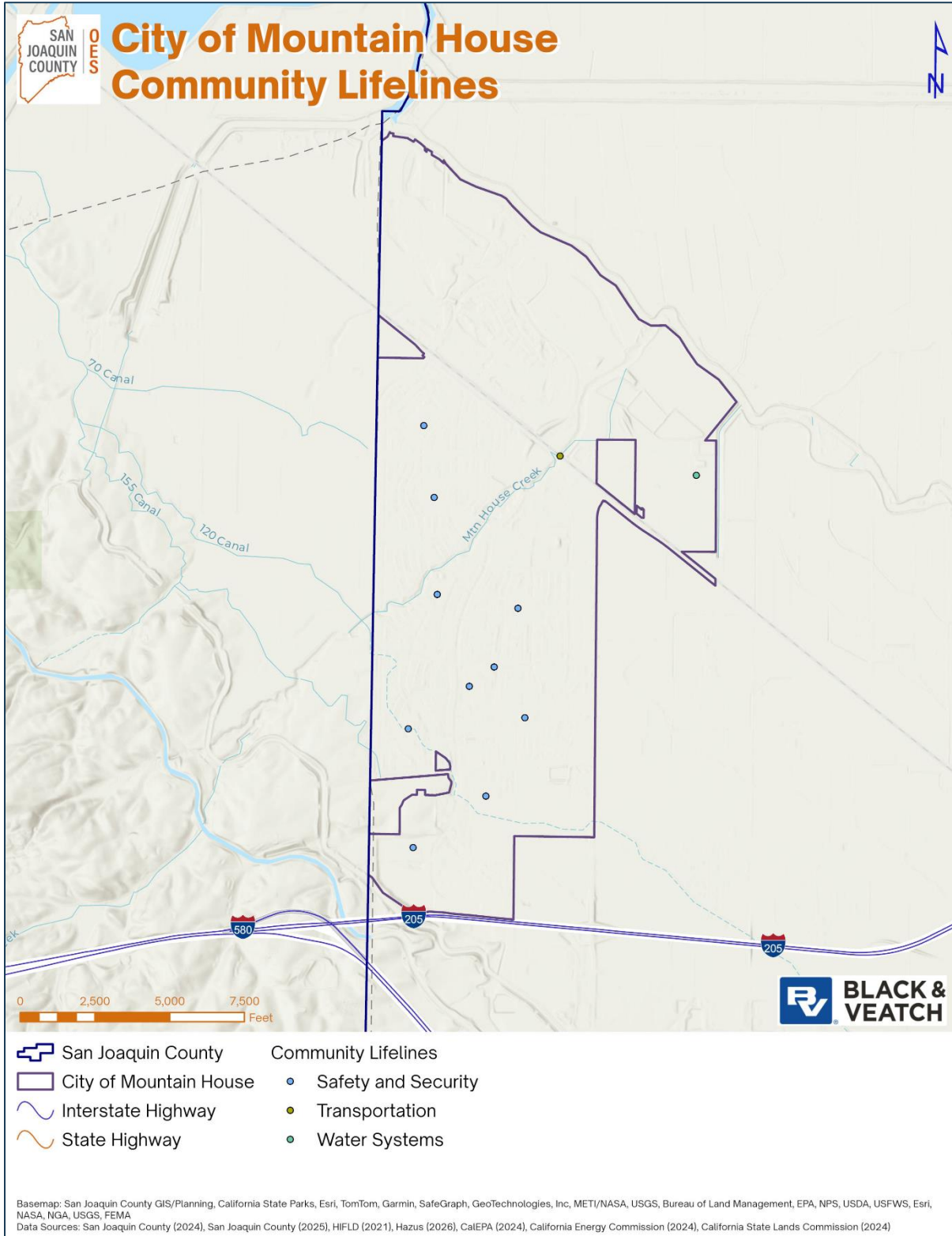


Figure 7-8 Fire Hazard Severity Zones



**Figure 7-9 Community Lifelines**



## 8. CITY OF RIPON



Source: Ripon Chamber

### 8.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the City of Ripon. Members are listed in Table 8-1.

Table 8-1 Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Ken Zuidervaart, Planning Director	Name and Title:	Kevin Werner, City Administrator
Address:	259 N. Wilma Avenue, Ripon, CA 95366	Address:	259 N. Wilma Avenue, Ripon, CA 95366
Phone Number:	(209) 599-2108	Phone Number:	(209) 599-2108
Email:	<a href="mailto:kzuidervaart@cityofripon.org">kzuidervaart@cityofripon.org</a>	Email:	<a href="mailto:kwerner@cityofripon.org">kwerner@cityofripon.org</a>

Primary Point of Contact		Alternate Point of Contact
<b>NFIP Floodplain Administrator</b>		
Name and Title:	Ken Zuidervaart, Planning Director	
Address:	259 N. Wilma Avenue, Ripon, CA 95366	
Phone Number:	(209) 599-2108	
Email:	kzuidervaart@cityofripon.org	
<b>Additional Planning Team Members:</b>		
Name and Title:	Daniel Sauer, Chief of Police	
Method of Participation:	Provided information (local knowledge, resources, etc.) to develop this annex.	
Name and Title:	Jared Heuvel, Lieutenant	
Method of Participation:	Provided information (local knowledge, resources, etc.) to develop this annex.	
Name and Title:	James Pease, Public Works Director	
Method of Participation:	Provided information (local knowledge, resources, etc.) to develop this annex.	
Name and Title:	Kevin Werner, City Administrator	
Method of Participation:	Provided information (local knowledge, resources, etc.) to develop this annex.	
Name and Title:	Lisa Roos, Finance Director	
Method of Participation:	Provided information (local knowledge, resources, etc.) to develop this annex.	

## 8.2 Jurisdictional Profile

### 8.2.1 Location and Features

Ripon is the southernmost community in San Joaquin County situated along the Stanislaus River and located in the northern section of the San Joaquin Valley. It lies between Stockton (20 miles to the north) and Modesto (4 miles to the south) and is bisected by State Route 99 and the Central Valley route of the Union Pacific Railroad (City of Ripon 2006).

### 8.2.2 History

Ripon has a history dating back to 1857 when William Hiller Hughes settled and gave the railroad a right of way through his property. The community was initially named Stanislaus Station and became a busy shipping point for stock and grains grown on the sand plains. Amliias B. Crooks, a native of Ripon, Wisconsin, started the first store in 1874 and applied to establish a post office. The community was officially renamed Ripon, and the post office was housed in various stores with several owners being appointed postmaster (City of Ripon 2025).

In 1884, Ripon had a hotel, blacksmith shop, two large warehouses, and 14 residences. The first substantial building erected in Ripon was the Odd Fellows building, a two-story brick building that became the hub of all activity in the town. The first school started in 1862 was known as the Crow school, and the Catholics and Methodists each established churches in the Atlanta area of Ripon in 1878. The Ripon Cemetery Association was established in 1899, with the land being donated by the Moulton family (City of Ripon 2025).

In 1909, the South San Joaquin Irrigation District was formed, and dry farming began to disappear. Row crops, melons, and almond trees began to appear, and dairies began to spring up, with the Portuguese people being the first large dairy farmers. As early as 1912, there were a number of real estate men busy in the Ripon area, and the Dutch farmers began to appear in 1916, attracted by the advertisements of rich farmlands. Ripon Fire District was formed in 1921, and Meyenberg Bros. built their first milk plant. Ripon City incorporated in 1945, and the water district voted to have the city operate the water company (City of Ripon 2025).

### **8.2.3 Governance**

Ripon is a general law city operating under a council-administrator form of government with the five-member City Council elected at large. From its incorporation until 1994, council members were selected using a ward system. In 1994, the city changed its process and now elects its council at large within the community by the electorate within the community. The council, however, continues to designate the Mayor from their body.

The City Council assumes responsibility for the adoption of this plan; the Planning Director will oversee its implementation (City of Ripon 2025).

## **8.3 Growth and Development Trends**

### **8.3.1 Population**

According to California Department of Finance, the population of Ripon as of January 2025 was 15,753. Since 2010, the population has grown at an average annual rate of 0.66 percent, though that rate is declining, with an annual average of -0.07 percent since 2020.

### **8.3.2 Equity Priority Communities**

Vulnerable populations include groups that experience disproportionate impacts of disasters as they often cannot protect themselves during disaster and may require assistance with daily activities. Identified vulnerable populations include the population that is 65 years and older, children under 5, and the socially vulnerable parts of the City identified in this plan.

### **8.3.3 Development**

Anticipated future development in the City of Ripon is expected to remain limited, with growth primarily comprised of small-scale residential projects and a select number of new commercial developments. In recent years, most new construction has been centered on medium to higher density housing, alongside a modest increase in accessory dwelling units. Ongoing and future growth will be managed according to the policies and objectives outlined in Ripon's 2040 General Plan. All City decisions regarding growth, including land use approvals, annexations, zoning changes, subdivision applications, and capital improvement initiatives, are required to be consistent with the General Plan and any pertinent adopted specific or master plans.

**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?	Yes					
If yes, give the estimated area annexed and estimated number of parcels or structures.	17.19 acres consisting of 47 single-family lots.					
Is your jurisdiction expected to annex any areas during the performance period of this plan?	Yes					
If yes, describe land areas and dominant uses.	Approx. 210 acres, Commercial, Light Industrial, Park, Professional Office, and Very High Density Residential					
If yes, who currently has permitting authority over these areas?	San Joaquin County					
Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.	N/A					
Are any areas targeted for development or major redevelopment in the next five years?	No					
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	N/A					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
	Single Family	8	9	2	6	0
	Multi-Family	0	0	0	82	0
	Other (mobile homes, accessory dwellings, mixed use, etc.)	0	1	4	1	2
	Commercial	4	9	7	5	1
	Total	12	19	13	94	3
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.	Anticipated future development in the City of Ripon is expected to remain limited, with growth primarily comprised of small-scale residential projects and a select number of new commercial developments.					

## 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 or improve upon 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.

### 8.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop policies and programs and to implement rules and regulations to protect and serve community members. Local policies are typically identified in a variety of community plans, implemented via a local ordinance, and enforced through a governmental body. An assessment of planning and regulatory capabilities is presented in Table 8-3.

**Table 8-3 Planning and Regulatory Capabilities**

		Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>					
Building Code		Yes	No	Yes	Yes
Comment:	The City enforces the Building Code. State building standards apply.				
Zoning Code		Yes	No	Yes	Yes
Comment:	City administers zoning consistent with State mandates, adopted 2040 General Plan, and Title 16 of the Ripon Municipal Code (RMC).				
Subdivisions		Yes	No	Yes	Yes
Comment:	City reviews and approves subdivisions per local ordinances (Chapters 16.94, 16.100, and 16.124 of the RMC) and State subdivision laws.				
Stormwater Management		Yes	No	Yes	Yes
Comment:	City oversees stormwater management per State laws and in accordance with its adopted stormwater management plan.				
Post-Disaster Recovery		No	Yes	No	Yes
Comment:	Post-disaster recovery primarily under San Joaquin County authority; some city coordination.				
Real Estate Disclosure		No	No	No	No
Comment:	Not applicable				
Growth Management		Yes	No	Yes	Yes
Comment:	City manages growth through zoning and General Plan 2040 implementation.				
Site Plan Review		Yes	Yes	Yes	Yes
Comment:	City and other jurisdictions share site plan approval roles, supported by State law and the Ripon Municipal Code, chapter 16.72.				
Environmental Protection		Yes	No	Yes	Yes
Comment:	City integrates environmental protection in planning and development processes through the CEQA process				

		Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Flood Damage Prevention		Yes	No	Yes	Yes
Comment:	City enforces flood damage prevention ordinances (chapters 8.01 and 16.10 of the RMC), complying with NFIP and State mandates.				
Emergency Management		No	No	No	Yes
Comment:	Emergency management handled by San Joaquin County with city liaison roles.				
Climate Change		No	No	Yes	Yes
Comment:	The City of Ripon does not currently integrate climate change adaptation or mitigation policies within its General Plan or the Ripon Municipal Code. Specifically, Ripon has not adopted a Climate Action Plan and does not include climate change objectives, greenhouse gas reduction strategies, or related adaptation measures in any chapter of its General Plan or any municipal ordinance. This means that, at present, there are no formal requirements, planning frameworks, or regulatory mechanisms at the local level addressing climate change within the City's codes or plans.				
<b>Planning Documents</b>					
General Plan		Yes	No	Yes	Yes
Is the General Plan compliant with Assembly Bill 2140?			No		
Comment:	Existing General Plan (2040) guides growth; not yet compliant with Assembly Bill 2140.				
Capital Improvement Plan		Yes	No	No	Yes
How often is the plan updated?		Updated every 5 years			
Comment:	CIP exists; last updated in 2024.				
Disaster Debris Management Plan		No	Yes	No	Yes
Comment:	County-managed plan, city coordinates as needed.				
Floodplain or Watershed Plan		No	No	Yes	Yes
Comment:	City maintains floodplain management aligned with State and FEMA requirements (RMC chapters 8.01 and 16.10).				
Stormwater Plan		Yes	No	No	Yes
Comment:	City of Ripon has a storm water management plan per local and State regulatory frameworks.				
Urban Water Management Plan		Yes	No	Yes	Yes
Comment:	City complies with State urban water management requirements and has an adopted urban water management plan (2015).				
Habitat Conservation Plan		No	Yes	No	Yes
Comment:	The City of Ripon participates in the San Joaquin Council of Governments' (SJCOG) Multi-Species Habitat Conservation and Open Space Plan (SJMSCP).				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Economic Development Plan	Yes	No	No	Yes
Comment:	Ripon has a local economic development plan (General Plan 2040); not mandated by State.			
Community Wildfire Protection Plan	No	No	No	No
Comment:	Not applicable			
Forest Management Plan	No	Yes	No	No
Comment:	Not applicable at city level			
Climate Action Plan	No	No	Yes	Yes
Comment:	The City of Ripon currently does not have an adopted Climate Action Plan (CAP) incorporated into its General Plan or municipal code. This absence of a formal CAP represents an opportunity for future integration to address greenhouse gas emissions reduction, climate change mitigation, and adaptation strategies in line with state mandates and regional initiatives.			
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	No	No	Yes
Comment:	THIRA was conducted at county level.			
Post-Disaster Recovery Plan	No	No	No	Yes
Comment:	Not currently developed at city level; opportunity for future integration.			
Continuity of Operations Plan	Yes	No	No	Yes
Comment:	Typically, internal city government plan; could be integrated better.			
Public Health Plan	No	No	Yes	Yes
Comment:	Public health coordinated mainly with county and state agencies.			
Emergency Management Plan	No	Yes	No	Yes
Comment:	Not currently in place but looking to develop.			

### ***Opportunities to Expand Planning and Regulatory Capabilities***

The planning and regulatory capabilities of the City can be expanded by integrating the County-wide hazard mitigation plan into the City’s various plans as listed in Table 8-13 and below:

- Building Code
- County level integration through post-disaster recovery plans, disaster debris management, public health measures, and emergency management plans
- Climate Action and Adaptation Plan (to be drafted in the future, will include environmental protection plans)
- Capital Improvement Plan

- Municipal Code (Subdivision Ordinance, Site Plan Review, Flood Damage Prevention, Zoning Code, Floodplain/Watershed Plan)
- General Plan (Growth Management, Economic Development)
- 2015 Urban Water Management Plan
- SJCOG Multi-species Habitat Conservation and Open Space Plan
- City-level Post-Disaster Recovery Plan
- Continuity of Operations Plan
- Threat and Hazard Identification and Risk Assessment (THIRA)
- Emergency Management Plan (to be developed)

### 8.4.2 Development and Permitting Capabilities

Jurisdictions 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 lead to hazard mitigation. Development and permitting capabilities are presented in Table 8-4.

**Table 8-4 Development and Permitting Capabilities**

Criterion	Response
Does your jurisdiction issue development permits?	Yes
If no, who does? If yes, which department?	Planning Department
Does your jurisdiction track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	No

### 8.4.3 Fiscal Capabilities

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. An assessment of fiscal capabilities is presented in Table 8-5.

**Table 8-5 Fiscal Capabilities**

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
If yes, specify:	Water and Sewer service fees
Incur Debt through General Obligation Bonds	Yes

Financial Resource	Accessible or Eligible to Use?
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

### Opportunities to Expand Fiscal Capabilities

One of the primary objectives in developing the 2026 MJHMP is to establish eligibility to pursue FEMA HMA grant funding opportunities (e.g., FMA and HMGP). HMA funding streams typically require up to a 25 percent local match. The City has identified local funding resources in Table 8-5 that can provide the local match for projects in the mitigation action plan that list HMA grants as a potential primary funding source.

### 8.4.4 Administrative and Technical Capabilities

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 8-6.

**Table 8-6 Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	Yes
If Yes, Department /Position:	Planning Department/Planning Director
Engineers or professionals trained in building or infrastructure construction practices	Yes
If Yes, Department /Position:	Engineering/City Engineer, Public Works/Public Works Director, Building Department/Building Official
Planners or engineers with an understanding of natural hazards	Yes
If Yes, Department /Position:	Planning Department/Planning Director
Staff with training in benefit-cost analysis	No
If Yes, Department /Position:	N/A
Surveyors	No
If Yes, Department /Position:	N/A
Personnel skilled or trained in GIS applications	Yes

Staff/Personnel Resource		Available?
If Yes, Department /Position:	Planning Department/Contract GIS support	
Scientist familiar with natural hazards in local area		No
If Yes, Department /Position:	N/A	
Emergency manager		No
If Yes, Department /Position:	N/A	
Grant writers		No
If Yes, Department /Position:	N/A	
Procurement Services and Management		Yes
If Yes, Department /Position:	Finance Department/Finance Director	

### Opportunities to Expand Administrative and Technical Capabilities

One of the primary objectives in developing the 2026 MJHMP is to establish eligibility to pursue FEMA HMA grant funding opportunities (e.g., FMA and HMGP). HMA funding streams typically require up to a 25 percent local match. The City has identified local funding resources in Table 8-6 that can provide the local match for projects in the mitigation action plan that list HMA grants as a potential primary funding source.

#### 8.4.5 Education and Outreach Capabilities

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 8-7.

**Table 8-7 Education and Outreach Capabilities**

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
If yes, briefly describe:	Hazard mitigation documents and plans are accessible on the City’s website for public review.
Do you use social media for hazard mitigation education and outreach?	Yes
If yes, briefly describe:	The City uses social media platforms to disseminate hazard preparedness and emergency info. (such as Nixle).
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
If yes, briefly describe:	The City Council and Planning Commission participate in hazard mitigation discussions.
Do you have any other programs in place that could be used to communicate hazard-related information?	Yes

Criterion		Response
If yes, briefly describe:	Programs like community newsletters, and local outreach events support communication.	
Do you have any established warning systems for hazard events?		No
If yes, briefly describe:	N/A	

### Opportunities to Expand Education and Outreach Capabilities

The City currently has an outreach program that provides information regarding hazards and their impacts to their residents. The City will update their outreach programs as needed.

### 8.4.6 Community Classifications

Other programs, such as the Community Rating System and NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 8-8.

**Table 8-8 Community Classifications**

	Participating?	Classification	Date Classified
Federal Information Processing Standards (FIPS) Code	Yes	06-61026	N/A
Unique Identity ID (UEI)	Yes	“active/ registered”	N/A
Community Rating System (CRS)	No	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	N/A	N/A
Public Protection (ISO for Fire Districts)	Yes	N/A	N/A
NWS StormReady	No	N/A	N/A
Firewise USA	No	N/A	N/A

### 8.4.7 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The community’s adaptive capacity for the impacts of climate change is presented in Table 8-9.

**Table 8-9 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	Medium
Comment:	Staff is aware of potential impacts, but no formal studies or policies in place.
Jurisdiction-level monitoring of climate change impacts	Low
Comment:	No structured monitoring programs for climate change indicators.
Technical resources to assess proposed strategies for feasibility and externalities	Medium
Comment:	Access to regional partnerships and consultants as needed; lacks in-house tools.
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
Comment:	No recent local GHG inventories performed; capability exists at regional level.
Capital planning and land use decisions informed by potential climate impacts	Low
Comment:	Climate adaptation not integrated in capital/project reviews or permitting.
Participation in regional groups addressing climate risks	Medium
Comment:	Participates in county planning, but no formal climate collaboration group.
<b>Implementation Capacity</b>	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
Comment:	No Climate Action Plan, climate change not mandated in General Plan or code.
Identified strategies for greenhouse gas mitigation efforts	Low
Comment:	No formal approaches included in plans; opportunity for future integration.
Identified strategies for adaptation to impacts	Low
Comment:	No adopted adaptation policies; opportunity for future development.
Champions for climate action in local government departments	Low
Comment:	No formal “champions”, but staff is open to info/training as mandate expands.
Political support for implementing climate change adaptation strategies	Medium
Comment:	General support for sustainability, but little policy yet in place.
Financial resources devoted to climate change adaptation	Low
Comment:	No dedicated funding; any funding for this would need to be allocated from the General Fund, subject to prioritization and approval by the City Council.
Local authority over sectors likely to be negative impacted	Medium
Comment:	City regulates land use/utilities; but not all key sectors (e.g. water resources).

Criterion		Jurisdiction Rating <sup>a</sup>
<b>Public Capacity</b>		
Residents' knowledge of and understanding of climate risk		Medium
Comment:	No outreach efforts are currently underway, and the City does not have the staffing capacity to support such activities at this time, additionally public understanding is limited.	
Residents' support of adaptation efforts		Medium
Comment:	Most support sustainability, but awareness of adaptation is limited.	
Residents' capacity to adapt to climate impacts		Medium
Comment:	Socioeconomic means are moderate, but programs/services are limited.	
Local economy current capacity to adapt to climate impacts		Medium
Comment:	Agriculture and services sector flexibility, but some climate-sensitive employers.	
Local ecosystems capacity to adapt to climate impacts		Medium
Comment:	Ripon near riparian systems, health moderately resilient, but vulnerable to drought.	

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 National Flood Insurance Program Compliance

Flooding is the costliest natural hazard in the United States. Community participation in the NFIP opens up opportunities for additional grant funding associated specifically with flooding issues. Assessment of the jurisdiction's current NFIP status and compliance provides planners with a greater understanding of the local flood management program, opportunities for improvement, and available grant funding opportunities. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 8-10.

**Table 8-10 National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Planning Department
Who is your floodplain administrator? (department/position)	Planning Department, Planning 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?	2010
Does your floodplain management program meet or exceed minimum requirements?	Yes
When was the most recent Community Assistance Visit or Community Assistance Contact?	2009

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
If so, what type of assistance/training is needed?	Any training focusing on NFIP administration, floodplain development regulation, emergency readiness, and technical modeling/tools.	
Does your jurisdiction have a Substantial Damage Response Plan?		No
How does your jurisdiction assess substantial damages after a hazard event?		The City of Ripon assesses substantial damage after a hazard event by following regulatory procedures specified in its Flood Damage Prevention Ordinance (Ripon Municipal Code Chapter 8.01).
Does your jurisdiction participate in the Community Rating System (CRS)?		No
If yes, is your jurisdiction interested in improving its CRS Classification?		N/A
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup>		26
What is the insurance in force?		\$8,647,000
What is the premium in force?		\$16,708
How many total loss claims have been filed in your jurisdiction? <sup>a</sup>		0
What were the total payments for losses?		\$ 0

a. According to FEMA statistics as of 12/2025

## 8.6 Integration

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.

### 8.6.1 Existing Integration

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

- San Joaquin County Local Hazard Mitigation Plan – Ripon's hazard mitigation strategies and risk assessments are incorporated as part of the broader countywide plan, promoting coordination of resources and mitigation efforts across jurisdictional boundaries.
- Ripon General Plan Safety Element – Addresses natural hazard risk reduction measures including floodplain management, emergency response, and land use policies consistent with hazard mitigation goals.
- Ripon Flood Damage Prevention Ordinance – Provides regulatory framework for floodplain management and substantial damage response, integrated with hazard mitigation objectives focused on flood risk reduction.

The City reviewed the current HMP prior to updating these plans and the Flood Damage Ordinance and incorporated aspects of the HMP where appropriate.

### 8.6.2 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:

- Ripon Emergency Operations Plan (EOP) – The EOP can be better aligned with the hazard mitigation plan to enhance preparedness, response, and recovery coordination for hazard events.
- Ripon Public Works Capital Improvement Program – Integrating mitigation priorities into infrastructure planning and investment decisions would improve long-term resilience of critical public assets.
- Ripon Climate Action and Adaptation Plan or regional climate resilience initiatives – Incorporating climate change adaptation strategies into hazard mitigation could address evolving risks such as increased flooding and heat events.

## 8.7 Risk Assessment

### 8.7.1 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	Declaration Title	Disaster # (Federal or State)	Declaration Date (Federal or State)	Damage Assessment
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	CA23-1	1/4/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State)	Declaration Date (Federal or State)	Damage Assessment
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	The City was subject to closures and social distancing/masking requirements.

### 8.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for the City of Ripon is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the City in identifying hazards that pose the most significant threat. 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.

**Table 8-12 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability (1-4 index value with 30% weighting factor)	Impact (1-4 index value with 30% weighting factor)	Spatial Extent (1-4 index value with 20% weighting factor)	Warning Time (1-4 index value with 10% weighting factor)	Climate Change (1-4 index value with 10% weighting factor)		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.3	.9	.2	.1	.3	1.8	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability (1-4 index value with 30% weighting factor)	Impact (1-4 index value with 30% weighting factor)	Spatial Extent (1-4 index value with 20% weighting factor)	Warning Time (1-4 index value with 10% weighting factor)	Climate Change (1-4 index value with 10% weighting factor)		
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

### 8.7.3 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: 1
- 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:

- Aging storm water and drainage infrastructure within Ripon increases susceptibility to flooding during heavy precipitation events, affecting residential and commercial areas.
- Ripon faces risks related to seasonal wildfires in surrounding wildland-urban interface zones, which threaten structures, public safety, and critical infrastructure.
- Increasing temperatures and extended drought conditions impact water supply reliability and exacerbate heat-related health risks, particularly for vulnerable populations.

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

## 8.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 8-13 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas (e.g., Dam Failure, Earthquakes, Landslide) prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter Energy Communications Transportation	Existing	1, 3, 4	Lead: Planning Department Support: Public Works; Finance; Fire District; San Joaquin County OES; FEMA	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including: <ul style="list-style-type: none"> <li>• Building Code</li> <li>• County level integration through post-disaster recovery plans, disaster</li> </ul>	Safety and Security Communications Transportation Water Systems	New	6	Lead: Planning Department Support: City Council; Public Works; Building; Legal; County Planning	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	debris management, public health measures and emergency management plans <ul style="list-style-type: none"> <li>• Capital Improvement Plan</li> <li>• Municipal Code (Subdivision Ordinance, Site Plan Review, Flood Damage Prevention, Zoning Code, Floodplain/Watershed Plan)</li> <li>• General Plan (Growth Management, Economic Development)</li> <li>• SJCOG Multi-species Habitat Conservation and Open Space Plan</li> <li>• City-level Post-Disaster Recovery Plan(to be drafted in the future)</li> <li>• Continuity of Operations Plan(to be drafted in the future)</li> <li>• Threat and Hazard Identification and Risk Assessment</li> <li>• 2015 Urban Water Management Plan</li> </ul>								

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	<ul style="list-style-type: none"> <li>Emergency Operations Plan (to be drafted in the future)</li> </ul>								
3	<p>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"> <li>NFIP training focusing on NFIP administration, floodplain development regulation, emergency readiness, and technical modeling/tools.</li> </ul>	Food, hydration, shelter	New, Existing	1, 2	<p>Lead: Planning Department / Floodplain Administrator</p> <p>Support: Public Works; City Attorney; County Flood Control; FEMA Region IX</p>	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
4	<p>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"> <li>Climate Action and Adaptation Plan (to be drafted in the future, will include environmental protection plans)</li> </ul>	Communications Safety and security	New, Existing	1, 3	<p>Lead: Planning Department</p> <p>Support: Public Works; Utilities; County Climate Partners; SJCOG</p>	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
5	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	N/A	N/A	6	Lead: Planning Department Support: City Administrator; City Council; County OES	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
6	Comprehensive storm water & drainage system upgrades	Water Systems	New, Existing	1, 4	Lead: Public Works Support: Planning; County Flood Control; SJCOG; CalTrans (if SR 99 corridors affected)	Yes	Very High (\$1,000,000 and above)	General Fund and FEMA HMA (FMA and HMGP)	Long-Term (5 years or more)
7	Urban heat reduction program	Food, hydration, shelter Health and medical Energy	New, Existing	1, 2, 4,	Lead: Public Works; Parks & Recreation Support: Planning; Public Health (County); Community Service; Nonprofits	Yes	High (\$250,00-\$1,000,000)	Staff Time, General Fund	Long-Term (5 years or more)
8	Levee and regional coordination / levee failure preparedness	Food, hydration, shelter Water systems	Existing	1, 2, 3, 4, 5, 6	Lead: City Administrator / Planning Support: County Flood	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
					Control; Reclamation Districts; Cal OES; Public Works				
9	Establish community cooling / shelter network & emergency power for shelters	Food, hydration, shelter Health and medical	Existing	1, 2, 3, 4, 5	Lead: Emergency Services; Planning Support: Public Works; Fire District; Police; Community Organizations; County Public Health	Yes	High (\$250,00-\$1,000,000)		Short-Term (less than 5 years)
10	Wildfire interface mitigation & defensible space program	Food, hydration, shelter	Existing	1, 4, 7	Lead: Fire District Support: Planning; Public Works; County Fire; CalFire	Yes	Very High (\$1,000,000 and above)	General Fund and FEMA HMA (FMAG)	Long-Term (5 years or more)
11	Post-disaster recovery and debris management plan	Food, hydration, shelter Transportation	Existing	1, 3, 5	Lead: City Administrator / Public Works Support: Planning; County OES; Finance; Private haulers	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
12	Enhance administrative capacity: grant-writing & project delivery function	N/A	New, Existing	4	Lead: Finance / City Administrator Support: Planning; Public Works; Contract grant writers; County OES	Yes	Moderate (\$50,000-\$250,000)	Staff Time, General Fund	Short-Term (less than 5 years)
13	Purchase generators for City-owned critical facilities and infrastructure that lack adequate backup power.	Safety and security; Energy; Communications	Existing	6	Lead: Public Works Director	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

**Table 8-14 Mitigation Action Prioritization**

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	0	3	3	3	3	1	0	3	3	3	1	3	3	3	3	35	High
#4	1	1	3	1	1	1	1	3	3	1	3	3	1	3	3	30	Medium
#5	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#6	3	3	3	1	3	1	1	3	3	1	3	1	1	1	1	29	Medium
#7	3	1	1	1	1	1	3	3	3	1	1	1	1	3	3	27	Medium
#8	3	3	3	3	3	3	1	3	3	3	3	3	3	3	3	43	High
#9	3	1	1	3	3	1	0	3	3	1	3	3	3	3	3	34	High
#10	3	3	3	1	1	1	3	3	3	1	1	1	1	3	3	31	High
#11	3	3	3	3	3	3	1	3	3	1	3	3	3	3	3	41	High
#12	1	1	3	3	3	3	1	3	3	3	3	3	3	3	3	39	High
#13	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium

Notes:  
 31 or more = High Priority  
 15 to 30 = Medium Priority  
 0 to 14 = Low Priority

Table 8-15 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and	Subsidence	Wildfire
#1		■			■		■		■		■						
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■	■	■		■		■					■		■	■		
#4	■				■			■		■	■			■	■		■
#5					■		■		■				■	■	■		■
#6		■			■		■					■		■	■		
#7	■	■	■	■	■	■			■								
#8	■		■		■	■						■		■	■		
#9		■			■		■		■			■		■	■		■
#10	■	■			■												■
#11	■				■		■	■	■	■	■	■	■	■	■	■	■
#12		■		■	■		■		■		■						
#13	■	■			■		■				■	■	■	■		■	■

## 8.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 8-16.

**Table 8-16 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Supported the countywide outreach efforts for this plan including promoting the public survey.	Throughout the planning process	TBD

## 8.10 Information Sources Used for This Annex

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

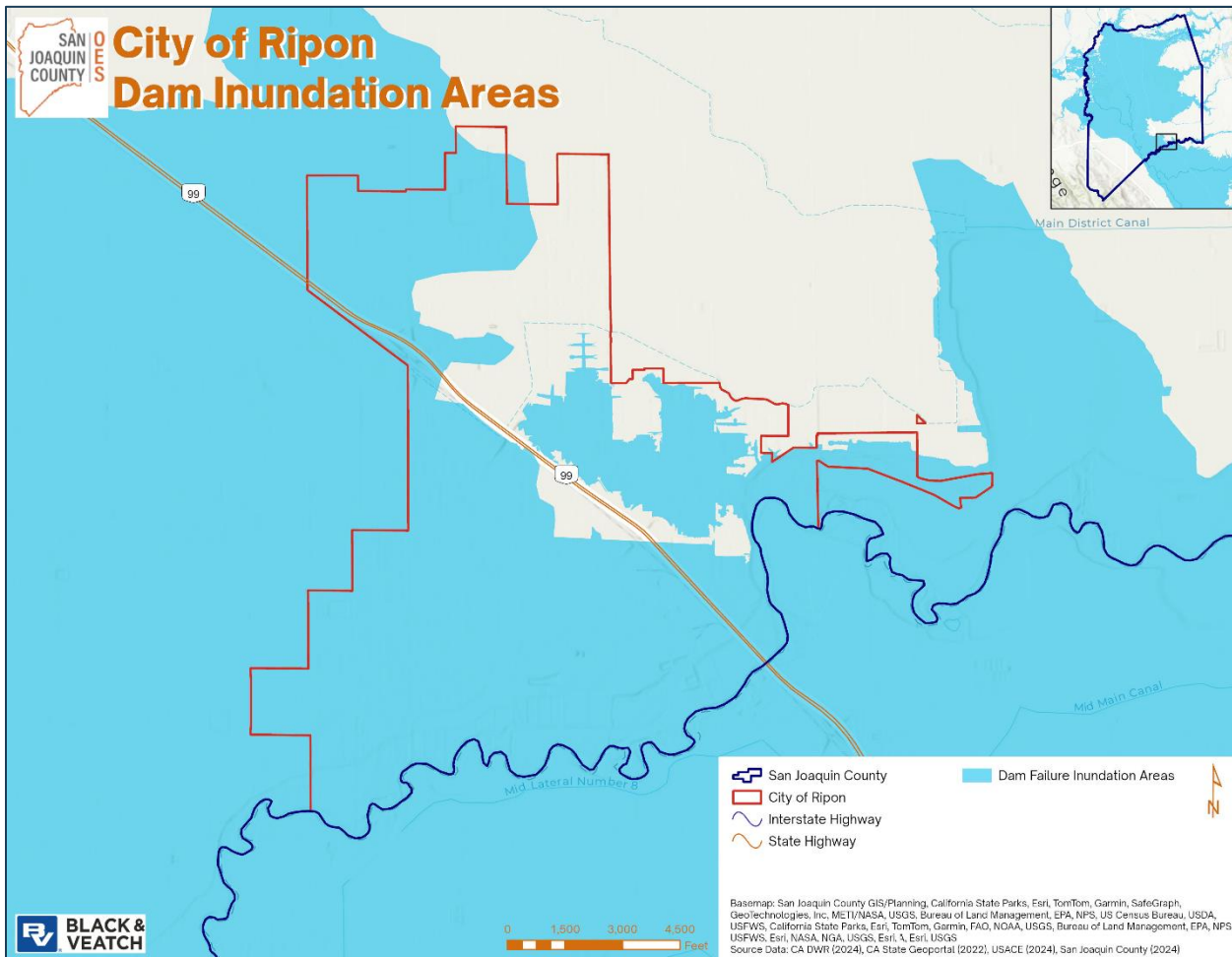
- San Joaquin County Local Hazard Mitigation Plan (2023) – Provided comprehensive county-wide hazard risk assessments, mitigation strategies, and integration guidance used to align Ripon’s hazard mitigation priorities with broader regional efforts.
- Ripon Municipal Code (updated 2021) – Informed local regulations related to floodplain management, building codes, and flood damage prevention used in mitigation planning.
- San Joaquin County Emergency Operations Plan – Offered context for emergency response coordination and integration with hazard mitigation actions.
- City of Ripon General Plan 2040 – This plan sets the long-term vision and land use policies for growth and development in Ripon through 2040. It includes a Safety Element that addresses natural hazard risks, mitigation goals, and integrates resilience strategies to promote public safety and minimize hazard impacts. The General Plan 2040 provides a policy framework supporting hazard mitigation planning and informs land use decisions related to floodplains, wildfire risk zones, and critical infrastructure protection.
- City of Ripon Emergency Operations Plan (EOP) – The EOP outlines procedures for coordinated emergency response and disaster management within Ripon. It supports hazard mitigation by describing roles, responsibilities, resource coordination, and communication protocols during hazard events. Incorporation of mitigation priorities into the EOP enhances readiness and links response efforts with long-term risk reduction strategies.

The following outside resources and references were reviewed:

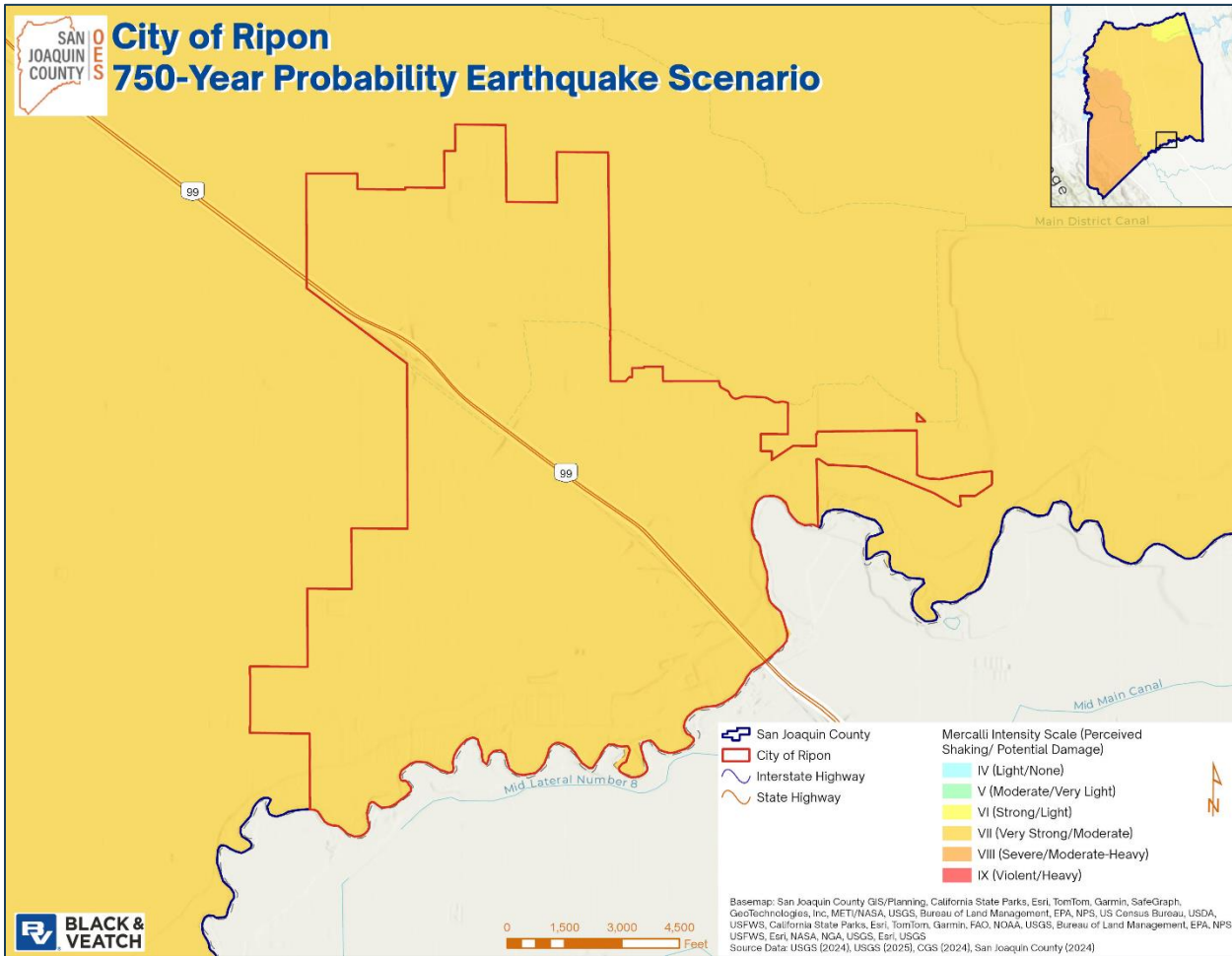
- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- California Governor’s Office of Emergency Services (Cal OES) Local Hazard Mitigation Planning Policy Guide (2025) – Provided state-level policy requirements and best practices for hazard mitigation planning.
- FEMA Local Hazard Mitigation Plan Handbook (2025) – Served as a primary guide for meeting federal plan requirements and ensuring consistency with NFIP and FEMA mitigation priorities.

## 8.11 Hazard Mapping

Jurisdiction-specific risk maps of the hazards are provided on the following pages. For a complete description of each hazard, please see the applicable chapters in Volume 1 of this plan. These maps are based on the vulnerability and risk assessment results for this plan.



**Figure 8-1 Dam Inundation Areas**



**Figure 8-2** 750-Year Probability Earthquake Scenario

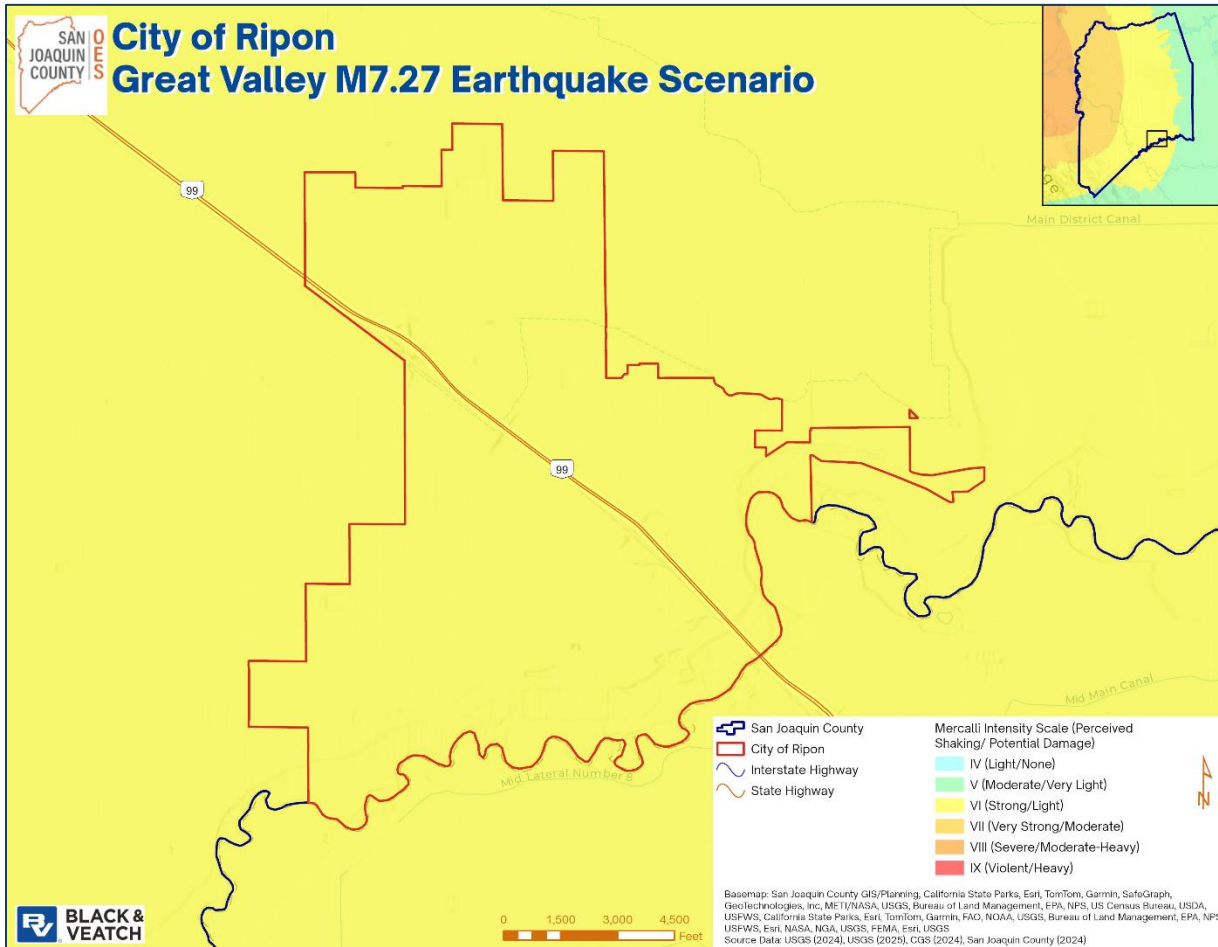
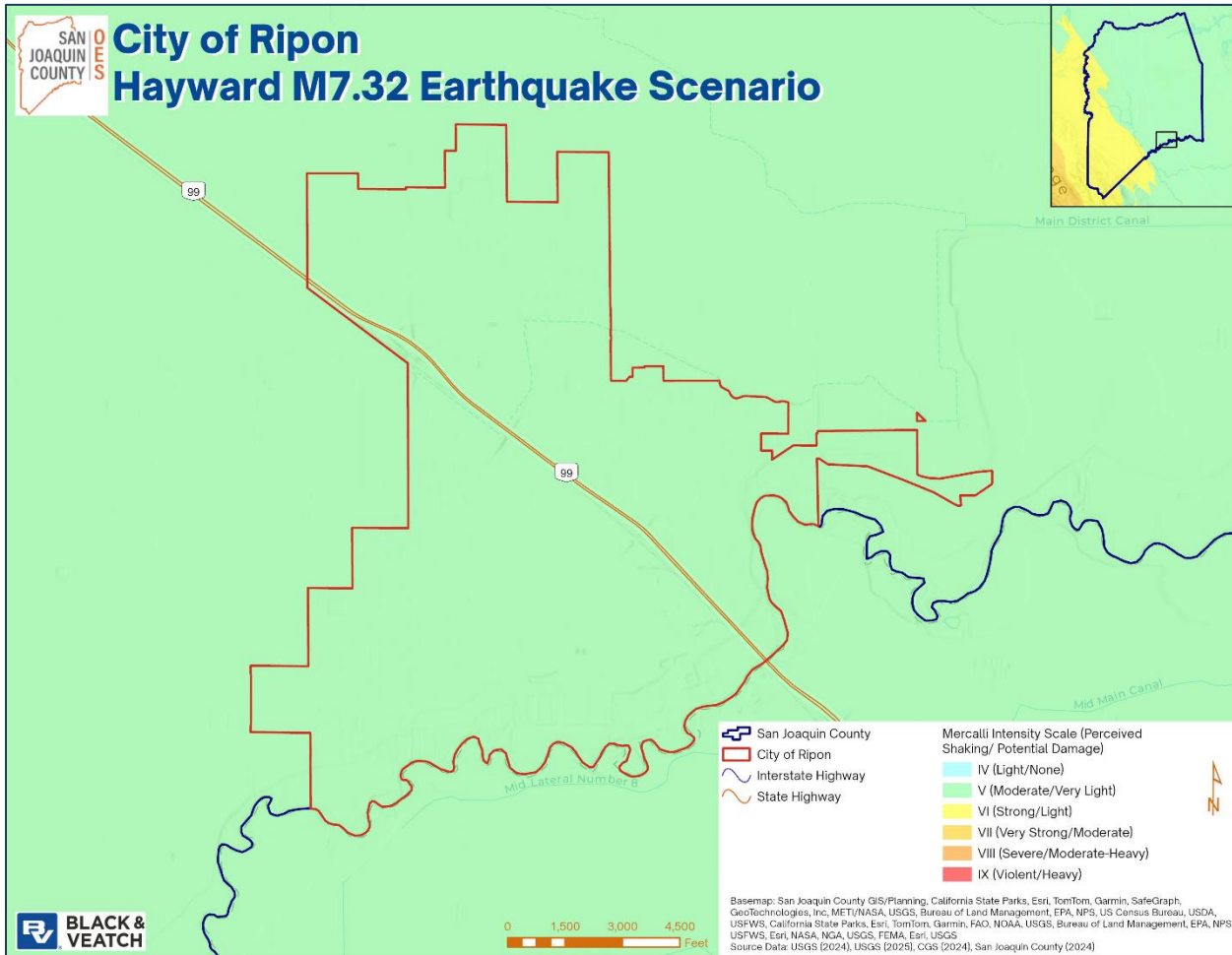


Figure 8-3 Great Valley M7.27 Earthquake Scenario



**Figure 8-4** Hayward M7.32 Earthquake Scenario

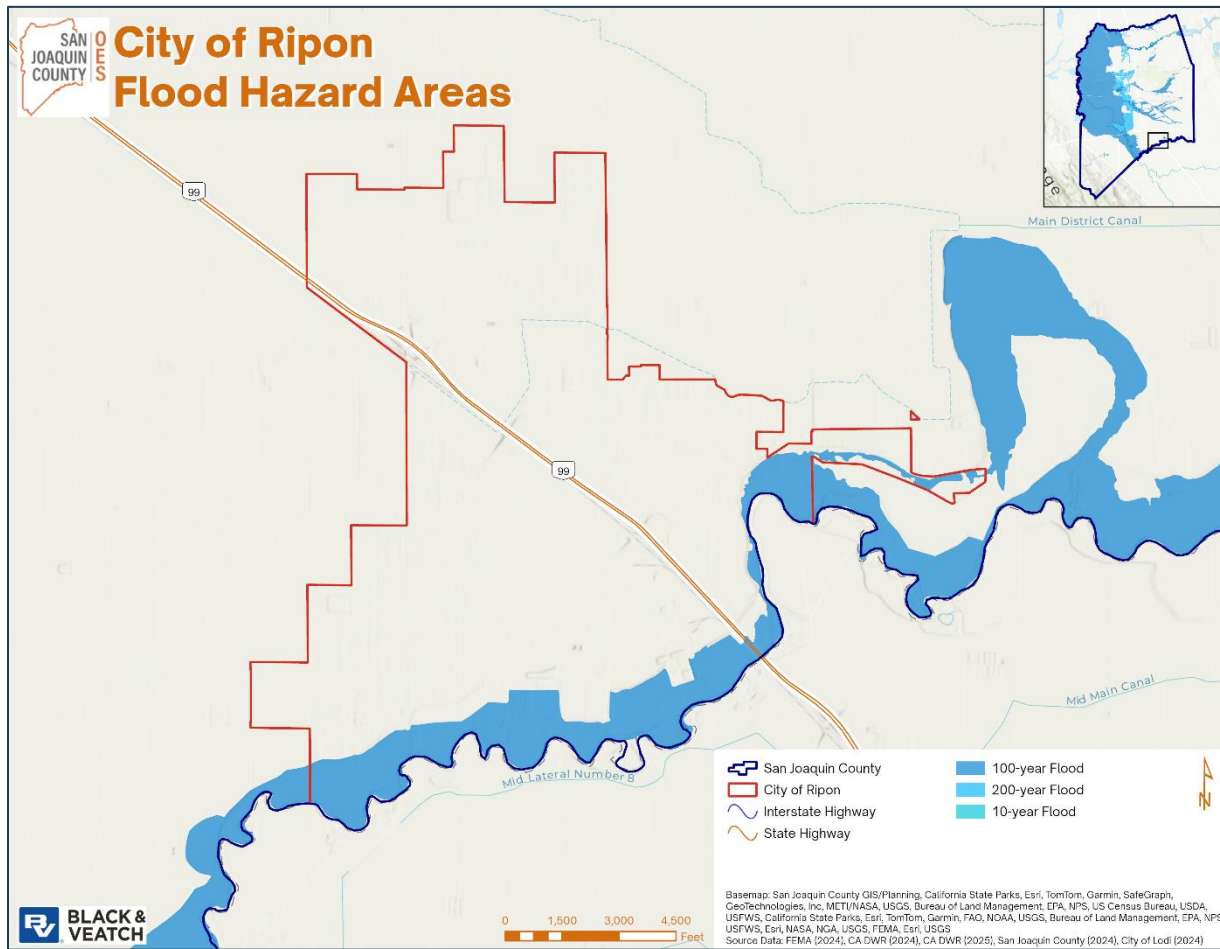
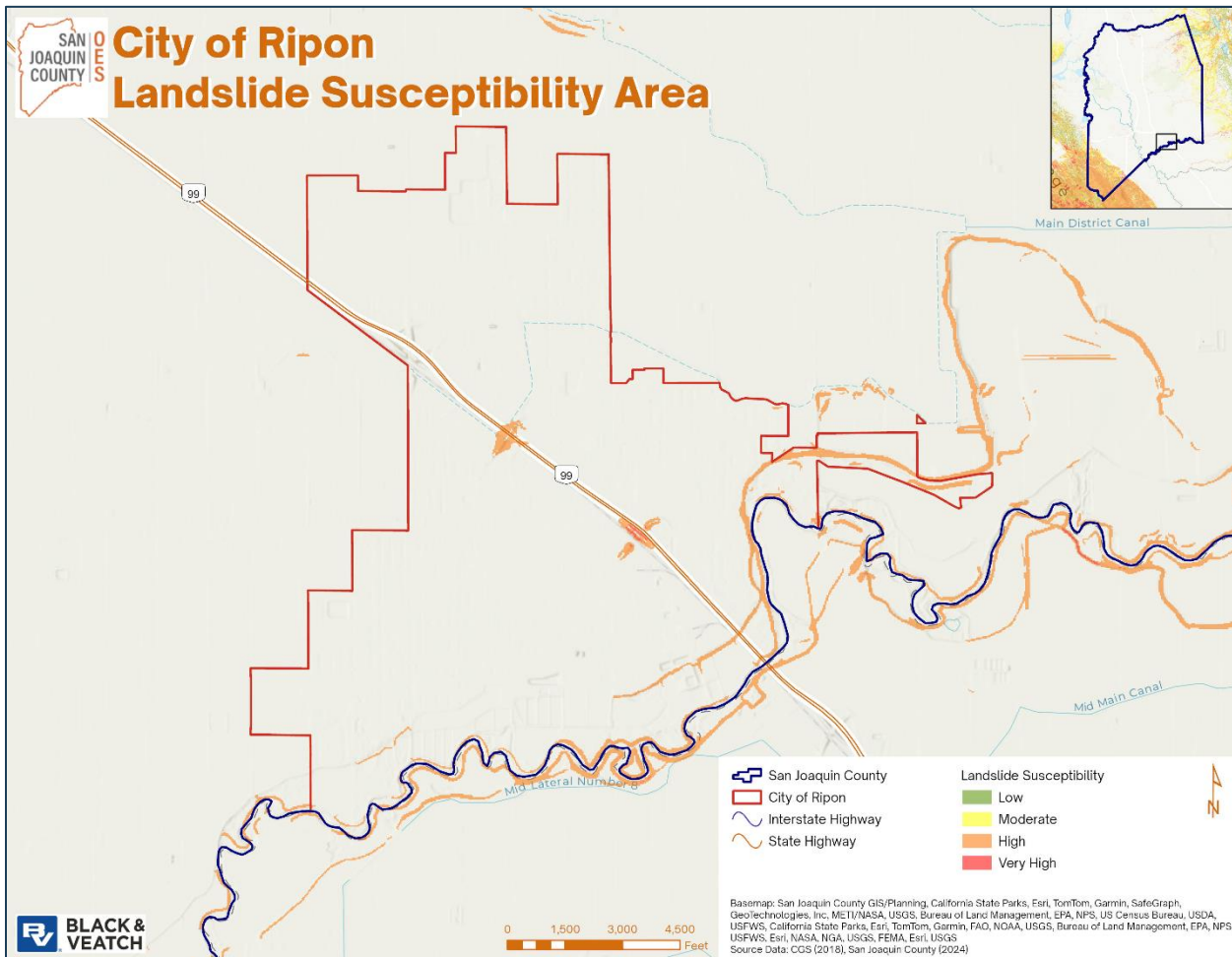
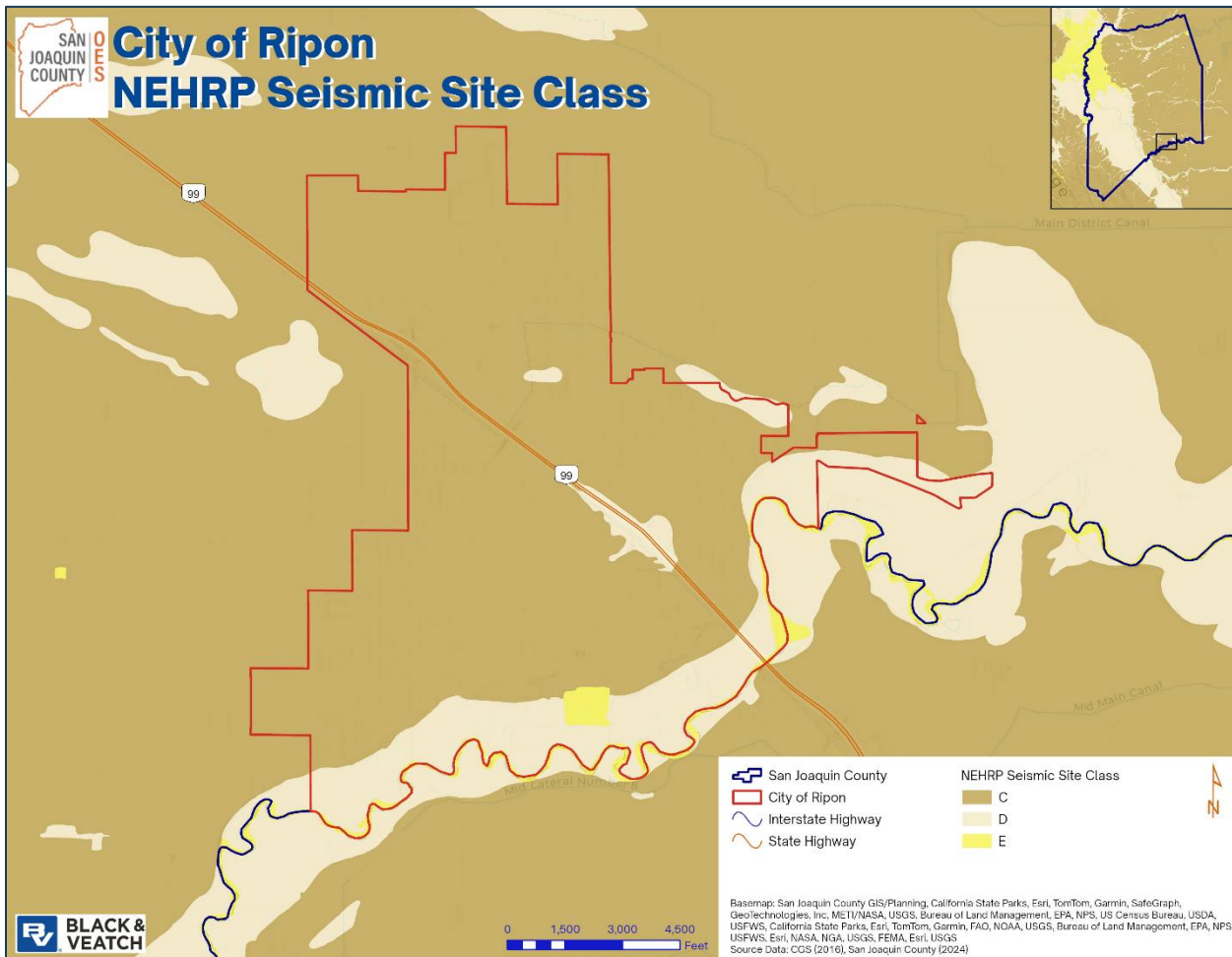


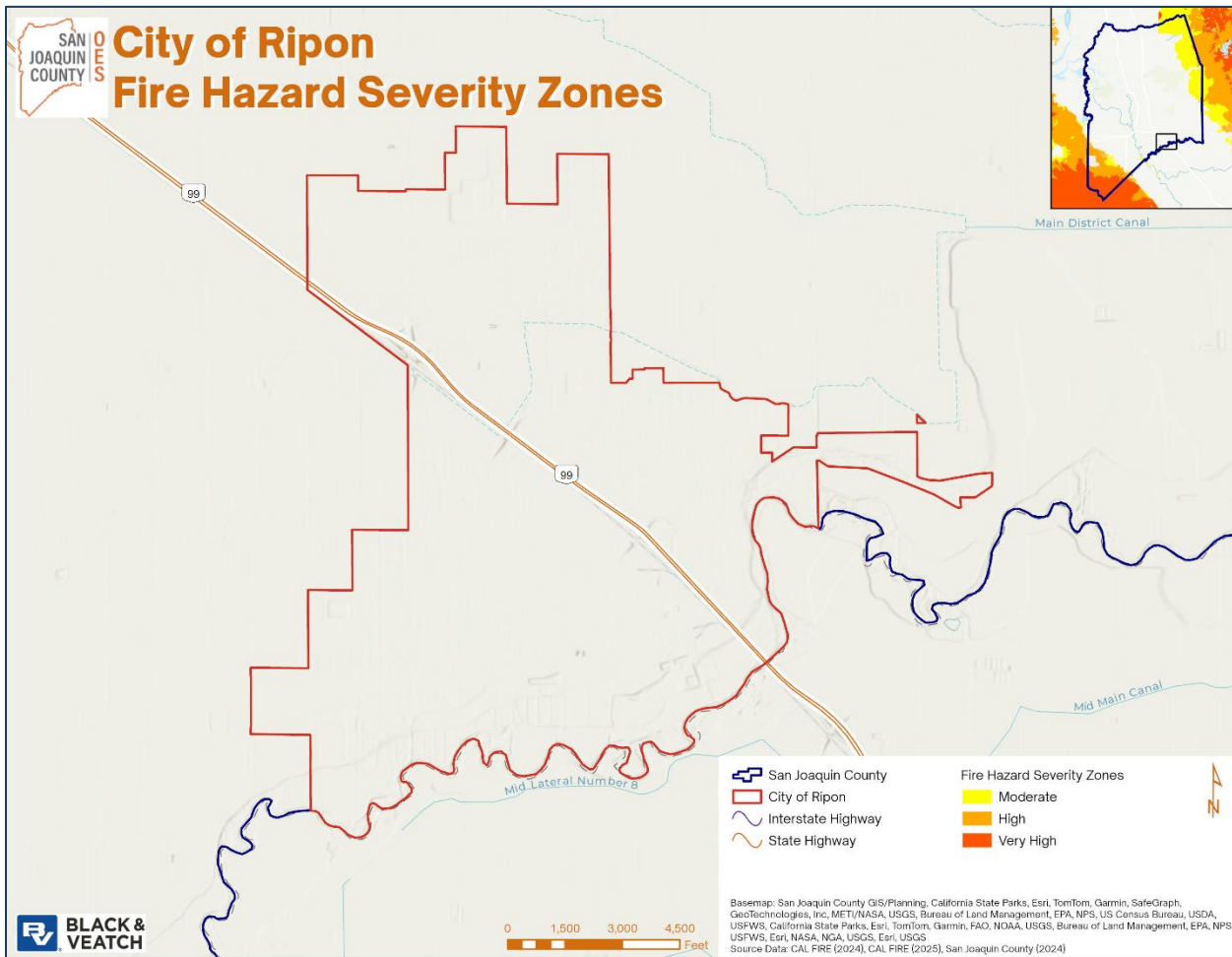
Figure 8-5 Flood Hazard Areas



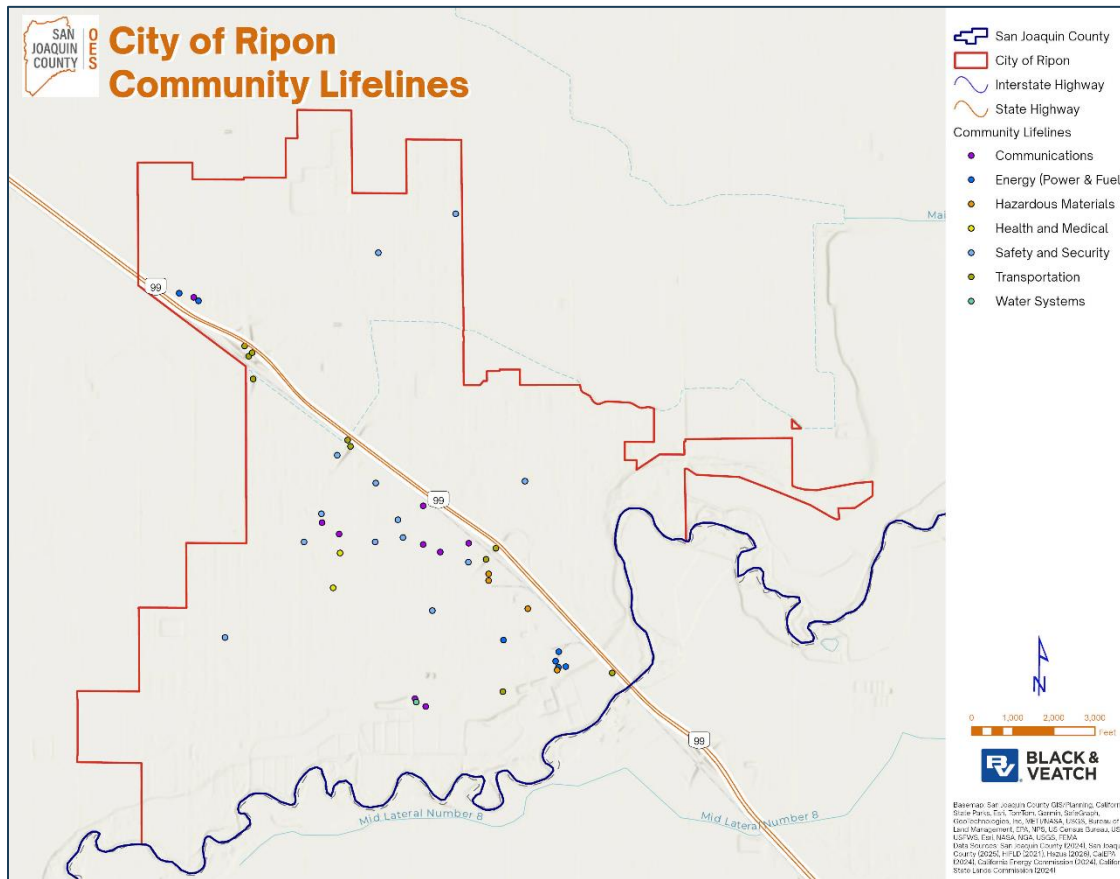
**Figure 8-6 Landslide Susceptibility Areas**



**Figure 8-7 NEHRP Seismic Site Class Soils**



**Figure 8-8 Fire Hazard Severity Zones**



**Figure 8-9 Community Lifelines**

## 9. CITY OF STOCKTON



Source: Stockton Fire (Courtesy of Larry Shapiro)

### 9.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the City of Stockton. Members are listed in Table 9-1.

**Table 9-1 Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Timothy Romero, Emergency Manager	Name and Title:	Anson K. Lihosit, Senior Planner
Address:	345 N. El Dorado Street, Stockton, CA 95202	Address:	345 N. El Dorado Street, Stockton, CA 95202
Phone Number:	209-937-8605	Phone Number:	209-937-8316
Email:	timothy.romero@stocktonca.gov	Email:	anson.lihosit@stocktonca.gov

Primary Point of Contact		Alternate Point of Contact
<b>NFIP Floodplain Administrator</b>		
Name and Title:	John Schweigerdt, Chief Building Official	
Address:	345 N. El Dorado Street, Stockton, CA 95202	
Phone Number:	209-937-8565	
Email:	john.schweigerdt@stocktonca.gov	
<b>Additional Planning Team Members:</b>		
Name and Title:	Jordan Peterson, Deputy Director of Redevelopment, Economic Development Department	
Method of Participation:	Provided input on drafting annex	
Name and Title:	Ann Okubo, Senior Civil Engineer, Municipal Services Department	
Method of Participation:	Provided input on drafting annex	
Name and Title:	John Schweigerdt, Deputy Community Development Director	
Method of Participation:	Provided input on drafting annex	
Name and Title:	Carmen Barragan, Debt & Treasury Manager, Administrative Services	
Method of Participation:	Provided input on drafting annex	
Name and Title:	Grant Kirkpatrick, Environmental & Sustainability Officer, City Manager’s Office	
Method of Participation:	Provided input on drafting annex	
Name and Title:	Shalilah Bess, Environmental & Sustainability Program Manager III, City Manager’s Office	
Method of Participation:	Provided input on drafting annex	

## 9.2 Jurisdictional Profile

### 9.2.1 Location and Features

Stockton is a city located in California and covers an area of approximately 65 square miles. It serves as the County seat and is surrounded by the cities of Manteca, Lathrop, Tracy, and Lodi. The General Plan Planning Area encompasses approximately 191 square miles. Determined in conjunction with the San Joaquin County Local Agency Formation Commission (LAFCO), the SOI is an area of approximately 115 square miles that could be considered as a potential future boundary of Stockton. The Downtown Core area, which is about 1 square mile, is located at the center of Stockton and is characterized by compact urban development within a traditional street grid network and historic buildings. The Greater Downtown area, which is almost 4 square miles, extends beyond the Downtown Core area and is bounded by Harding Way, Charter Way/Martin Luther King Jr. Boulevard, Pershing Avenue, and Wilson Way (Envision Stockton 2040 General Plan 2018).

Stockton is located east of the San Francisco Bay near the center of the northern San Joaquin Valley. In and around Stockton are thousands of miles of waterways that make up the California Delta. Interstate 5 and State Route 99, inland California's major north–south highways, pass through the city. State Route 4 and the dredged San Joaquin River connect the city with the San Francisco Bay Area to its west, creating the Stockton Deepwater Shipping Channel. Stockton and West Sacramento are California's only inland seaports.

## 9.2.2 History

The area where Stockton is located was originally inhabited by the Yachicumne Yokuts and Miwok tribes, but the town itself was settled in 1845 by Charles Weber. The discovery of gold near the American River in 1848 led to a growing commercial empire and the City of Stockton was officially incorporated in 1850. As gold mining decreased, agriculture became the main industry, which led to the growth of related industries such as flourmills, shipyards, financial institutions, and tanneries. Due to its location within the San Joaquin Delta, shipping became an important aspect of the local economy.

As Stockton's economy grew, residential development also grew. The Downtown area was revitalized during the early to mid-20th century due to war efforts bringing military construction to the shipyards. Suburban development during the latter part of the 20th century drew businesses and residential growth to outlying areas. In 1996, Stockton's Naval Reserve Center on Rough and Ready Island closed and was transferred to the Port of Stockton, marking a significant shift in the city's economy. The facility had served as a major communications outpost for Pacific submarine activities during the Cold War (City of Stockton 2018).

## 9.2.3 Governance

The City of Stockton is administered by seven elected City Council members who each serve four-year terms. The city council members appoint department administrators who manage city functions.

Stockton is also seat of San Joaquin County, for which the government of San Joaquin County is defined and authorized under the California Constitution and law as a general law county.

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

# 9.3 Growth and Development Trends

## 9.3.1 Population

As shown on Figure 9-1, overall, Stockton's population has grown steadily in the last two decades. Since 2005, Stockton has experienced an average annual growth rate of 0.9 percent and grew as a whole by 15.8 percent (an increase of 43,974 people). However, between 2021 and 2022, the population decreased by over 1,395 residents. This was the first year of population decrease since 2008. Figure 9-1 shows the population growth rate in Stockton relative to San Joaquin County and the state of California. From 2000 to 2022, both the City of Stockton and the county as a whole grew at a faster rate than the state average. In each jurisdiction, population increased between 2000 and 2010 at approximately twice the rate of population growth between 2010 and 2022. According to the California Department of Finance 2025 estimates, Stockton has a population of 320,877.

**Table HE-2: Historical Population Change  
Stockton, 2000-2022**

YEAR	POPULATION	CHANGE	AAGR
2000	243,771		-
2005	278,515	34,744	2.9%
2006	284,418	5,903	2.1%
2007	295,070	10,652	3.7%
2008	275,885	-19,185	-6.5%
2009	287,584	11,699	4.2%
2010	292,747	5,163	0.4%
2011	296,367	3,620	1.2%
2012	297,975	1,608	0.5%
2013	298,115	140	0.0%
2014	302,405	4,290	1.4%
2015	306,138	3,733	1.2%
2016	309,829	3,691	0.2%
2017	313,255	3,426	1.1%
2018	315,099	1,844	0.6%
2019	317,356	2,257	0.7%
2020	319,188	1,832	0.6%
2021	323,884	4,696	1.5%
2022	322,489	-1,395	-0.4%

Source: DOF, Report E-4 Population Estimates for Cities, Counties, and the State, 2011-2022, with 2010 Census Benchmark; DOF, Table 2a Historical Census Populations of California State, Counties, Cities, Places, and Towns.

Source: (2023-2031 Housing Element, Historical Population Change, Table HE-2, Page BR-6, July 9, 2024.)

**Figure 9-1 Population Data from the Envision Stockton 2040 General Plan**

Stockton’s population was slightly younger than the county and state average in 2020. The City had a higher percentage of residents under the age of 34 than San Joaquin County, and the median age in Stockton (33.0) was lower than that of the county (34.4) and the state (36.7).

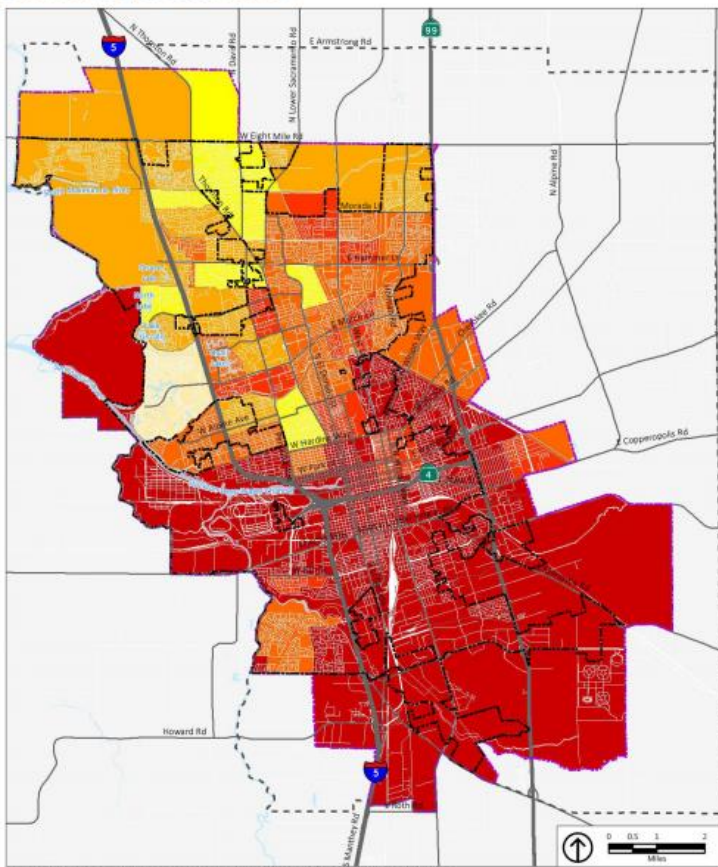
Stockton’s population was more ethnically and racially diverse than the county and state in 2020. Asian and Hispanic populations continue to make up about 64 percent of the population in Stockton (Envision Stockton 2040 General Plan, Housing Element 2024).

### 9.3.2 Equity Priority Communities

Equity means equal opportunity for all. Low-income residents, communities of color, tribal nations, and immigrant communities have historically disproportionately experienced environmental burdens and related health problems. This inequity has resulted from many factors, including inappropriate zoning and incomplete land use planning, which have led to development patterns that concentrate pollution emissions and environmental hazards near communities that have not had the political wherewithal to protect themselves. As many of these “disadvantaged” or “environmental justice” communities continue to face significant barriers to their overall health, livelihood, and sustainability, State law now requires that general plans address environmental justice

through Senate Bill (SB) 1000. Just as importantly, community input throughout the Envision Stockton 2040 General Plan process confirmed the need to prioritize these strategies. Therefore, policies and actions throughout the General Plan that help aim to reduce health risks in disadvantaged communities in Stockton are highlighted with the throughout the document. State law defines environmental justice as: The fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies. Figure 9-2 shows local disadvantaged communities. These areas were mapped using the California Communities Environmental Health Screening Tool (CalEnviroScreen), developed by the State Office of Environmental Health Hazard Assessment on behalf of the California Environmental Protection Agency. CalEnviroScreen measures pollution and population characteristics using 20 indicators such as air and drinking water quality, waste sites, toxic emissions, asthma rates, and poverty. It applies a formula to each census tract in the state to generate a score that rates the level of cumulative impacts on each area. A census tract with a higher score is one that experiences higher pollution burden and vulnerability than census tracts with lower scores.

**Disadvantaged Communities**



Source: California Office of Environmental Health Hazard Assessment, 2018; PlaceWorks, 2018.

Percent of Disadvantaged Communities

91-100% (highest scores)	61-70%	31-40%	General Plan Planning Area
81-90%	51-60%	21-30%	City Limit
71-80%	41-50%	11-20%	Sphere of Influence
	0-10% (lowest scores)		

Source: (City of Stockton 2018)

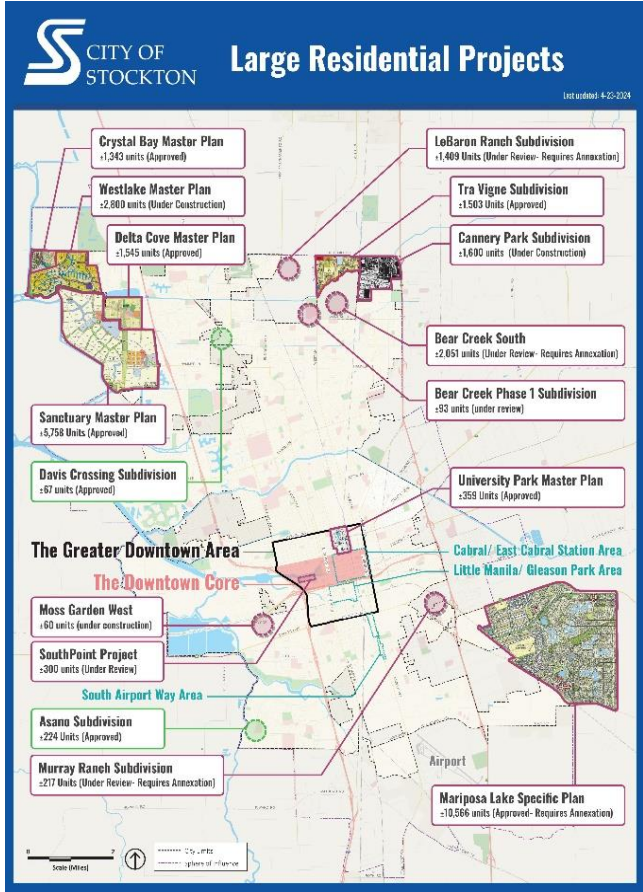
**Figure 9-2 Disadvantaged Communities Mapped in the Envision Stockton 2040 General Plan**

### 9.3.3 Development

Recent development has occurred throughout the City of Stockton. The Envision Stockton 2040 General Plan includes policies and actions, Policy LU2-2, Action LU-2.2D, to facilitate development of housing units in the Greater Downtown and discourage urban development at the edges of the City. (Envision Stockton 2040 General Plan, Land Use Element, Pages 3-6 and 3-7, December 4, 2018). Future development will follow the General Plan, Development Code, Municipal Code, and other applicable regulations.

**Table 9-2 Recent and Expected Future Development Trends**

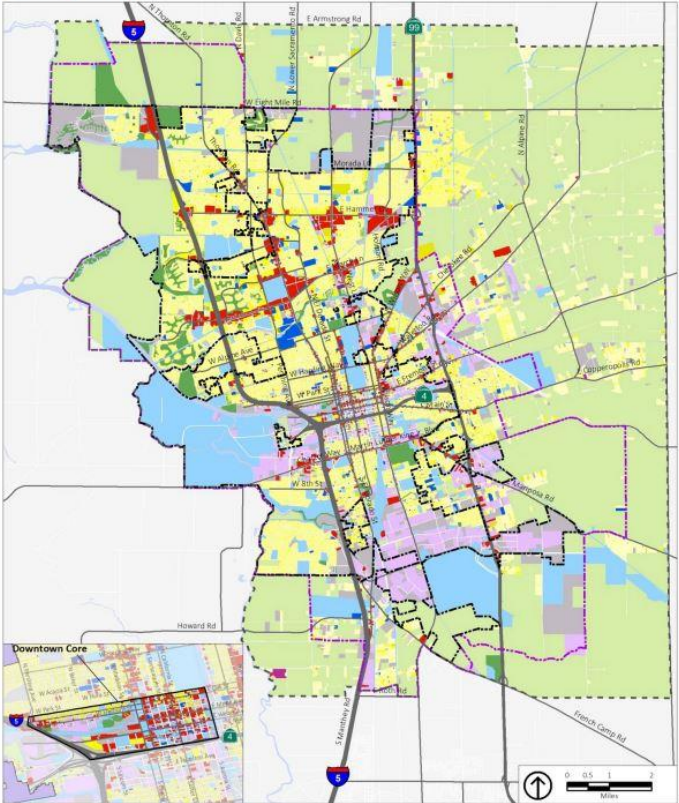
Criterion	Response														
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?	The San Joaquin County Local Hazard Mitigation Plan 2023 was adopted by San Joaquin County on April 11, 2023. Since that date, the City of Stockton has had annexations of land that were approved by the San Joaquin County Local Agency Formation Commission (LAFCO).														
If yes, give the estimated area annexed and estimated number of parcels or structures.	Area Annexed: -The Mariposa Industrial Park I, Phase 2 annexed three parcels totaling 6.29 acres at 5262 E. Mariposa Road (APN 179-220-15, 2.5 acres), 5276 E. Mariposa Road (APN 179-220-14, 2.48 acres) and an unaddressed access easement parcel (APN 179-220-26, 1.31 acres). [10/2024] -Mariposa Industrial Park, annexed nine parcels of land totaling 203.48 acres. [04/2023]														
Is your jurisdiction expected to annex any areas during the performance period of this plan?	Not at the time of this HMP update; however, future annexations will be decided by the LAFCO.														
If yes, describe land areas and dominant uses.	N/A.														
If yes, who currently has permitting authority over these areas?	N/A.														
Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.	<p>The City of Stockton does not track which portion of the City that building permits are built or currently track permitting in hazard areas, with the exception of the special flood areas. (For building permits, in special flood areas, the City does consider the floodplain.) Based on the City’s Housing Element Annual Progress Reports, in the past five years, there have been a total of 3,409 housing units built within the entire city (see table below).</p> <table border="1"> <thead> <tr> <th>Year</th> <th>2020</th> <th>2021</th> <th>2022</th> <th>2023</th> <th>2024</th> <th></th> </tr> </thead> <tbody> <tr> <td>Total Units</td> <td>469</td> <td>888</td> <td>605</td> <td>610</td> <td>837</td> <td></td> </tr> </tbody> </table> <p>Refer to the map below and the link to the Large Residential projects map on the City of Stockton website: <a href="https://cms3.revize.com/revize/stockton/Documents/Business/Planning">https://cms3.revize.com/revize/stockton/Documents/Business/Planning</a></p>	Year	2020	2021	2022	2023	2024		Total Units	469	888	605	610	837	
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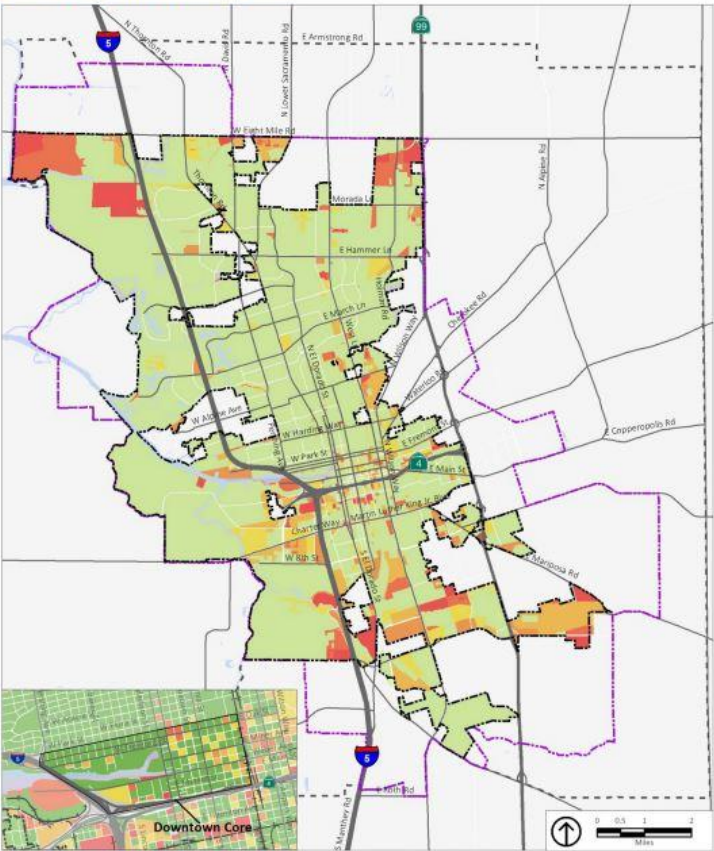
Criterion	Response
	<p><a href="#">%20&amp;%20Engineering/Other%20Projects%20Environmental/Stockton_Large_Residential_Projects_36x48_v06_4-23-2024.pdf</a></p> 
<p>Are any areas targeted for development or major redevelopment in the next five years?</p>	<p>Yes.</p> <ul style="list-style-type: none"> <li>-The 2040 General Plan changed the emphasis of growth in "outfill" areas at the periphery of the City to focus new construction and redevelopment in existing "infill" neighborhoods. (Envision Stockton 2040 General Plan, Introduction, Page 1-2, December 4, 2018).</li> <li>-POLICY LU-2.2 Facilitate the development of at least 4,400 new housing units in the Greater Downtown by 2040. (Envision Stockton 2040 General Plan, Land Use Element, Page 3-6, December 4, 2018).</li> </ul> <p>Refer to the map below and the link to the Large Residential projects map on the City of Stockton website:  <a href="https://cms3.revize.com/revize/stockton/Documents/Business/Planning%20&amp;%20Engineering/Other%20Projects%20Environmental/Stockton_Large_Residential_Projects_36x48_v06_4-23-2024.pdf">https://cms3.revize.com/revize/stockton/Documents/Business/Planning%20&amp;%20Engineering/Other%20Projects%20Environmental/Stockton_Large_Residential_Projects_36x48_v06_4-23-2024.pdf</a></p>

Criterion	Response																																				
<p>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</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>2020</th> <th>2021</th> <th>2022</th> <th>2023</th> <th>2024</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td>517</td> <td>569</td> <td>493</td> <td>493</td> <td>528</td> </tr> <tr> <td>Multi-Family</td> <td>11</td> <td>17</td> <td>3</td> <td>2</td> <td>3</td> </tr> <tr> <td>Other (mobile homes, accessory dwellings, mixed use, etc.)</td> <td>20</td> <td>16</td> <td>34</td> <td>27</td> <td>14</td> </tr> <tr> <td>Commercial</td> <td>38</td> <td>59</td> <td>50</td> <td>42</td> <td>37</td> </tr> <tr> <td><b>Total</b></td> <td><b>586</b></td> <td><b>661</b></td> <td><b>580</b></td> <td><b>564</b></td> <td><b>582</b></td> </tr> </tbody> </table>		2020	2021	2022	2023	2024	Single Family	517	569	493	493	528	Multi-Family	11	17	3	2	3	Other (mobile homes, accessory dwellings, mixed use, etc.)	20	16	34	27	14	Commercial	38	59	50	42	37	<b>Total</b>	<b>586</b>	<b>661</b>	<b>580</b>	<b>564</b>	<b>582</b>
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<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>If yes, briefly describe, including whether any of the areas are in known hazard risk areas:</p> <p><b>EXISTING LAND USE</b></p>																																				

Criterion	Response																											
	<p>How people use land in Stockton helps to define the City’s character and that of its individual neighborhoods. The General Plan land use map establishes a plan for future land uses in Stockton, which may differ in some places from how the land is used today, in order to achieve community goals, such as a balance between jobs and housing. In addition to land uses that are planned in the General Plan land use map, it’s also important to consider the land uses that exist on the ground today. Those existing land uses are tracked by the County Assessor for all of San Joaquin County, including Stockton, and are summarized on Figure 2-2 and mapped on Figure 2-3. Land uses mapped within the City limit cover 33,600 acres (roughly 52.5 of Stockton’s 65 square miles), more than a third of which is used for housing. Of the 11,900 acres devoted to residential use, more than 85 percent contains single-family homes. Given Stockton’s role as the County seat, it’s not surprising that public/semi-public uses take up almost a quarter of the City; these uses include government buildings, public and private schools, the airport, hospitals, and religious institutions. Industrial and commercial uses combined represent about 15 percent of the City’s land, and parks, recreation, open space, and agricultural uses account for about 14 percent. Mapped land uses within Stockton’s SOI add over 29,000 acres, including more than 14,000 acres of agricultural land, which accounts for almost 30 percent of the total area of the SOI, including the city limit.</p> <p><b>Figure 2-2: Land Use Distribution</b></p> <table border="1"> <caption>Figure 2-2: Land Use Distribution Data</caption> <thead> <tr> <th>Category</th> <th>Residential</th> <th>Public/Semi-Public</th> <th>Mixed Use</th> <th>Commercial</th> <th>Industrial</th> <th>Parks, Recreation, &amp; Open Space</th> <th>Agriculture</th> <th>Vacant</th> </tr> </thead> <tbody> <tr> <td>CITY LIMITS</td> <td>35%</td> <td>23%</td> <td>&lt;1%</td> <td>6%</td> <td>9%</td> <td>5%</td> <td>9%</td> <td>4%</td> </tr> <tr> <td>SPHERE OF INFLUENCE</td> <td>27%</td> <td>19%</td> <td>&lt;1%</td> <td>4%</td> <td>7%</td> <td>4%</td> <td>28%</td> <td>11%</td> </tr> </tbody> </table> <p>Source: San Joaquin County, 2016.</p>	Category	Residential	Public/Semi-Public	Mixed Use	Commercial	Industrial	Parks, Recreation, & Open Space	Agriculture	Vacant	CITY LIMITS	35%	23%	<1%	6%	9%	5%	9%	4%	SPHERE OF INFLUENCE	27%	19%	<1%	4%	7%	4%	28%	11%
Category	Residential	Public/Semi-Public	Mixed Use	Commercial	Industrial	Parks, Recreation, & Open Space	Agriculture	Vacant																				
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SPHERE OF INFLUENCE	27%	19%	<1%	4%	7%	4%	28%	11%																				

Criterion	Response
	<p>There are over 4,000 acres of vacant land within the city limit, which accounts for 12 percent of the mapped land uses. Much of this acreage is located at the edge of the City, where large development projects have been approved but not yet constructed. There are also areas interior to the City that remain vacant or that haven't been developed to their full potential and are therefore considered "underutilized." These vacant and underutilized areas represent opportunities for infill development that can strengthen and enhance the City's core and interior neighborhoods and are shown on <b>Figure 2-4</b>. To identify the underutilized properties shown in the figure, the improvement-to-land (I/L) ratio for each parcel was calculated based on County Assessor data. The I/L ratio is the relationship of a property's improvement value to its land value. For example, a lot worth \$100,000 that is improved with a building worth \$40,000 would have an I/L ratio of 0.4. In this analysis, properties with an I/L ratio below 1.0 were considered underutilized.</p> <p>(Envision Stockton 2040 General Plan, Planning Framework, Page 2-4, December 4, 2018).</p>

Criterion	Response												
	<p><b>Figure 2-3 Existing Land Use</b></p>  <p>Source: City of Stockton, 2016; San Joaquin County, 2016; PlaceWorks, 2017</p> <table border="0"> <tr> <td>Residential - Rural</td> <td>Mixed Use</td> <td>Public and Quasi Public</td> </tr> <tr> <td>Residential - Single Family</td> <td>Commercial</td> <td>Parks, Recreation, and Open Space</td> </tr> <tr> <td>Residential - Multi-Family</td> <td>Industrial</td> <td>Agriculture</td> </tr> <tr> <td>Residential - Mobile Home</td> <td>Institutional</td> <td>Vacant</td> </tr> </table> <p>City Limit Sphere of Influence General Plan Planning Area</p> <p>(Envision Stockton 2040 General Plan, Planning Framework, Figure 2-3, Page 2-5, December 4, 2018).</p>	Residential - Rural	Mixed Use	Public and Quasi Public	Residential - Single Family	Commercial	Parks, Recreation, and Open Space	Residential - Multi-Family	Industrial	Agriculture	Residential - Mobile Home	Institutional	Vacant
Residential - Rural	Mixed Use	Public and Quasi Public											
Residential - Single Family	Commercial	Parks, Recreation, and Open Space											
Residential - Multi-Family	Industrial	Agriculture											
Residential - Mobile Home	Institutional	Vacant											

Criterion	Response
	<p><b>Figure 2-4 Vacant and Underutilized Land</b></p>  <p>Source: City of Stockton, 2016; US Census Bureau, 2010; San Joaquin County Assessor, 2016; PlaceWorks, 2017.</p> <p><b>Percent of Vacant and Underutilized Land By Census Block</b></p> <ul style="list-style-type: none"> <li>&lt; 24%</li> <li>25 - 34%</li> <li>35 - 45%</li> <li>46 - 62%</li> <li>63 - 84%</li> <li>&gt; 84%</li> </ul> <p>City Limit Sphere of Influence General Plan Planning Area</p> <p>(Envision Stockton 2040 General Plan, Planning Framework, Figure 2-4, Page 2-6, December 4, 2018).</p>

## 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 or improve upon 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.

### 9.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop policies and programs and to implement rules and regulations to protect and serve community members. Local policies are typically identified in a variety of community plans, implemented via a local ordinance, and enforced through a governmental body. An assessment of planning and regulatory capabilities is presented in Table 9-3.

**Table 9-3 Planning and Regulatory Capabilities**

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>				
Building Code	Yes	No	Yes	Yes
Comment:	California Code of Regulations, Title 24. Ord. No. 2022-11-15-1203			
Zoning Code	Yes	No	Yes	No
Comment:	Stockton Municipal Code, Title 16. Most recent adoption was Ordinance Number 2025-06-03-1601, 6/3/2025.			
Subdivisions	Yes	No	Yes	No
Comment:	Stockton Municipal Code, Title 16, Division 6.			
Stormwater Management	Yes	Yes	Yes	No
Comment:	SMC Chapter 13.16: Stormwater Management and Discharge Control; The City of Stockton, along with San Joaquin County, is a co-permittee on an NPDES permit (Order No. R5-2015-0024) which is the core regulatory document. This permit requires the City to develop and implement a Storm Water Management Plan (SWMP) to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP).			
Post-Disaster Recovery	Yes	Yes	Yes	Yes
Comment:	Stockton Municipal Code - Title 15 (Building and Construction): All post-disaster rebuilding and significant repairs must comply with the current adopted building, fire, and other safety codes. Stockton Municipal Code - Chapter 1.52 (Relocation Benefits for Displaced Tenants): This ordinance mandates that property owners provide relocation payments to tenants who are temporarily or permanently displaced from their homes due to unsafe or substandard conditions cited by the City, which includes conditions resulting from an earthquake, flood, fire, or other natural disaster; Revenue and Taxation Code Section 170 (Disaster Relief); Proposition 19 (Base Year Value Transfer).			
Real Estate Disclosure	No	Yes	Yes	Yes
Comment:	California Civil Code Section 1103			
Growth Management	Yes	Yes	Yes	Yes
Comment:	Envision Stockton 2040 General Plan; General Plan Law (Government Code § 65300 et seq.); State Density Bonus Law (Government Code § 65915)			
Site Plan Review	Yes	Yes	Yes	No
Comment:	Stockton Municipal Code, Title 16, Chapter 16.152.			

		Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Environmental Protection		No	No	Yes	No
Comment:	California Environmental Quality Act (CEQA)				
Flood Damage Prevention		Yes	No	Yes	Yes
Comment:	Stockton Municipal Code Ch. 15.44. Ord. No. 003-11 & 2016-05-24-1605				
Emergency Management		Yes	Yes	Yes	Yes
Comment:	Stockton Municipal Code (SMC) Chapter 2.82 and the City of Stockton Emergency Operations Plan (EOP); California Emergency Services Act (Government Code, Title 2, Division 1, Chapter 7); Standardized Emergency Management System (SEMS) - Government Code § 8607; Local Emergency Proclamation - Government Code § 8630				
Climate Change		Yes	No	Yes	No
Comment:	Stockton Municipal Code, Title 16, Chapter 16.80.390				
<b>Planning Documents</b>					
General Plan		Yes	No	Yes	Yes
Is the General Plan compliant with Assembly Bill 2140?			No		
Comment:	General Plan (GP) – Envision Stockton 2040: The Plan was adopted by Council on December 4, 2018. General Plan, Safety Element, Action SAF-2.7A: Create a city-specific Local Hazard Mitigation Plan and incorporate this plan into the Safety Element. Begin creation of the plan within one year.				
Capital Improvement Plan		Yes	No	Yes	Yes
How often is the plan updated?		Every five years			
Comment:	California Government Code § 65401: This state law requires the Planning Commission to review the City's Capital Projects Program (CIP) for conformity with the General Plan.				
Disaster Debris Management Plan		No	Yes	No	No
Comment:	California Disaster Recovery Framework, 2019				
Floodplain or Watershed Plan		Yes	No	Yes	Yes
Comment:	Flood Damage Prevention (SMC Title 15, Chapter 15.44); Floodplain Management Findings (SMC Title 16, Chapter 16.90); Urban Water Management Planning Act (California Water Code).				
Stormwater Plan		Yes	No	Yes	Yes
Comment:	Federal Clean Water Act (CWA), which is implemented in California by the State Water Resources Control Board (SWRCB) and the Central Valley Regional Water Quality Control Board (CVRWQCB).				
Urban Water Management Plan		Yes	No	Yes	No
Comment:	Urban Water Management Planning Act; SMC Chapter 13.28 Water Conservation; Chapter 13.32 Water Shortage Emergencies; Chapter 13.04 City Water System.				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Habitat Conservation Plan	No	Yes	No	No
Comment:	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)			
Economic Development Plan	Yes	No	No	Yes
Comment:	Economic Development Strategic Action Plan (EDSAP) – Adopted January 2022			
Community Wildfire Protection Plan	Yes	No	No	No
Comment:	California Fire Code (CFC).			
Forest Management Plan	Yes	Yes	No	No
Comment:	The City of Stockton's requirements for tree management primarily focus on its Urban Forest (street trees, park trees, and trees in public easements), rather than large-scale, undeveloped forest land management typical in mountainous regions.			
Climate Action Plan	Yes	Yes	Yes	Yes
Comment:	City of Stockton CAP August 2014; New Climate Action & Adaptation Plan (CAAP) is currently under development and will incorporate data, analysis and strategies applicable for Stockton and the MSA (Escalon, Lathrop, Lodi, Manteca, Ripon, Tracy, and unincorporated areas of SJC).			
Threat & Hazard Identification & Risk Assessment (THIRA)	No	Yes	No	Yes
Comment:	SJCO LHMP: The THIRA was reviewed for Hazard Identification and Risk Assessments and updated in November 2016. An updated THIRA is being completed.			
Post-Disaster Recovery Plan	Yes	No	Yes	No
Comment:	California Emergency Services Act; SEMS; NIMS; and California Revenue and Taxation Code 170			
Continuity of Operations Plan	Yes	No	No	Yes
Comment:	Emergency Organization and Functions (SMC Title 2, Chapter 2.82)			
Public Health Plan	Yes	No	Yes	No
Comment:	Stockton Hazard Annex: Human Health Hazards			
Emergency Operations Plan	Yes	No	Yes	Yes
Comment:	The City of Stockton Emergency Operations Plan (EOP) establishes an Emergency Management Organization and assigns functions and tasks consistent with California's Standardized Emergency Management Systems (SEMS) and the National Incident Management System (NIMS). It is reviewed and tested periodically and revised as necessary to meet changing conditions.			

### **Opportunities to Expand Planning and Regulatory Capabilities**

The planning and regulatory capabilities of the City can be expanded by integrating the County-wide hazard mitigation plan into the City’s various plans as listed in Table 9-13 and below:

- Building Code
- Subdivision Ordinance
- Climate Action Plan
- Economic Development Plan
- Capital Improvement Plan
- Municipal Code (Post-Disaster Recovery, Flood Damage Prevention, Emergency Management, Floodplain/Watershed Plan, Stormwater Plan, Continuity of Operations)
- General Plan (Grant Management)
- Threat and Hazard Identification and Risk Assessment (THIRA)
- Real Estate Disclosure

The City has identified numerous opportunities to integrate the HMP into plans, codes, and ordinances. Updates to the building code with consideration for the hazards identified in this plan can help lessen damage to property. Updates to the subdivision ordinance can help create more resilient future development. The Climate Action Plan can help the community reduce its impact on the changing climate and consider adaptations. The Economic Development Plan can be updated to include plans for community solvency in the aftermath of disaster. The Capital Improvement Plan provides an opportunity to fund larger scale, long-term projects that support future community resiliency. The municipal code outlines brief policies for post-disaster recovery, flood damage prevention, emergency management, floodplain/watershed management, stormwater management, and continuity of operations, which can all be updated according to the findings of this plan to support resilience in the face of disaster. The General Plan is responsible for outlining grant management which can likewise be updated to expand resources for the community to apply for and receive grant funding. The THIRA will be updated as part of this plan.

#### **9.4.2 Development and Permitting Capabilities**

Jurisdictions 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 lead to hazard mitigation. Development and permitting capabilities are presented in Table 9-4.

**Table 9-4 Development and Permitting Capabilities**

<b>Criterion</b>	<b>Response</b>
Does your jurisdiction issue development permits?	Yes
If no, who does? If yes, which department?	Community Development Department
Does your jurisdiction track permits by hazard area?	No

Criterion	Response
Does your jurisdiction have a buildable lands inventory?	Yes, the City’s 2023-2031 Housing Element includes an Opportunity Sites list in Appendix A. Refer to the following link for the Housing Element: <a href="https://cms3.revize.com/revize/stockton/Documents/Business/Planning%20&amp;%20Engineering/Shape%20Stockton/NEW_OpportunitiesSites_CityWebsiteHousingElementPage_02-04-2025.pdf">https://cms3.revize.com/revize/stockton/Documents/Business/Planning%20&amp;%20Engineering/Shape%20Stockton/NEW_OpportunitiesSites_CityWebsiteHousingElementPage_02-04-2025.pdf</a>

### 9.4.3 Fiscal Capabilities

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. An assessment of fiscal capabilities is presented in Table 9-5.

**Table 9-5 Fiscal Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Comment: For the Community Development Block Grants, City Council would need to approve an allocation of CDBG funds through the Annual Action Plan process. The City currently does not have funds allocated to any hazard mitigation projects, but the new draft Consolidated Plan has a goal aligned with it (e.g. Resilient Infrastructure & Public Facilities; and Healthy Neighborhoods & Residents).	
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
If yes, specify:	N/A
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

### Opportunities to Expand Fiscal Capabilities

One of the primary objectives in developing the 2026 MJHMP is to establish eligibility to pursue FEMA HMA grant funding opportunities (e.g., FMA and HMGP). HMA funding streams typically require up to a 25 percent local match. The City has identified local funding resources in Table 9-5 that can provide the local match for projects in the mitigation action plan that list HMA grants as a potential primary funding source.

#### 9.4.4 Administrative and Technical Capabilities

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 9-6.

**Table 9-6 Administrative and Technical Capabilities**

Staff/Personnel Resource		Available?
Planners or engineers with knowledge of land development and land management practices		Yes
If Yes, Department /Position:	The Community Development Department includes nine full-time planners including Community Development Director, Assistant Director, Planning Manager, Senior Planners, and Assistant Planners.	
Engineers or professionals trained in building or infrastructure construction practices		Yes
If Yes, Department /Position:	Community Development Department. Plan checkers, inspectors, development engineering.	
Planners or engineers with an understanding of natural hazards		Yes
If Yes, Department /Position:	Yes. The Community Development Department includes planners and engineers. The General Plan includes the Safety Element which describes potential natural hazards.	
Staff with training in benefit-cost analysis		Yes
If Yes, Department /Position:	Economic Development Department. Deputy Director of Redevelopment.	
Surveyors		Yes
If Yes, Department /Position:	Yes. The Community Development Department recently had a contract approved by the City Council with Motion 2025-05-13-1209, for on-call land surveyor services for the review of applications for final subdivision maps, parcel maps, lot line adjustments, lot mergers, abandonments, and dedications.	
Personnel skilled or trained in GIS applications		Yes
If Yes, Department /Position:	Information Technology	
Scientist familiar with natural hazards in local area		Yes

Staff/Personnel Resource		Available?
If Yes, Department /Position:	<ul style="list-style-type: none"> <li>• Flooding - University of California, Davis, Civil and Environmental Engineering and Geography Department</li> <li>• Flooding – GEI Consultants</li> <li>• Flooding - California Department of Water Resources (CDWR)</li> <li>• Earthquakes - University of California, Berkeley, Department of Earth and Planetary Science</li> <li>• Earthquakes - Berkeley Seismology Lab</li> <li>• Earthquakes - USGS</li> </ul>	
Emergency manager		Yes
If Yes, Department /Position:	Fire Department, Emergency Manager	
Grant writers		Yes
If Yes, Department /Position:	Economic Development Department.	
Procurement Services and Management		Yes
If Yes, Department /Position:	Administrative Services Department, Procurement	

### Opportunities to Expand Administrative and Technical Capabilities

Administrative and technical capabilities are a community’s staff, skills and tools. These capabilities can be used for mitigation planning and to carry out specific mitigation actions. They also include the ability to access, coordinate and implement these resources effectively (FEMA 2023). An assessment of administrative and technical capabilities is presented in Table 9-6.

#### 9.4.5 Education and Outreach Capabilities

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 9-7.

**Table 9-7 Education and Outreach Capabilities**

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
If yes, briefly describe:	Flood preparedness and development regulations.
Do you use social media for hazard mitigation education and outreach?	Yes
If yes, briefly describe:	Resources available through Cal OES Listos California.

Criterion		Response
Do you have any citizen boards or commissions that address issues related to hazard mitigation?		Yes
If yes, briefly describe:	Disaster Service Council; LEPC IV	
Do you have any other programs in place that could be used to communicate hazard-related information?		Yes
If yes, briefly describe:	CRS Program; Cal OES Listos California	
Do you have any established warning systems for hazard events?		No
If yes, briefly describe:	-	

### Opportunities to Expand Education and Outreach Capabilities

The City currently has an outreach program that provides information regarding hazards and their impacts to their residents. The City will update their outreach programs as needed.

### 9.4.6 Community Classifications

Other programs, such as the Community Rating System and NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 9-8.

**Table 9-8 Community Classifications**

	Participating?	Classification	Date Classified
Federal Information Processing Standards (FIPS) Code	Yes	06-75000	2006
Unique Identity ID (UEI)	No	-	-
Community Rating System (CRS)	Yes	8	4/11/2022
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	2	2020 (update in progress)
Public Protection (ISO for Fire Districts)	Yes	3	FY 2015-2016
NWS StormReady	No	-	-
Firewise USA	No	-	-

### 9.4.7 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The community’s adaptive capacity for the impacts of climate change is presented in Table 9-9.

**Table 9-9 Adaptive Capacity for Climate Change**

Criterion		Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>		
Jurisdiction-level understanding of potential climate change impacts		High
Comment:	The City is conducting a vulnerability assessment as part of its Climate Action & Adaptation Plan (CAAP), identifying sector-specific risks related to heat, drought, wildfire smoke, and flooding.	
Jurisdiction-level monitoring of climate change impacts		Medium
Comment:	While there is some tracking of extreme heat days and air quality via regional and state sources, there is limited local real-time monitoring or tracking infrastructure.	
Technical resources to assess proposed strategies for feasibility and externalities		Medium
Comment:	The City leverages consultant support and regional partnerships (e.g. SJCOCG), but lacks fully dedicated in-house modeling tools or staffing for cost-benefit and externality analysis.	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory		High
Comment:	The City is in the process of completing a community-wide and municipal operations GHG inventory in alignment with ICLEI and State protocols. The updated inventory will have a baseline of 2022 and also include data from all cities within SJC. The City plans to regularly update this inventory moving forward, per the updated CAAP.	
Capital planning and land use decisions informed by potential climate impacts		Medium
Comment:	Climate considerations are increasingly incorporated into planning documents, but implementation across departments is still inconsistent and is largely driven by state mandates rather than internal policy. The intention is that the new CAAP will incite the need to update city codes and policies to incorporate new BAU procedures. City will maintain a Climate Action Plan Advisory Committee to lead the discussion on recommended planning actions and decisions.	
Participation in regional groups addressing climate risks		High
Comment:	The City actively participates in regional collaboratives, such as the AB 617 Community Steering Committee and the Regional Climate Collaborative.	
<b>Implementation Capacity</b>		
Clear authority/mandate to consider climate change impacts during public decision-making processes		Medium
Comment:	The General Plan, CAAP, CEQA, and the Office of the Governor provide pathways to integrate climate into the decision-making process; however, there are limited mandates at the local level to prioritize climate change impacts.	
Identified strategies for greenhouse gas mitigation efforts		High
Comment:	The CAAP will outline sector-specific mitigation strategies, including building electrification, infill development, mode shift targets, alternative fuel options for commercial and city owned vehicles, organics recycling, and renewable energy adoption.	

Criterion		Jurisdiction Rating <sup>a</sup>
Identified strategies for adaptation to impacts		High
Comment:	The CAAP will include adaptation strategies tailored to local risks, such as urban greening, cooling centers, flood resilience, and water conservation efforts.	
Champions for climate action in local government departments		High
Comment:	The City created its first Environmental & Sustainability Division within the City Manager's Office in October 2023. This team is dedicated to fulfilling the objectives of the CAAP. The City will also adopt a Climate Action Plan Advisory committee to lead the discussion on the development of actionable strategies for the CAAP and monitor implementation.	
Political support for implementing climate change adaptation strategies		High
Comment:	The City Council has consistently signaled its support for climate change adaptation strategies.	
Financial resources devoted to climate change adaptation		Medium
Comment:	The City has secured substantial grant funding for climate adaptation, but ongoing general fund commitments remain limited for environmental & sustainability projects and programs.	
Local authority over sectors likely to be negative impacted		Medium
Comment:	The City has land use, transportation, and water-related authority, but limited influence over transportation, energy, and other private sector industries without state or regional coordination.	
<b>Public Capacity</b>		
Residents' knowledge of and understanding of climate risk		Medium
Comment:	Community outreach and education efforts have increased, particularly in the most disadvantaged areas of the City, but public understanding of long-term climate impacts is not at the desired level.	
Residents' support of adaptation efforts		High
Comment:	Support is growing, especially when linked to co-benefits like shade, safety, and jobs.	
Residents' capacity to adapt to climate impacts		Low
Comment:	Many Stockton residents face economic, health, and housing vulnerabilities that limit their ability to respond to heat, flooding, or evacuation scenarios without targeted support.	
Local economy current capacity to adapt to climate impacts		Medium
Comment:	While some industries are more resilient and adaptable, others such as small businesses and agricultural sectors face high exposure and low adaptive capacity. With proper funding capacity to adapt increases.	
Local ecosystems capacity to adapt to climate impacts		Low
Comment:	Urban development, invasive species, and altered landscapes have left many local ecosystems vulnerable and sensitive to temperature, water, and wildfire pressures. Local ecosystem can be adapted to incorporate more native trees and flood mitigation measures.	

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 National Flood Insurance Program Compliance

Flooding is the costliest natural hazard in the United States. Community participation in the NFIP opens up the opportunity for additional grant funding associated specifically with flooding issues. Assessment of the jurisdiction’s current NFIP status and compliance provides planners with a greater understanding of the local flood management program, opportunities for improvement, and available grant funding opportunities. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 9-10.

**Table 9-10 National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Community Development Department – Building & Life Safety Division
Who is your floodplain administrator? (department/position)	Community Development Director
Are any certified floodplain managers on staff in your jurisdiction?	Yes (2)
What is the date that your flood damage prevention ordinance was last amended?	05/24/2016
Does your floodplain management program meet or exceed minimum requirements?	Yes
When was the most recent Community Assistance Visit or Community Assistance Contact?	2016
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
If so, what type of assistance/training is needed?	General floodplain management training is welcomed.
Does your jurisdiction have a Substantial Damage Response Plan?	No
How does your jurisdiction assess substantial damages after a hazard event?	Preliminary Damage Assessments
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
If yes, is your jurisdiction interested in improving its CRS Classification?	Yes
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup>	2,013
What is the insurance in force?	\$689,762,000
What is the premium in force?	\$1,882,195
How many total loss claims have been filed in your jurisdiction? <sup>a</sup>	66
What were the total payments for losses?	\$ 463,087

a. According to FEMA statistics as of 01/31/2025

## 9.6 Integration

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.

### 9.6.1 Existing Integration

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

- **Economic Development Strategic Action Plan (EDSAP)** – Adopted by City Council in January 2022, this Plan includes an initiative for the pursuit of brownfields funding for site redevelopment activities, with the primary focus on Downtown to incentivize full-spectrum housing development.
- **Draft 2025-2029 Consolidated Plan** – Pending City Council approval in spring 2025, this Plan establishes new five-year goals for the use of funding from the U.S. Department of Housing & Urban Development (HUD). The Draft 2025-2029 Consolidated Plan has goals for “Resilient Infrastructure & Public Facilities” and “Healthy Neighborhoods & Residents.” Both of these goals would set the stage for the potential future use of HUD funding for hazard mitigation activities, pending appropriate approvals and alignment with HUD requirements.
- **Climate Action Plan (CAP)** - Adopted by City Council in August 2014, this plan includes strategic measures to comply with state and local mandates to reduce greenhouse gas emissions in alignment with the San Joaquin Air Pollution Control District across multiple sectors such as agriculture, building energy, off-road equipment, on-road transportation, solid waste management, wastewater treatment and water transportation.

The City reviewed the current HMP prior to updating these plans and incorporated aspects of the HMP where appropriate.

### 9.6.2 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:

- Annual Action Plan process for the potential use of Community Development Block Grant (CDBG) funding from HUD. Refer to Action #2 in Table 9-13.
- Envision Stockton 2040 General Plan. Once a city-specific Local Hazard Mitigation Plan is created, it may be incorporated into the Safety Element. Refer to Action #2 in Table 9-13..
- Stockton MSA Climate Action and Adaptation Plan 2026. This plan is currently in development with the potential to incorporate mitigation planning within the framework of proposed strategies. Hazard mitigation practices can be incorporated into the strategies. Refer to Action #2 in Table 9-13..

## 9.7 Risk Assessment

### **SEISMIC AND GEOLOGIC HAZARDS**

There are a few faults in the region capable of causing a major earthquake in Stockton, but they are all west of Stockton, closer to the San Francisco Bay. Closer to Stockton are some smaller faults, including the Stockton Fault that runs east-west across the City, but it is not known to be active. Strong shaking from a major earthquake is rare in Stockton, although there were reports of significant shaking and localized damage in the area during the 1989 Loma Prieta earthquake.

(Envision Stockton 2040 General Plan, Safety Element, Seismic and Geologic Hazards, Page 5-10, July 9, 2024.)

Link:

<https://cms3.revize.com/revize/stockton/Documents/Business/Planning%20&%20Engineering/Shape%20Stockton/Draft%20Safety%20Element%20December%202023.pdf>

### **FLOODING AND INUNDATION HAZARDS**

Floods are among the costliest natural disasters in terms of human hardship and economic loss nationwide, significantly threatening people's health and lives and causing substantial damage to structures, landscapes, and utilities. Reclamation of Delta land over many years has reduced available floodplain and increased flooding potential. Flood risk is therefore one of the most pressing threats to the Delta area, and Stockton is one of the areas at highest risk.

Areas at an elevated risk of flooding are generally divided into 100-, 200-, and 500-year flood zones. A 100-year flood zone has a 1 percent chance of experiencing a major flood in any given year, a 200-year flood zone has a 0.5 percent chance, and a 500-year flood zone has a 0.2 percent chance. The majority of the City is in one of these flood zones.

Most of the City is protected from flooding by levees. However, many levees in the Delta region were initially constructed more than a century ago using rudimentary equipment and nonengineered fill material excavated from adjacent channels, sloughs, and marshes. There have been several improvements to the levee system in and around Stockton in recent years, including construction of new flood protection facilities led by the San Joaquin Area Flood Control Agency. A number of local, regional, state, and federal agencies play a role in maintaining levees and other flood protection facilities in and around Stockton. This includes the Central Valley Flood Protection Board, a regulating authority over flood risk management in the Central Valley and responsible for adopting the Central Valley Flood Protection Plan.

Despite these improvements, vulnerabilities remain in Stockton's levee system. The Country Club neighborhood and areas along the San Joaquin River and its floodplain in the southern part of the City do not receive adequate flood protection from levees. Although all remaining levees provide 100-year flood protection, no levees meet the State's 200-year flood protection requirement in the Central Valley Flood Protection Plan. The Delta's levees are also threatened by the active seismic zones west of the Delta, including the San Andreas and Hayward faults. Even without an earthquake or flood, Delta levees can fail during high tides or even on sunny days. In the event of a major levee break, much of the City would be inundated, potentially damaging tens of thousands of homes.

## Sea Level Rise

Sea level rise is an increase in the ocean’s surface height relative to the land in a particular location. It is a gradual process that takes place over years or decades, affecting communities near shorelines and low-lying waterways, including the Sacramento/San Joaquin Delta region. Sea levels in the San Francisco Bay-Delta Estuary are likely to rise at least to 7 to 13 inches by 2050, and potentially as high as 23 inches (almost two feet). By the end of the century, sea levels are likely to rise significantly higher, potentially as much as 7 to 10 feet. Certain areas of Stockton will be flooded due to sea level rise by 2050 and 2085, respectively.

There are a range of factors that impact water levels in the San Joaquin Delta, including inflows (from local and upstream precipitation), San Joaquin Delta exports into regional and state water systems, astronomical tides, atmospheric effects (pressure and wind), and flow control operations. Regional and local land subsidence further complicates local sea level trends for the Delta region. Decomposition of drained and converted marsh and peat soils in diked Delta islands have caused much of the Delta region to lie below sea level—in some places by as much as 20 feet. Continued land subsidence may increase the relative rate of locally observed sea level change for the Delta area when comparing water levels to local land elevations. (City of Stockton 2018)

### 9.7.1 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	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	CA23-1	1/4/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	The City was subject to closures and social distancing/masking requirements.

### 9.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for the City of Stockton is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the City in identifying hazards that pose the most significant threat. 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.

**Table 9-12 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability (1-4 index value with 30% weighting factor)	Impact (1-4 index value with 30% weighting factor)	Spatial Extent (1-4 index value with 20% weighting factor)	Warning Time (1-4 index value with 10% weighting factor)	Climate Change (1-4 index value with 10% weighting factor)		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.3	.9	.2	.1	.3	1.8	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

Notes:  
 PRI Value 1 to 1.9 = Low Hazard Risk Ranking  
 PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking  
 PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### 9.7.3 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***

Based on best available data for the City (FEMA 2025), the following provides a summary of repetitive loss records:

- 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***

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:

- **Prevalence of Surface Flooding:** While much attention focuses on major river flooding, a localized issue is the high risk from surface (pluvial) and riverine (fluvial) flooding. The data shows that in 44 of Stockton's 159 census tracts, more than half of the buildings face a significant flood risk. Refer to the table below (action #6) for the proposed action to address this vulnerability.
- **Social Vulnerability in Flood-Prone Areas:** In the Stockton area, approximately 10,334 people reside in land below 3 feet in elevation. A significant portion of this vulnerable population is characterized by **high social vulnerability** (5,469 people) and **populations of color** (5,150 people), indicating that flood risks disproportionately affect certain demographic groups. Refer to the table below (action #6) for the proposed action to address this vulnerability.
- **Water Quality and Urban Nuisance:** Specific to the downtown area, public attention and local government efforts have focused on the accumulation of trash and debris in local waterways and the significant issue of Harmful Algal Blooms (HABs) in McLeod Lake/Stockton Waterfront during hot months. Refer to Action Number 7 on Table 9-13.
- **Human-Caused Hazards:** This is classified as an extremely high-priority within the City's emergency planning framework. Refer to Action 2 on Table 9-13.

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

## 9.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 9-13 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas (e.g., Dam Failure, Earthquake, Flooding) prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter Energy Communications Transportation	Existing	1, 3, 4	Lead: Economic Development Department? Support: Community Development Department.	Yes	Very High (\$1,000,000 and above)	FEMA HMGP and FMA	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including: <ul style="list-style-type: none"> <li>• Building Code</li> <li>• Subdivision Ordinance</li> <li>• Climate Action Plan</li> <li>• Economic Development Plan</li> <li>• Capital Improvement Plan</li> </ul>	Safety and Security Communications Transportation Water Systems	New	6	Lead: Office of Emergency Services Support: Community Development Department, Economic Development Department, and City	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	<ul style="list-style-type: none"> <li>General Plan</li> <li>Annual Action Plan</li> <li>Emergency Operations Plan</li> <li>New Climate Action &amp; Adaptation Plan (CAAP) (currently under development)</li> </ul>				Manager's Office.				
3	Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements. This will include increased training for staff.	Food, hydration, shelter	New, Existing	1, 2	Lead: Community Development Department Support:	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
4	Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following: <ul style="list-style-type: none"> <li>Public outreach</li> <li>Integration adaptive capacity into the appropriate plans</li> </ul>	Communications Safety and security	New, Existing	1, 3	Lead: City Manager's Office Support:	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
5	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	N/A	N/A	6	Lead: Office of Emergency Services Lead Support	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
6	The City will complete a feasibility study to determine the areas most susceptible to pluvial and riverine flooding and identify projects to reduce or eliminate impacts from such flooding, with a focus on socially vulnerable populations. Once complete, the City will determine which projects to seek funding for and implement.	Safety and security	New	1, 3, 4, 7	Lead: City Manager's Office Support:	Yes	Medium for study; high for implementation	General Fund and FEMA HMA (FMA and HMGP)	Short-Term (less than 4 years)
7	Waterway debris monitoring and removal plan and implementation is needed to address flooding caused by accumulation of trash in the waterways.	Food, hydration, shelter Water Systems	New, Existing	1, 3, 4, 7	Lead: City Manager's Office Support:	Yes	Medium for study; high for implementation	General Fund and FEMA HMA (FMA and HMGP)	Short-Term (less than 4 years)
8	Purchase generators for City-owned critical facilities and infrastructure that lack adequate backup power.	Safety and security; Energy; Communications	Existing	6	Lead: Public Works Director	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

**Table 9-14 Mitigation Action Prioritization**

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	0	3	3	3	3	1	0	3	3	3	1	3	3	3	3	35	High
#4	1	1	3	1	1	1	1	3	3	1	3	3	1	3	3	30	Medium
#5	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#6	3	3	3	3	3	3	3	3	3	3	3	3	1	1	1	40	High
#7	3	3	3	1	3	1	3	3	3	1	3	1	1	1	1	31	High
#8	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium

Note: 31+ = high  
 15 to 30 = medium  
 >15 = low

Table 9-15 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■		■		■		■	■		■	■		
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■	■	■		■		■					■		■	■		
#4	■				■			■	■	■				■	■		■
#5					■		■		■	■			■	■	■		■
#6	■	■			■		■					■		■	■		
#7	■	■		■	■		■					■		■	■		
#8	■	■			■		■					■	■	■		■	■

## 9.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 9-16.

**Table 9-16 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Building Safety Month Promotion - Brochures and information at the Permit Center & State of the City Address	May – Annually	N/A
Flood awareness letter sent to all properties in a Special Flood Hazard Area	June – Annually	~2,400 properties
Flood protection assistance letter sent to all realtors, lenders, and insurance agents	June – Annually	~390 businesses
Flood information webpage	Ongoing	N/A
Supported the countywide outreach efforts for this plan including promoting the public survey.	Throughout the planning process	TBD

## 9.10 Information Sources Used for This Annex

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

- Economic Development Strategic Action Plan (EDSAP) for relevant recommendations or initiatives.
- Draft 2025-2029 Consolidated Plan for potential alignment of draft goals with hazard mitigation activities.
- Envision Stockton 2040 General Plan for the background information and hazard information.
- 2023-2031 Housing Element for housing and population information.

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.

## 9.11 Hazard Mapping

Jurisdiction-specific risk maps of the hazards are provided on the following pages. For a complete description of each hazard, please see the applicable chapters in Volume 1 of this plan. These maps are based on the vulnerability and risk assessment results for this plan.

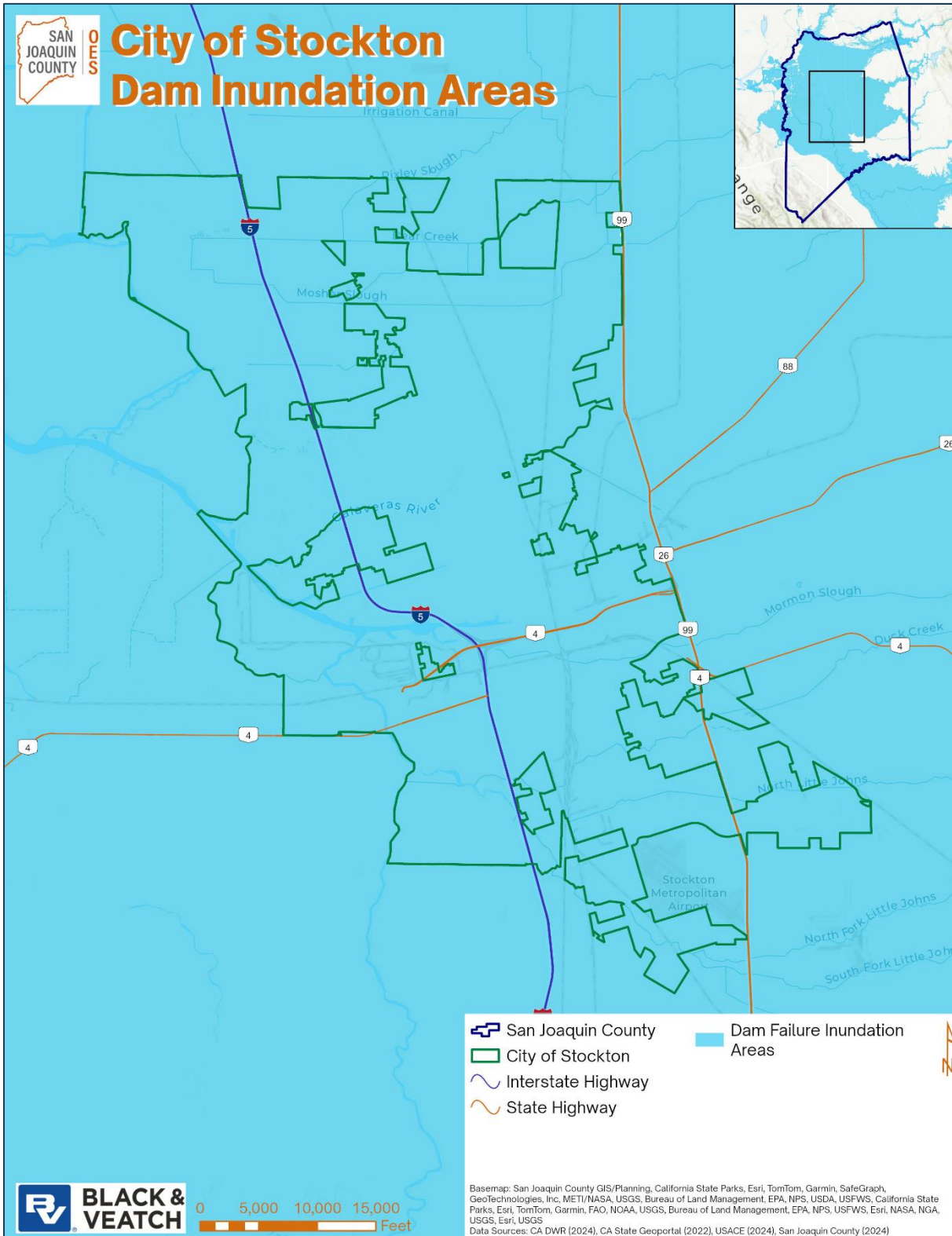


Figure 9-3 Dam Inundation Areas

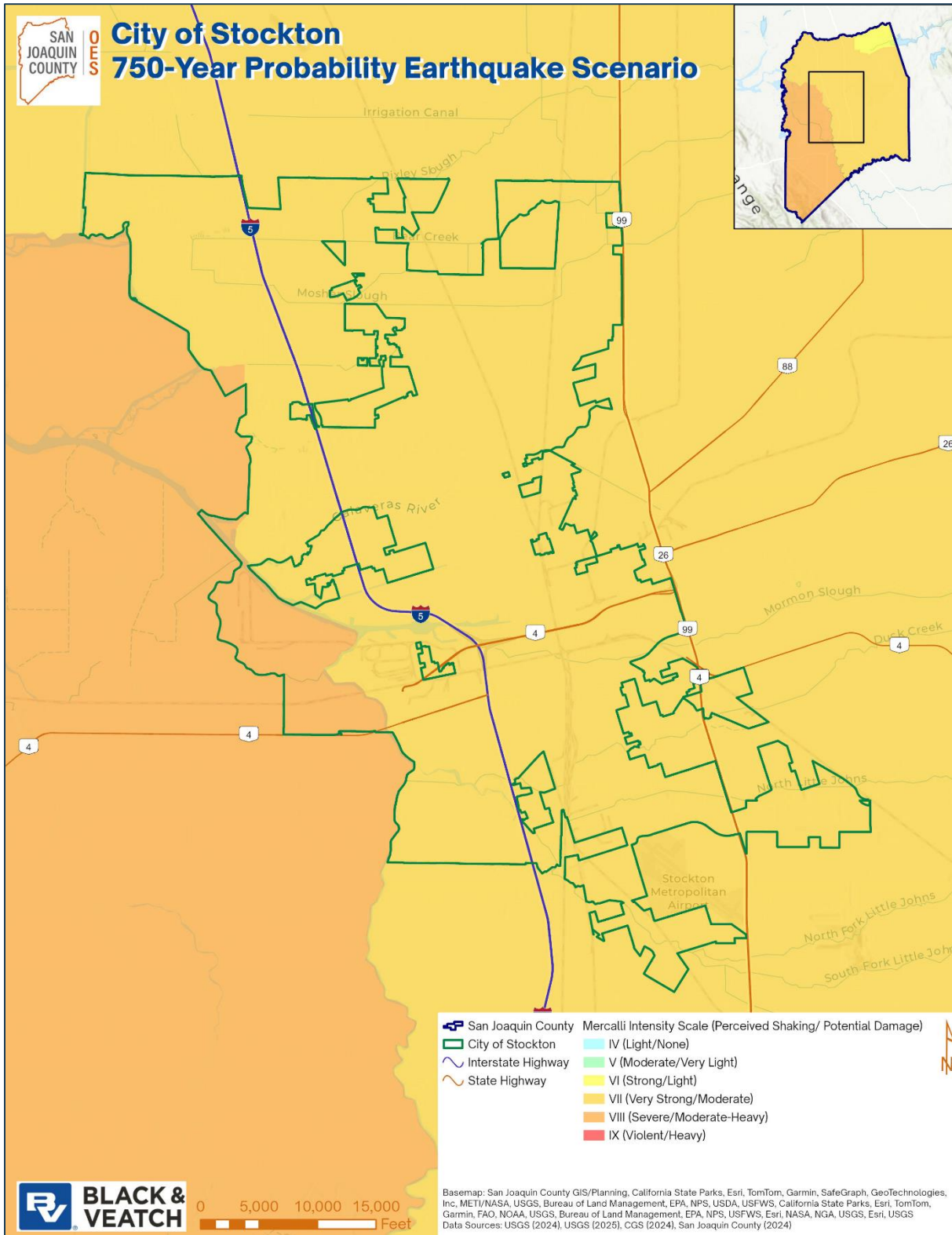


Figure 9-4 750-Year Probability Earthquake Scenario

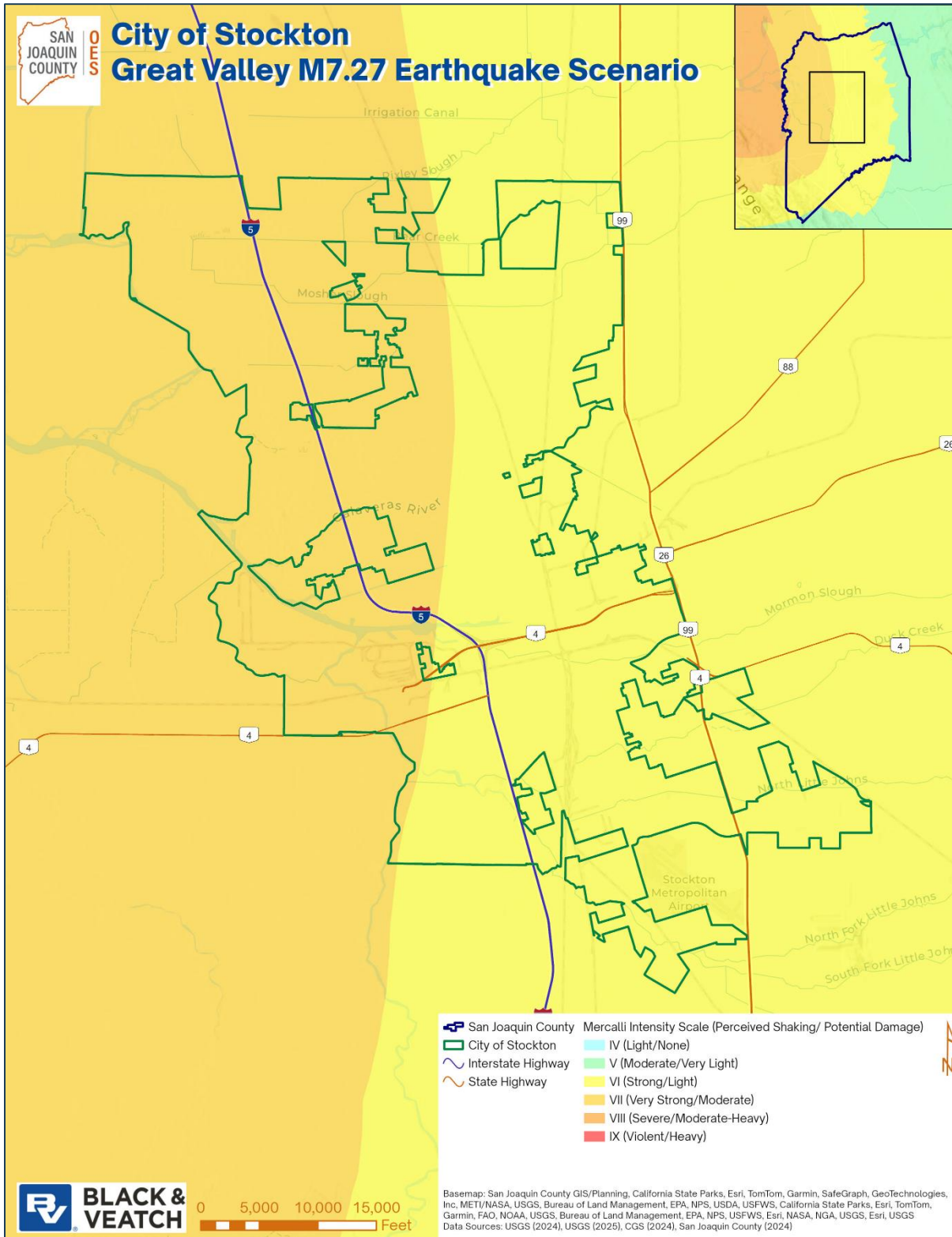


Figure 9-5 Great Valley M7.27 Earthquake Scenario

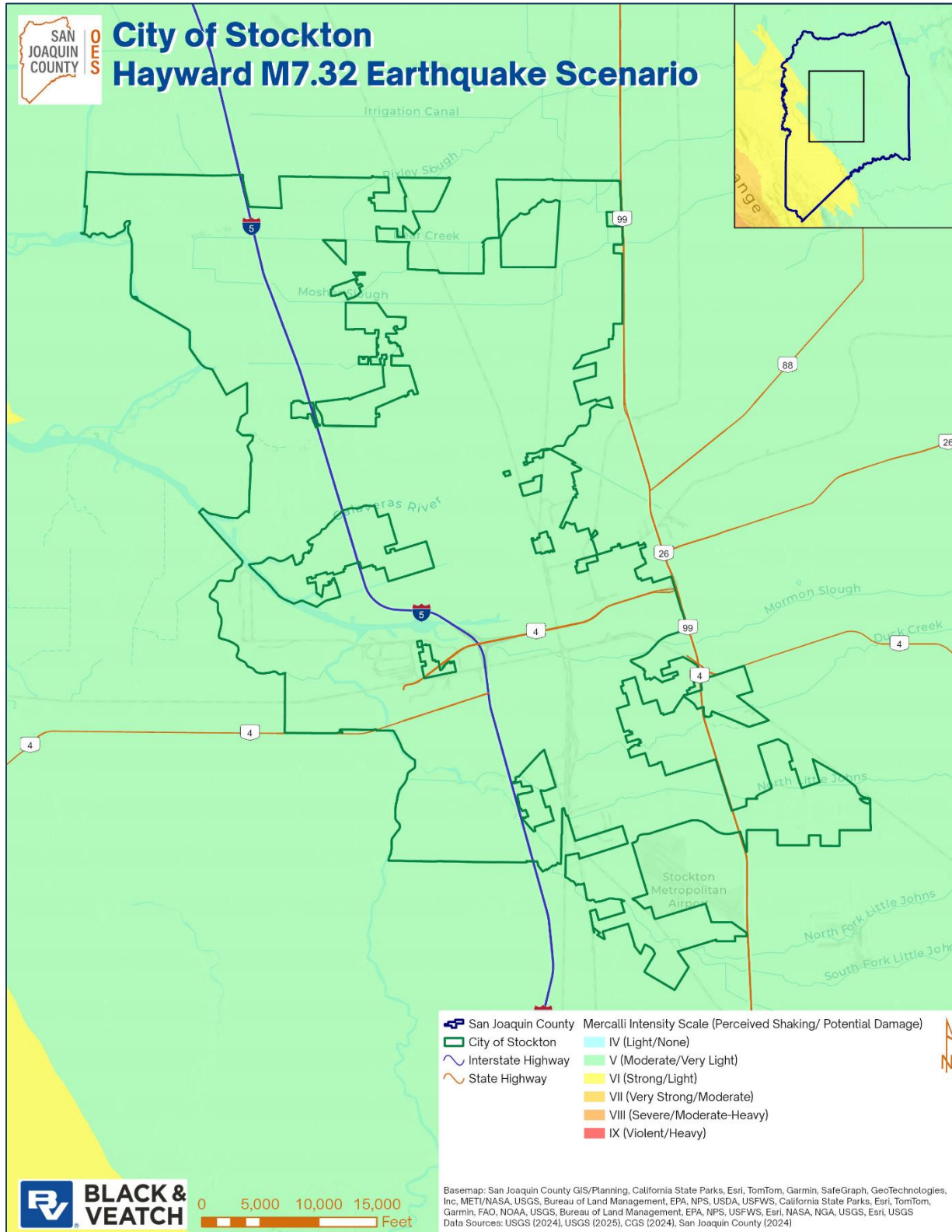


Figure 9-6 Hayward M7.32 Earthquake Scenario

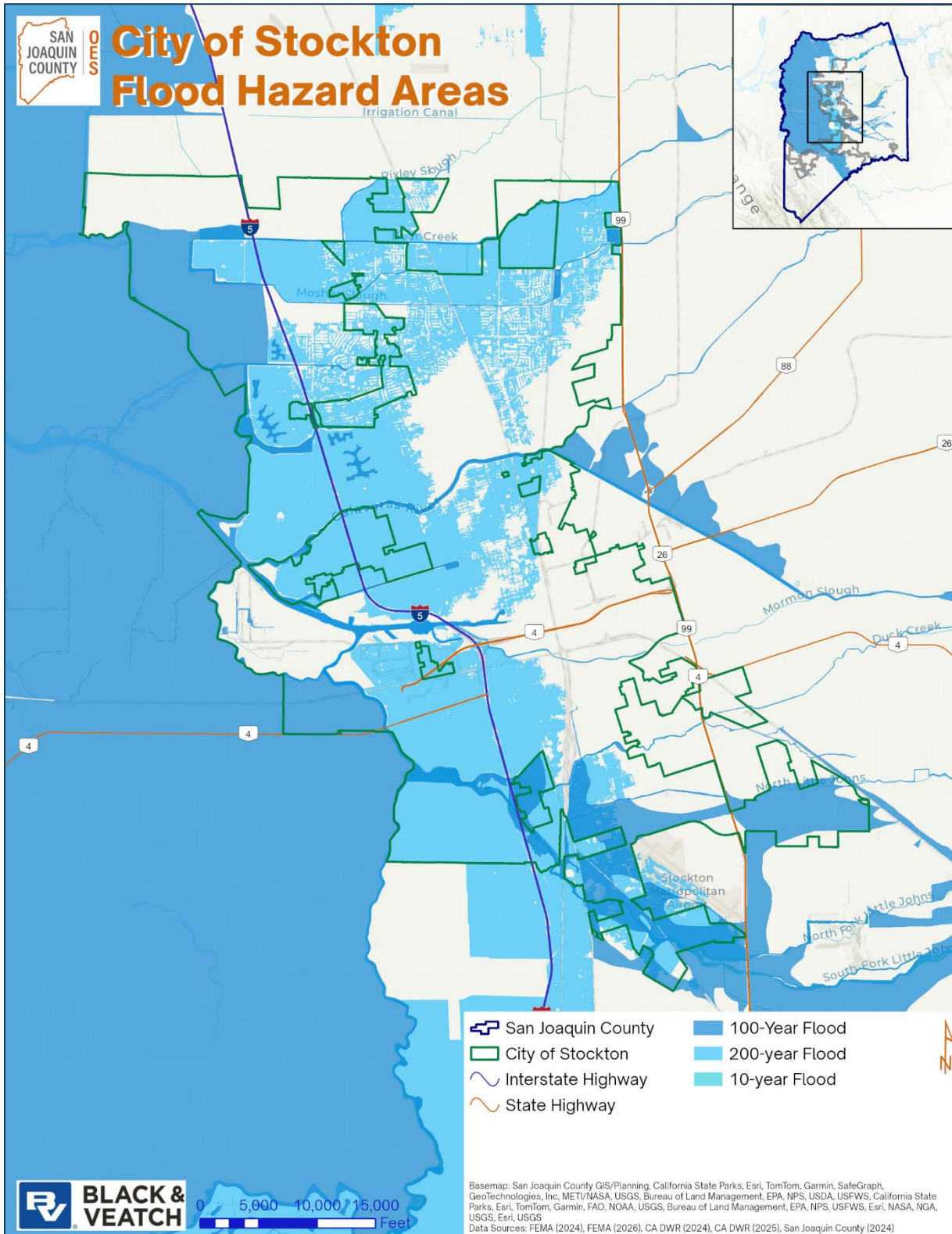


Figure 9-7 Flood Hazard Areas

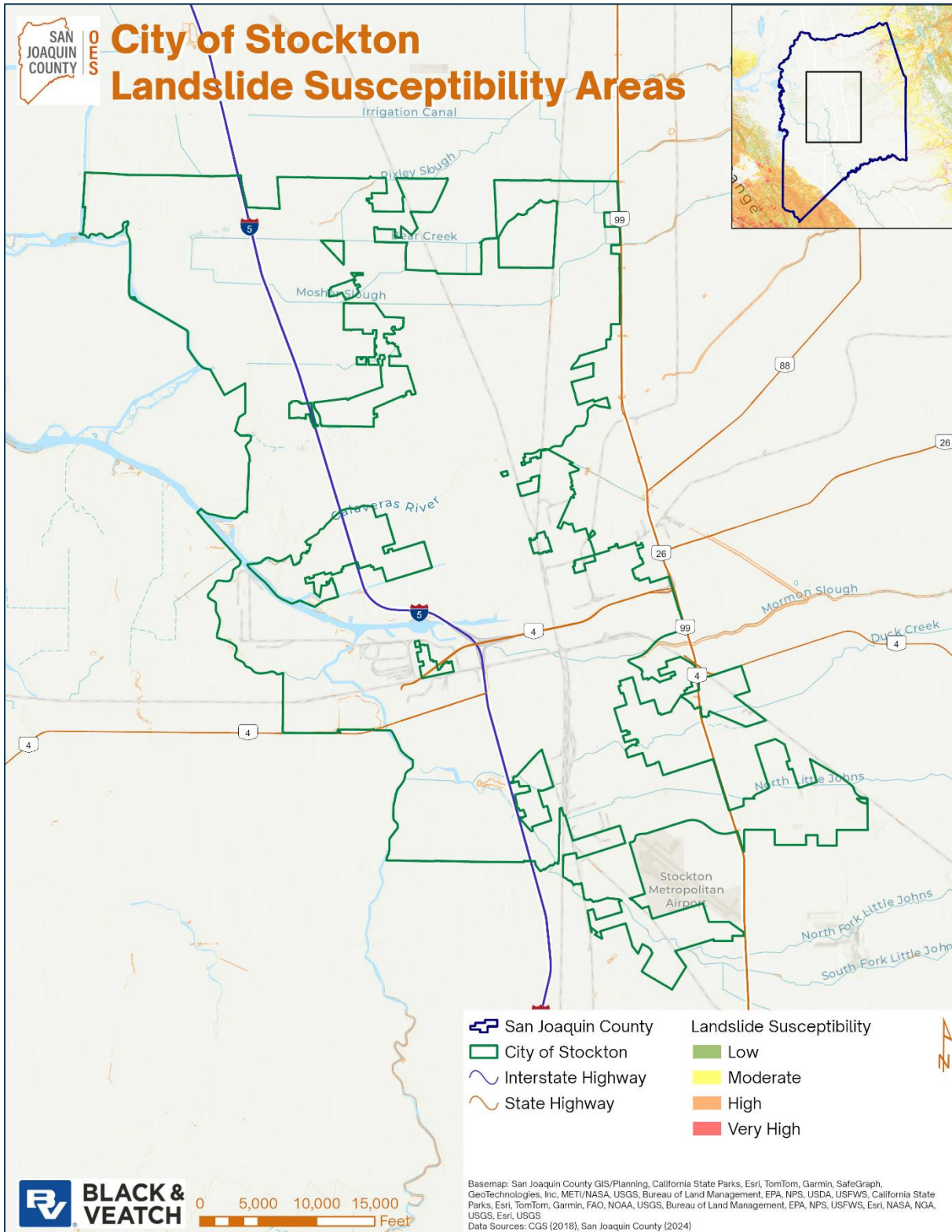


Figure 9-8 Landslide Susceptibility Areas

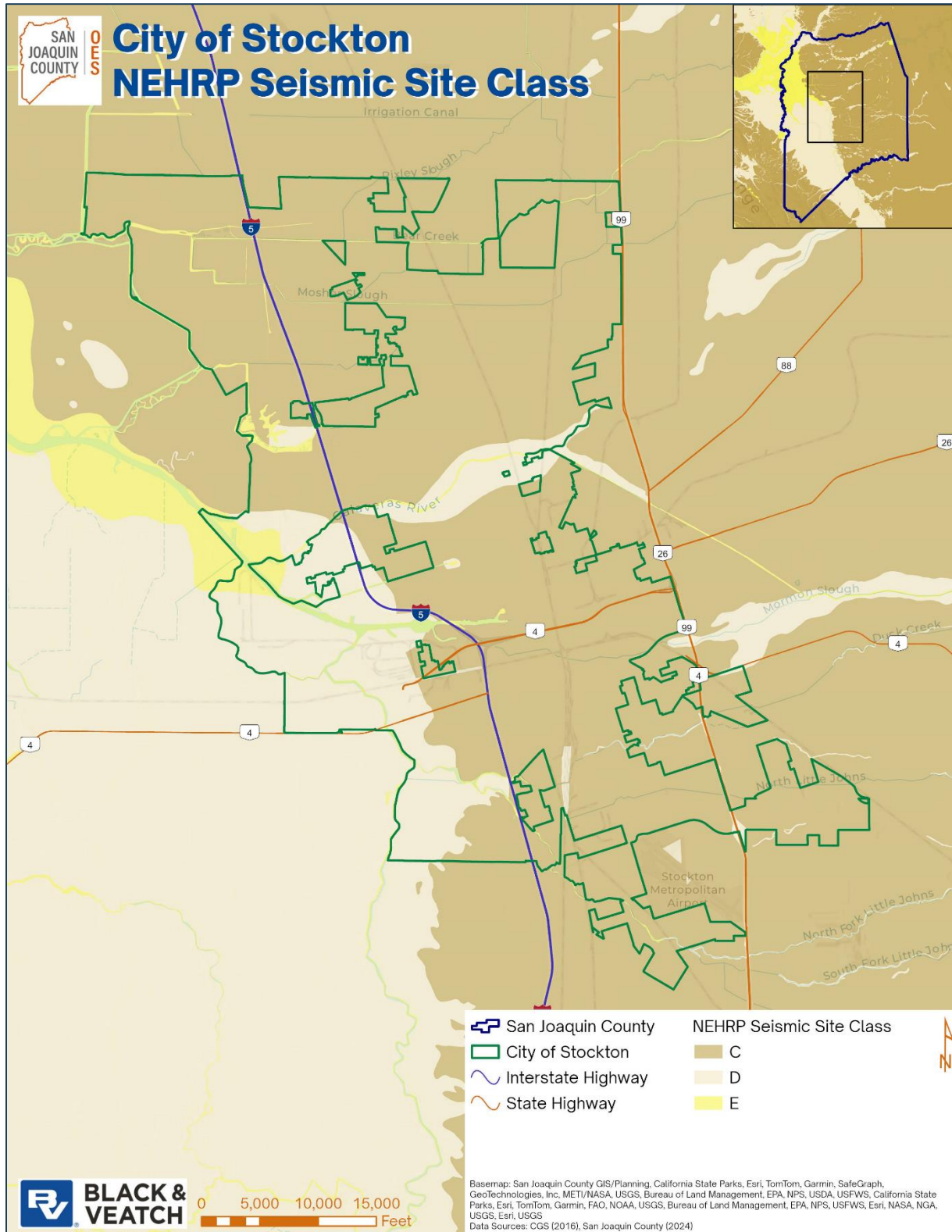
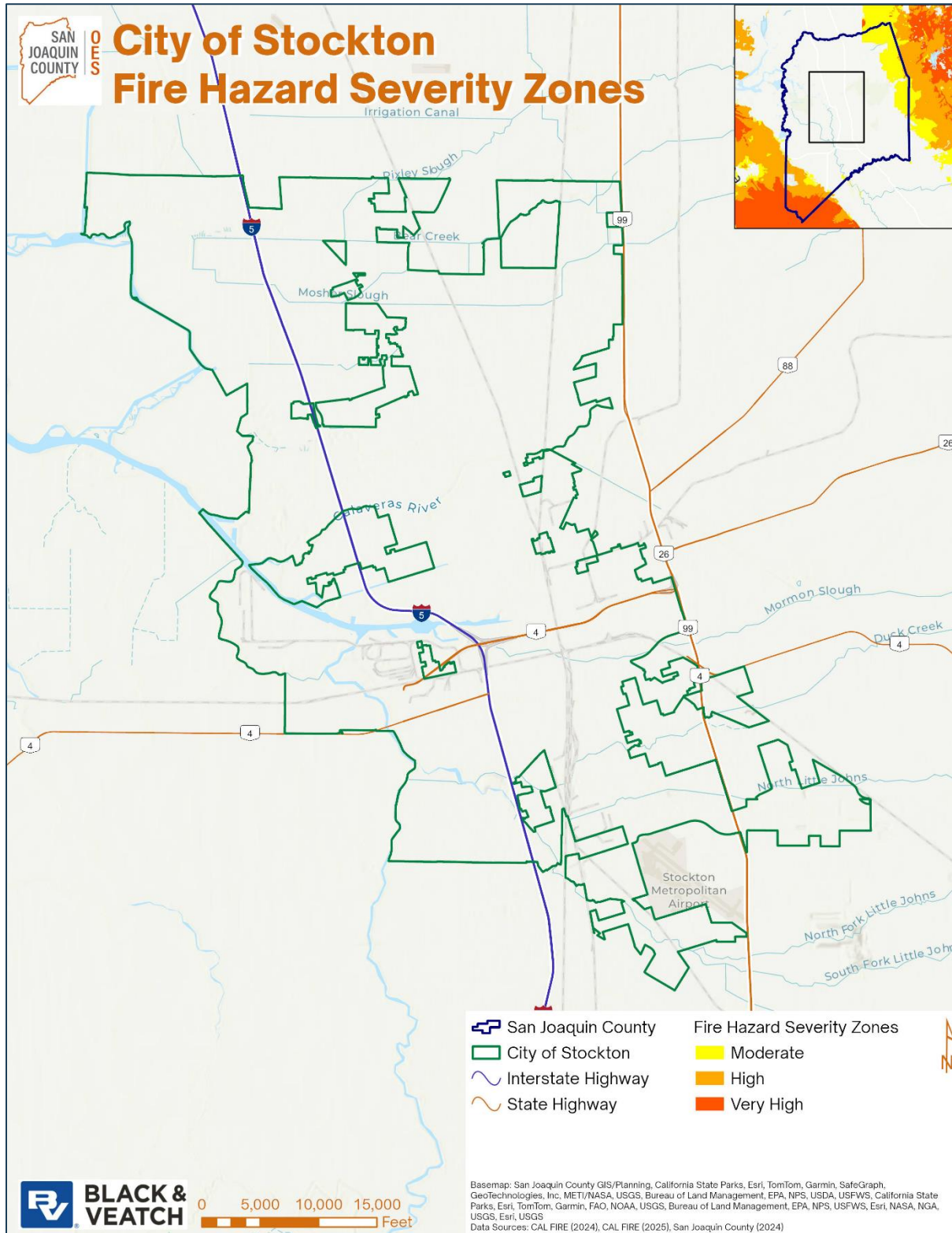
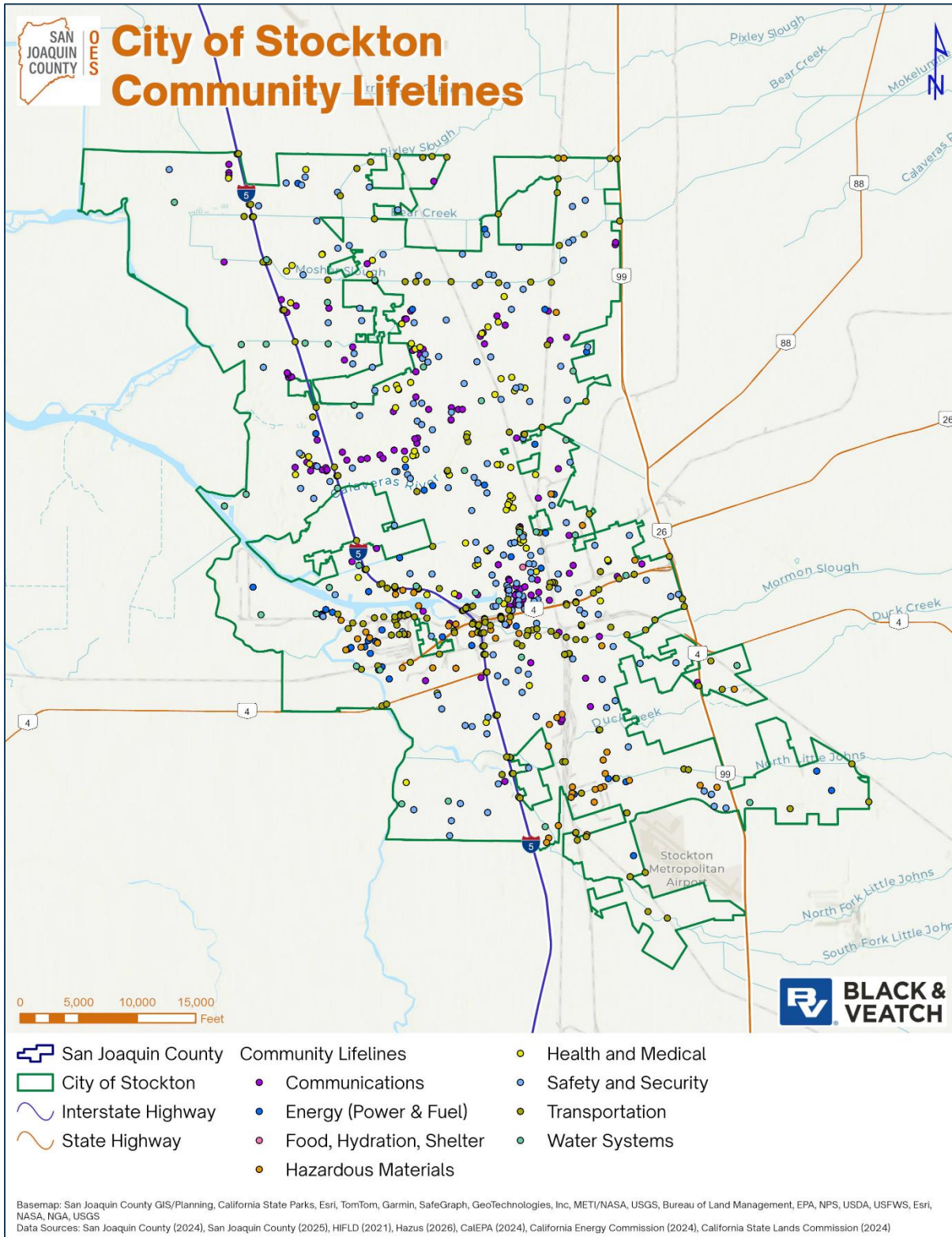


Figure 9-9 NEHRP Seismic Site Class Soils



**Figure 9-10 Fire Hazard Severity Zones**



**Figure 9-11 Community Lifelines**



## 10. CITY OF TRACY



Source: City of Tracy

### 10.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the City of Tracy. Members are listed in Table 10-1.

Table 10-1 Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Michael Richards, Sergeant	Name and Title:	Craig Kootstra, Lieutenant
Address:	1000 Civic Center Dr Tracy, CA 95376	Address:	1000 Civic Center Dr Tracy, CA 95376
Phone Number:	(209) 831-6670	Phone Number:	(209) 831-6637
Email:	Mike.Richards@TracyPD.com	Email:	Craig.Kootstra@TracyPD.com
<b>NFIP Floodplain Administrator</b>			
Name and Title:	Dennis Canright, Building Official		
Address:	333 Civic Center Plaza Tracy, CA 95376		
Phone Number:	(209) 831-6415		
Email:	Dennis.Canright@CityofTracy.org		

Primary Point of Contact		Alternate Point of Contact
<b>Additional Planning Team Members:</b>		
Name and Title:	Ana Contreras, Code Enforcement Manager	
Method of Participation:	Research for the project	
Name and Title:	Sheryl Tapia, Administrative Assistant	
Method of Participation:	Research for the project	
Name and Title:	David Murphy, Deputy Director of Operations	
Method of Participation:	Coordinator	
Name and Title:	Stephanie Reyna-Hiestand, Deputy Director of Utilities	
Method of Participation:	Coordinator	

## 10.2 Jurisdictional Profile

### 10.2.1 Location and Features

The City of Tracy is located approximately 68 miles south of Sacramento and 60 miles east of San Francisco. The City lies in the San Joaquin Valley, and east of the Coastal Range that separates California’s Central Valley from the San Francisco Bay Area (City of Tracy n.d.).

Interstate 205 runs through the northern portion of the City and connects to Interstate 580 and Interstate 5, a major north-south interstate corridor east of the City. The City of Tracy is situated adjacent to several major water infrastructure conveyance systems, including the State Water Project’s (SWP) California Aqueduct, the Delta-Mendota Canal (DMC), and Old River. Old River flows east to west north of Tracy. Three railroads also intersect the City, and the City is served by a municipal airport and the Altamont Corridor Express transit station that provides commuter rail service to Silicon Valley in the Bay Area (City of Tracy n.d.).

### 10.2.2 History

Until the 1860’s, the area that is now the City of Tracy was populated by the Yokuts tribe. The Yokuts livelihood revolved around subsistence from foods provided by local rivers and creeks in the region. The Yokuts were displaced by Spanish immigrants, and later by Mexican and American immigrants (City of Tracy n.d.)

In 1869, the Central Pacific Railroad (now Southern Pacific) completed a rail line through the area now known as the City of Tracy. The rail line ran from Sacramento through Stockton and over Altamont Pass. After the construction of the rail line, a new town known as Lathrop Junction developed approximately nine miles west of Stockton. This community became the center of the railroad business and the headquarters for the Central Pacific Railroad in San Joaquin Valley. As the railroad business expanded so did the need for additional railroad buildings and infrastructure. By 1870, this new coaling station had 45 buildings serving the needs of the railroad employees and families (City of Tracy n.d.).

In 1878, a new rail line was constructed from Oakland that connected to Martinez and the Central Pacific Railroad at a point three miles east of the new coaling station in Ellis (City of Tracy n.d.). As the new rail line was built in 1878, the City of Tracy was established. The establishment of the new line to Tracy meant discontinuing the line to the coaling station at Ellis and relocation to Lathrop and the new Tracy station. Over the years, the City grew as

a railroad hub. A new rail line was later constructed through Los Banos as a faster way to travel to Los Angeles. Then, in March 1894, the railroad headquarters in Lathrop were moved to Tracy (City of Tracy n.d.).

In 1910, the City of Tracy incorporated, and it gradually transitioned from a railroad town to a small agricultural community after the first irrigation district was established in 1915. As railroad operations slowed in the 1950s, the City of Tracy grew as an agricultural area. During the 20th Century, the city transitioned again, this time from an agricultural community to a residential community, as people arrived from the San Francisco Bay Area seeking a small town and affordable housing (City of Tracy n.d.).

### 10.2.3 Governance

The City of Tracy is a general-law city with a City Manager form of government. The City Council appoints the City Manager and the City Attorney. The City Manager is the chief administrative officer for the City and is accountable to the City Council. The City of Tracy is governed by four elected council members who each serve four-year terms and one mayor who serves a two-year term (City of Tracy n.d.).

The City Manager's Office assumes responsibility for the adoption of this plan; Engineering Services will oversee its implementation (City of Tracy n.d.).

## 10.3 Growth and Development Trends

### 10.3.1 Population

According to the California Department of Finance, the population of the City of Tracy as of January 2025 was 98,215. Since 2020, the population has grown at an average annual rate of almost 1 percent (State of California Department of Finance n.d.).

### 10.3.2 Equity Priority Communities

Equity means equal opportunity for all. Low-income residents, communities of color, tribal nations, and immigrant communities have historically disproportionately experienced environmental burdens and related health problems. This inequity has resulted from many factors, including inappropriate zoning and incomplete land use planning, which have led to development patterns that concentrate pollution emissions and environmental hazards near communities that have not had the political wherewithal to protect themselves. As many of these "disadvantaged" or "environmental justice" communities continue to face significant barriers to their overall health, livelihood, and sustainability, State law now requires that general plans address environmental justice through Senate Bill (SB) 1000. The Environmental Justice element of the City's General Plan identifies potential policy solutions to address disparities in disadvantaged communities.

According to the 2024 San Joaquin County Homelessness Point-In-Time Count, 4,732 people are experiencing homelessness within the County. Over 70 percent have experienced homelessness for over a year, with 10 reported to be unsheltered in Tracy.

### 10.3.3 Development

Anticipated future development for City of Tracy is low to moderate, consisting of a mix of industrial, commercial, and residential growth. Recent development has been mostly infill. Future growth in the City of Tracy will be managed as identified in the City's 2011 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 General Plan.

**Table 10-2 Recent and Expected Future Development Trends**

Criterion	Response					
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan?	Yes-Current Plan 2022-2027					
If yes, give the estimated area annexed and estimated number of parcels or structures.	The City recently voted to annex 3.9 acres, pending County approval. The City voted to approve 104 acres in 2025 which is also pending County approval.					
Is your jurisdiction expected to annex any areas during the performance period of this plan?	Yes-in the 2022-2027 time frame					
If yes, describe land areas and dominant uses.	Industrial and residential -Industrial annexation is around the Cordes Ranch area to the west of Tracy along I-580 and east of Tracy along I-205 and the Northeast Industrial area. -Residential annexation would be around the Corral Hollow/Valpico area.  Annexations could include 250 acres of industrial land and 250 acres of single-family parcels.					
If yes, who currently has permitting authority over these areas?	San Joaquin County					
Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.	All future development and annexation are within the sphere of influence in the City of Tracy 2011 General Plan. All growth will take place within approved and anticipated areas.					
Are any areas targeted for development or major redevelopment in the next five years?	No, much of the anticipated growth in the next 5 years is already within the City of Tracy boundaries. Annexation is not required for this growth.					
If yes, briefly describe, including whether any of the areas are in known hazard risk areas	The potential annexations are not known to be in hazard risk area.					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
	Single Family	1,695	2,182	3,217	1,604	2,764
	Multi-Family	8	10	133	31	77
	Other (mobile homes, accessory dwellings, mixed use, etc.)	14	9	9	2	7
	Commercial	165	201	337	225	358
	Total	1,882	2,402	4,394	1,862	3,933

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.	City of Tracy General Plan projections show that build-out of the City is not complete. Based on the Municipal Services Review completed by San Joaquin LAFCo there remains large specific plan areas for substantial residential capacity as well as industrial and commercial capacity.

## 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 or improve upon 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.

### 10.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop policies and programs and to implement rules and regulations to protect and serve community members. Local policies are typically identified in a variety of community plans, implemented via a local ordinance, and enforced through a governmental body. An assessment of planning and regulatory capabilities is presented in Table 10-3.

**Table 10-3 Planning and Regulatory Capabilities**

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>				
Building Code	Yes	No	Yes	Yes
Comment:	The City adopted the 2022 California Building Code. Adoption and reference to the 2022 CBC is outlined in Title 9, section 9.04.030. (Ord. No. 1335, § 3, 12-6-2022)			
Zoning Code	Yes	No	Yes	Yes
Comment:	The City’s Zoning Ordinance is Title 10 of the Tracy Municipal Code. It guides current development through standards and regulations relating to allowable land uses, conditionally allowable land uses, height, setbacks, parking, and signage. (Ord. No. 1202, Exh. A § 1, 12-1-2015)			
Subdivisions	Yes	No	Yes	Yes
Comment:	Title 12 of the Tracy Municipal Code contains the City’s subdivision provisions, procedural requirements, tentative subdivision maps, parcels maps, dedications, and improvements. It also outlines streets, alleys, and other public right-of-way or easements for emergency access. (Ord. 934 C.S. § 1 (part), 1996: prior code § 12-1.101)			

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Stormwater Management	Yes	No	Yes	Yes
Comment:	<p>The City of Tracy (in coordination with other small cities in San Joaquin County) implemented development standards to protect water quality under the “General Permit for Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (also known as MS4 permits).</p> <p>They City complies with requirements under MS4 Order No. 2013-0001-DWQ, which was updated in 2013 as part of the second Phase II Small MS4 General Permit (adopted July 2013). They City is implementing a Storm Water Management Plan that contains processes that will be used to meet mandatory requirements under the updated order.</p> <p>The City’s 2015 Multi-Agency Post-Construction Storm Water Standards Manual and 2013 Storm Water Management Plan are located here: <a href="https://www.ci.tracy.ca.us/index.cfm?navId=1679">https://www.ci.tracy.ca.us/index.cfm?navId=1679</a> (Ord. No. 1233, § 3, 5-16-2017).</p>			
Post-Disaster Recovery	No	Yes	No	No
Comment:	N/A			
Real Estate Disclosure	Yes	No	Yes	Yes
Comment:	<p>In California, the duty to disclose is codified in the California Civil Code Section 1102 which mandates a Real Estate Transfer Disclosure Statement (TDS). The TDS is a comprehensive disclosure statement that sellers must provide to potential buyers, covering the property’s condition, known defects, relevant environmental hazards, and other neighborhood nuisances.</p>			
Growth Management	Yes	No	Yes	Yes
Comment:	<p>In 1987 the Tracy City Council adopted a Residential Growth Management Plan, commonly referred to as the Growth Management Ordinance, or GMO. The GMO was amended several times between 2000 and 2014. The purpose of the GMO is to determine residential growth allotments and building permit activities, and define residential growth allocation exemptions. The GMO also defines primary growth areas, the development agreement process, vesting process, and specific requirements for new development, primarily specific plan projects (Ord. No. 1136, § 1, 2009).</p>			
Site Plan Review	Yes	Yes	Yes	Yes
Comment:	<p>Discretionary projects involve site plan review as part of the planning and approval process conducted by the City’s Development Services Department. The Land Development Division of Engineering also provides review and permit processing. This division reviews subdivision maps, construction plans, public improvement, and grading plans for all residential, commercial, and industrial projects (Prior code § 10-2.1713).</p>			
Environmental Protection	No	Yes	Yes	Yes
Comment:	The San Joaquin County Environmental Health Department provides comprehensive services.			

		Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Flood Damage Prevention		Yes	No	Yes	Yes
Comment:	<p>Title 9 of the Tracy Municipal Code contains the City’s building regulations, and Chapter 9.52 contains the Floodplain Regulations. Special flood hazard areas in the City are based on the January 24, 1991 Flood Insurance Study (FIS) and recent Flood Insurance Rate Map (FIRM).</p> <p>The Floodplain Regulations limit development of projects in the flood hazard zone unless the project demonstrates flood management facilities will protect the project to the urban level of flood protection, implements conditions on the permit or project entitlement that protect the project to standard flood protection standards, or is intended to be protected by project levees.</p> <p>Chapter 9.52.150 summarizes the standards of construction for new projects, and new construction or substantial improvements shall have the lowest floor elevation, including basements, elevated to or above base flood elevation (BFE). Upon completion of construction, the elevation of the lowest flood shall be certified by a registered professional engineer or verified by the community building inspector. The certification shall be provided to the Floodplain Administrator.</p>				
Emergency Management		Yes	No	No	Yes
Comment:	Chapter 3.24 Emergency Organization and Functions				
Climate Change		Yes	No	Yes	Yes
Comment:	See Sustainability Action Plan – 2011 under Planning Documents below.				
<b>Planning Documents</b>					
General Plan		Yes	No	Yes	Yes
Is the General Plan compliant with Assembly Bill 2140?			Yes		
Comment:	<p>The City’s General Plan was last updated and amended in 2011, but amendments have occurred as recently as 2025. The Housing Element of the General Plan was adopted and approved in 2025 by California Department of Housing and Community Development for 2023-2031. An update to the General Plan is underway and is expected to take a minimum of three to five years to complete.</p>				
Capital Improvement Plan		Yes	No	No	Yes
How often is the plan updated?		Every year			
Comment:	<p>The Capital Improvement Division (Design Group) of the Engineering Department is responsible for the planning and design of all City of Tracy CIP projects. These include projects, such as construction, repair, and improvements of public streets, utility pipelines, pump stations, bridges, bike paths, public buildings, and public parks.</p> <p>The Capital Improvement Division follows design standards, and standard plans and specifications for all street, utility, parks, streetscape, and storm water projects. Most projects are outlined in the Infrastructure Master Plan documents available here: <a href="https://www.ci.tracy.ca.us/?navId=2101">https://www.ci.tracy.ca.us/?navId=2101</a></p>				

		Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Disaster Debris Management Plan		Yes	Yes	No	No
Comment:	N/A				
Floodplain or Watershed Plan		Yes	No	Yes	No
Comment:	N/A				
Stormwater Plan		Yes	No	No	Yes
Comment:	<p>The Storm Drainage Master Plan Update is underway.</p> <p>The Storm Drainage Master Plan (SDMP) includes hydrologic and hydraulic analyses, a conceptual plan for storm drainage infrastructure needed to serve new and existing development areas, probable cost options for new and upgraded infrastructure, policies, impact fee program area descriptions and documentation for existing conditions, facilities, studies, regulations and agreements. The SDMP identifies storm drainage facilities needed to serve future land development projects under the build-out condition for the City's Sphere of Influence and storm drainage facility upgrades needed to correct existing deficiencies. The SDMP also serves as a reference document for existing facilities and their functional characteristics. New development projects will be required to provide site or project-specific solutions that are consistent with the overall infrastructure approach presented in the SDMP.</p>				
Urban Water Management Plan		Yes	No	Yes	Yes
Comment:	<p>Citywide Water System Master Plan Update - 2024</p> <p>The Water System Master Plan evaluates the required backbone potable and recycled water system facilities required to serve buildout of the City's General Plan. Buildout of the City's Sphere of Influence includes existing developed land uses within City limits, on-going development projects infill with approved water supply and assumed future service areas.</p>				
Habitat Conservation Plan		No	Yes	No	Yes
Comment:	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)				
Economic Development Plan		Yes	No	No	Yes
Comment:	<p>City of Tracy's Economic Development Strategic Plan - 2023</p> <p>The Economic Development Division contains various business development and incentive and program resources for commercial, retail, and property owners. Oversight of the Community Block Grant (CDBG) and Housing Program are functions of the City's Economic Development Division.</p>				
Community Wildfire Protection Plan		Yes	No	No	No
Comment:	N/A				
Forest Management Plan		Yes	Yes	No	No
Comment:	N/A				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Climate Action Plan	Yes	No	Yes	Yes
Comment:	Sustainability Action Plan (2011) The City of Tracy adopted a Sustainability Action Plan (SAP) in 2011 as part of the City's on-going efforts to transform Tracy into a leader for environmental, economic, and social sustainability. The SAP is a detailed, long-range strategy to achieve sustainability in the sectors of greenhouse gas (GHG) emissions, energy, transportation and land use, solid waste, water, agriculture and open space, biological resources, air quality, public health, and economic development. It establishes targets for a range of sustainability topics and sets forth measures to assist the City in achieving those goals. In the future, the climate adaptation strategies or hazard mitigation actions that focus on climate adaptation can be integrated into the Sustainability Action Plan.			
Threat & Hazard Identification & Risk Assessment (THIRA)	No	Yes	No	No
Comment:	A THIRA has been developed for San Joaquin County as part of this plan update			
Post-Disaster Recovery Plan	No	No	No	No
Comment:	N/A			
Continuity of Operations Plan	No	No	No	Yes
Comment:	N/A			
Public Health Plan	No	No	Yes	Yes
Comment:	N/A			
Emergency Operations Plan				
Comment:	The City of Tracy adopted their Citywide Public Safety Master Plan Update in 2023.			
Other -	No	Yes	No	Yes
Comment:	The City of Tracy contains numerous infrastructure master plans for new development in the City's Planning Area. These include the Citywide Parks Master Plan, Public Facilities Master Plan, Public Safety Master Plan, Wastewater Master Plan, Water System Master Plan, Transportation Master Plan, Storm Drainage Master Plan, and the Sustainability Action Plan.			

### Opportunities to Expand Planning and Regulatory Capabilities

- Building and Zoning Codes – prior to the adoption of the next building and zoning codes, the City will review the LHMP and integrate hazard-related information where necessary.
- Stormwater Management Plan has not been updated since 2013; during the next update, the City will review the LHMP and integrate hazard-related information where necessary.
- The City will review the mitigation strategies identified in the LHMP and add them to the list of projects in the Capital Improvement Plan, where applicable.

- The Storm Drainage Master Plan was prepared in 2012 and the update is underway. During the update, the City will review the LHMP and integrate hazard-related information where necessary.
- Sustainability Action Plan was adopted in 2011 and has not been updated since adoption; during the next update, the City will review the LHMP and integrate hazard-related information where necessary.
- Refer to Table 10-14 for a mitigation action to integrate the following plans and codes:
  - Municipal Code including Building code, Zoning Code, Subdivisions, Stormwater Management, Growth Management Ordinance, Site Plan Review, Environmental Protection, Emergency Management
  - Capital Improvement Plan
  - General Plan update
  - Citywide Water Systems Master Plan
  - San Joaquin County Multi-Species Habitat Conservation and Open Space Plan
  - Economic Strategic Master Plan

### 10.4.2 Development and Permitting Capabilities

Jurisdictions 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 lead to hazard mitigation. Development and permitting capabilities are presented in Table 10-4.

**Table 10-4 Development and Permitting Capabilities**

Criterion	Response
Does your jurisdiction issue development permits?	Yes
If no, who does? If yes, which department?	Community and Economic Development Department
Does your jurisdiction track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	Yes

### 10.4.3 Fiscal Capabilities

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. An assessment of fiscal capabilities is presented in Table 10-5.

**Table 10-5 Fiscal Capabilities**

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

Financial Resource		Accessible or Eligible to Use?
User Fees for Water, Sewer, Gas or Electric Service		Yes
If yes, specify:	Water, Sewage, Storm Drain	
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

### Opportunities to Expand Fiscal Capabilities

The City will explore the various funding options to identify resources to fund mitigation strategies identified in this MJHMP.

#### 10.4.4 Administrative and Technical Capabilities

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 10-6.

**Table 10-6 Administrative and Technical Capabilities**

Staff/Personnel Resource		Available?
Planners or engineers with knowledge of land development and land management practices		Yes
If Yes, Department /Position:	Director of Community and Economic Development Director	
Engineers or professionals trained in building or infrastructure construction practices		Yes
If Yes, Department /Position:	Chief Building Official (Community and Economic Development)	
Planners or engineers with an understanding of natural hazards		Yes
If Yes, Department /Position:	Chief Building Official (Community and Economic Development) GIS Specialist/Meter Reader (Public Works)	
Staff with training in benefit-cost analysis		Yes
If Yes, Department /Position:	Human Resources, Manager	
Surveyors		Yes
If Yes, Department /Position:	Engineering, Land Surveyor	

Staff/Personnel Resource		Available?
Personnel skilled or trained in GIS applications		Yes
If Yes, Department /Position:	GIS Technician (Information Technology/GIS Division)	
Scientist familiar with natural hazards in local area		Yes
If Yes, Department /Position:	Utilities, Water Operations Specialist & Superintendent	
Emergency manager		Yes
If Yes, Department /Position:	City Manager's Officer, Assistant City Manager	
Grant writers		Yes
If Yes, Department /Position:	Per Department, Decentralized	
Procurement Services and Management		Yes
If Yes, Department /Position:	Per Department, Decentralized	

### Opportunities to Expand Administrative and Technical Capabilities

Administrative and technical capabilities are a community's staff, skills and tools. These capabilities can be used for mitigation planning and to carry out specific mitigation actions. They also include the ability to access, coordinate and implement these resources effectively (FEMA 2023). An assessment of administrative and technical capabilities is presented in Table 10-6.

### 10.4.5 Education and Outreach Capabilities

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 10-7.

**Table 10-7 Education and Outreach Capabilities**

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
If yes, briefly describe:	Local Hazard Mitigation Plan
Do you use social media for hazard mitigation education and outreach?	Yes
If yes, briefly describe:	Cooperation through Police Department, South County Fire, City Hall and San Joaquin County Office of Emergency Services
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
If yes, briefly describe:	South County Fire has a volunteer CERT program

Criterion		Response
Do you have any other programs in place that could be used to communicate hazard-related information?		Yes
If yes, briefly describe:	Social Media Outreach	
Do you have any established warning systems for hazard events?		Yes
If yes, briefly describe:	Alert OC – A City-wide mass notification system: Reverse 911 City cable channel	

### Opportunities to Expand Education and Outreach Capabilities

The City currently has an outreach program that provides information regarding hazards and their impacts to their residents via social media and the website. The City will update their outreach programs as needed.

### 10.4.6 Community Classifications

Other programs, such as the Community Rating System and NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 10-8.

**Table 10-8 Community Classifications**

	Participating?	Classification or Number	Date Classified
Federal Information Processing Standards (FIPS) Code	Yes	06-077-80238	N/A
Unique Identity ID (UEI)	Yes	NNLSG8XLKRC8	N/A
Community Rating System (CRS)	No	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	Yes	2	5/20/2016
Public Protection (ISO for Fire Districts)	Yes	City of Tracy Class 2 Tracy Rural Fire Protection District Class 3/3Y	Unknown
NWS StormReady	No	N/A	N/A
Firewise USA	No	N/A	N/A

### 10.4.7 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The community’s adaptive capacity for the impacts of climate change is presented in Table 10-9.

**Table 10-9 Adaptive Capacity for Climate Change**

Criterion		Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>		
Jurisdiction-level understanding of potential climate change impacts		Low
Jurisdiction-level monitoring of climate change impacts		Low
Technical resources to assess proposed strategies for feasibility and externalities		Unsure
Jurisdiction-level capacity for development of greenhouse gas emissions inventory		Unsure
Capital planning and land use decisions informed by potential climate impacts		Low
Participation in regional groups addressing climate risks		Medium
Comment:	San Joaquin Regional Climate Collaborative	
<b>Implementation Capacity</b>		
Clear authority/mandate to consider climate change impacts during public decision-making processes		Low
Identified strategies for greenhouse gas mitigation efforts		Medium
Comment:	Sustainability Action Plan	
Identified strategies for adaptation to impacts		Medium
Comment:	Sustainability Action Plan	
Champions for climate action in local government departments		Low
Political support for implementing climate change adaptation strategies		Medium
Comment:	Sustainability Action Plan	
Financial resources devoted to climate change adaptation		Low
Local authority over sectors likely to be negative impacted		Low
<b>Public Capacity</b>		
Residents' knowledge of and understanding of climate risk		Low
Residents' support of adaptation efforts		Low
Residents' capacity to adapt to climate impacts		Medium
Comment:	Sustainability Action Plan	
Local economy current capacity to adapt to climate impacts		Unsure
Local ecosystems capacity to adapt to climate impacts		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 National Flood Insurance Program Compliance

Flooding is the costliest natural hazard in the United States. Community participation in the NFIP opens up opportunities for additional grant funding associated specifically with flooding issues. Assessment of the jurisdiction’s current NFIP status and compliance provides planners with a greater understanding of the local flood management program, opportunities for improvement, and available grant funding opportunities. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 10-10.

**Table 10-10 National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Community and Economic Development Department
Who is your floodplain administrator? (department/position)	Chief Building Official/Floodplain Manager
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	2019
Does your floodplain management program meet or exceed minimum requirements?	Yes
When was the most recent Community Assistance Visit or Community Assistance Contact?	April 2019
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
If so, what type of assistance/training is needed?	Refamiliarize with requirements
Does your jurisdiction have a Substantial Damage Response Plan?	Yes
How does your jurisdiction assess substantial damages after a hazard event?	If cost of repair is more than 50% market value
Does your jurisdiction participate in the Community Rating System (CRS)?	No
If yes, is your jurisdiction interested in improving its CRS Classification?	N/A
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup>	47
What is the insurance in force?	\$18,710,000
What is the premium in force?	\$39,344
How many total loss claims have been filed in your jurisdiction? <sup>a</sup>	10
What were the total payments for losses?	\$ 18,652

a. According to FEMA statistics as of 12/2025

## 10.6 Integration

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.

### 10.6.1 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, Capital Improvement Plan, Stormwater Plan, Urban Water Management Plan, Economic Development Plan, Climate Action Plan, Citywide Parks Master Plan, Public Facilities Master Plan, Public Safety Master Plan, Wastewater Master Plan, Water System Master Plan, Transportation Master Plan, and Storm Drainage Master Plan all have the ability to broadly integrate the goals and objectives identified in the hazard mitigation plan when updates occur.
- Building code, zoning code, subdivision, stormwater management, real estate disclosure, growth management, site plan review, flood damage prevention, and emergency management have the ability to consider additional mitigation and abatement measures when amendments occur.

## 10.7 Risk Assessment

### 10.7.1 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.

**Table 10-11 Past Natural Hazard Events**

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/2023	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	CA23-1	1/4/23	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the City did not identify any additional damages associated with this event.
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	Staff physical and mental wellbeing, workplace safety concerns, work from home issues

### 10.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for the City of Tracy is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the City in identifying hazards that pose the most significant threat. 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.

**Table 10-12 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability (1-4 index value with 30% weighting factor)	Impact (1-4 index value with 30% weighting factor)	Spatial Extent (1-4 index value with 20% weighting factor)	Warning Time (1-4 index value with 10% weighting factor)	Climate Change (1-4 index value with 10% weighting factor)		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.3	.9	.2	.1	.3	1.8	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

Notes:

PRI Value 1 to 1.9 = Low Hazard Risk Ranking

PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking

PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### **10.7.3 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: 1
- 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:

- The City did not identify any other vulnerabilities.

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

## 10.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Status of Prior Plan Actions
- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 10-13 Status of Prior Plan Actions**

Project Number	Project Name and Description	Responsible Party	Status (No Progress, In Progress, Complete, Ongoing Capability)  Provide a brief explanation of implementation process.	Should the action be included in the Plan Update (i.e., there is still a need, this is still a priority)?	
				Yes/No  If no, explain why not including in the Update	If yes, provide an update on the problem and solution.
D-1	Work with dam owners, reclamation districts, and San Joaquin County to update dam and levee assessments on potential impacts and inundation areas and develop land use standards and emergency response and evacuation plans based on the information	CED Land Development	XX	No, this is not a Utilities function. The City does not conduct levee assessments, that is the county. Maybe CED due to land use standards	
D-2	Create Emergency Action Plans for dams and levees posing a risk of flooding	CED Land Development	XX	Again, maybe Land Development - CED	
DR-1	Public outreach campaign on water conservation practices during drought conditions	City Utilities Department	XX	Yes	Continue to provide educational outreach to customers regarding water efficiency.

Project Number	Project Name and Description	Responsible Party	Status (No Progress, In Progress, Complete, Ongoing Capability)  Provide a brief explanation of implementation process.	Should the action be included in the Plan Update (i.e., there is still a need, this is still a priority)?	
				Yes/No  If no, explain why not including in the Update	If yes, provide an update on the problem and solution.
DR-2	Groundwater supply augmentation for drought resiliency	City Utilities Department	XX	Yes	Groundwater is high in salinity and other nutrients therefore not a viable single source. Must be used in conjunction with other water supplies – blended.
E-1	Earthquake building safety and retrofitting	City Building Safety and Fire Prevention Division	XX		
E-2	Earthquake drill and safety education for all residents	City Building Safety and Fire Prevention Division	XX		
EH-1	Extreme heat outreach campaign targeted for vulnerable populations	City Parks, Recreation, & Community Services Department	XX		
F-1	Flood safety and adopt and drain program	City Public Works Department	XX		
F-2	Consider joining Community Rating System (CRS) to promote affordable flood insurance	City Building Safety and Fire Prevention Division	XX		

Project Number	Project Name and Description	Responsible Party	Status (No Progress, In Progress, Complete, Ongoing Capability)  Provide a brief explanation of implementation process.	Should the action be included in the Plan Update (i.e., there is still a need, this is still a priority)?	
				Yes/No  If no, explain why not including in the Update	If yes, provide an update on the problem and solution.
H-1	Hazardous materials spill preparedness	Fire Department, Police Department	XX		
S-1	Consider becoming a StormReady® community	City Public Works Department	No Progress	Yes, research and good transparency	No issue
T-1	Enhance local building code to incorporate wind-resistant design features that address wind and tornado hazards	City Building Safety and Fire Prevention Division	XX		
T-2	Plan around forced blackouts	City Manager's Office	XX		
W-1	Fire Wise public education	Fire Department	XX		
W-2	Create and modify automatic aid agreements	Fire Department	XX		
W-3	Enhance local building code to address wildfire resilience	Fire Department	XX		
MH-1	Family preparation planning for emergency preparedness	City Manager Office	XX		
MH-2	Hazard Awareness GIS Mapping Application	IT / GIS Department	XX		
MH-3	Update Comprehensive Emergency Management Plan	Fire Department	XX		

Project Number	Project Name and Description	Responsible Party	Status (No Progress, In Progress, Complete, Ongoing Capability)  Provide a brief explanation of implementation process.	Should the action be included in the Plan Update (i.e., there is still a need, this is still a priority)?	
				Yes/No  If no, explain why not including in the Update	If yes, provide an update on the problem and solution.
MH-4	Establish routine inspection and maintenance of City infrastructure	City Public Works Department	XX		

Table 10-14 Hazard Mitigation Action Plan Matrix

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter; Energy; Communications; Transportation	Existing	1, 3, 4	Lead: City Engineer/Emergency Services Support: Public Works	Yes	Very High (\$1,000,000 and above)	Staff Time, FEMA HMGP and FMA, General Fund	Long-Term (5 years or more)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
2	<p>Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including:</p> <ul style="list-style-type: none"> <li>• Municipal Code (Building code, Zoning Code, Subdivisions, Stormwater Management, Growth Management Ordinance, Site Plan Review, Environmental Protection, Emergency Management</li> <li>• Capital Improvement Plan</li> <li>• General Plan update</li> <li>• Citywide Water Systems Master Plan</li> <li>• San Joaquin County Multi-Species Habitat Conservation and Open Space Plan</li> <li>• Economic Strategic Master Plan</li> </ul>	Safety and Security; Communications; Transportation; Water Systems	New	6	Lead: City Engineer/Emergency Services Support: Public Works	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
3	Continue to maintain good standing and compliance under the NFIP through implementation of floodplain	Any lifelines exposed to flooding	New, Existing	1,2	Lead: City Engineer/Emergency Services	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	<p>management programs that, at a minimum, meet the NFIP requirements:</p> <ul style="list-style-type: none"> <li>Evaluate the current floodplain ordinance to determine if updates are needed</li> <li>Update and adopt the City's floodplain ordinance to meet the minimum requirements of the NFIP</li> <li>Seek training opportunities for staff to refamiliarize with requirements</li> </ul>				Support: Public Works				than 5 years)
4	<p>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"> <li>Public Facilities Master Plan</li> <li>Public Safety Master Plan</li> <li>Wastewater Master Plan,</li> <li>Transportation Master Plan</li> </ul>	Communications; Safety and security	New, Existing	1,3	Lead: CDD/Planning Support: Public Works/City Engineer	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
5	Purchase generators for City-owned critical facilities and infrastructure that lack adequate backup power.	Safety and security; Energy; Communications	Existing	6	Lead: Public Works	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
6	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	N/A	N/A	1,3,4,7	Lead: City Engineer/Emergency Services Support: Public Works	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
7	Join NWS StormReady program	Safety and security	New, Existing		Lead: Emergency Services	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

**Table 10-15 Mitigation Action Prioritization**

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	0	3	3	3	3	1	0	3	3	3	1	3	3	3	3	35	High
#4	1	1	3	1	1	1	1	3	3	1	3	3	1	3	3	30	Medium
#5	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium
#6	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#7	3	1	1	3	3	1	0	1	3	3	3	3	3	3	3	34	High

Notes:  
 31 or more = High Priority  
 15 to 30 = Medium Priority  
 0 to 14 = Low Priority

Table 10-16 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■		■		■						■		
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■	■	■		■		■					■		■	■		
#4	■				■			■	■	■				■	■		■
#5	■	■			■		■			■		■	■	■		■	■
#6	■		■				■	■	■	■	■	■	■	■	■	■	■
#7	■		■		■	■	■					■	■	■			

## 10.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 10-17.

**Table 10-17 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Supported the countywide outreach efforts for this plan including promoting the public survey.	Throughout the planning process	TBD

## 10.10 Information Sources Used for This Annex

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

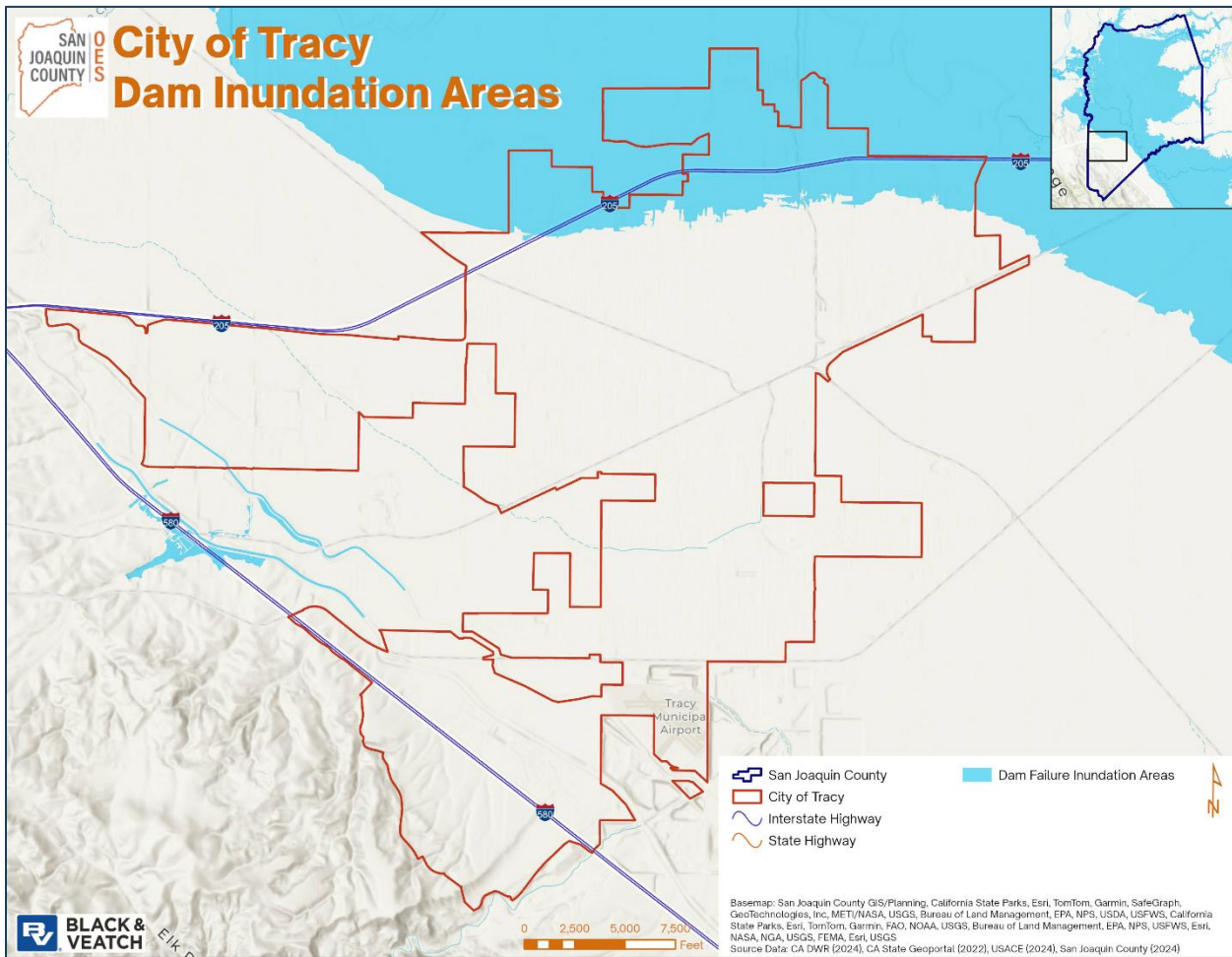
- City of Tracy Local Hazard Mitigation Plan 2020 – Used to provide content for the jurisdictional profile, reviewed for capabilities updates, and mitigation action reconciliation.

The following outside resources and references were reviewed:

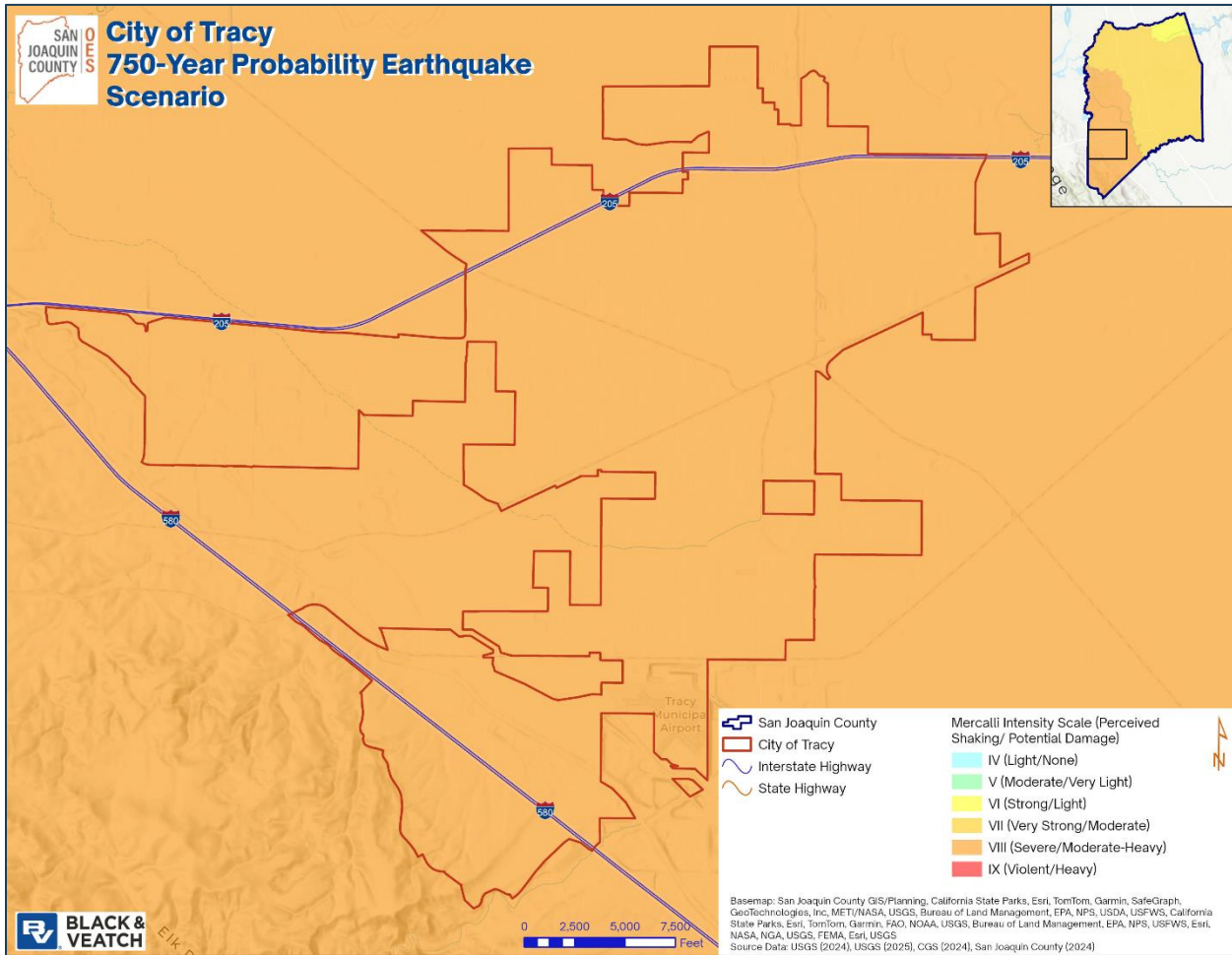
- Hazard Mitigation Plan Annex Development Toolkit—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

## 10.11 Hazard Mapping

Jurisdiction-specific risk maps of the hazards are provided on the following pages. For a complete description of each hazard, please see the applicable chapters in Volume 1 of this plan. These maps are based on the vulnerability and risk assessment results for this plan.



**Figure 10-1 Dam Inundation Areas**



**Figure 10-2 750-Year Probability Earthquake Scenario**

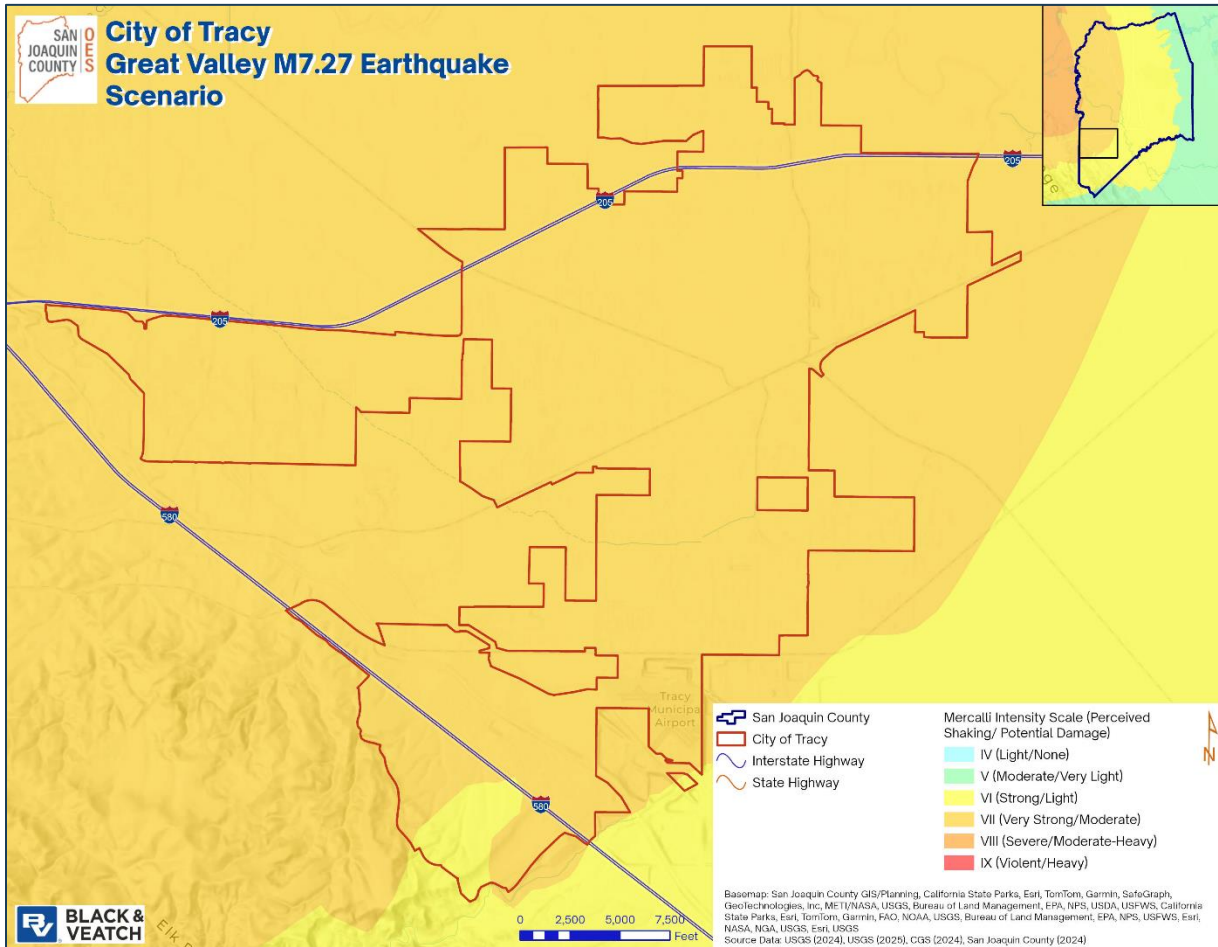


Figure 10-3 Great Valley M7.27 Earthquake Scenario

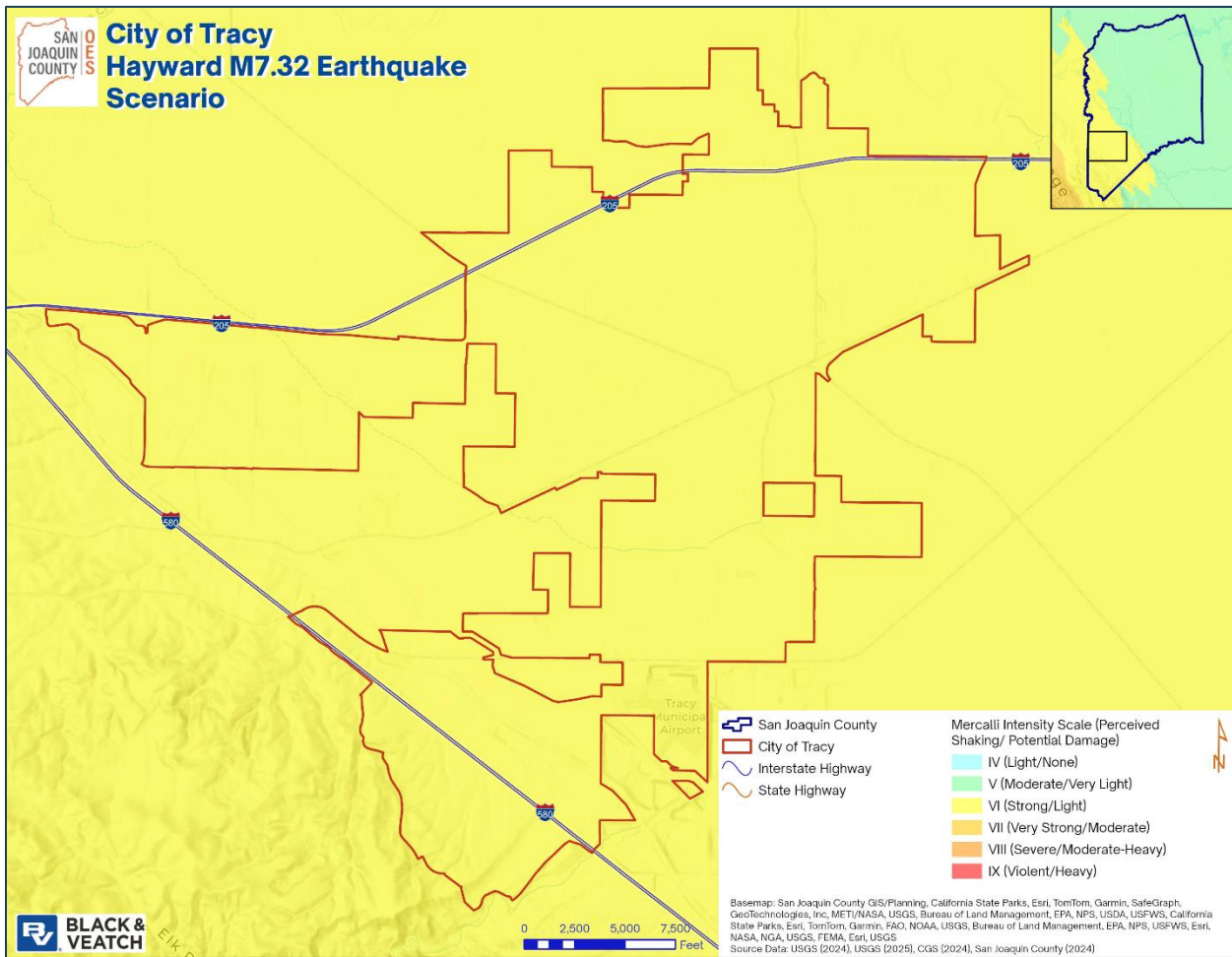


Figure 10-4 Hayward M7.32 Earthquake Scenario

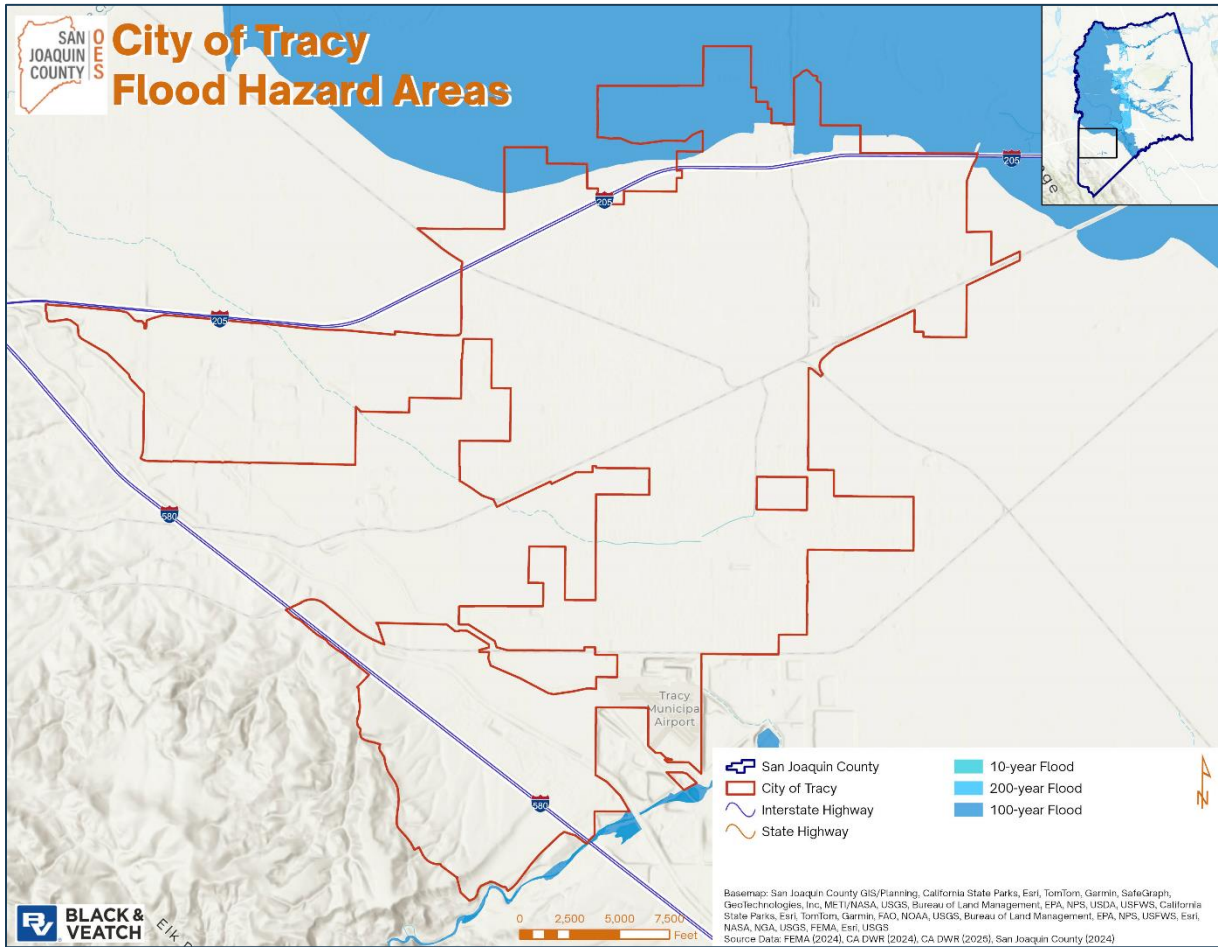
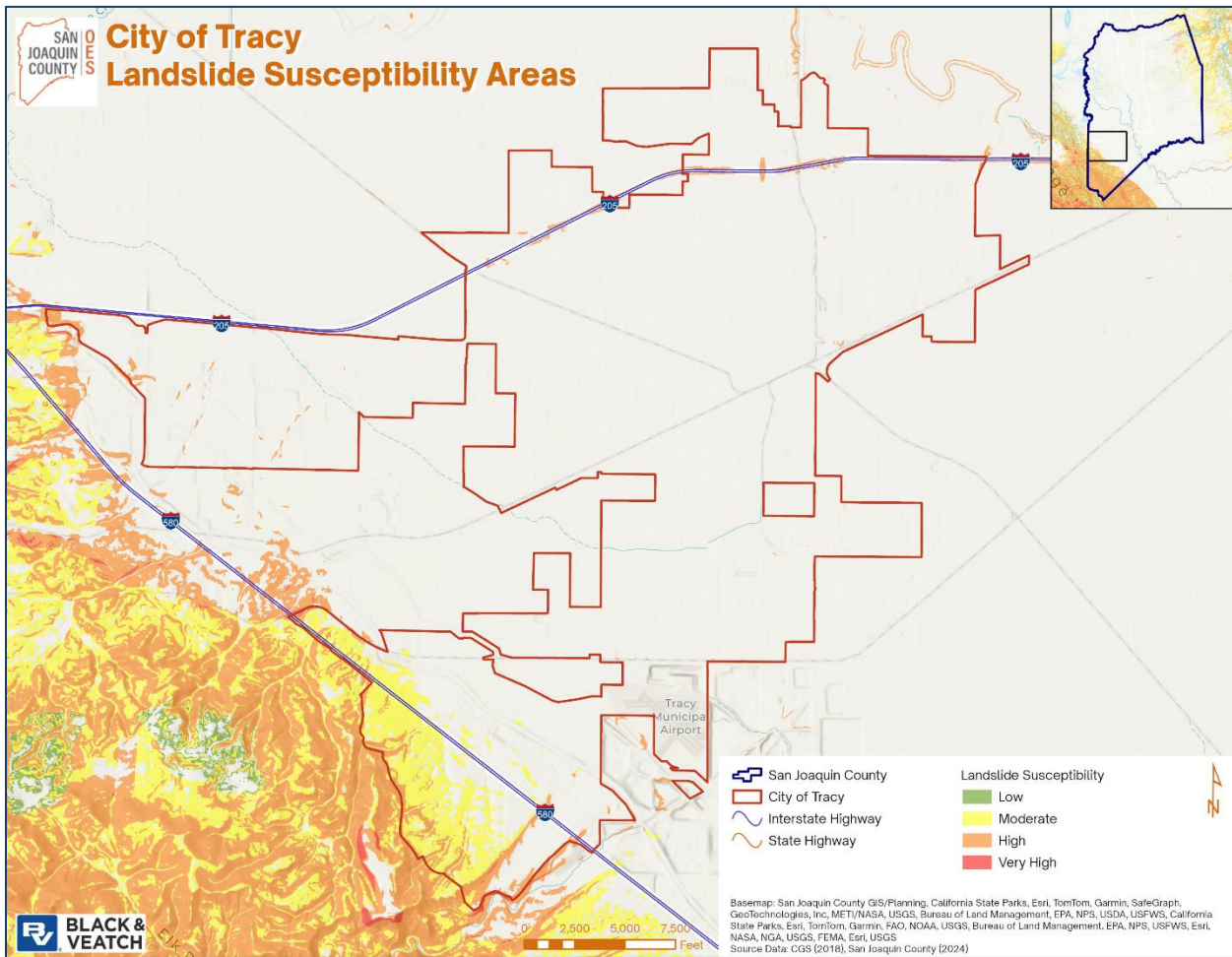
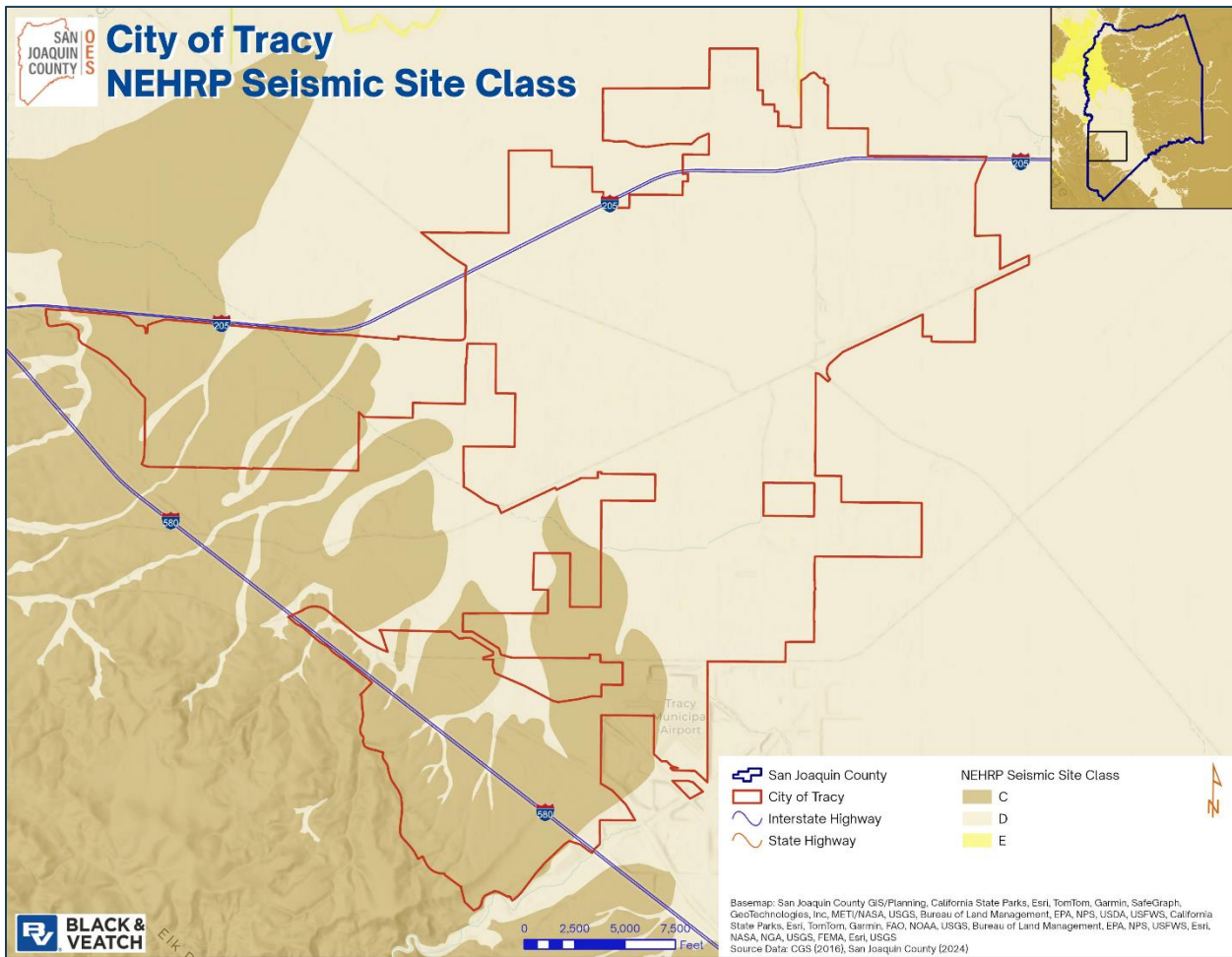


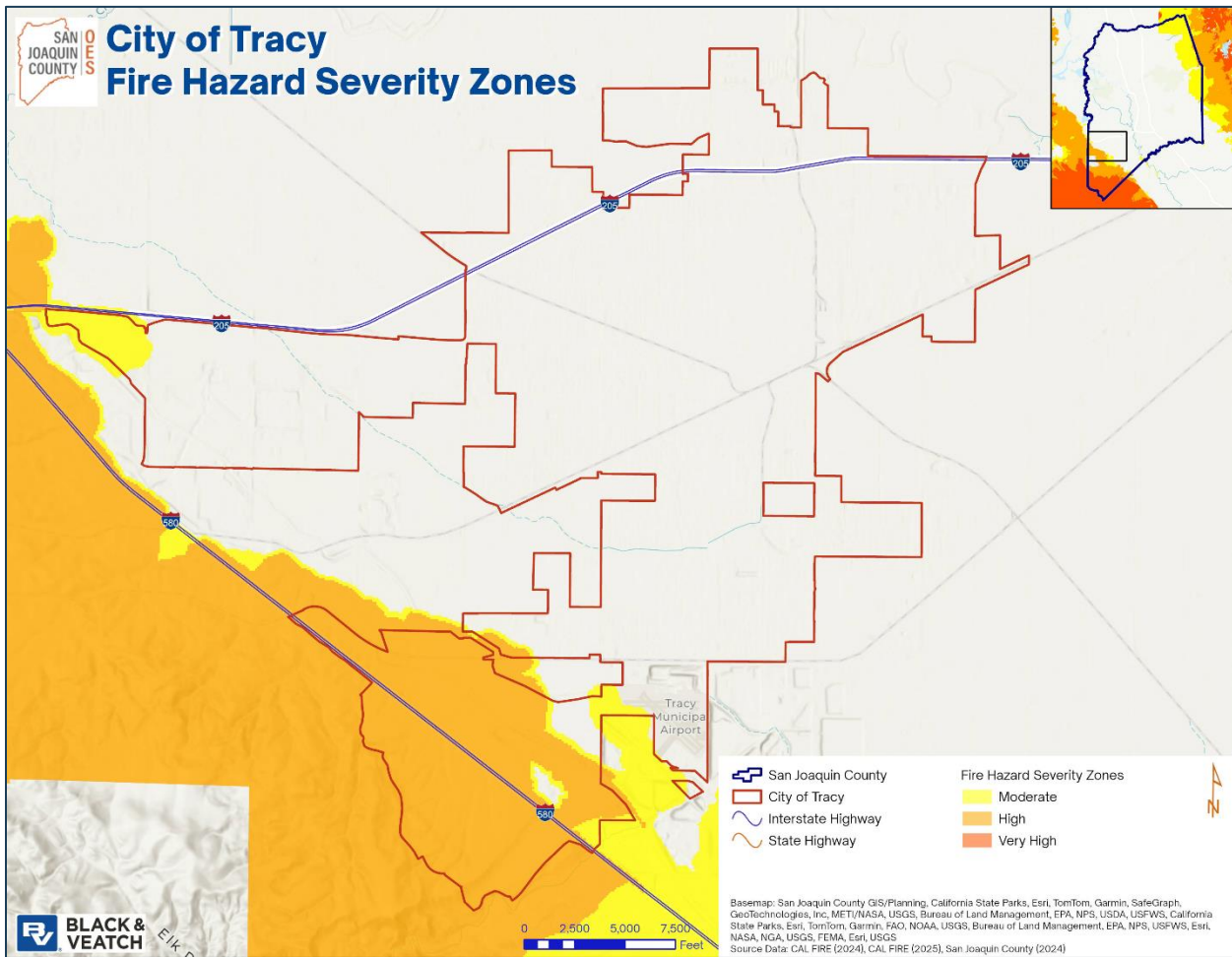
Figure 10-5 Flood Hazard Areas



**Figure 10-6 Landslide Susceptibility Areas**



**Figure 10-7 NEHRP Seismic Site Class Soils**



**Figure 10-8 Fire Hazard Severity Zones**

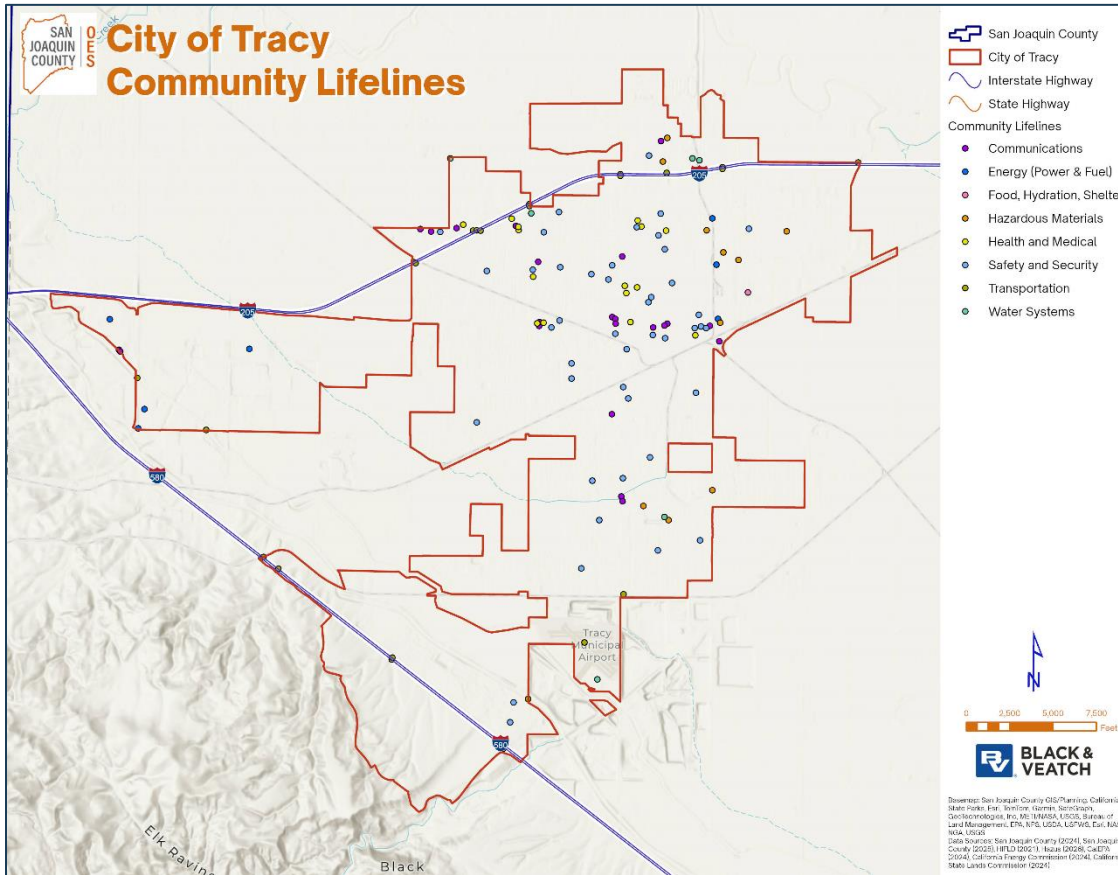


Figure 10-9 Community Lifelines

## 11. BYRON-BETHANY IRRIGATION DISTRICT

*This Annex is a planning document prepared by the Byron-Bethany Irrigation District for purposes of compliance with the federal Disaster Mitigation Act of 2000 (P.L. 106-390) and is intended to inform the District’s mitigation strategy. Statements herein are forward-looking, subject to change based on Board action, funding availability, and changed conditions, and do not create legal rights, duties, or causes of action on behalf of any third party. Security-sensitive details concerning specific critical facilities, single-point-of-failure analysis, and detailed cybersecurity posture are maintained in confidential appendices not subject to public release, consistent with America’s Water Infrastructure Act Section 2013, CISA guidance, and California Government Code Section 6254(aa).*



Source: Byron-Bethany Irrigation District

### 11.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the Byron-Bethany Irrigation District. Members are listed in Table 11-1.

**Table 11-1 Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Brad Mizuno, Water Resources Specialist	Name and Title:	Nader Shareghi, Assistant General Manager
Address:	7995 Bruns Rd, Byron CA 94514	Address:	7995 Bruns Rd, Byron, CA 94514

Primary Point of Contact		Alternate Point of Contact	
Phone Number:	209-835-0375 ext. 111	Phone Number:	209-835-0375 ext. 105
Email:	<a href="mailto:b.mizuno@bbid.org">b.mizuno@bbid.org</a>	Email:	<a href="mailto:n.shareghi@bbid.org">n.shareghi@bbid.org</a>
Additional Planning Team Members:			
Name and Title:	David Vaz, Operations & Maintenance Supervisor		
Method of Participation:	Contributed information and participated in planning process		
Name and Title:	Joe Resendes, Fleet & Facilities		
Method of Participation:	Contributed information and participated in planning process		

## 11.2 Jurisdictional Profile

### 11.2.1 Overview

Byron-Bethany Irrigation District (BBID) is a special district that was formed in 1914 to provide water to its agriculture customers. It also serves municipal and industrial customers. BBID currently employs 19 employees, and funding comes primarily from rates, water transfers, and property taxes.

The District’s raw water supply is drawn entirely from the Sacramento–San Joaquin Delta via intakes at Old River near the Bethany and Wicklund Cut pump stations. BBID exercises senior pre-1914 appropriative water rights and separately holds a federal Central Valley Project (CVP) West Side Water Service Contract for supplemental supplies. The Sacramento–San Joaquin Delta is the District’s principal source of supply. The District relies on the State Water Project and federal Central Valley Project pumping facilities for conveyance from the Delta. Operational redundancy and source-diversification opportunities are addressed in the District’s Capital Improvement Plan and in the mitigation actions identified in Section 11.8

### 11.2.2 Service Area

Byron-Bethany Irrigation District (BBID) is a multi-county special district serving parts of Alameda, Contra Costa, and San Joaquin Counties across 55 square miles and 36,000 acres. The District serves more than 215 agricultural customers and more than 40,000 residents of the Mountain House community and Tracy Hills.

Contract staffing is provided for the unincorporated community of Byron Sanitary District (Contra Costa County).

The District’s service area is organized into four contiguous service areas: the Byron Service Area, the Bethany Service Area (which includes Tracy Hills), the CVP (Plainview) Service Area, and the West Side Service Area. Raw-water deliveries to the City of Mountain House are made under contract from the Mountain House Raw Water Pipeline.

### 11.2.3 Governance

Byron-Bethany Irrigation District (BBID) is governed by an elected seven-member Board of Directors, which assumes responsibility for the adoption of this plan. The General Manager will oversee the plan’s implementation.

## 11.2.4 Assets

Table 11-2 Assets

Asset	Value
Property	
General Properties	\$21,624,350
Equipment	
Office Equipment	\$165,442
Vehicles	\$2,129,436
Tools and Equipment	\$1,527,162
PL-984 Project	\$2,123,774
CVPSA distribution system	\$792,083
Telemetry	\$261,167
Mariposa energy plant	\$4,716,154
Drainage system	\$594,984
<i>Equipment Total:</i>	<i>\$33,934,552</i>
Critical Facilities	
Pumping plants	\$26,311,915
<i>Total Assets:</i>	<i>\$60,246,467</i>

## 11.2.5 Critical Facilities and Infrastructure

The District owns and operates critical facilities and infrastructure supporting multiple FEMA Community Lifelines—principally Water Systems, with contributions to Energy, Communications, Transportation, and Safety and Security. Consistent with the methodology described in Volume 1, and applying critical-infrastructure risk-assessment principles consistent with EPA and CISA guidance for water utilities, the District has inventoried each critical facility, identified its function and primary lifeline contribution, recorded its location and replacement value (per Table 11-2), and assessed its exposure to each natural hazard ranked in Section 11.7.

## 11.2.6 Categories of District Critical Facilities and Infrastructure

The inventory comprises facilities in the following principal categories:

- Pump stations serving the District’s three service areas
- Raw-water conveyance pipelines, including cross-service-area pipelines under public rights-of-way
- Canals and check structures
- Energy generation facility operated under a District partnership arrangement
- SCADA master and telemetry sites
- District administrative facilities

The aggregate inventory totals approximately \$60.2 million in replacement value, consistent with the asset values reported in Table 11-2.

### 11.2.7 Aggregate Hazard Exposure Summary

Without identifying specific facilities, the District's overall lifeline exposure across the inventory is summarized below:

- Seismic: Pump stations and conveyance pipelines have exposure to mapped active fault zones in the East Bay and northern San Joaquin Valley region; lifeline pipelines crossing fault traces are identified in the Confidential Appendix for further engineering assessment.
- Riverine and Delta-related flooding and levee failure: Facilities in the District's service areas are located behind reclamation district levees protecting against Delta levee failure; the Canal 45 / Kellogg Creek levee breach during the 2022–2023 winter storms is documented in Table 11-9.
- Wildfire: Portions of the District's service area lie within CAL FIRE State Responsibility Area Very High Fire Hazard Severity Zones; facilities in those areas are identified in the Confidential Appendix.
- Severe wind and Public Safety Power Shutoff (PSPS): Facilities dependent on grid power are subject to operational impacts during PSPS events and downed-line outages, as occurred in 2022 and 2025.
- Subsidence: Cross-service-area pipelines have potential exposure to differential settlement.
- Dam failure: Portions of the District's service area are within or adjacent to mapped inundation footprints of upstream dam facilities; facilities in those areas are identified in the Confidential Appendix.

### 11.2.8 Confidential Appendix

A facility-by-facility inventory identifying each critical facility by name, location, function, replacement value, single-point-of-failure designation where applicable, and hazard-specific vulnerability rating is maintained as a Confidential Appendix to this Annex. The Confidential Appendix is not part of the public record and is exempt from disclosure under the California Public Records Act exemption protecting vulnerability assessments of public service utilities (Government Code Section 7929.210, formerly Section 6254(aa), as recodified by AB 473 (2022), and successor provisions); under related CPRA provisions exempting records the disclosure of which is exempted or prohibited pursuant to federal or state law (formerly Section 6254(k)); and consistent with CISA Water and Wastewater Sector guidance and EPA Drinking Water Infrastructure Risk and Resilience guidance.

Access to the Confidential Appendix is limited to the District's Board of Directors, General Manager, designated District staff, and the District's authorized consultants and counsel; FEMA Region IX, the California Governor's Office of Emergency Services, and authorized federal and state mitigation officials reviewing or approving the plan; authorized law enforcement and first-responder agencies coordinating with the District; and such other parties as the General Manager determines to have a legitimate operational, emergency-response, or oversight need consistent with the security purposes of this Appendix. Requests for access from authorized parties should be directed to the District in writing, as designated by the General Manager.

The categories above represent the District's current critical facility profile. The inventory in the Confidential Appendix is updated as facilities are added, modified, or decommissioned, and the District reserves the right to revise the Appendix without amendment to this public plan. The District may provide additional facility-level information to FEMA Region IX, the California Governor's Office of Emergency Services, and other authorized reviewing officials on request without amending this public plan.

## 11.3 Current Trends

The Byron-Bethany Irrigation District originally was formed to serve the Byron and Bethany service areas. The District’s service area expanded throughout the years, consolidating with Plainview Irrigation District in 2004 and West Side Irrigation District in 2015.

Recent and ongoing trends affecting District operations include: continued reduction of CVP allocations during dry years (0% Ag Water Supply Allocations in 2014, 2015, and 2022); increasing State Water Resources Control Board (SWRCB) regulatory action affecting both pre-1914 and post-1914 water rights; population growth in Mountain House (incorporated as a City in 2024) and Tracy Hills, which increases the consequence of any interruption in BBID raw-water delivery; and continuing consolidation pressure on small Delta-dependent water districts. The District has begun work on an Integrated Water Management Plan and is updating its Strategic Plan and Emergency Response Plan to reflect these conditions including the SWRCB’s 2015 enforcement action that interrupted District deliveries pending judicial review.

Land use and development trends within the District’s service area: The Bethany Service Area, particularly Tracy Hills, continues to develop residential housing under City of Tracy and Alameda County jurisdiction. The Mountain House community, incorporated as a City in July 2024, projects population growth from approximately 40,000 to over 50,000 by 2040 per the Mountain House General Plan. The Byron Service Area remains predominantly agricultural with limited development pressure. These trends increase the consequence of any disruption to BBID raw-water delivery—both because more residents depend on the supply and because BBID’s role as the raw-water provider to incorporated municipal customers expands its critical-infrastructure profile. The District’s mitigation strategy (Section 11.8) reflects this by prioritizing investments in the Bethany and West Side service areas, which serve the highest-growth populations.

## 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.

Findings of the capability assessment were reviewed to identify opportunities to expand or improve upon 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.

### 11.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop plans and programs and to implement regulations to protect and serve community members. An assessment of planning and regulatory capabilities is presented in Table 11-3.

**Table 11-3 Planning and Regulatory Capabilities**

Plan, Study or Program	Date of Most Recent Update	Comment
Capital Improvement Plan	Annually	Concurrent with budget approval in February

Strategic Plan	2012	Could be updated
Emergency Response Plan	1991	Update in progress

### **Opportunities to Expand Planning and Regulatory Capabilities**

The planning and regulatory capabilities of the District can be expanded by integrating the 2026 LHMP into the District Strategic Plan and the Capital Improvement Plan as listed in Table 11-11 and below:

- Capital Improvement Plan
- Integrated Water Management Plan(In progress)
- Strategic Plan
- Emergency Response Plan

### **11.4.2 Fiscal Capabilities**

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. An assessment of fiscal capabilities is presented in Table 11-4.

**Table 11-4 Fiscal Capabilities**

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		Yes
If yes, specify:	Water Rates	
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

### **Opportunities to Expand Fiscal Capabilities**

One of the primary objectives in developing the 2026 LHMP is to establish eligibility to pursue FEMA HMA grant funding opportunities. HMA funding streams typically require a 25 percent local match. The District has identified

local funding resources in Table 11-4 that can provide the local match for projects in the mitigation action plan that list HMA grants as a potential primary funding source.

### 11.4.3 Administrative and Technical Capabilities

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 11-5.

**Table 11-5 Administrative and Technical Capabilities**

Staff/Personnel Resource		Available?
Planners or engineers with knowledge of land development and land management practices		Yes
If Yes, Department /Position:	Assistant General Manager	
Engineers or professionals trained in building or infrastructure construction practices		Yes
If Yes, Department /Position:	Contract	
Planners or engineers with an understanding of natural hazards		Yes
If Yes, Department /Position:	Contract	
Staff with training in benefit-cost analysis		Yes
If Yes, Department /Position:	General Manager	
Surveyors		Yes
If Yes, Department /Position:	Contract	
Personnel skilled or trained in GIS applications		Yes
If Yes, Department /Position:	Water Resources Specialist	
Scientist familiar with natural hazards in local area		Yes
If Yes, Department /Position:	General Manager, Assistant General Manger	
Emergency manager		Yes
If Yes, Department /Position:	Assistant General Manger	
Grant writers		Yes
If Yes, Department /Position:	Water Resources Specialist	
Procurement Services and Management		Yes
If Yes, Department /Position:	Fleet/Facilities Coordinator	

### ***Opportunities to Expand Administrative and Technical Capabilities***

Increased capacity is needed in finance staffing to facilitate smooth processes to respond to financial needs.

#### **11.4.4 Education and Outreach Capabilities**

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 11-6.

**Table 11-6 Education and Outreach Capabilities**

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
If yes, briefly describe:	-	
Do you use social media for hazard mitigation education and outreach?		No
If yes, briefly describe:	-	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?		No
If yes, briefly describe:	-	
Do you have any other programs in place that could be used to communicate hazard-related information?		No
If yes, briefly describe:	-	
Do you have any established warning systems for hazard events?		No
If yes, briefly describe:	-	

### ***Opportunities to Expand Education and Outreach Capabilities***

Education and outreach to the public will be expanded through the use of the District website.

#### **11.4.5 Community Classifications**

Other programs, such as NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 11-7.

**Table 11-7 Community Classifications**

	Participating?	Classification / Number	Date Classified
Unique Identity ID (UEI)	Yes	HJDTMJ2M16D5	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	N/A	N/A
Public Protection (ISO for Fire Districts)	Yes	02/2Y	April 1, 2020
NWS StormReady	No	N/A	N/A
Firewise USA	No	N/A	N/A

### 11.4.6 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The District’s adaptive capacity for the impacts of climate change is presented in Table 11-8.

**Table 11-8 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	Low
Jurisdiction-level monitoring of climate change impacts	Low
Technical resources to assess proposed strategies for feasibility and externalities	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
Capital planning and land use decisions informed by potential climate impacts	Low
Participation in regional groups addressing climate risks	Low
<b>Implementation Capacity</b>	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
Identified strategies for greenhouse gas mitigation efforts	Low
Identified strategies for adaptation to impacts	Low
Champions for climate action in local government departments	Low
Political support for implementing climate change adaptation strategies	Low
Financial resources devoted to climate change adaptation	Low
Local authority over sectors likely to be negative impacted	Low
<b>Public Capacity</b>	

Criterion	Jurisdiction Rating <sup>a</sup>
Residents’ knowledge of and understanding of climate risk	Low
Residents’ support of adaptation efforts	Low
Residents’ capacity to adapt to climate impacts	Low
Local economy current capacity to adapt to climate impacts	Low
Local ecosystems capacity to adapt to climate impacts	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.

Climate change is projected to affect District operations along several pathways: reduced Sierra Nevada snowpack and earlier runoff reduce CVP allocations available to BBID; sea-level rise and reduced Delta outflow increase salinity intrusion risk at BBID’s Old River intakes; longer and hotter periods of extreme heat increase agricultural evapotranspiration and customer water demand at the same time that available supply is reduced; more frequent atmospheric-river events stress Delta levees protecting BBID infrastructure; and warmer surface waters increase the frequency and severity of harmful algal blooms in source water. The District’s adaptive capacity is currently rated Low across most criteria, indicating that focused investment in technical assessment, planning, and partnerships will be required to keep pace with these climate-driven risks.

## 11.5 National Flood Insurance Program Compliance

Districts are not eligible to participate in the National Flood Insurance Program (NFIP). However, any new assets or infrastructure developed by the District is in compliance with the floodplain regulations established by the surrounding municipal entities.

Per 44 CFR 59.22, NFIP community membership is limited to incorporated communities with floodplain regulatory authority; special districts such as BBID are not eligible to enroll as a community member. The District’s assets are nevertheless located within the floodplain regulatory jurisdictions of San Joaquin County, Contra Costa County, Alameda County, the City of Tracy, the City of Mountain House, and the Town of Byron (unincorporated). New BBID infrastructure constructed in any of these jurisdictions complies with the host community’s adopted floodplain management ordinance and the locally adopted FEMA Flood Insurance Rate Maps (FIRMs) effective for each county.

The District maintains no NFIP-insured structures, holds no Repetitive Loss or Severe Repetitive Loss properties, and to the District’s knowledge does not own any habitable structures within mapped Special Flood Hazard Areas (Zone A, AE, or AO). [BBID to confirm via GIS overlay of asset locations on current FIRMs; if any assets are within an SFHA, identify the asset, host community, and applicable floodplain management ordinance.]

## 11.6 Integration

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.

### 11.6.1 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 Improvements Plan – Will integrate mitigation projects among both plans

Emergency Response Plan – Will use hazard data and mapping developed for the HMP in the update to the Emergency Response Pre-Incident Plan

Integrated Water Management Plan (in progress) – Will incorporate HMP hazard rankings, source-water reliability findings, and pump-station criticality into the planning framework for water supply, conservation, and conjunctive use.

Strategic Plan – Update in progress; will incorporate hazard mitigation goals and risk-informed capital prioritization from the HMP.

Groundwater Sustainability Plans (Tracy Subbasin and Eastern San Joaquin Subbasin) under SGMA – drought-resilience strategies that benefit both surface- and groundwater supplies. Coordinate, in an interested-party capacity, with the applicable Groundwater Sustainability Agencies on conjunctive-use opportunities.

Mutual Aid – Pursue California Water/Wastewater Agency Response Network (CalWARN) membership and formal mutual-aid agreements with neighboring water purveyors (City of Mountain House, City of Tracy, Mountain House CSD) for emergency response coordination.

## 11.7 Risk Assessment

### 11.7.1 Jurisdiction-Specific Natural Hazard Event History

Table 11-9 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 11-9 Past Natural Hazard Events**

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/2023	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	Broken levy along canal 45/Kellogg Creek.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	CA23-1	1/4/23	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	PSPS – reduced pumping capacity during outages.
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	The District was subject to closures and social distancing/masking requirements.

The District also identified the following impactful hazard events that did not result in federal or state disaster declarations:

- 2014-2015, 2022 – 0% CVP Ag Water Supply Allocation
- 2015 – Pre-1914 & Post-1914 Water supply curtailment (SWRCB)
- 2025 - PSPS – Wildfire/wind precautions
- 2025 - PG&E Transformer Failure – impacted West Side Service Area – shut down pump station to 6500 irrigated acres
- 2020-2025 - 107-year-old pumps at Wicklund Pump Station failure – unable to obtain parts for obsolete pumps
- 2015-2025 – pipeline leakage from on-farm issues

2006–2025: Pump cavitation events at Wicklund Cut Pump Station caused by low tides and high pumping from federal and state pumping plants.

2006-2025: Pump cavitation events at Pump Station 1 North due to high pumping, aquatic treatments, and tidal influence from SWP inlet channel.

### 11.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for the Byron-Bethany Irrigation District is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the District in identifying hazards that pose the most significant threat. Table 11-10 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 the economy.

The District reviewed Volume 1’s planning area hazard list and confirms that all 11 natural hazards identified there are also relevant to the District. No additional hazards beyond Volume 1’s set were identified during the District’s risk assessment as warranting a separate jurisdiction-level profile. Hazards not addressed in this PRI table—including tornado, volcanic eruption, and tsunami—were considered and excluded as having negligible probability or no plausible exposure pathway within the District’s service area.

**Table 11-10 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.6	.8	.1	.4	3.1	High
Earthquake	.3	1.2	.8	.4	.3	3.	High
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.3	.9	.6	.1	.3	2.2	Medium
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium
<i>Notes:</i> PRI Value 1 to 1.9 = Low Hazard Risk Ranking PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking PRI Value 3.0 to 4.0 = High Hazard Risk Ranking							

### 11.7.3 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.

#### 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:

- Low tide events and high pumping from federal and state facilities cause pump cavitation, halting operations at pump stations and disrupting water distribution until water levels return to suitable conditions for pumping.

- Strong wind events may cause downed power lines or power outages, disrupting the power supply to facilities and affecting water pumping operations.

Chemical spills, such as pesticides or herbicides, into canals and waterways could contaminate the water supply, impacting the system’s ability to distribute water.

Source water dependency on the Sacramento–San Joaquin Delta. All District raw water is drawn from the Delta. Delta levee failure, salinity intrusion driven by sea-level rise and reduced outflow, and harmful algal blooms. The Victoria Island levee incident (2025) is illustrative of the levee-failure pathway in the immediate vicinity of BBID intakes that could interrupt or degrade the District’s principal water source.

Regulatory curtailment risk. SWRCB curtailment of pre-1914 and post-1914 appropriative water rights during drought emergencies, and reduction of federal CVP allocations, can cut District deliveries to zero in dry years (occurred in 2014, 2015, and 2022). This risk is not captured in the natural-hazard PRI but is the most significant operational risk to the District.

Levee dependency. District pump stations, canals, and pipelines sit behind or cross reclamation district levees (including the Byron Tract, Victoria Island, and adjacent levee systems). Failure of these levees during a flood event would directly damage BBID infrastructure, as occurred during the 2022–2023 winter storms when a portion of Canal 45 / Kellogg Creek levee was breached.

Seismic vulnerability of lifeline pipelines. The Mountain House Raw Water Pipeline and the UPRR pipeline crossing are critical to deliveries to Mountain House and the West Side Service Area; both cross or run parallel to mapped Holocene faults (Greenville, Midway). Pump stations and welded-steel/PVC pipelines have not been formally assessed for seismic vulnerability.

Wildland-urban interface exposure of Bethany Service Area assets. The Bethany Service Area (including Tracy Hills) abuts the Diablo Range foothills. Bethany Reservoir and PS1-S, the only pump station feeding the Bethany Service Area, sit within or adjacent to CAL FIRE State Responsibility Area (SRA) and Local Responsibility Area Very High Fire Hazard Severity Zones.

Cyber risk to operational technology systems. The District’s cybersecurity posture and operational technology resilience are addressed under Action 19. Detailed posture information is maintained outside this public plan consistent with EPA and CISA guidance for water utilities.

The following quantitative impact estimates apply to BBID assets and customers:

- Population dependent on continuous BBID raw-water delivery: approximately 40,000 residents (City of Mountain House and Tracy Hills) plus over 215 agricultural customers.
- Irrigated acreage served: approximately 36,000 acres across 55 square miles in Alameda, Contra Costa, and San Joaquin Counties.
- Total District replacement value at risk: \$60,246,467 (per Table 11-2).
- Acreage at risk to a Wicklund Cut Pump Station failure: 6,500 irrigated acres in the West Side Service Area.
- Structures in mapped FEMA Special Flood Hazard Areas (SFHA): [BBID to confirm via overlay of District asset GIS layer on countywide FIRM panels referenced in Volume 1 risk maps].
- Pump stations located within CAL FIRE State Responsibility Area Very High Fire Hazard Severity Zones: [BBID to confirm; Bethany area assets likely include PS1-S and the Mariposa Energy Project].
- Pump stations located within 1 mile of mapped Holocene-active fault traces (Greenville, Midway, Concord-Green Valley): [BBID to confirm via overlay].

- Pump stations located within the inundation footprint of any high-hazard or significant-hazard dam: Bethany Forebay Dam (DWR) inundation directly affects the Bethany Service Area; reference Volume 1 dam-failure inundation analysis.

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

## 11.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix

The District prioritized mitigation actions through the Priority Risk Index methodology described in Volume 1, Section 17, and through a qualitative benefit-cost screening considering: (1) life safety and customer-delivery continuity, (2) replacement-value-at-risk protected per dollar invested, (3) consequence of inaction given documented past failures, and (4) leverage of FEMA Hazard Mitigation Assistance (HMA) grant funding (25 percent local match per Section 11.4.2). High-cost projects such as Action 9 (Wicklund Cut Pump Station Replacement) are justified by the 6,500 irrigated acres and 20,000+ residents whose deliveries depend on the asset; documented century-old equipment age; and the lack of redundant supply for the City of Mountain House. Low-cost projects (Actions 2, 3) are prioritized for early implementation given low investment, broad benefit, and direct support of FEMA HMA grant application readiness. Formal FEMA Benefit-Cost Analysis will be conducted at the project application stage using the FEMA BCA Toolkit and, where applicable, FEMA Pre-Calculated Benefits.

- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 11-11 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses	Food, hydration, shelter Energy Communications Transportation  Water supply to service areas within BBID boundaries	Existing Assets	1, 3, 4	Lead: General Manager Support:	Yes	Very High (\$1,000,000 and above)	Staff time, General fund, loans, grants, bonds	Long-Term (5 years or more)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	and/or are in high- or medium-risk hazard areas.								
2	Integrate the hazard mitigation plan into other plans that address natural hazards within the service area including: <ul style="list-style-type: none"> <li>• Capital Improvement Plan</li> <li>• Integrated Water Management Plan</li> <li>• Strategic Plan</li> <li>• Emergency Response Plan</li> </ul>	Safety and security Communications Transportation Water Systems  Water delivery to BBID Service Areas	Existing Assets	6  Emergency Plan and plan to update assets	Lead: General Manager Support: Assistant General Manager	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
3	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	Ensure BBID has contingency plan to ensure water delivery to customers	Existing Assets	6  Keep plan updated throughout process	Lead: Water Resources Specialist Support: Assistant General Manager	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)



Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
4	Purchase generators for District-owned critical facilities and infrastructure that lack adequate backup power, including: <ul style="list-style-type: none"> <li>Pump stations</li> </ul>	Safety and security Energy Communications  Byron-Bethany Service Areas and West Side Service Area (Wicklund Pump Station)	New Assets	3, 5  Power to pump stations in case of outage	Lead: Fleet and Facilities Supervisor Support: O&M Supervisor	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
5	Corrosion Protection Survey	<p>Water Systems</p> <p>Protect various metallic assets, including pipelines, hydrants, and other appurtenances, from corrosion to protect the associated infrastructure:</p> <ul style="list-style-type: none"> <li>- BBID Headquarters Hydrants/Risers (anodes)</li> <li>- Mariposa Energy Project Pipeline (Anodes)</li> <li>- Mountain House Raw Water Pipeline (impressed current)</li> <li>- Pump Station 2 &amp; 3</li> </ul>	Existing Assets	4, 5  Protect pipelines from leakage or breaking	<p>Lead: O&amp;M Manager</p> <p>Support: Assistant General Manager</p>	Yes	Low	Staff Time, General Fund	Short-Term
6	SCADA / Telemetry Improvement and Expansion	<p>Water Systems</p> <p>Improving overall efficiency, decrease manpower required for operation, increased control over water movement</p>	Existing Assets / New Assets	4, 5  Control of canals and pump stations	<p>Lead: O&amp;M Manager</p> <p>Support: Assistant General Manager</p>	Yes	Medium	Staff time, General Fund	Short Term

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
7	PS1-S Transformer Replacement	Water Systems, Energy: High Risk transformer – high consequence of failure, as it’s the only pump station supplying the Bethany service area, including Tracy Hills	Existing Assets	1, 4, 5 Update electrical to prevent failures	Lead: O&M Manager Support: Assistant General Manager	Yes	Medium	Staff time, General Fund	Short Term
8	Dutra & Lewis Check Structure Automation (SCADA)	Water Systems: Improving overall efficiency, decrease manpower and allow remove adjustments, increased control over water movement	New Assets	4, 5 Control of canals and pump stations	Lead: O&M Manager Support: Assistant General Manager	Yes	Medium	Staff time, General Fund	Short Term
9	Wicklund Cut Pump Station Replacement	Water Systems: 100+ Year old pumps/pump station, failing intake structures, pipelines, electrical inefficiency, water delivery efficiency improvement, 6,500 irrigated acres at risk, potential secondary water source for City of Mountain House	Existing Assets / New Assets	4, 5 Ensure water delivery reliability for current and future	Lead: General Manager Support: Assistant General Manager	Yes	High	Grants, Loans, Bonds, General Funds, Staff time	Short Term
10	Pump Station 1 North Replacement	Water Systems: Byron Service Area, replace pumps and motors with Variable Frequency Drive,	Existing Assets / Benefits New	4, 5 Ensure water delivery to Byron Service Area	Lead: Assistant General Manager Support: O&M Manager	Yes	High	Grants, General Fund, Bonds, Loans	Short Term

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
		metering, modern electrical							
11	Smith Pumps Replacement	Water Systems: Byron Service Area on-farm controls, improving overall efficiency, and decrease manpower	Existing Assets	4, 5  Control on-farm water delivery	Lead: O&M Manager Support: Assistant General Manager	Yes	High	Staff Time, General Funds	Short Term
12	Turnout Metering and Inventory	Water Systems: System-Wide – outdated metering techniques to estimate daily diversions, improve efficiency and decrease manpower, and ensure compliance with Senate Bill 7	Existing Assets	4, 5  Water efficiency	Lead: O&M Manager Support: Assistant General Manager	Yes	Medium	Staff Time, General Funds	Short Term
13	R Line Pipeline Replacement – Coelho Box 2 to R-10 Box	Water Systems: Byron Service Area, high priority project due to frequent pipeline leaks and damage to pipeline caused by farming activities	Existing Assets	4, 5  Water efficiency to reduce leakage	Lead: O&M Manager Support: Assistant General Manager	Yes	Medium	Staff Time, General Funds	Short Term
14	UPRR Pipeline Rehabilitation	Water Systems: Pipeline replacement under Union Pacific Rail Road leaving Wicklund Pump Station, reduce leakage near City of Mountain House and UPRR	Existing Assets	4, 5  Ensure pipeline efficiency of water to WSSA	Lead: O&M Manager Support: Assistant General Manager	Yes	Medium	Staff Time, General Funds	Short Term

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
15	Upper and Lower Main Canal Gate Improvements	Water Systems: Install automated/smart gates and turnouts in West Side Service Area increasing overall efficiency and reduce spill	New	4, 5  Water use efficiency	Lead: Assistant General Manager Support: O&M Manager	Yes	Medium	Staff Time, General Funds, Grants	Short Term
16	District Chemical Spill Prevention and Response Program	Develop and implement a district-wide chemical spill prevention and response program to reduce the likelihood and severity of pesticide and herbicide releases into canals and waterways. agencies.	New, Existing	4, 5	Lead: O&M Manager Support: Assistant General Manager	Yes	Medium	Grants, Bonds, General Funds, Staff time	Short Term
17	Pump Cavitation Resilience Program	Develop and implement a program to reduce pump cavitation risk and operational downtime during low-tide and high-system-demand periods by improving intake hydraulics, enabling operational flexibility, and strengthening real-time monitoring and coordination with relevant federal/state water operators.	New, Existing	4, 5	Lead: O&M Manager Support: Assistant General Manager	Yes	Very High (\$1,000,000 and above)	Grants, Bonds, General Funds, Staff time	Long-Term (5 years or more)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
18	Drought Resilience and Source-Water Diversification Program	Evaluates off-stream storage feasibility, formalizes water transfer/exchange protocols, and integrates with the District's in-progress Integrated Water Management Plan.	New, Existing	4, 5	Lead: General Manager; Support: Assistant General Manager	Yes	Very High (\$1,000,000 and above)	USBR WaterSMART (Drought Resiliency), DWR IRWM Implementation Grants, FEMA BRIC, EPA Clean Water SRF, General Fund, Bonds	Long-Term (5 years or more)
19	SCADA / ICS Cybersecurity Hardening	Implement an enhanced cybersecurity program for District operational technology systems consistent with EPA and CISA guidance for water utilities. Specific implementation measures are described in the District's internal Cybersecurity Implementation Plan, which is not appended to this public plan.	New, Existing	4, 5	Lead: Water Resources Specialist; Support: Assistant General Manager	Yes	Medium (\$50,000–\$1,000,000)	EPA Water Infrastructure Improvements Grants, CISA technical assistance, FEMA HMGP, General Fund, Staff Time	Short-Term (less than 5 years)
20	Customer Outreach and Hazard Awareness Program	Develop a sustained customer outreach program covering hazard preparedness for BBID's agricultural and municipal customers, including: drought-year	Existing	4, 5, 6	Lead: Water Resources Specialist; Support: Assistant General Manager	Yes	Low (\$0-\$50,000)	General Fund, Staff Time	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
		preparedness, PSPS / wildfire-season operational impacts, water-conservation incentives during curtailment, and emergency contact procedures. Channels include the BBID website (currently does not host hazard information per Section 11.4.4), agricultural customer mailings, public Board meetings, and social media.							
21	Watershed and Riparian Corridor Coordination	Coordinate with the San Joaquin Area Flood Control Agency, surrounding reclamation districts (RD 800 Byron Tract, RD 2059, and adjacent reclamation districts), and the California Department of Fish and Wildlife on Delta levee and riparian corridor maintenance that protects BBID infrastructure. Identify opportunities for nature-based mitigation including riparian	Existing	4, 5	Lead: General Manager; Support: Assistant General Manager	Yes	Low (\$0-\$50,000)	Staff Time, General Fund, DWR Delta Levees Subventions Program	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
		setback maintenance and levee toe protection.							

Table 11-12 Mitigation Action Prioritization

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#4	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium
#5	1	3	3	3	3	3	0	1	0	1	1	3	1	1	1	25	Medium
#6	1	3	3	3	3	3	0	1	0	1	1	3	1	1	1	25	Medium
#7	1	3	3	3	3	3	0	1	0	1	1	3	1	1	1	25	Medium
#8	1	3	3	3	3	3	0	1	0	1	1	3	1	1	1	25	Medium
#9	1	3	3	3	3	3	0	1	0	1	1	3	1	1	1	25	Medium

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#10	1	3	3	3	3	3	0	1	0	1	1	3	1	1	1	25	Medium
#11	1	3	3	3	3	3	0	1	0	1	1	3	1	1	1	25	Medium
#12	1	3	3	3	3	3	0	1	0	1	1	3	1	1	1	25	Medium
#13	1	3	3	3	3	3	0	1	0	1	1	3	1	1	1	25	Medium
#14	1	3	3	3	3	3	0	1	0	1	1	3	1	1	1	25	Medium
#15	1	3	3	3	3	3	0	3	0	1	1	3	1	1	1	27	Medium
#16	3	3	3	1	1	1	3	1	3	1	3	3	3	3	3	35	High
#17	1	1	1	1	1	1	3	3	3	1	3	1	3	3	3	29	Medium

Table 11-13 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■		■		■		■	■	■	■	■	■	■
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■		■				■	■	■	■	■	■	■	■	■	■	■
#4					■		■		■	■			■	■			■
#5		■			■			■									
#6		■			■			■									
#7		■			■			■									
#8		■			■			■									
#9		■			■			■									
#10		■			■			■									
#11		■			■			■									
#12		■			■			■									
#13		■			■			■									
#14		■			■			■									



Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#15		■			■			■						■			
#16	■	■					■		■		■	■		■	■		■
#17	■	■			■				■								■

**11.9 Public Outreach**



*Public Survey Outreach at the BBID Office*

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 11-14.

**Table 11-14 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Website – hazard information	Ongoing	-
Board meeting, open to the public, discussing hazard mitigation	Ongoing	-
Supported the countywide outreach efforts for this plan including promoting the public survey.	Throughout the planning process	TBD

**11.10 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 – referenced to develop the mitigation plan matrix

Emergency Response Plan – Adopted by Board of Directors on April 21, 2026

Strategic Plan (2012) – referenced for governance and goals; update in progress

Integrated Water Management Plan (in progress) – referenced for source-water reliability, conjunctive use, and drought planning

- BBID Water Rights documentation (pre-1914 appropriative rights; CVP West Side Water Service Contract) – referenced for regulatory curtailment risk and supply reliability
- Annual Asset Inventory and Pump Station Condition Reports – referenced for critical-facilities listing and replacement priorities

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.

The Byron-Bethany Irrigation District commits to the plan maintenance process described in Volume 1, Section 17. Specifically:

- The Water Resources Specialist will serve as BBID’s point of contact for annual reporting to San Joaquin County Office of Emergency Services, with the Assistant General Manager as alternate.
- BBID anticipates participating in the annual Fall plan maintenance meeting convened by San Joaquin County OES, subject to staff availability and District resources.
- BBID intends to report progress on each of the mitigation actions in Section 11.8 at least annually
- In the event of a federally or state-declared disaster affecting the District’s service area, BBID will participate in the post-event plan review process described in Volume 1.
- At the 5-year plan update, BBID will revise the capability assessment, refresh hazard rankings, document mitigation action progress, identify new actions, and submit the updated annex to San Joaquin County OES for inclusion in the next MJHMP update.
- The District anticipates incorporating hazard mitigation progress into the annual budget development cycle as workload and staffing permit.

The plan-maintenance commitments stated above are forward-looking planning commitments made for purposes of compliance with the federal Disaster Mitigation Act of 2000 (P.L. 106-390) and FEMA’s Local Mitigation Plan Review Tool. They do not create any rights, duties, or causes of action enforceable by any third party. Implementation is subject to Board approval, available District funding, and changed conditions.

## 12. LINDEN-PETERS RURAL COUNTY FIRE PROTECTION DISTRICT



Source: Linden-Peters Fire Protection District

### 12.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the Linden-Peters Fire Protection District. Members are listed in Table 12-1.

Table 12-1 Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Brandon Ruegsegger, Chief	Name and Title:	Rod Ruegsegger, Captain
Address:	17725 East Highway 26, Linden, CA 95236	Address:	17725 East Highway 26, Linden, CA 95236
Phone Number:	209.887.3710	Phone Number:	209.887.3710
Email:	<a href="mailto:Bruegsegger@lindenfire.org">Bruegsegger@lindenfire.org</a>	Email:	<a href="mailto:Ruegsegger@lindenfire.org">Ruegsegger@lindenfire.org</a>

### 12.2 Jurisdictional Profile

#### 12.2.1 Overview

Since May 10th, 1937, the Linden-Peters Fire District has provided fire protection and emergency response services.

Linden-Peters Fire District is a combination department of full-time and volunteer firefighters. Full-time firefighters work a 48-hour on-duty schedule with 96 hours off-duty. The District’s central focuses are fire protection and suppression, as well as emergency medical services and other types of specialized responses for the District’s residents and visitors.

As of April 1, 2020, the ISO has awarded the Linden-Peters Fire District a rating of 02/2Y. This means that our department exceeds the national average in terms of preparedness and effectiveness.

### 12.2.2 Service Area

The Linden-Peters Fire District features one fire station that serves an area of approximately 127 square miles in the eastern portion of San Joaquin County. The department responds to emergency calls in the communities of Linden, Peters, and surrounding areas. The department also respond automatic-aid to neighboring fire districts and to mutual-aid requests throughout the state.

### 12.2.3 Governance

The Fire Chief assumes responsibility for the adoption of this plan; the Fire Chief will oversee its implementation.

### 12.2.4 Assets

Table 12-2 Assets

Asset	Value
Property	
	\$951,579
Equipment	
Small Tools and Equipment	\$280,479
Apparatus and Vehicles	\$1,693,679
Depreciation	\$-1,209,619
<i>Total:</i>	<i>\$1,716,118</i>

## 12.3 Current Trends

The District is not anticipating significant growth or decline during the planning horizon.

## 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 or improve upon 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.

### 12.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop plans and programs and to implement regulations to protect and serve community members. An assessment of planning and regulatory capabilities is presented in Table 12-3.

**Table 12-3 Planning and Regulatory Capabilities**

Plan, Study or Program	Date of Most Recent Update	Comment
Capital Improvement Plan	2024	
California Fire Code	2022	Establishes minimum requirements to protect against fire hazard.
California Building Code	2022	Establishes minimum building requirements that protect against hazards.
California Fire & Rescue Mutual Aid Plan	2023	Establishes mutual aid support.
San Joaquin County Ordinance 4286 Pertaining to Fire Prevention and Weed Abatement hazards and protect the community effectively	2006	Forces mandatory weed abatement and rubbish removal on private property in unincorporated areas to reduce fire hazards. Enforced by the County Fire Warden, it requires property owners to clear combustible vegetation, with costs of non-compliance becoming a lien against the property.

### *Opportunities to Expand Planning and Regulatory Capabilities*

The District has limited planning and regulatory capabilities but will continue to explore opportunities to expand.

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. An assessment of fiscal capabilities is presented in Table 12-4.

**Table 12-4 Fiscal Capabilities**

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
If yes, specify:	-
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No

Financial Resource	Accessible or Eligible to Use?
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

### Opportunities to Expand Fiscal Capabilities

The District identifies grants from the California Governor’s Office of Emergency Services as a potential fiscal capability.

### 12.4.2 Administrative and Technical Capabilities

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 12-5.

**Table 12-5 Administrative and Technical Capabilities**

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

Staff/Personnel Resource		Available?
Emergency manager		No
If Yes, Department /Position:	-	
Grant writers		Yes
If Yes, Department /Position:	Contract	
Procurement Services and Management		Yes
If Yes, Department /Position:	Board of Directors	

### Opportunities to Expand Administrative and Technical Capabilities

Administrative and technical capabilities are a community’s staff, skills and tools. These capabilities can be used for mitigation planning and to carry out specific mitigation actions. They also include the ability to access, coordinate and implement these resources effectively (FEMA, 2023). An assessment of administrative and technical capabilities is presented in Table 12-5.

### 12.4.3 Education and Outreach Capabilities

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 12-6.

**Table 12-6 Education and Outreach Capabilities**

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
If yes, briefly describe:	-
Do you use social media for hazard mitigation education and outreach?	Yes
If yes, briefly describe:	-
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
If yes, briefly describe:	-
Do you have any other programs in place that could be used to communicate hazard-related information?	Yes
If yes, briefly describe:	Sign board
Do you have any established warning systems for hazard events?	No
If yes, briefly describe:	-

### Opportunities to Expand Education and Outreach Capabilities

The District will continue to utilize their website, social media, and sign board to reach the public and advertise programs.

#### 12.4.4 Community Classifications

Other programs, such as NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 12-7.

**Table 12-7 Community Classifications**

	Participating?	Classification	Date Classified
Unique Identity ID (UEI)	No	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	N/A	N/A
Public Protection (ISO for Fire Districts)	Yes	02/2Y	April 1, 2020
NWS StormReady	No	N/A	N/A
Firewise USA	No	N/A	N/A

#### 12.4.5 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The community’s adaptive capacity for the impacts of climate change is presented in Table 12-8.

**Table 12-8 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	Low
Jurisdiction-level monitoring of climate change impacts	Low
Technical resources to assess proposed strategies for feasibility and externalities	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
Capital planning and land use decisions informed by potential climate impacts	Low
Participation in regional groups addressing climate risks	Low

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Implementation Capacity</b>	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
Identified strategies for greenhouse gas mitigation efforts	Low
Identified strategies for adaptation to impacts	Low
Champions for climate action in local government departments	Low
Political support for implementing climate change adaptation strategies	Low
Financial resources devoted to climate change adaptation	Low
Local authority over sectors likely to be negative impacted	Low
<b>Public Capacity</b>	
Residents' knowledge of and understanding of climate risk	Low
Residents' support of adaptation efforts	Low
Residents' capacity to adapt to climate impacts	Low
Local economy current capacity to adapt to climate impacts	Low
Local ecosystems capacity to adapt to climate impacts	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 National Flood Insurance Program Compliance

Districts are not eligible to participate in the National Flood Insurance Program (NFIP). However, any new assets or infrastructure developed by the District are in compliance with the floodplain regulations established by the surrounding municipal entities.

## 12.6 Integration

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.

### 12.6.1 Existing Integration

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

- The District did not identify any existing integration.

### 12.6.2 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 Plan

## 12.7 Risk Assessment

### 12.7.1 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	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/23	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	CA23-1	1/4/23	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	The District was subject to closures and social distancing/masking requirements.

### 12.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for Linden-Peters Fire District is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the District in identifying hazards that pose the most significant threat. 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 the economy.

**Table 12-10 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.3	.9	.2	.1	.3	1.8	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

### **12.7.3 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.

#### ***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 District did not identify any other vulnerabilities.

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

## 12.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 12-11 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter Energy Communications Transportation	Existing	1, 3, 4	Lead: Chief Support: Captain	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans that address natural hazards within the service area including: <ul style="list-style-type: none"> <li>• Capital Improvement Plan</li> </ul>	Safety and security Communications Transportation Water Systems	New	6	Lead: Chief Support: Captain	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
3	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	N/A	New	6	Lead: Chief Support: Captain	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
4	Purchase generators for District-owned critical facilities and infrastructure that lack adequate backup power.	Safety and security Energy Communications	Existing	3, 5	Lead: Chief Support: Captain	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

**Table 12-12 Mitigation Action Prioritization**

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#4	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium

Notes:  
 31 or more = High Priority  
 15 to 30 = Medium Priority  
 0 to 14 = Low Priority

Table 12-13 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■		■		■		■	■	■	■	■	■	■
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■		■				■	■	■	■	■	■	■	■	■	■	■
#4					■		■		■	■			■	■	■		■

## 12.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 12-14.

**Table 12-14 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Fire Safety for School Age Children	Annually	1,200
Fire Extinguisher Training	Annually	50
Supported the countywide outreach efforts for this plan including promoting the public survey.	Throughout the planning process	TBD

## 12.10 Information Sources Used for This Annex

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

- **CIP**—Reviewed for mitigation action 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.

### 13. MOKELUMNE RURAL COUNTY FIRE DISTRICT



Source: Mokelumne Rural Fire Protection District

#### 13.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the Mokelumne Rural Fire Protection District. Members are listed in Table 13-1.

Table 13-1 Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Mark Weber, Fire Chief	Name and Title:	Matt Duaime, Asst. Fire Chief
Address:	13157 E. Brandt Rd. Lockeford, CA 95237	Address:	13157 E. Brandt Rd. Lockeford, CA 95237
Phone Number:	209-727-0564	Phone Number:	209-727-0564
Email:	Mweber@mokelumnefire.org	Email:	mduaime@mokelumnefire.org

Primary Point of Contact		Alternate Point of Contact
<b>Additional Planning Team Members:</b>		
Name and Title:	Matt Duaime, Assistant Chief	
Method of Participation:	Planner, Implementer	
Name and Title:	Heather Artiaga, Administrative Assistant	
Method of Participation:	Financial information	
Name and Title:	Steve Watt, Captain	
Method of Participation:	Attended planning meetings	

## 13.2 Jurisdictional Profile

### 13.2.1 Overview

The Mokelumne Rural Fire District was founded in 1946 by a group of dedicated men from the Northern Fruit Company in Victor, CA. On February 15, 1947, the District received official recognition from the San Joaquin County Board of Supervisors. By December of that year, it had established its first fire station and acquired its first fire engine.

Today, the District provides fire protection, suppression, and prevention services, along with water rescue, urban search and rescue, and emergency medical services. Staff includes 10 full-time employees: a Fire Chief, three Captains, three Engineers, and three Firefighters. The District also has a Reserve Assistant Fire Chief, three seasonal firefighters who bolster daily staffing during peak fire season, as well as a part-time Administrative Assistant.

The District is governed by a five-member Board of Directors. Funding comes primarily from property taxes and a special assessment tax established in 1987. Additional revenue is generated through service charges, fire prevention fees, and fire impact fees.

### 13.2.2 Service Area

The Mokelumne Fire District covers approximately 64 square miles in northern San Joaquin County, situated between the Mokelumne River and Live Oak Road. The District provides fire protection and emergency services to the communities of Lockeford and Victor, as well as the rural areas surrounding Lodi. Its diverse coverage area includes both urban and rural environments, featuring residential subdivisions, apartment complexes, three schools, wineries, and packing facilities, along with industrial zones and two major highways. The Mokelumne River runs through the District, adding to its unique geographical landscape.

### 13.2.3 Governance

The governing body of the District consists of five board members, elected by the citizens of the District, each serving 4-year terms. The Board of Directors has the authority to adopt policies and resolutions and provide overall direction to the District.

The Mokelumne Fire District Board of Directors assumes responsibility for the adoption of this plan; the Fire Chief will oversee its implementation.

### 13.2.4 Assets

Table 13-2 Assets

Asset	Value
Property	
2 Acres	\$1,000,000
Equipment	
#2 Type 1 Fire Engines	\$ 2,600,000
Type 3 Fire Engine	\$ 1,000,000
Water Tender	\$ 750,000
Rescue Unit	\$ 2,000,000
Water Rescue	\$ 1,500,000
Chief Command Vehicles	\$120,000
<i>Total:</i>	<i>\$ 8,970,000</i>
Critical Facilities	
Fire Station	\$ 3,000,000
Classroom/Training Center	\$ 1,000,000
Generator Station 1	\$ 200,000
<i>Total:</i>	<i>\$ 4,200,000</i>

## 13.3 Current Trends

The Mokelumne Fire District serves the townships of Lockeford and Victor, along with the surrounding rural areas of Lodi, covering a total of 64 square miles. The District continues to experience steady growth each year, driven by expanding residential and commercial developments.

In recent years, the addition of wineries, packing sheds, and other businesses has contributed to the area's economic expansion. Two new subdivisions are currently in the planning phases for Lockeford, with one potentially breaking ground in the coming years. As travel demands and housing needs increase, so does the demand for emergency services.

This ongoing growth has resulted in a steady rise in call volume, reflecting the increasing need for fire and emergency response within the District. The Mokelumne Fire District remains committed to meeting these evolving challenges while ensuring the safety and well-being of the communities it serves.

## 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 or improve upon 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.

### 13.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop plans and programs and to implement regulations to protect and serve community members. An assessment of planning and regulatory capabilities is presented in Table 13-3.

**Table 13-3 Planning and Regulatory Capabilities**

Plan, Study or Program	Date of Most Recent Update	Comment
Fire Impact Fee Study	2024	Approved by Board, moving to Supervisor Approval process. Updating the Fire Impact Fee is essential to supporting the District’s growth. The revised fees will help fund the construction of a new fire station and the addition of necessary apparatus to meet the rising demand for emergency services. As development expands, these investments will ensure the District remains prepared to mitigate emerging hazards.
Capital Improvement Plan	November 2024	Updated Capital Improvement Plan. The Capital Improvement Plan is designed to address and mitigate potential hazards as the District continues to grow. By proactively planning for infrastructure, equipment, and resource expansion, the District can enhance its ability to respond effectively to increasing emergency demands.
Mokelumne River EAP	March 2025	Establishes emergency procedures.
California Fire Code	2022	Establishes minimum requirements to protect against fire hazard.
California Building Code	2022	Establishes minimum building requirements that protect against hazards.
California Fire & Rescue Mutual Aid Plan	2023	Establishes mutual aid support.
San Joaquin County Ordinance 4286 Pertaining to Fire Prevention and Weed Abatement hazards and protect the community effectively	2006	Forces mandatory weed abatement and rubbish removal on private property in unincorporated areas to reduce fire hazards. Enforced by the County Fire Warden, it requires property owners to clear combustible vegetation, with costs of non-compliance becoming a lien against the property.

### Opportunities to Expand Planning and Regulatory Capabilities

The planning and regulatory capabilities of the District can be expanded by integrating the County-wide hazard mitigation plan into the District Strategic Plan and the Capital Improvement plan as listed in Table 13-11 and below:

Action 2: Integrate the hazard mitigation plan into other plans that address natural hazards within the service area including:

- Fire Impact fee Study
- Capital Improvement Plan
- Mokelumne River EAP
- California Fire Code
- California Building Code
- California Fire & Rescue Mutual Aid Plan

### 13.4.2 Fiscal Capabilities

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. An assessment of fiscal capabilities is presented in Table 13-4.

**Table 13-4 Fiscal Capabilities**

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
If yes, specify:	-	
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

The District also benefits from fire permitting fees established through the San Joaquin County Ordinance 4535 Operational Fire Fees.

### Opportunities to Expand Fiscal Capabilities

One of the primary objectives in developing the 2026 MJHMP is to establish eligibility to pursue FEMA HMA grant funding opportunities (e.g., FMA and HMGP). HMA funding streams typically require up to a 25 percent local match. The District has identified local funding resources in Table 13-4 that can provide the local match for projects in the mitigation action plan that list HMA grants as a potential primary funding source.

### 13.4.3 Administrative and Technical Capabilities

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 13-5.

**Table 13-5 Administrative and Technical Capabilities**

Staff/Personnel Resource		Available?
Planners or engineers with knowledge of land development and land management practices		Yes
If Yes, Department /Position:	Fire District Personnel: Fire Chief, Board of Directors	
Engineers or professionals trained in building or infrastructure construction practices		Yes
If Yes, Department /Position:	Fire District Personnel: Fire Chief, Board of Directors	
Planners or engineers with an understanding of natural hazards		Yes
If Yes, Department /Position:	Fire District Personnel: Fire Chief, Board of Directors	
Staff with training in benefit-cost analysis		Yes
If Yes, Department /Position:	Fire District Personnel: Fire Chief, Board of Directors	
Surveyors		No
If Yes, Department /Position:	Through Consultant if Needed	
Personnel skilled or trained in GIS applications		No
If Yes, Department /Position:	Through Consultant if Needed	
Scientist familiar with natural hazards in local area		No
If Yes, Department /Position:	Through Consultant if Needed	
Emergency manager		Yes
If Yes, Department /Position:	Fire Chiefs	
Grant writers		Yes
If Yes, Department /Position:	Fire Chiefs, Captains	

Staff/Personnel Resource		Available?
Procurement Services and Management		Yes
If Yes, Department /Position:	Fire Chief, Administrative Assistant	

### Opportunities to Expand Administrative and Technical Capabilities

Administrative and technical capabilities are a community’s staff, skills and tools. These capabilities can be used for mitigation planning and to carry out specific mitigation actions. They also include the ability to access, coordinate and implement these resources effectively (FEMA 2023). An assessment of administrative and technical capabilities is presented in Table 13-5.

### 13.4.4 Education and Outreach Capabilities

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 13-6.

**Table 13-6 Education and Outreach Capabilities**

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
If yes, briefly describe:	Hazard information displayed on the website
Do you use social media for hazard mitigation education and outreach?	Yes
If yes, briefly describe:	Social media outreach
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
If yes, briefly describe:	-
Do you have any other programs in place that could be used to communicate hazard-related information?	Yes
If yes, briefly describe:	Electronic Billboard Notifications
Do you have any established warning systems for hazard events?	Yes
If yes, briefly describe:	Perimeter & County OES

### Opportunities to Expand Education and Outreach Capabilities

The District will continue to utilize their website, social media, and electronic billboard to reach the public and advertise programs.

### 13.4.5 Community Classifications

Other programs, such as NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 13-7.

**Table 13-7 Community Classifications**

	Participating?	Classification	Date Classified
Unique Identity ID (UEI)	Yes	GJM4NK3ZVZ19	Feb 5 ,1947
Building Code Effectiveness Grading Schedule (BCEGS)	No	N/A	N/A
Public Protection (ISO for Fire Districts)	Yes	4/10	2018 (Currently under review)
NWS StormReady	No	N/A	N/A
Firewise USA	No	N/A	N/A

### 13.4.6 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The District’s adaptive capacity for the impacts of climate change is presented in Table 13-8.

**Table 13-8 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	Low
Jurisdiction-level monitoring of climate change impacts	Low
Technical resources to assess proposed strategies for feasibility and externalities	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
Capital planning and land use decisions informed by potential climate impacts	Low
Participation in regional groups addressing climate risks	Low

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Implementation Capacity</b>	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
Identified strategies for greenhouse gas mitigation efforts	Low
Identified strategies for adaptation to impacts	Low
Champions for climate action in local government departments	Low
Political support for implementing climate change adaptation strategies	Low
Financial resources devoted to climate change adaptation	Low
Local authority over sectors likely to be negative impacted	Low
<b>Public Capacity</b>	
Residents' knowledge of and understanding of climate risk	Low
Residents' support of adaptation efforts	Low
Residents' capacity to adapt to climate impacts	Low
Local economy current capacity to adapt to climate impacts	Low
Local ecosystems capacity to adapt to climate impacts	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.

### 13.5 National Flood Insurance Program Compliance

Districts are not eligible to participate in the National Flood Insurance Program (NFIP). However, any new assets or infrastructure developed by the District are in compliance with the floodplain regulations established by the surrounding municipal entities.

### 13.6 Integration

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.

### 13.6.1 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 is designed to address and mitigate potential hazards as the District continues to grow. By proactively planning for infrastructure, equipment, and resource expansion, the District can enhance its ability to respond effectively to increasing emergency demands.
- **Fire Impact Fee Update** – Updating the Fire Impact Fee is essential to supporting the District’s growth. The revised fees will help fund the construction of a new fire station and the addition of necessary apparatus to meet the rising demand for emergency services. As development expands, these investments will ensure the District remains prepared to mitigate emerging hazards.
- **San Joaquin County Ordinance 4286 Pertaining to Fire Prevention and Weed Abatement hazards and protect the community effectively** – Forces mandatory weed abatement and rubbish removal on private property in unincorporated areas to reduce fire hazards. Enforced by the County Fire Warden, it requires property owners to clear combustible vegetation, with costs of non-compliance becoming a lien against the property.
- **San Joaquin County Ordinance 4535 Operational Fire Fees** – Establishes fire permitting and fee structure.
- **California Building and Fire Code Adoption 2022**

The District reviewed the current HMP prior to updating these plans and incorporated aspects of the HMP where appropriate.

### 13.6.2 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:

- **Strategic Plan Update** – Updating the District’s Strategic Plan will allow for a comprehensive review of current operations, future needs, and long-term goals. This update will help align resources, staffing, and response capabilities with the District’s growth, ensuring continued efficiency and effectiveness in service delivery. Refer to Action #2 in Table 13-11.
- **Firewise USA program.** Refer to Action #2 in Table 13-11

## 13.7 Risk Assessment

### 13.7.1 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	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/23	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	CA23-1	1/4/23	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	The District was subject to closures and social distancing/masking requirements.

### 13.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for the Mokelumne Rural Fire Protection District is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the District in identifying hazards that pose the most significant threat. 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 the economy.

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Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
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Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
Levee Failure	.3	.9	.2	.1	.3	1.8	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

Notes:  
 PRI Value 1 to 1.9 = Low Hazard Risk Ranking  
 PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking  
 PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### 13.7.3 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.

#### Other Noted Vulnerabilities

The jurisdiction has not identified any other issues with natural hazards other than what is in the risk assessment.

Non-natural hazards identified as other vulnerabilities include the following:

- Hazardous materials incidents, the district has many facilities with hazardous materials like anhydrous ammonia.
- The Fire District has CCT railway that runs through the district that transports many different hazardous materials.

## 13.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 13-11 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter Energy Communications Transportation	Existing	1, 3, 4	Lead: Fire Chief Support: Asst. Fire Chief	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans that address natural hazards within the service area including: <ul style="list-style-type: none"> <li>• Fire Impact fee Study</li> <li>• Capital Improvement Plan</li> <li>• Mokelumne River EAP</li> </ul>	Safety and security Communications Transportation Water Systems	New	6	Lead: Fire Chief Support: Asst. Fire Chief	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	<ul style="list-style-type: none"> <li>California Fire Code</li> <li>California Building Code</li> <li>California Fire &amp; Rescue Mutual Aid Plan</li> <li>Strategic Plan Update</li> <li>FireWise USA Program</li> </ul>								
3	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	-	New	6	Lead: Fire Chief Support: Asst. Fire Chief	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
4	Purchase generators for District-owned critical facilities and infrastructure that lack adequate backup power.	Safety and security Energy Communications	Existing	3, 5	Lead: Chief Support: Captain	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

**Table 13-12 Mitigation Action Prioritization**

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#4	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium

Notes:  
 31 or more = High Priority  
 15 to 30 = Medium Priority  
 0 to 14 = Low Priority

Table 13-13 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■		■		■		■	■	■	■	■	■	■
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■		■				■	■	■	■	■	■	■	■	■	■	■
#4					■		■		■	■			■	■	■		■

## 13.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 13-14.

**Table 13-14 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
School events at all three schools	Yearly Multiple	2,000
Annual Rescue Team Dinner Event	Yearly April	400
Local Ag Fest Event	Yearly March	2,500
Monthly M.A.C Meetings	Once a Month	20
Fire Safety Day at the Station	Yearly October	200
Christmas Events	Yearly December	1,000
Supported the countywide outreach efforts for this plan including promoting the public survey	Throughout the planning process	TBD

## 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 Plan
- Fire Impact Fee Study
- Mokelumne River EAP
- California Fire and Rescue Mutual Aid 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.

## 14. SAN JOAQUIN AREA FLOOD CONTROL AGENCY



Smith Canal Flood Control Gate, Photo source: San Joaquin Area Flood Control Agency

### 14.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the San Joaquin Area Flood Control Agency (SJAFCA). Members are listed in Table 14-1.

**Table 14-1 Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Darren Suen, PE Executive Director	Name and Title:	Glenn Prasad, PE Deputy Executive Director
Address:	2800 W. March Lane, Suite 200 Stockton, CA 95219	Address:	2800 W. March Lane, Suite 200 Stockton, CA 95219
Phone Number:	(209) 451-2820	Phone Number:	(350) 333-1141 x3000
Email:	darren.suen@sjafca.org	Email:	glenn.prasad@sjafca.org

Primary Point of Contact		Alternate Point of Contact
<b>Additional Planning Team Members:</b>		
Name and Title: Method of Participation:	Ryan Curry, Senior Project Manager, San Joaquin Area Flood Control Agency Provided insight and feedback on Annex content and documentation	
Name and Title: Method of Participation:	Seth Wurzel, Principal, Larsen Wurzel & Associates, Inc. Provided insight and feedback on the fiscal capacity of the Agency	
Name and Title: Method of Participation:	Juan Neira, Senior Civil Engineer, SJAFCA Provided asset valuations for asset inventory purposes	
Name and Title: Method of Participation:	Sylvia Razniak, Finance and Accounting Manager, SJAFCA Provided asset valuations for asset inventory purposes	
Name and Title: Method of Participation:	Christopher Neudeck, Kjeldsen, Sinnock, Neudeck, Inc. Assisted in drafting this Annex. Provided feedback from member agency and local flood control/levee maintaining agency perspective	
Name and Title: Method of Participation:	Joseph Thomas, Kjeldsen, Sinnock, Neudeck, Inc. Assisted in drafting this Annex	
Name and Title: Method of Participation:	Brenna Howell, Howell Consulting, Inc. Assisted in drafting this Annex	

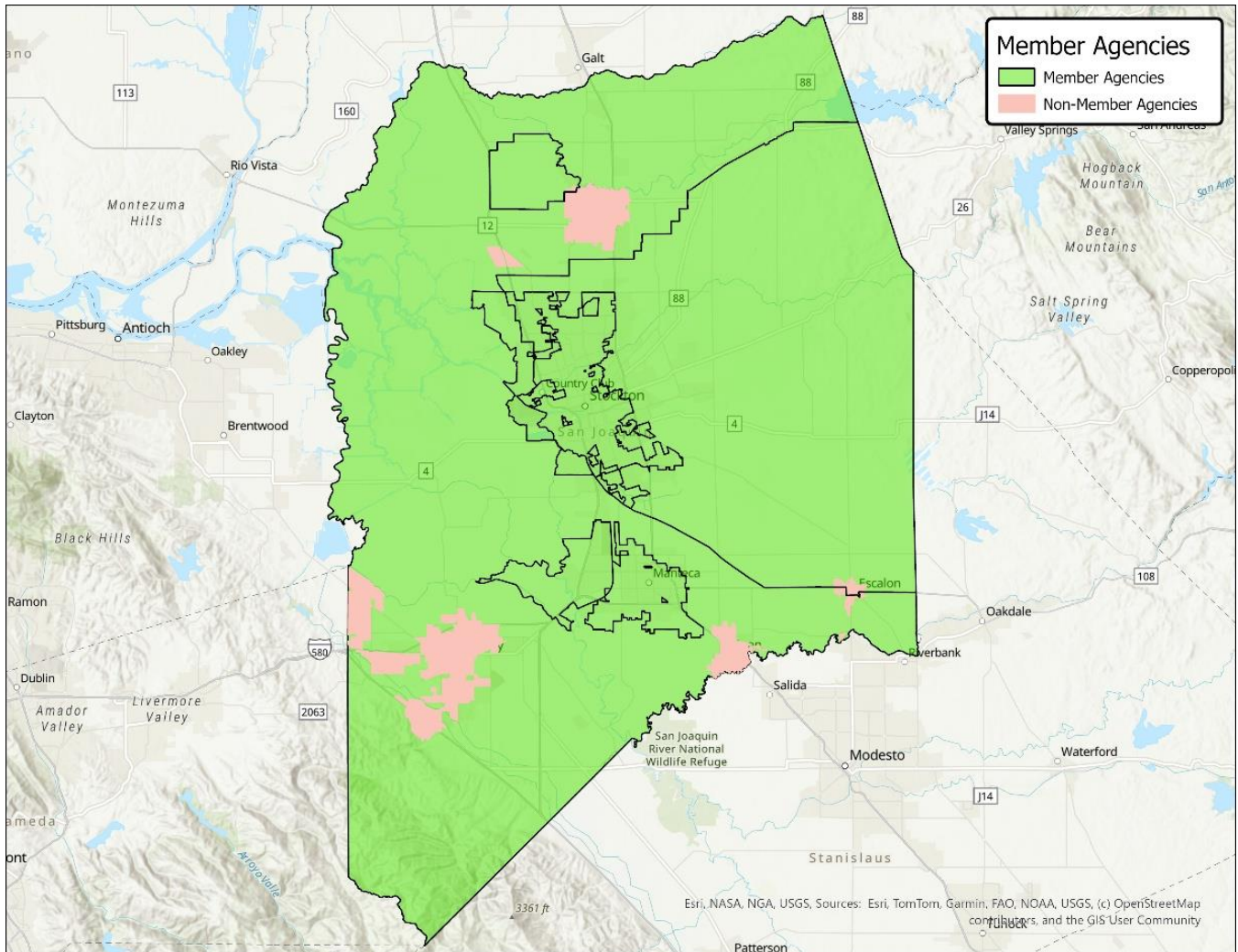
## 14.2 Jurisdictional Profile

### 14.2.1 Overview

The San Joaquin Area Flood Control Agency (SJAFCA) is a Joint Powers Authority that was created in May 1995 between the City of Stockton, San Joaquin County, and the San Joaquin County Flood Control and Water Conservation District for the purpose of addressing flood protection for the City of Stockton and surrounding County area. On November 16, 2017, the Joint Exercise of Powers Agreement was expanded to include the Cities of Lathrop and Manteca as well as the City of Stockton and San Joaquin County.

### 14.2.2 Service Area

SJAFCA’s service area coincides with the jurisdiction boundaries of the member agencies. This currently includes the incorporated areas of the City of Stockton, City of Lathrop, City of Manteca, the Unincorporated Areas of San Joaquin County, and the San Joaquin County Flood Control and Water Conservation District (See Figure 14-1 for SJAFCA Service Area).



**Figure 14-1 SJAFCA Service Area**

### 14.2.3 Governance

SJAFCA is governed by a nine-member Board of Directors composed of two elected officials each from the cities of Stockton, Lathrop, and Manteca, two from San Joaquin County and the San Joaquin County Flood Control and Water Conservation District, and one member of the public appointed by the Board.

The Board of Directors assumes responsibility for the adoption of this plan; the Executive Director will oversee its implementation.

### 14.2.4 Assets

An inventory of SJAFCA Assets as well as flood control/reclamation district known assets within the SJAFCA Service area are summarized below. Assets directly controlled by SJAFCA have SJAFCA as a prefix to that line

item. Jurisdictions preparing a separate Flood Hazard Annex as of the time of this Annex’s development have been excluded from the inventory below. Unless otherwise noted, all values are in 2025 USD.

**Table 14-2 Assets**

Asset	Value
Property	
SJAFCA - Solari Properties (Fee Title)	\$1,500,000
SJAFCA - Others in various stages of acquisition (escrow)	\$1,500,000
<b>SJAFCA Property – Total:</b>	<b>\$3,000,000</b>
Equipment	
SJAFCA Fleet Vehicles	\$100,000
SJAFCA Office Equipment	\$150,000
Flood Fight Supplies (15 Flood Fight Containers)	\$750,000
<b>SJAFCA Equipment - Total:</b>	<b>\$1,000,000</b>
Critical Facilities	
SJAFCA – Pump Station/Detention Basin, Stormwater	\$7,500,000
SJAFCA – Smith Canal Gate	\$100,000,000
Pump Stations, Stormwater/Dewatering (35)	\$7,000,000
Levees – FEMA 100-year Accredited, 138 miles	\$3,864,000,000
Levees – Non-FEMA Accredited, USACE Funded Levees (199 miles total of USACE Funded Levees), 109 miles	\$2,180,000,000
Levees – Non-FEMA Accredited, Non-USACE Funded Levees, 596 miles	\$6,556,000,000
<b>SJAFCA Critical Facilities – Total:</b>	<b>\$12,714,500,000</b>
<b>SJAFCA Asset Total:</b>	<b>\$12,829,000,000</b>

### 14.3 Current Trends

SJAFCA has been steadily investing in regional improvements to the flood control system. Ongoing and recently completed projects include the Smith Canal Gate Project, the Lower San Joaquin River Project, Mossdale Tract, the Lower San Joaquin River Feasibility Study Phase I & II as well Paradise Cut.

SJAFCA was originally established to certify flood control projects protecting the City of Stockton and portions of Unincorporated San Joaquin County. It’s member agencies, and service areas, was expanded in November of 2017 with the inclusion of the cities of Lathrop and Manteca. Further expansion of member agencies and service

area is not anticipated at this time. The general service area has increased in population by approximately 94,000 people or 14% between 2010 and 2020.

## 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 or improve upon 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.

### 14.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop plans and programs and to implement regulations to protect and serve community members. An assessment of planning and regulatory capabilities is presented in Table 14-3.

**Table 14-3 Planning and Regulatory Capabilities**

Plan, Study or Program	Date of Most Recent Update	Comment
Strategic Plan – Priority Actions Update 2024	March 2024	Identifies Action Items arising from the Strategic Plan. Not a full update of the Strategic Plan
Strategic Plan	September 2022	Identifies SJAFCA’s Mission, Goals, and Objectives
Lower San Joaquin and Delta South Regional Flood Management Plan	January 2021	Regional Plan identifying Regional Goals, Agencies, Strategies, Accomplishments, Challenges, and Priorities.

### *Opportunities to Expand Planning and Regulatory Capabilities*

SJAFCA will continue to maintain and update the plans identified in Table 14-3. Additionally, SJAFCA will continue training on the mitigation process and it’s purpose to SJAFCA member agencies; update SJAFCA climate change policy; and continue to promote regional flood resiliency through integration with regional flood control agencies on flood emergency plans and contingency maps.

### 14.4.2 Financial Capabilities

Assessing a jurisdiction’s financial 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. An assessment of financial capabilities is presented in Table 14-4.

**Table 14-4 Financial Capabilities**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Assessments 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 Assessments 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

**Opportunities to Expand Financial Capabilities**

SJAFCA will continue to pursue state and federal grants for both SJAFCA and regional planning and capital projects. SJAFCA will continue and strategically expand it’s outreach efforts to increase local awareness of regional flood control issues to foster support for local funding initiatives.

**14.4.3 Administrative and Technical Capabilities**

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 14-5.

**Table 14-5 Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	Yes
If Yes, Department /Position:	Deputy Executive Director
Engineers or professionals trained in building or infrastructure construction practices	Yes
If Yes, Department /Position:	Deputy Executive Director, Executive Project Manager, Senior Civil Engineer
Planners or engineers with an understanding of natural hazards	Yes
If Yes, Department /Position:	Deputy Executive Director, Executive Project Manager, Senior Civil Engineer
Staff with training in benefit-cost analysis	Yes

Staff/Personnel Resource		Available?
If Yes, Department /Position:	This function is provided through contract.	
Surveyors		Yes
If Yes, Department /Position:	This function is provided through contract.	
Personnel skilled or trained in GIS applications		Yes
If Yes, Department /Position:	This function is provided through contract.	
Scientist familiar with natural hazards in local area		Yes
If Yes, Department /Position:	This function is provided through contract.	
Emergency manager		Yes
If Yes, Department /Position:	SJAFCA relies upon San Joaquin County OES to perform this function.	
Grant writers		Yes
If Yes, Department /Position:	This function is provided through contract.	
Procurement Services and Management		Yes
If Yes, Department /Position:	Staff/Finance and Accounting Manager	

### **Opportunities to Expand Administrative and Technical Capabilities**

Educate staff on the value and mindset of pre-disaster mitigation; continue planning for enhanced public outreach on SJAFCA mission and purpose; train and educate member agencies encourage selected staff to pursue related credentials (e.g. Professional Engineer license, Certified Floodplain Manager certification, Emergency Management Institute training courses, etc.)

#### **14.4.4 Education and Outreach Capabilities**

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 14-6.

**Table 14-6 Education and Outreach Capabilities**

Criterion	Response
Do you have a public information officer or communications office?	No
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	Yes
If yes, briefly describe:	Flood mitigation projects

Criterion		Response
Do you use social media for hazard mitigation education and outreach?		Yes
If yes, briefly describe:	Social media is used to update the public on plans and projects that will mitigate flood hazards in the Service Area	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?		No
If yes, briefly describe:	-	
Do you have any other programs in place that could be used to communicate hazard-related information?		No
If yes, briefly describe:	-	
Do you have any established warning systems for hazard events?		No
If yes, briefly describe:	Hazard warnings are handled by member agencies or San Joaquin County Office of Emergency Services.	

### Opportunities to Expand Education and Outreach Capabilities

Opportunities to expand education and outreach capabilities include the creation of a comprehensive outreach strategy to serve as a framework for SJAFCA to participate in meaningful two-way communication with the public, member agencies on aspects of governance, general flood risk awareness, current projects and delivery of services.

#### 14.4.5 Community Classifications

Other programs, such as NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 14-7.

**Table 14-7 Community Classifications**

	Participating?	Number or Classification	Date Classified
Unique Identity ID (UEI)	No	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	N/A	N/A
Public Protection (ISO for Fire Districts)	No	N/A	N/A
NWS StormReady	No	N/A	N/A
Firewise USA	No	N/A	N/A

#### 14.4.6 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with

an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The Agency's adaptive capacity for the impacts of climate change is presented in Table 14-8.

**Table 14-8 Adaptive Capacity for Climate Change**

Criterion		Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>		
Jurisdiction-level understanding of potential climate change impacts		Medium
Comment:	SJAFCA staff are well versed in how potential climate change impacts could impact their Service Area. Participation in local, regional, and state planning level efforts keeps them informed of the latest science, impacts to regional and local projects.	
Jurisdiction-level monitoring of climate change impacts		Low
Comment:	SJAFCA relies upon State and State funded institutions to keep apprised of potential climate change induced impacts.	
Technical resources to assess proposed strategies for feasibility and externalities		Low
Comment:	SJAFCA utilizes consultants and member agency technical staff for these tasks.	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory		Low
Comment:	SJAFCA utilizes consultants and member agency technical staff for these tasks.	
Capital planning and land use decisions informed by potential climate impacts		Medium
Comment:	SJAFCA utilizes consultants and member agency technical staff for these tasks.	
Participation in regional groups addressing climate risks		Medium
Comment:	SJAFCA participates in regional planning efforts which focus amongst other topics, adapting to changing climate induced impacts as they relate to changing flood risk and frequency and hazard profile. These groups include the Delta Working Group, the Lower San Joaquin Flood Management Plan, and Central Valley Flood Protection Plan Update 2027 Workshops and Stakeholder Engagement Meetings.	
<b>Implementation Capacity</b>		
Clear authority/mandate to consider climate change impacts during public decision-making processes		Medium
Comment:	The authority/mandate is a derived authority/mandate from State and Local laws, ordinances, regulations. SJAFCA has long been an advocate for increased flood protection system resiliency.	
Identified strategies for greenhouse gas mitigation efforts		Medium
Comment:	Preparation of California Environmental Quality Act documents by consultants identifies these strategies on a project-by-project basis.	
Identified strategies for adaptation to impacts		Medium
Comment:	Preparation of California Environmental Quality Act documents by consultants identifies these strategies on a project-by-project basis.	
Champions for climate action in local government departments		Medium

Criterion		Jurisdiction Rating <sup>a</sup>
Comment:	The majority of the project advocated for and pursued by SJAFCA are driven by the need to create a more resilient flood control system within the Service Area.	
Political support for implementing climate change adaptation strategies		High
Comment:	Californians are among the nation’s most invested in adapting to potential climate change scenarios.	
Financial resources devoted to climate change adaptation		Medium
Comment:	All SJAFCA projects consider and plan for changing flood risks and hazards.	
Local authority over sectors likely to be negative impacted		Low
Comment:	SJAFCA’s authorities are relatively constrained and has been primarily focused on positive advocacy for increased flood system resiliency. This approach seeks buy-in, rather than a top-down regulatory mandate.	
<b>Public Capacity</b>		
Residents’ knowledge of and understanding of climate risk		Medium
Comment:	Californians are among the nation’s most invested in adapting to potential climate change scenarios.	
Residents’ support of adaptation efforts		Medium
Comment:	Californians are among the nation’s most invested in adapting to potential climate change scenarios.	
Residents’ capacity to adapt to climate impacts		Low
Comment:	While the desire and understanding of what climate change would mean for the residents, the DWR projected changes to flood risks present an immense financial hurdle for the Service Area residents. The CVFPP 2017 Update projected a tripling of the “100-year” flood peak flow rates due to climate change modifying the snow/rain mix in the San Joaquin River Watershed.	
Local economy current capacity to adapt to climate impacts		Low
Comment:	While the desire and understanding of what climate change would mean for the residents, the DWR projected changes to flood risks present an immense financial hurdle for the Service Area residents. The CVFPP 2017 Update projected a tripling of the “100-year” flood peak flow rates due to climate change modifying the snow/rain mix in the San Joaquin River Watershed.	
Local ecosystems capacity to adapt to climate impacts		Unsure
Comment:		

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 National Flood Insurance Program Compliance

Special districts are not eligible to participate in the National Flood Insurance Program (NFIP). However, any new assets or infrastructure developed by the Agency is in compliance with the floodplain regulations established by the surrounding municipal entities. However as the majority of the constituent member agencies are charged with NFIP compliance, many of the projects and plans advocated for and funded by SJAFCA are developed with NFIP compliance as a significant “added value” to the project and or plan. Additionally, SJAFCA projects provide added

value to the member agency's Community Rating System (CRS) Rating through enhanced mitigation actions, increased flood resiliency and other regional actions.

## 14.6 Integration

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.

### 14.6.1 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:

- California Central Valley Flood Protection Plan 2027 Update – Integrate components of the flood risk assessment developed for this project.
- Member Agencies' General Plan Updates, especially the Safety elements and AB2140 coordination amongst the plans – Integrate hazards from the risk assessment to these member agencies' plans.
- California Central Valley Flood Protection Plan Update – Integrate components of the flood risk assessment developed for this project.
- California Conservation Strategy Update – Integrate components of the flood risk assessment developed for this project.
- State Plan of Flood Control Descriptive Document Update – integrate components of the flood risk assessment developed for this project.
- Flood System Status Report – Integrate components of the flood risk assessment developed for this project.
- SJAFCA Climate Change Policy – Integrate components of the flood risk assessment developed for this project.
- Flood Safety Plans of the LMAs – Integrate components of the flood risk assessment developed for this project.
- EOPs of the Incorporated Cities – Integrate components of the flood risk assessment developed for this project.

## 14.7 Risk Assessment

### 14.7.1 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	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the Agency did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the Agency did not identify any additional damages associated with this event.
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the Agency did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/2023	While this event impacted San Joaquin County, the Agency did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	While this event impacted San Joaquin County, the Agency did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	CA23-1	1/4/23	While this event impacted San Joaquin County, the Agency did not identify any additional damages associated with this event.
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	While this event impacted San Joaquin County, the Agency did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the Agency did not identify any additional damages associated with this event.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the Agency did not identify any additional damages associated with this event.
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	The Agency was subject to closures and social distancing/masking requirements.

### 14.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for the San Joaquin Area Flood Control Agency (SJAFC) is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the Agency in identifying hazards that pose the most significant threat. 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 the economy.

**Table 14-10 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	1.2	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.3	.8	.1	.4	3.1	High

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.6	.9	.6	.3	.3	1.8	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	0.9	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

Notes:  
 PRI Value 1 to 1.9 = Low Hazard Risk Ranking  
 PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking  
 PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### 14.7.3 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.

#### 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:

- Flooding and its impacts would vary by location and severity of any given event and will likely only affect certain areas of the County during specific times. Based on the number of levees located throughout the County and population in leveed areas, future events would have potentially devastating economic impacts for the County. Cascading impacts on life, property, and overall community health may be catastrophic.

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

## 14.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 14-11 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support member agencies in retrofitting, purchase, or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter Energy Communications Transportation	Existing	1, 3, 4	Lead: SJAFCA Support: SJAFCA member agencies	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans that address natural hazards within the service area including: <ul style="list-style-type: none"> <li>• Member agency general plans</li> <li>• Member agency climate change adaptation plans</li> </ul>	Safety and Security Communications Transportation Water Systems	New	6	Lead: SJAFCA member agencies Support: SJAFCA	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	<ul style="list-style-type: none"> <li>Strategic Plan</li> <li>SKAFCA Climate Change Policy</li> <li>Flood System Status Report</li> <li>State Plan of Flood Control Descriptive Document Update</li> <li>Lower San Joaquin and Delta South Regional Flood Management Plan</li> <li>Flood Safety Plans of LMAs</li> <li>EOPs of Incorporated Cities</li> <li>California Conservation Strategy Update</li> <li>California Central Valley Flood Protection Plan Update</li> </ul>								

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
3	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.		New	6	Lead: County Support: SJAFCA	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
4	Coordinate with member and partner agencies on identifying potential flood risk reduction projects for feasibility studies annually.	Water Systems	New, Existing	1, 4, 6	Lead: SJAFCA Support: Member agencies, Federal Partners	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund	Long-Term (5 years or more)
5	Conduct annual coordination meetings with member and partner agencies to identify, evaluate, and implement flood hazard risk reduction measures.	Water Systems	New, Existing	1, 4, 6	Lead: SJAFCA Support: Member agencies, State & Federal Partners	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
6	Conduct feasibility studies, for the Paradise Cut Bypass Project.	Water Systems	New	1, 4	Lead: SJAFCA Support: Member agencies, State & Federal Partners	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund, State & Federal Grants	Short-Term (less than 5 years)
7	Develop engineering plans and initial environmental review for the Paradise Cut Bypass Project as identified in the feasibility study.	Water Systems	New	1, 4	Lead: SJAFCA Support: Member agencies, State & Federal Partners	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund, State & Federal Grants	Long-Term (5 years or more)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
8	Conduct feasibility studies for the Urban Flood Risk Reduction Project.	Water Systems	New, Existing	1, 4	Lead: SJAFCA Support: Member agencies, State & Federal Partners	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund, State & Federal Grants	Short-Term (less than 5 years)
9	Develop engineering plans and initial environmental review for the Urban Flood Risk Reduction Project as identified in the feasibility study.	Water Systems	New, Existing	1, 4	Lead: SJAFCA Support: Member agencies, State & Federal Partners	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund, State & Federal Grants	Long-Term (5 years or more)
10	Implement the Lower San Joaquin River Project in accordance with the authorized Federal Project.	Water Systems	New	1, 4	Lead: USACE Support: SJAFCA, Member Agencies, Local Agencies, State & Federal Partners	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund, State & Federal Grants	Short-Term (less than 5 years)
11	Continue to enhance and implement a public awareness and outreach program that supports SJAFCA's mission, goals, and objectives through targeted messaging that leverages partnerships with member agencies.	Communications	New, Existing	2, 6	Lead: SJAFCA Support: Member Agencies, State & Federal Partners	Yes	Moderate (\$50,000 - \$250,000)	Staff Time, General Fund, State & Federal Grants	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
12	Conduct feasibility study for Mormon Slough Bypass project.	Water Systems	New	1, 4	Lead: SJAFCA Support: Member Agencies, State & Federal Partners	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund, State & Federal Grants	Short-Term (less than 5 years)
13	Conduct feasibility study for San Joaquin River tributary systems levee improvements.	Water Systems	Existing	1, 4	Lead: SJAFCA Support: Member Agencies, State & Federal Partners	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund, State & Federal Grants	Short-Term (less than 5 years)
14	Continue to evaluate and study feasibility of FloodMAR projects.	Water Systems	New	1, 4	Lead: SJAFCA Support: Member Agencies, State & Federal Partners	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund, State & Federal Grants	Short-Term (less than 5 years)
15	Continue to support the formation of local funding programs for local flood control agencies.	Water Systems	New	6	Lead: Member Agencies Support: SJAFCA, State Partners	Yes	High to Very High (\$250,000 - \$1,000,000)	Staff Time, General Fund, State & Federal Grants	Short-Term (less than 5 years)
16	Support in the expansion and improved coverage of member agencies' ALERT2 stream/rainfall gage systems throughout San Joaquin County.	Water Systems	New, Existing	1, 4	Lead: Member Agencies Support: SJAFCA, State & Federal Partners	Yes	High to Very High (\$250,000 - \$1,000,000)	Staff Time, General Fund, State & Federal Grants	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
17	Continue to support and improve local flood emergency response plans and coordination.	Water Systems, Communications, Safety and Security	Existing	3, 5	Lead: SJC OES Support: SJAFCA, Member Agencies, State & Federal Partners	Yes	High to Very High (\$250,000 - \$1,000,000)	Staff Time, General Fund, State & Federal Grants	Short-Term (less than 5 years)
18	Purchase generators for District-owned critical facilities and infrastructure that lack adequate backup power.	Safety and security Energy Communications	Existing	3, 5	Lead: SJC OES Support: SJAFCA, Member Agencies, State & Federal Partners	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Table 14-12 Mitigation Action Prioritization

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#4	3	3	3	1	1	1	1	3	3	3	3	1	3	3	3	35	High
#5	3	3	3	1	1	3	1	3	3	3	3	3	3	3	3	39	High
#6	3	3	3	1	1	1	1	3	3	3	3	1	3	3	3	35	High
#7	3	3	3	1	1	1	1	3	3	3	3	1	3	3	3	35	High
#8	3	3	3	1	1	1	1	3	3	3	3	1	3	3	3	35	High
#9	3	3	3	1	1	1	1	3	3	3	3	1	3	3	3	35	High
#10	3	3	3	1	1	1	1	3	3	3	3	1	3	3	3	35	High
#11	3	3	3	1	1	1	0	1	3	1	3	3	3	1	1	28	Medium
#12	3	3	3	1	1	1	1	3	3	3	3	1	3	3	3	35	High
#13	3	3	3	1	1	1	1	3	3	3	3	1	3	3	3	35	High
#14	3	3	3	1	1	1	1	3	3	3	3	1	3	3	3	35	High
#15	3	3	3	3	3	1	1	1	3	1	3	3	3	3	3	37	High

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#16	3	3	3	1	1	1	1	3	3	1	3	3	3	3	3	35	High
#17	3	3	3	3	3	1	1	1	3	1	3	3	3	3	3	37	High
#18	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium

Notes:  
 31 or more = High Priority  
 15 to 30 = Medium Priority  
 0 to 14 = Low Priority

**Table 14-13. Mitigation Action Classification and Natural Hazards Addressed**

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■		■		■		■	■	■	■	■	■	■
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3					■		■		■	■			■	■	■		■
#4	■	■			■		■	■	■	■	■	■	■	■	■	■	■
#5	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■
#6		■		■	■		■					■		■	■		
#7		■		■	■		■					■		■	■		
#8		■		■	■		■					■		■	■		
#9		■		■	■		■					■		■	■		
#10		■		■	■		■					■		■	■		
#11			■		■	■	■					■		■	■		
#12		■		■	■		■					■		■	■		
#13		■		■	■		■					■		■	■		
#14		■		■	■		■					■		■	■		

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#15	■	■			■		■					■		■	■		
#16		■		■	■		■					■		■	■		
#17	■	■			■		■					■		■	■		
#18					■		■		■	■			■	■	■		■

## 14.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 14-14.

**Table 14-14 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
SJC Kick off Meeting		
SJAFCA outreach to LMAs (website info) link to SJC, info letter to LMAs	Varies	N/A
Posted SJCounty LHMP survey on website; promote survey at meetings SJAFCA staff attend	8/13/25	100
Local Maintaining Agency Board Meetings + Purpose	Various	N/A

## 14.10 Information Sources Used for This Annex

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

- Strategic Plan – Priority Actions Update 2024 – reviewed for mitigation plans, risks, and roles.
- Strategic Plan – September 2022 – reviewed for mitigation plans, risks, and roles.
- Lower San Joaquin and Delta South Regional Flood Management Plan – reviewed for mitigation plans, risks, and roles.

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.
- California Central Valley Flood Protection Plan – 2022 Update – the CVFPP 2022 Update was used to support risk characterization, future conditions, past hazard events and noted vulnerabilities.

## 15. SAN JOAQUIN COUNTY OFFICE OF EDUCATION



Source: San Joaquin County Office of Education

### 15.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the San Joaquin County Office of Education. Members are listed in Table 15-1.

**Table 15-1 Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Jenny Rich, Emergency Preparedness Coordinator	Name and Title:	Tim Sutton, Director II Operations and Support Services
Address:	2707 Transworld Drive Stockton, CA 95206	Address:	2707 Transworld Drive Stockton, CA 95206
Phone Number:	(209) 313-2378	Phone Number:	(209) 468-9102
Email:	Jerich@sjcoe.net	Email:	Tisutton@sjcoe.net
<b>Additional Planning Team Members:</b>			
Name and Title:	Andy Manzo, Administrative Assistant Operations and Support Services		
Method of Participation:	Provided information via email and attended planning meetings to support the development of the annex.		
Name and Title:	Shawn Barkhou, Fleet Support Technician		
Method of Participation:	Attended planning meetings and provided input on the annex.		
Name and Title:	Ed Babakhan Division Director IT		
Method of Participation:	Provided information to update the annex via email.		
Name and Title:	Tim Sutton, Director II Operations and Support Services		
Method of Participation:	Attended planning meetings and provided input on the annex.		
Name and Title:	Marlene Acosta, Administrative Services Director		
Method of Participation:	Attended planning meetings and provided input on the annex.		

## 15.2 Jurisdictional Profile

### 15.2.1 Overview

The San Joaquin County Office of Education (SJCOE) was established in 1853 and currently employs approximately 2,200 permanent and temporary. The SJCOE is a regional agency that provides educational leadership, resources, and customized services to assist all 14 school districts in San Joaquin County. The SJCOE receives state and federal funding as well as grants. The SJCOE and its divisions fulfill state mandates to oversee district finances, register teacher credentials, certify school attendance records, and develop countywide programs to serve special student populations.

The San Joaquin County Board of Education (SJCBOE) is the governing body of the SJCOE. The SJCBOE has delegated the decision-making authority to the San Joaquin County Superintendent of Schools per Superintendent Policy 2000. The chief executive officer of the San Joaquin County Office of Education is the San Joaquin County Superintendent of Schools, Troy A. Brown, Ed.D.

### 15.2.2 Service Area

These details are included in the above Jurisdictional Profile.

### 15.2.3 Governance

The Superintendent assumes responsibility for the adoption of this plan; the Emergency Preparedness Coordinator will oversee its implementation.

### 15.2.4 Assets

Table 15-2 Assets

Asset	Value
Equipment	
59 private passenger cars	\$1,667,386
24 passenger vans	\$641,264
4 pick-up trucks (not for maintenance)	\$216,458
1 Bus (9-20 passenger)	\$27,160
4 Buses (60+ passenger)	\$599,204
2 passenger vans (9-14 people)	\$87,486
2 Food Service Vehicles	\$83,982
2 Golf Carts	\$60,628
11 Maintenance Vehicles	\$301,842
3 Forklifts	\$33,885
20 Trailers	\$282,847
1 Heavy Trucks	\$86,416

Asset	Value
1 Generac 300 kw diesel generator	\$43,500
1 Generac 350 kw diesel generator	\$24,500
7 medium trucks	\$332,258
28 Light Trucks (Vans/pickups)	\$871,565
<i>Total:</i>	<i>\$ 5,360,381</i>
Critical Facilities	
Nelson Center/Data Center	Unknown
3127 Transworld Site	\$18,670,000
Adams Elementary	\$221,797
Bianchi Road	\$3,036,524
Sierra High School Site	\$881,595
GVCC Fremont St Warehouse	\$4,413,205
Discovery Challenge Academy	\$231,155
Dorothy Biddick School	\$3,408,099
East Union High Site	\$470,739
Federal Building	\$19,215,834
Georgetown Place	\$1,111,600
Lathrop Community	\$2,415,607
Monte Diablo BFA	\$6,395,677
ONE.Choice	\$3,118,787
ONE.Discover	\$3,036,524
ONE.Harmony	\$2,520,543
ONE.Lodi	\$2,697,963
ONE.Success	\$3,077,889
Colonial Heights	\$557,771
Dent Elementary Site	\$901,928
Escalon High Site	\$881,184
Great Valley School Site	\$1,048,477
Jacobson School	\$938,500
John McFall	\$5,590,422

Asset	Value
Lincoln Elementary Site	\$470,585
Manteca High Site	\$156,913
Manteca Young Adult	\$4,168,941
McKinley Elementary Site	\$1,930,762
Neil Hafley Site	\$153,913
Redwood School	\$8,855,166
Sequoia Elementary Site	\$156,913
Sierra High Site	\$881,595
Sierra Middle School Site	\$370,045
Waverly Elementary Site	\$1,291,422
Clairmont Elementary	\$221,797
Cleveland Elementary	\$221,797
Creekside Elementary	\$147,864
Edison High Site	\$221,797
Grunsky Elementary	\$1,019,671
Harrison Elementary	\$931,685
King Elementary	\$2,439,788
Lathrop Annex	\$1,266,441
Live Oak Elementary	\$221,797
Montezuma Elementary	\$221,797
Nightingale Charter School	\$221,797
North Elementary	\$798,873
Oakwood Elementary	\$221,797
Parklane Elementary	\$844,848
Ripona Elementary	\$913,448
Taft Elementary	\$221,797
Taylor Skills School	\$147,864
Westwood Elementary	\$147,864
Heritage Primary Elementary	\$147,864
Durham Ferry	\$7,543,558

Asset	Value
Nelson Center	\$ 5,945,600
Venture Academy	\$4,345,600
Career Tech and Educational Center	\$6,462,155
Wenworth Education Center	\$13,850,000
Excel Academy	\$3,487,929
Excel Sports Complex	\$4,655,655
Ventureland	\$3,810,200
Teacher’s College	\$6,136,627
Sky Mountain	\$9,053,726
Solar Parking Lots	\$4,614,499

### 15.3 Current Trends

The SJCOE continues to grow and expand services throughout the county to support approximately 154,00 students over 14 school districts. The SJCOE has seen significant growth in all areas of service to include providing mental health support, professional development, software engineering, special education services, college and career readiness, County Operated Schools and Programs, as well as leadership and program guidance through the Diversity Equity Inclusion and Access program (DEIA).

### 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 or improve upon 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.

#### 15.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop plans and programs and to implement regulations to protect and serve community members. An assessment of planning and regulatory capabilities is presented in Table 15-3.

**Table 15-3 Planning and Regulatory Capabilities**

Plan, Study or Program	Date of Most Recent Update	Comment
SJCOE Emergency Operations Plan	2025	Guides emergency response
Facilities Assessment Plan	2017	On-going
Capital Improvements Plan	Annual	On-going

### ***Opportunities to Expand Planning and Regulatory Capabilities***

The planning and regulatory capabilities of the SJCOE can be expanded by integrating the County-wide hazard mitigation plan into the SJCOE Emergency Operations Plan, Facilities Assessment Plan, and the Capital Improvement plan as listed in Table 15-11.

#### **15.4.2 Fiscal Capabilities**

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. An assessment of fiscal capabilities is presented in Table 15-4.

**Table 15-4 Fiscal Capabilities**

<b>Financial Resource</b>	<b>Accessible or Eligible to Use?</b>
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	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	No

### ***Opportunities to Expand Fiscal Capabilities***

One of the primary objectives in developing the 2026 MJHMP is to establish eligibility to pursue FEMA HMA grant funding opportunities (e.g., FMA and HMGP). HMA funding streams typically require up to a 25 percent local match. The SJCOE has identified local funding resources in Table 15-4 that can provide the local match for projects in the mitigation action plan that list HMA grants as a potential primary funding source.

#### **15.4.3 Administrative and Technical Capabilities**

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 15-5.

**Table 15-5 Administrative and Technical Capabilities**

Staff/Personnel Resource		Available?
Planners or engineers with knowledge of land development and land management practices		No
If Yes, Department /Position:	-	
Engineers or professionals trained in building or infrastructure construction practices		Yes
If Yes, Department /Position:	Operations   Director II	
Planners or engineers with an understanding of natural hazards		Yes
If Yes, Department /Position:	Operations   Emergency Preparedness Coordinator	
Staff with training in benefit-cost analysis		Yes
If Yes, Department /Position:	Business Services   Division Director	
Surveyors		No
If Yes, Department /Position:	-	
Personnel skilled or trained in GIS applications		No
If Yes, Department /Position:	-	
Scientist familiar with natural hazards in local area		No
If Yes, Department /Position:	-	
Emergency manager		Yes
If Yes, Department /Position:	Operations   Emergency Preparedness Coordinator	
Grant writers		Yes
If Yes, Department /Position:	Administration     Grant Development Coordinator	
Procurement Services and Management		Yes
If Yes, Department /Position:	Operations/Purchasing   Coordinator IV	

### ***Opportunities to Expand Administrative and Technical Capabilities***

Administrative and technical capabilities are a community’s staff, skills and tools. These capabilities can be used for mitigation planning and to carry out specific mitigation actions. They also include the ability to access, coordinate and implement these resources effectively (FEMA, 2023). An assessment of administrative and technical capabilities is presented in Table 15-5.

#### **15.4.4 Education and Outreach Capabilities**

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 15-6.

**Table 15-6 Education and Outreach Capabilities**

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
If yes, briefly describe:	-	
Do you use social media for hazard mitigation education and outreach?		No
If yes, briefly describe:	-	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?		No
If yes, briefly describe:	-	
Do you have any other programs in place that could be used to communicate hazard-related information?		Yes
If yes, briefly describe:	SJCOE Safety Committee	
Do you have any established warning systems for hazard events?		Yes
If yes, briefly describe:	The SJCOE uses Edulinks to notify/communicate with staff, students, and families.	

### ***Opportunities to Expand Education and Outreach Capabilities***

The SJCOE will continue to utilize the website, Edulinks, and the SJCOE safety committee to notify the public.

#### **15.4.5 Community Classifications**

Other programs, such as NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 15-7.

**Table 15-7 Community Classifications**

	Participating?	Classification or Number	Date Classified
Unique Identity ID (UEI)	Yes		N/A
NWS StormReady	No		N/A
Firewise USA	No		N/A

### 15.4.6 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The SJCOE’s adaptive capacity for the impacts of climate change is presented in Table 15-8.

**Table 15-8 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	High
Comment:	As an educational facility, the Office of Education is continuously keeping up with climate information and how it impacts the district.
Jurisdiction-level monitoring of climate change impacts	Low
Technical resources to assess proposed strategies for feasibility and externalities	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
Capital planning and land use decisions informed by potential climate impacts	Medium
Comment:	Ca. Environmental Quality Act
Participation in regional groups addressing climate risks	Low
<b>Implementation Capacity</b>	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
Identified strategies for greenhouse gas mitigation efforts	High
Comment:	The SJCOE has installed 20 EV charging stations and has begun phasing EVs into the fleet.
Identified strategies for adaptation to impacts	Low
Champions for climate action in local government departments	High
Comment:	Through the Durham Ferry Outdoor Education Center in Manteca and Sky Mountain Outdoor Education Center in Placer County, the SJCOE also hosts environmental literacy networks for students, educators, and community partners to promote civic and environmental action, and leads a statewide grant for the California Regional Environmental Education Community Network.

Criterion		Jurisdiction Rating <sup>a</sup>
Political support for implementing climate change adaptation strategies		High
Comment:	As an educational facility, many leaders support climate adaptation.	
Financial resources devoted to climate change adaptation		High
Comment:	The SJCOE has devoted resources to installing over 4,500 solar panels across 4 parking lots, installed 20 electric vehicle charging stations, has begun installation of drought tolerant landscape at SJCOE properties, as well as beginning to phase electric vehicles into fleet. The Greater Valley Conservation Corps (a department under the SJCOE) offers recycling programs countywide.	
Local authority over sectors likely to be negative impacted		Low
<b>Public Capacity</b>		
Residents' knowledge of and understanding of climate risk		Low
Residents' support of adaptation efforts		Unsure
Residents' capacity to adapt to climate impacts		Unsure
Local economy current capacity to adapt to climate impacts		Unsure
Local ecosystems capacity to adapt to climate impacts		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.

## 15.5 National Flood Insurance Program Compliance

The SJCOE is not eligible to participate in the National Flood Insurance Program (NFIP). However, any new assets or infrastructure developed by the SJCOE is in compliance with the floodplain regulations established by the surrounding municipal entities.

## 15.6 Integration

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.

### 15.6.1 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 Facilities Assessment Plan may integrate the findings of this plan through consideration for the hazards outlined and their impact on the SJCOE’s facilities. Refer to Action #2 in Table 15-11.
- The Capital Improvement Plan provides opportunities for funding and can support projects that will help make the community more resilient. Refer to Action #2 in Table 15-11.

## 15.7 Risk Assessment

### 15.7.1 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	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the SJCOE did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the SJCOE did not identify any additional damages associated with this event.
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the SJCOE did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/23	The SJCOE experienced downed trees, roof leaks, and seepage into buildings due to heavy winds, rainfall, and ponding water.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	The SJCOE experienced downed trees, roof leaks, and seepage into buildings due to heavy winds, rainfall, and ponding water.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022-January 2023 Storms	CA23-1	1/4/23	While this event impacted San Joaquin County, the SJCOE did not identify any additional damages associated with this event.
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	Cancellation or delay of extracurricular outdoor activities
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the SJCOE did not identify any additional damages associated with this event.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the SJCOE did not identify any additional damages associated with this event.
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	Students countywide were displaced from classrooms and school sites for over a year. The purchase of a large number of Chromebooks, laptops, and desktop computers had to happen expediently to equip students and staff to work and learn remotely.

### 15.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for the San Joaquin County Office of Education facilities is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the SJCOE in identifying hazards that pose the most significant threat. 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 the economy.

**Table 15-10 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.3	.9	.2	.1	.3	1.8	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

Notes:  
 PRI Value 1 to 1.9 = Low Hazard Risk Ranking  
 PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking  
 PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### 15.7.3 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.

#### **Other Noted Vulnerabilities**

The jurisdiction has not identified any other issues other than what is in the risk assessment.

## 15.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 15-11 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter Energy Communications Transportation	Existing	1, 3, 4	Lead: Director II Operations and Support Services	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans that address natural hazards within the service area including: <ul style="list-style-type: none"> <li>• SJCOE EOP</li> <li>• Facilities Assessment Plan</li> <li>• Capital Improvements Plan</li> </ul>	Safety and security Communications Transportation Water Systems	New	6	Lead: Emergency Preparedness Coordinator	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
3	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	N/A	New	6	Lead: Emergency Preparedness Coordinator	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
4	Purchase generators for District-owned critical facilities and infrastructure that lack adequate backup power.	Safety and security Energy Communications	Existing	3, 5	Lead: Chief Support: Captain	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

**Table 15-12 Mitigation Action Prioritization**

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#4	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium

Notes:  
 31 or more = High Priority  
 15 to 30 = Medium Priority  
 0 to 14 = Low Priority

Table 15-13 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■		■		■		■	■	■	■	■	■	■
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■		■				■	■	■	■	■	■	■	■	■	■	■
#4					■		■		■	■			■	■	■		■

## 15.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 15-14.

**Table 15-14 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Career Quest	3/27/25	100+
Supported the countywide outreach efforts for this plan including promoting the public survey.	Throughout the planning process	TBD

## 15.10 Information Sources Used for This Annex

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

- SJCOE Emergency Operations Plan—Used for the capability assessment
- Facilities Assessment Plan—Used for the capability assessment
- Capital Improvement Plan—Used for the capability assessment

District insurance records were used to develop 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.

## 16. STOCKTON PORT DISTRICT



Source: Port of Stockton

### 16.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the Stockton Port District. Members are listed in Table 16-1.

Table 16-1 Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Jeff Vine, Emergency Management/Safety Officer	Name and Title:	Lacy Edwards, Port Security Manager
Address:	315 W. Fyffe Avenue Stockton, CA 95203	Address:	315 W. Fyffe Avenue Stockton, CA 95203
Phone Number:	(209) 946-0246	Phone Number:	(209) 946-0246
Email:	<a href="mailto:jvine@stocktonport.com">jvine@stocktonport.com</a>	Email:	<a href="mailto:ledwards@stocktonport.com">ledwards@stocktonport.com</a>

## 16.2 Jurisdictional Profile

### 16.2.1 Overview

The Stockton Port District, more commonly known as the Port of Stockton, is a unique inland port situated on the Delta of the San Joaquin River, within the agriculturally rich community of California's fertile San Joaquin Valley. As a California Special District and public entity, the Port offers flexible solutions for domestic and international distribution by ship, rail, or truck.

The Port of Stockton officially opened on February 2, 1933. The Port currently employs a staff of 111. The Port is governed by a seven-member Board of Commissioners.

### 16.2.2 Service Area

The Port of Stockton is the number one dedicated bulk/break bulk port in California and the fourth busiest port in the state. In 2023, the Port had 288 vessel calls and 50,998 rail cars received with 4.3 million metric tons of cargo handled. The Port provides 10,077 total jobs. Two major railroads service the port tenants with over 75 miles of railroad track. The Port has 12,000 + linear feet of docks and nearly 4,000 total acres of property along the deep water channel. The Port has over seven million square feet of storage. Over 95% of the fertilizer used to grow Central Valley crops comes through the Port. The Port of Stockton is the second California port to be Green Marine Certified and has 42 zero emission units deployed.

### 16.2.3 Governing Body

The Port is governed by a seven-member Board of Commissioners; four commissioners are appointed by the City of Stockton and three commissioners appointed by San Joaquin County. The Board establishes policies under which the port's staff, supervised by the Port Director who conducts daily operations.

The Stockton Port Commission assumes responsibility for the adoption of this plan; the Risk Department will oversee its implementation.

### 16.2.4 Assets

A detailed list of assets was used to determine hazard risk but is not available as publicly facing content. Please contact the Local Hazard Mitigation Planning Team listed above with any questions.

## 16.3 Current Trends

The Port of Stockton has experienced notable growth in recent years by capitalizing on its strength as a general cargo port, particularly during and after the COVID-19 supply-chain disruptions, when shippers redirected cargo from congested container ports to inland facilities like Stockton; this shift resulted in record-breaking vessel calls and tonnage in 2021, driven largely by increased breakbulk activity and supported by decades of prior investment in infrastructure, facilities, and operational capacity. The Port's growth trend, as documented in its annual reporting, reflects a deliberate long-term strategy focused on flexibility, diversification of cargo types, and continued reinvestment to maintain competitiveness during periods of disruption and change (Port of Stockton California n.d.)

## 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 or improve upon 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.

### 16.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop plans and programs and to implement regulations to protect and serve community members. An assessment of planning and regulatory capabilities is presented in Table 16-2.

**Table 16-2 Planning and Regulatory Capabilities**

Plan, Study or Program	Date of Most Recent Update	Comment
Port of Stockton 2024-26 Utility Wildfire Mitigation Plan	09/16/2024	The Port of Stockton’s Utility Wildfire Mitigation Plan seeks to reduce the risk of wildfires associated with the design, construction, operation, and maintenance of the Port’s electrical utility infrastructure, while prioritizing public safety, environmental protection, and continuity of service in the face of increasing wildfire risk.
FY 2025-2030 Capital Improvement Plan	04/24/2025	The CIP includes a range of projects aimed at maintaining and improving the Port’s physical properties, with an estimated total cost exceeding \$50,000. The program is coordinated by the Finance Department and the Department of Facilities & Procurement, and it covers various aspects such as buildings, environmental activities, utility systems, and the railroad transportation system. Funding sources for these projects are identified, and the CIP is intended to illustrate the magnitude of facility and infrastructure needs throughout the Port. The Port actively seeks State, Federal, and other grant opportunities to complete the projects and programs in the CIP.

Plan, Study or Program	Date of Most Recent Update	Comment
Adopted Operating Budget FY 2026	06/16/2025	The Port of Stockton adopts an annual operating budget that funds day-to-day operations, supports implementation of the Port’s multi-year Capital Improvement Program, and documents revenues, expenditures, reserves, and cash flow. The budget demonstrates fiscal and administrative capacity to maintain critical Port facilities, utilities, and services and to support continuity of operations and recovery following hazard events.

**Opportunities to Expand Planning and Regulatory Capabilities**

The planning and regulatory capabilities of the District can be expanded by integrating the 2026 LHMP into the Utility Wildfire Mitigation Plan and the Capital Improvement Plan as listed in Table 16-10 and below:

- Utility Wildfire Mitigation Plan
- Capital Improvement Plan
- Adopted Operating Budget

**16.4.2 Fiscal Capabilities**

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. An assessment of fiscal capabilities is presented in Table 16-3.

**Table 16-3 Fiscal Capabilities**

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	Yes
If yes, specify:	Electricity
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No

Financial Resource	Accessible or Eligible to Use?
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No

### Opportunities to Expand Fiscal Capabilities

One of the primary objectives in developing the 2026 MJHMP is to establish eligibility to pursue FEMA HMA grant funding opportunities (e.g., FMA and HMGP). HMA funding streams typically require up to a 25 percent local match. The Port has identified local funding resources in Table 16-3 that can provide the local match for projects in the mitigation action plan that list HMA grants as a potential primary funding source.

### 16.4.3 Administrative and Technical Capabilities

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 16-4.

**Table 16-4 Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	No
If Yes, Department /Position:	Facilities/Engineering Director and Real Estate Department
Engineers or professionals trained in building or infrastructure construction practices	Yes
If Yes, Department /Position:	Facilities/Engineering Director
Planners or engineers with an understanding of natural hazards	Yes
If Yes, Department /Position:	Yes, Facilities/Engineering Director
Staff with training in benefit-cost analysis	Yes
If Yes, Department /Position:	Finance
Surveyors	No
If Yes, Department /Position:	-
Personnel skilled or trained in GIS applications	Yes
If Yes, Department /Position:	IT, GIS Specialist
Scientist familiar with natural hazards in local area	No
If Yes, Department /Position:	-

Staff/Personnel Resource		Available?
Emergency manager		Yes
If Yes, Department /Position:	Risk Management, Emergency Management/Safety Officer	
Grant writers		Yes
If Yes, Department /Position:	Grants Management Specialist	
Procurement Services and Management		Yes
If Yes, Department /Position:	Procurement and Contracts Officer	

### Opportunities to Expand Administrative and Technical Capabilities

Administrative and technical capabilities are a community’s staff, skills and tools. These capabilities can be used for mitigation planning and to carry out specific mitigation actions. They also include the ability to access, coordinate and implement these resources effectively (FEMA 2023). An assessment of administrative and technical capabilities is presented in Table 16-4.

#### 16.4.4 Education and Outreach Capabilities

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 16-5.

**Table 16-5 Education and Outreach Capabilities**

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
If yes, briefly describe:	N/A
Do you use social media for hazard mitigation education and outreach?	No
If yes, briefly describe:	N/A
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
If yes, briefly describe:	Community outreach monthly meetings
Do you have any other programs in place that could be used to communicate hazard-related information?	No
If yes, briefly describe:	-
Do you have any established warning systems for hazard events?	Yes
If yes, briefly describe:	Everbridge

### Opportunities to Expand Education and Outreach Capabilities

The Port will continue to use Everbridge to warn of hazard events.

#### 16.4.5 Community Classifications

Other programs, such as NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 16-6.

**Table 16-6 Community Classifications**

	Participating?	Classification	Date Classified
Unique Identity ID (UEI)	No	N/A	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	N/A	N/A
Public Protection (ISO for Fire Districts)	No	N/A	N/A
NWS StormReady	No	N/A	N/A
Firewise USA	No	N/A	N/A

#### 16.4.6 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity - high, medium, or low. The Port’s adaptive capacity for the impacts of climate change is presented in Table 16-7.

**Table 16-7 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	Low
Jurisdiction-level monitoring of climate change impacts	Low
Technical resources to assess proposed strategies for feasibility and externalities	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	High
Comment:	The Port of Stockton participates in the U.S. EPA Clean Ports Program and is a recipient of a \$110.47 million Clean Ports grant to deploy zero-emission equipment, shore power, and supporting energy infrastructure. This program demonstrates the Port’s planning, grant management, and implementation capacity for large-scale environmental and infrastructure initiatives within Port-owned facilities.

Criterion		Jurisdiction Rating <sup>a</sup>
Capital planning and land use decisions informed by potential climate impacts		Low
Participation in regional groups addressing climate risks		Medium
Comment:	San Joaquin Regional Climate Collaborative, Sustainable Terminals Accelerating Regional Transformation (START) project,	
<b>Implementation Capacity</b>		
Clear authority/mandate to consider climate change impacts during public decision-making processes		High
Comment:	The Port of Stockton participates in the U.S. EPA Clean Ports Program and is a recipient of a \$110.47 million Clean Ports grant to deploy zero-emission equipment, shore power, and supporting energy infrastructure. This program demonstrates the Port's planning, grant management, and implementation capacity for large-scale environmental and infrastructure initiatives within Port-owned facilities.	
Identified strategies for greenhouse gas mitigation efforts		High
Comment:	The Port of Stockton participates in the U.S. EPA Clean Ports Program and is a recipient of a \$110.47 million Clean Ports grant to deploy zero-emission equipment, shore power, and supporting energy infrastructure. This program demonstrates the Port's planning, grant management, and implementation capacity for large-scale environmental and infrastructure initiatives within Port-owned facilities.	
Identified strategies for adaptation to impacts		Medium
Comment:	The Port of Stockton participates in the U.S. EPA Clean Ports Program and is a recipient of a \$110.47 million Clean Ports grant to deploy zero-emission equipment, shore power, and supporting energy infrastructure. This program demonstrates the Port's planning, grant management, and implementation capacity for large-scale environmental and infrastructure initiatives within Port-owned facilities.	
Champions for climate action in local government departments		High
Comment:	San Joaquin Regional Climate Collaborative	
Political support for implementing climate change adaptation strategies		Medium
Comment:	San Joaquin Regional Climate Collaborative	
Financial resources devoted to climate change adaptation		High
Comment:	The Port of Stockton participates in the U.S. EPA Clean Ports Program and is a recipient of a \$110.47 million Clean Ports grant to deploy zero-emission equipment, shore power, and supporting energy infrastructure. This program demonstrates the Port's planning, grant management, and implementation capacity for large-scale environmental and infrastructure initiatives within Port-owned facilities.	
Local authority over sectors likely to be negative impacted		Low
<b>Public Capacity</b>		
Residents' knowledge of and understanding of climate risk		N/A
Residents' support of adaptation efforts		N/A
Residents' capacity to adapt to climate impacts		N/A

Criterion	Jurisdiction Rating <sup>a</sup>
Local economy current capacity to adapt to climate impacts	N/A
Local ecosystems capacity to adapt to climate impacts	N/A

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 National Flood Insurance Program Compliance

Districts are not eligible to participate in the National Flood Insurance Program (NFIP). However, any new assets or infrastructure developed by the Port are in compliance with the floodplain regulations established by the surrounding municipal entities.

## 16.6 Integration

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.

### 16.6.1 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 Plan—The CIP will coordinate with mitigation projects identified in the MJHMP.

## 16.7 Risk Assessment

### 16.7.1 Jurisdiction-Specific Natural Hazard Event History

Table 16-8 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 16-8 Past Natural Hazard Events**

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the Port did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the Port did not identify any additional damages associated with this event.
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the Port did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/23	While this event impacted San Joaquin County, the Port did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	While this event impacted San Joaquin County, the Port did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	CA23-1	1/4/23	\$77,368.66 total \$42,516.64 is obligated \$34,852.02 is under review
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	While this event impacted San Joaquin County, the Port did not identify any additional damages associated with this event.
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the Port did not identify any additional damages associated with this event.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the Port did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	The Port was subject to closures and social distancing/masking requirements.

### 16.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for the Stockton Port District is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the Port in identifying hazards that pose the most significant threat. Table 16-9 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. The Countywide ranking of low for levee failure was updated to medium based on the Port’s perception of risk.

**Table 16-9 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.6	.9	.2	.1	.3	1.9	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

Notes:  
 PRI Value 1 to 1.9 = Low Hazard Risk Ranking  
 PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking  
 PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### 16.7.3 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.

#### 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:

- Holding Pond may not be as strong as it should be for large storms.
- Storm Drain Pump on the south side of holding ponds needs a generator to keep up pumping during a power outage.

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

## 16.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 16-10 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter Energy Communications Transportation	Existing	1, 3, 5	Lead: Facilities Department  Support: Operations and Risk Manager	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans that address natural hazards within the service area including: <ul style="list-style-type: none"> <li>• Utility Wildfire Mitigation Plan</li> <li>• Capital Improvement Plan</li> </ul>	Safety and security Communications Transportation Water Systems	New	6	Lead: Risk Manager  Support: Facilities, Real Estate Departments	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	<ul style="list-style-type: none"> <li>Adopted Operating Budget</li> </ul>								
3	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.		New	6	Lead: Facilities, Real Estate Departments  Support: Risk Manager	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
4	Purchase generators for District-owned critical facilities and infrastructure that lack adequate backup power, including: <ul style="list-style-type: none"> <li>Storm Drain Pump on south side of holding ponds</li> </ul>	Safety and security Energy Communications	Existing	3, 5	Lead: Facilities Department  Support: Procurement	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
5	The Port will work with the City's Engineer and DPW to evaluate the integrity and capacity of the Holding Pond and determine if improvements are necessary. Once evaluated, cost-effective mitigation measures will be made as necessary, with a focus in areas of	Safety and Security Water Systems	Existing	1, 4	Lead: Facilities Department  Support: Risk Manager	Yes	Medium (>\$75,000) for study; high for implementation	General Fund and FEMA HMA (FMA and HMGP)	Long-Term (5 years or more)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	community lifelines. The Port will work with the City DPW, Engineer, and OEM to monitor the areas to determine performance of the improvements and if additional measures are necessary.								

Table 16-11 Mitigation Action Prioritization

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#4	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium
#5	3	3	3	3	1	1	1	3	3	0	3	1	3	3	1	32	High

**Table 16-12 Mitigation Action Classification and Natural Hazards Addressed**

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■		■		■		■	■	■	■	■	■	■
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■		■				■	■	■	■	■	■	■	■	■	■	■
#4					■		■		■	■		■	■	■	■		■
#5		■		■	■		■		■		■		■	■			

Notes:  
31 or more = High Priority  
15 to 30 = Medium Priority  
0 to 14 = Low Priority

## 16.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 16-13.

**Table 16-13 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Port Outreach Committee	Monthly	8 to 20
Supported the countywide outreach efforts for this plan including promoting the public survey	Throughout the planning process	TBD

## 16.10 Information Sources Used for This Annex

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

- Grant for storm damage—Used to list local hazard events
- Equipment List—Used in the evaluation of assets
- Property list—Used in the evaluation of 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.

## 17. RECLAMATION DISTRICT 348 (NEW HOPE TRACT)



Source: Reclamation District No. 348 (New Hope Tract)

### 17.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the Reclamation District No. 348 (New Hope Tract). Members are listed in Table 17-1.

**Table 17-1 Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Patrick W. Ervin, P.E., Project Engineer	Name and Title:	Neil Favor, E.I.T., Staff Engineer
Address:	2151 River Plaza Drive, STE 100 Sacramento, CA 95833	Address:	2151 River Plaza Drive, STE 100 Sacramento, CA 95833
Phone Number:	(916) 441-6850	Phone Number:	(916) 441-6850
Email:	<a href="mailto:pwervin@wbecorp.com">pwervin@wbecorp.com</a>	Email:	<a href="mailto:nfavor@wbecorp.com">nfavor@wbecorp.com</a>
<b>Additional Planning Team Members:</b>			
Name and Title:	Robert C. Wagner, P.E., District Engineer		
Method of Participation:	Document review		
Name and Title:	Martin Berber, P.E., Project Engineer		
Method of Participation:	Document review		

Primary Point of Contact		Alternate Point of Contact
Name and Title:	William Stokes, President, Reclamation District No. 348	
Method of Participation:	Provided District asset information	
Name and Title:	Alexis Stevens, District Counsel	
Method of Participation:	Provided District asset information	

## 17.2 Jurisdictional Profile

### 17.2.1 Overview

Reclamation District No. 348 (District), also known as New Hope Tract, is a special district formed in 1879 under the Act of 1861 to provide levee maintenance and drainage services. The District lands were originally part of Swampland District 5.

The District is funded by a maintenance assessment levied against property owners within the boundaries of the District for the purpose of maintaining District levees and drainage facilities. The District also receives funding from the California Department of Water Resource (DWR) under various programs such as the Delta Levees Special Flood Control Projects and the Flood Control Subventions Program.

The District has one full time maintenance employee whose duties include, but are not limited to, vegetation management, equipment maintenance, rodent control, and maintenance of District drainage facilities.

### 17.2.2 Service Area

The District encompasses an area bounded by the Mokelumne River to the west, north, and east and Beaver Slough to the south.

### 17.2.3 Governance

The District Board assumes responsibility for the adoption of this plan; the District engineer will oversee its implementation.

### 17.2.4 Assets

Table 17-2 Assets

Asset	Value
Property	
N/A	\$0
Equipment	
Caterpillar 416B 4WD Backhoe	\$135,000
New Holland TN75 Tractor	\$72,000
2008 Ford F-250 Pickup	\$80,000
Q Linkbelt Excavator	\$150,000

Asset	Value
Vermeer Chipper BC1000XL	\$75,000
Alamo Boom-Axe Rotary Brush Cutter	\$10,000
John Deere 5090M Utility Tractor	\$100,000
Bush Hog 9' Mower	\$12,000
Schulte Model 1800 Pull Type Rotary	\$50,000
<i>Total:</i>	<i>\$684,000</i>
Critical Facilities	
New Hope Levee System (18.6 Miles @ \$27,610,000/mile)	\$513,380,000
4 Pump Stations (\$1.75 Million x 4)	\$7,000,000
<i>Total:</i>	<i>\$520,380,000</i>

### 17.3 Current Trends

Since its formation, the District has remained primarily an agricultural area with little development and population growth. This trend is likely to continue over the next ten years.

### 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 or improve upon 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.

#### 17.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop plans and programs and to implement regulations to protect and serve community members. An assessment of planning and regulatory capabilities is presented in Table 17-3.

**Table 17-3 Planning and Regulatory Capabilities**

Plan, Study or Program	Date of Most Recent Update	Comment
District Levee Regulations	Unknown	Regulations controlling alterations to and encroachments upon, through or over the District's levee system.
California Water Code Division 15 Reclamation Districts	1951	Grants Districts the authority to do all things necessary or convenient for accomplishing the purposes for which it was formed.
Delta Levees Special Flood Control Projects Program	2014	The Delta Levees Special Flood Control Projects Program works directly with local agencies to provide critical financial assistance for flood protection in the Delta. This funding protects and enhances the economic, environmental and cultural resources in the Delta. The Program provides funding to safeguard public benefits, including roads, utilities, urbanized areas, water quality, recreation, navigation, and fish and wildlife from flood hazards. The Program mitigates the habitat impacts of each project and ensures a net long-term habitat improvement in the Delta.
5-Year Plan	October 2021	The 5-Year Plan is a document that identifies levee improvement and habitat enhancement projects for the New Hope Tract levee system. This document is funded through the California Department of Water Resources.
Emergency Operations Plan	June 2022	Flood Safety Plan to ensure that District staff can meet response objectives in a flood emergency as well as effectively interact with other jurisdictions performing emergency functions within and around the District.

### ***Opportunities to Expand Planning and Regulatory Capabilities***

The District's opportunity to expand regulatory capability is limited. Except for local District Levee Regulations that address landowner alterations to District Levees, District regulatory authority is granted through the California Water Code, which can only be expanded by the State of California.

Long term planning is heavily dependent on State funding. Each potential project requires extensive environmental studies, environmental mitigation, topographic surveys, engineering design, project management, etc. The District is reliant on State Programs like the Delta Levees Special Flood Control Projects which provides funding for the planning and construction of flood control projects with the District.

### **17.4.2 Fiscal Capabilities**

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. An assessment of fiscal capabilities is presented in Table 17-4.

**Table 17-4 Fiscal Capabilities**

Financial Resource		Accessible or Eligible to Use?
Community Development Block Grants		No
Capital Improvements Project Funding		No
Authority to Levy Taxes for Specific Purposes		Yes
User Fees for Water, Sewer, Gas or Electric Service		No
If yes, specify:	-	
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

### ***Opportunities to Expand Fiscal Capabilities***

The District’s primary sources of income are assessments levied on landowners within the District boundary for the purpose of providing levee maintenance, and State-Sponsored grant programs like the Delta Levees Special Flood Control Projects.

The District has the capability to increase assessments each year by the Norther California (San Francisco Bay Area) Consumer Price Index, not to exceed 3%, per year. Although the District has the capability to increase the assessment each year, it exercises discretion and raises the assessment as needed based on projected maintenance and improvement costs.

State-Sponsored grant programs provide the majority of funding for large levee improvement projects within the District, typically through the release of Project Solicitation Packages (PSP). The frequency and funding amount for each PSP varies, as it is dependent on the availability of State funds. The District submits project applications whenever a PSP is released by the California Department of Water Resources.

### **17.4.3 Administrative and Technical Capabilities**

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 17-5.

**Table 17-5 Administrative and Technical Capabilities**

Staff/Personnel Resource		Available?
Planners or engineers with knowledge of land development and land management practices		No
If Yes, Department /Position:	N/A	
Engineers or professionals trained in building or infrastructure construction practices		Yes
If Yes, Department /Position:	Consultant District Engineer – Wagner & Bonsignore, Consulting Civil Engineers	
Planners or engineers with an understanding of natural hazards		Yes
If Yes, Department /Position:	Consultant District Engineer – Wagner & Bonsignore, Consulting Civil Engineers	
Staff with training in benefit-cost analysis		Yes
If Yes, Department /Position:	Consultant District Engineer – Wagner & Bonsignore, Consulting Civil Engineers	
Surveyors		Yes
If Yes, Department /Position:	Consultant District Engineer – Wagner & Bonsignore, Consulting Civil Engineers	
Personnel skilled or trained in GIS applications		Yes
If Yes, Department /Position:	Consultant District Engineer – Wagner & Bonsignore, Consulting Civil Engineers	
Scientist familiar with natural hazards in local area		Yes
If Yes, Department /Position:	Consultant District Engineer – Wagner & Bonsignore, Consulting Civil Engineers	
Emergency manager		Yes
If Yes, Department /Position:	District Personnel Consultant District Engineer – Wagner & Bonsignore, Consulting Civil Engineers	
Grant writers		Yes
If Yes, Department /Position:	Consultant District Engineer – Wagner & Bonsignore, Consulting Civil Engineers	
Procurement Services and Management		Yes
If Yes, Department /Position:	District Personnel Consultant District Engineer – Wagner & Bonsignore, Consulting Civil Engineers	

### **Opportunities to Expand Administrative and Technical Capabilities**

The District utilizes its own personnel, the District Engineer, and various consultants to accomplish all tasks in Table 17-5, except for land development and management which are outside the District’s scope of services.

#### **17.4.4 Education and Outreach Capabilities**

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 17-6.

**Table 17-6 Education and Outreach Capabilities**

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
If yes, briefly describe:	-	
Do you use social media for hazard mitigation education and outreach?		No
If yes, briefly describe:	-	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?		Yes
If yes, briefly describe:	The District Board of Trustees is made up of citizens who are also landowners within the District.	
Do you have any other programs in place that could be used to communicate hazard-related information?		Yes
If yes, briefly describe:	District Emergency Operations Plan	
Do you have any established warning systems for hazard events?		Yes
If yes, briefly describe:	District Emergency Operations Plan	

### **Opportunities to Expand Education and Outreach Capabilities**

The District holds monthly Board meetings to discuss District business, which includes hazard mitigation. These are public meetings where the District welcomes questions and comments from the public. The District pays a consultant to maintain a District website where meeting agendas are posted.

The District also coordinates closely with San Joaquin County Office of Emergency Services (SJC OES) who perform public outreach on behalf of reclamation districts. The SJC OES develops documents like the Emergency Operations Plan that educate the public about flood risks.

### 17.4.5 Community Classifications

Other programs, such as NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 17-7.

**Table 17-7 Community Classifications**

	Participating?	Classification	Date Classified
Unique Identity ID (UEI)	Yes	FNMBHXSPZXK2	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	N/A	N/A
Public Protection (ISO for Fire Districts)	No	N/A	N/A
NWS StormReady	No	N/A	N/A
Firewise USA	No	N/A	N/A

### 17.4.6 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The District’s adaptive capacity for the impacts of climate change is presented in Table 17-8.

**Table 17-8 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	High
Comment:	Design of levee improvement/rehabilitation projects funded through the California Department of Water Resources (Department) take into account rising water surface elevations related to climate change.
Jurisdiction-level monitoring of climate change impacts	Unsure
Comment:	The District’s purpose is flood protection. Monitoring the long term impacts of climate change, and how those impacts relate to flood control within the Sacramento-San Joaquin Delta is beyond the ability of the District.
Technical resources to assess proposed strategies for feasibility and externalities	High
Comment:	Planning for future flood protection strategies.
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Unsure
Comment:	The capacity does not exist.
Capital planning and land use decisions informed by potential climate impacts	Unsure

Criterion		Jurisdiction Rating <sup>a</sup>
Comment:	The District does not have jurisdiction over land use within its boundaries.	
Participation in regional groups addressing climate risks		High
Comment:	The District participates in State level discussions regarding the impacts of climate change on flood control.	
Implementation Capacity		
Clear authority/mandate to consider climate change impacts during public decision-making processes		High
Comment:	The District has the authority to approve levee projects that consider the impacts of climate change.	
Identified strategies for greenhouse gas mitigation efforts		High
Comment:	The District complies with California Air Resources Board (CARB) mitigation efforts.	
Identified strategies for adaptation to impacts		High
Comment:	Design elevations of levee projects adapt to meet rising water surface elevations resulting from climate change.	
Champions for climate action in local government departments		Unsure
Political support for implementing climate change adaptation strategies		Unsure
Financial resources devoted to climate change adaptation		Unsure
Local authority over sectors likely to be negative impacted		Low
Comment:	The capacity does not exist.	
Public Capacity		
Residents' knowledge of and understanding of climate risk		Low
Comment:	The capacity does not exist.	
Residents' support of adaptation efforts		Low
Comment:	The capacity does not exist.	
Residents' capacity to adapt to climate impacts		High
Comment:	The District strives to adapt to climate change through flood control projects.	
Local economy current capacity to adapt to climate impacts		High
Comment:	Typically, flood control projects are funded through a 90/10 cost share with DWR, where DWR pays 90% of flood control projects. The cost share allows the local economy to adapt accordingly.	
Local ecosystems capacity to adapt to climate impacts		High
Comment:	District flood control projects are permitted through multiple environmental agencies whose purpose is to protect the environment and its ecosystems.	

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 National Flood Insurance Program Compliance

Districts are not eligible to participate in the National Flood Insurance Program (NFIP). However, any new assets or infrastructure developed by the District are in compliance with the floodplain regulations established by the surrounding municipal entities.

## 17.6 Integration

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.

### 17.6.1 Existing Integration

No existing integration was identified as this is the first MJHMP for the County.

### 17.6.2 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:

- **Emergency Operations Plan (EOP)** – The results of the risk assessment will be used in future versions of the EOP.
- **Five Year Plan** – The results of the risk assessment will be used in future versions of the Five-Year Plan.

## 17.7 Risk Assessment

### 17.7.1 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	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Biological	2024 Bird Flu	N/A	12/18/24	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/23	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	DR-4683-CA CA23-1	1/14/23 1/4/23	\$1,410,096.72
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	The District was subject to closures and social distancing/masking requirements.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Storms, Flooding, Mud and Landslides; 1997 January Floods	DR-1155-CA CA97-01	1/4/97 1/2/97	Record flows on the Cosumnes River with high flows on the Mokelumne River (5,000 cfs) led to peak stage of 21.7' at Benson's Ferry gauge on January 3rd. The district levees had no freeboard remaining from Union Pacific railroad tracks to the junction of the Mokelumne River and Beaver Slough. A critical situation created by flood waters breaking back into the Mokelumne River from the flooded Bean Ranch across from the district's westside levee. A rodent hole opened up with water at the levee crown. The district was just able to save the levee. Emergency sand bagging at low spots prevented overtopping. The area was evacuated even though the levees held.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	Severe Storms & Flooding; 1986 Storms	DR-758-CA CA86-01	2/21/86 2/18/86	The Mokelumne River peaked at 18.3 feet on February 19th, over three feet above flood stage (15.0'). The primary levee failed just north of the New Hope Road bridge on February 20th after river elevations had begun to

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
				<p>rapidly recede (possibly due to the failure of Tyler Island downstream). Officials surmise there was a saturation failure with portions of levee subsequently seen several feet back from their original location. Flood water filled the areas east of Union Pacific Railroad tracks and eventually broke through tracks near Benson’s Ferry at 2 p.m. the same day. Water partially filled the area between the railroad tracks and Interstate 5 flowing westward primarily through the Barber Road underpass. Waters sheet flowed across the district north of Walnut Grove Road which served as a barrier preventing the flow south (Walnut Grove Road is the highest elevation in the area). Water moved into areas south of Walnut Grove Road Marina for the first two days, mainly through culverts in the road. The northwest corner of the district and the area just east of Wimpy’s Marina is higher and water did not approach the levee. The third day flood waters broke over Walnut Grove Road completely inundating the south side of the district. Portions of Thornton remained dry although the entire town was surrounded by water. The relief cut was made on the fourth day at the junction of the Mokelumne River and Beaver Slough by the district, break repaired by the COE. Emergency pumps were installed next to the district pump station on Mokelumne River south of Walnut Grove Road.</p>

### 17.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for Reclamation District No. 348 (New Hope Tract) is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the District in identifying hazards that pose the most significant threat. 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 the economy.

**Table 17-10 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
Dam Failure	.3	.3	.2	.1	.3	1.2	Low
Drought	.3	.3	.2	.1	.3	1.2	Low
Earthquake	.3	.9	.4	.4	.2	2.2	Medium
Extreme Heat	.3	.3	.2	.1	.2	1.1	Low
Landslide, Debris Flow & Other Mass Movements	.3	.3	.2	.1	.3	1.2	Low
Levee Failure	.3	.6	.6	.4	.3	2.2	Medium
Lightning	.3	.3	.2	.1	.2	1.1	Low
Riverine, Stream and Alluvial Flooding	.3	.6	.4	.1	.3	1.7	Low
Severe Wind, Weather and Storms	1.2	.6	.2	.1	.4	2.5	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	.1	.3	.2	.1	.2	0.9	Low

Notes:  
 PRI Value 1 to 1.9 = Low Hazard Risk Ranking  
 PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking  
 PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### **17.7.3 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.

#### ***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:

- District pump stations are not equipped with generators.

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

## 17.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 17-11 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	<p>Integrate the hazard mitigation plan into other plans that address natural hazards within the service area including:</p> <ul style="list-style-type: none"> <li>• RD 348 Emergency Operations Plan</li> <li>• RD 348 Five Year Plan</li> <li>• District Levee Regulations</li> <li>• California Water Code</li> <li>• Delta Levees Special Flood Control Projects</li> </ul>	<p>Safety and security Communications Transportation Water Systems</p>	Existing	6	<p>Lead: District Engineer Support: DWR, District Board Members and Staff</p>	Yes	Low (\$0-\$50,000)	Staff Time, General Fund, DWR	Short-Term (less than 5 years)
2	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	N/A	Existing	6	<p>Lead: District Engineer Support: DWR, District Board Members and Staff</p>	Yes	Low (\$0-\$50,000)	Staff Time, General Fund, DWR	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
3	Purchase generators for District-owned critical facilities and infrastructure that lack adequate backup power, including: <ul style="list-style-type: none"> <li>Pump Stations 1-4</li> </ul>	Safety and security Energy Communications	Existing	3, 5	Lead: District Engineer Support: District Board Members and Staff	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Table 17-12 Mitigation Action Prioritization

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#2	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#3	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium

Notes:  
 31 or more = High Priority  
 15 to 30 = Medium Priority  
 0 to 14 = Low Priority

Table 17-13 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1	■		■				■	■	■	■	■	■	■	■	■	■	■
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3					■		■		■	■			■	■	■		■

## 17.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 17-14.

**Table 17-14 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
District Board Meeting (Open to the Public)	2 <sup>nd</sup> Thursday Each Month	Varies
Supported the countywide outreach efforts for this plan including promoting the public survey.	Throughout the planning process	TBD

## 17.10 Information Sources Used for This Annex

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

- Reclamation District No. 348 New Hope Tract Five Year Plan (October 2021)
  - General District information, District Profile, Trends, etc.
- Emergency Operations Plan (2022)
  - Included in Table 1-3.
- Delta Levees Special Flood Control Projects Guidelines
  - Included in Table 1-3.
- California Water Code Division 15 – Reclamation Districts
  - Included in Table 1-3.

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. WATERLOO-MORADA RURAL COUNTY FIRE PROTECTION DISTRICT



Source: Waterloo-Morada Fire District

## 18.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the Waterloo-Morada Fire District. Members are listed in Table 18-1.

**Table 18-1 Hazard Mitigation Planning Team**

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Eric Walder, Fire Chief	Name and Title:	Jason Culbertson, Battalion Chief
Address:	6925 E. Foppiano Lane Stockton, CA 95212	Address:	6925 E. Foppiano Lane Stockton, CA 95212
Phone Number:	(209) 931-3107	Phone Number:	(209) 931-3107
Email:	ewalder@wmfire.org	Email:	jculbertson@wmfire.org
<b>Additional Planning Team Members:</b>			
Name and Title:	Yolanda Palermo, Administrative Secretary, Board Clerk		
Method of Participation:	Provided financial information		
Name and Title:	Jason Harper, Battalion Chief, Logistics Chief		
Method of Participation:	Provided information on capabilities and input on mitigation strategies		

Primary Point of Contact		Alternate Point of Contact
Name and Title:	Scott Byous, Battalion Chief, Operations Chief	
Method of Participation:	Provided information on capabilities and input on mitigation strategies	
Name and Title:	Reid Hawkins, Fire Engineer, Public Information Officer/Social Media Manager	
Method of Participation:	Provided information on capabilities and input on mitigation strategies	

## 18.2 Jurisdictional Profile

### 18.2.1 Overview

The Waterloo-Morada Rural County Fire Protection District, doing business as the Waterloo-Morada Fire District (WMFD), is a special district located in the unincorporated area of San Joaquin County. It borders the City of Stockton to the west and unincorporated areas on all other sides. The principal act that governs the District is the Fire Protection District Law of 1987. This act empowers WMFD to provide fire protection, rescue, emergency medical services, hazardous materials response, and any other services related to the protection of lives and property.

The District was formed in 1947 and currently employs 22 full-time and 2 part-time employees. Its major funding sources include property taxes and special property taxes. The governing body of the District consists of five board members, elected by the citizens of the District, each serving 4-year terms. The Board of Directors has the authority to adopt policies and resolutions and provide overall direction to the District.

### 18.2.2 Service Area

The Waterloo-Morada Fire District provides all-risk fire, rescue, and emergency medical services to an unincorporated area of San Joaquin County including the communities of Morada and Waterloo with a population approaching 15,000 residents. The District’s service area is approximately 36 square miles.

The Waterloo-Morada Fire District operates out of two fire stations. Staffing includes a Fire Chief, an Administrative Assistant, and 21-line personnel. Daily staffing includes line personnel staff, one Battalion Chief, and two Engine Companies, each staffed with a Company Officer, a Driver/Operator, and a Firefighter.

Staff are on duty 24 hours a day, 7 days a week working a traditional 48/96 schedule on an A-B-C shift rotation.

### 18.2.3 Governance

The governing body of the District consists of five board members, elected by the citizens of the District, each serving 4-year terms. The Board of Directors has the authority to adopt policies, resolutions and provide overall direction to the District.

The Board of Directors assumes responsibility for the adoption of this plan; the Fire Chief will oversee its implementation.

## 18.2.4 Assets

Table 18-2 Assets

Asset	Value
Property	
Six Vacant Acres	\$1,500,000
Equipment	
Water Tender	\$600,000
3-Type 1 Fire Engines	\$3,600,000
Type 3 Fire Engine	\$800,000
Type 6 Fire Engine	\$500,000
Battalion Chief Command Vehicle	\$150,000
Chief Command Vehicle	\$80,000
2-Utility Vehicles	\$120,000
<i>Total:</i>	<i>\$7,350,000</i>
Critical Facilities	
Fire Station 1	\$6,500,000
Fire Station 2	\$5,000,000
Generator Station 1	\$200,000
Generator Station 2	\$200,000
<i>Total:</i>	<i>\$11,900,000</i>

## 18.3 Current Trends

The Waterloo-Morada Fire District serves a diverse population of the unincorporated areas of San Joaquin County. From the more industrial areas that border the City of Stockton to the bedroom community of Morada where you find a diverse social-economic array of residential development. In addition, the unincorporated area served to the East of Stockton including the community of Waterloo which accounts for the majority of the land mass and is predominately agricultural with large orchard operations and residential homesteads. With utility services limited and a limited growth mindset in the communities served, growth will happen at a slow pace within the service area of the District. With annexations of the unincorporated areas bordering Stockton, the District’s service area over a period of time is predicted to slowly decrease, without the reduction of calls for service.

## 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 or improve upon 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.

### 18.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop plans and programs and to implement regulations to protect and serve community members. An assessment of planning and regulatory capabilities is presented in Table 18-3.

**Table 18-3 Planning and Regulatory Capabilities**

Plan, Study or Program	Date of Most Recent Update	Comment
Capital Improvement Plan	Report annually in July	Establishes strategy for financial investments
Fire Impact Fee Program	Annually in December	Provides funding
Mokelumne River EAP	March 2025	Basis for mutual aid and statewide response
Deployment Analysis WMR	February 2017	Evaluates current service area and risk
California Fire Code	2022	Sets minimum requirements for fire safety
California Building Code	2022	Sets construction standards to reduce threat of damages from hazard events
California Fire and Rescue Mutual Aid Plan	February 2023	Establishes mutual aid capability
California Fire and Rescue Mutual Aid Operational Area Coordinator Manual	April 2019	Applied Statewide Organization process locally in the XSJ Operational Area
San Joaquin County Ordinance 4286 Pertaining to Fire Prevention and Weed Abatement hazards and protect the community effectively	2006	Forces mandatory weed abatement and rubbish removal on private property in unincorporated areas to reduce fire hazards. Enforced by the County Fire Warden, it requires property owners to clear combustible vegetation, with costs of non-compliance becoming a lien against the property.

### ***Opportunities to Expand Planning and Regulatory Capabilities***

The planning and regulatory capabilities of the district can be expanded by integrating the County-wide hazard mitigation plan into the Mokelumne River EAP and the Capital Improvement Plan as listed in Table 18-11 and below:

- Action 2: Integrate the hazard mitigation plan into other plans that address natural hazards within the service area including:
  - Capital Improvement Plan
  - Fire Impact Fee Program
  - Mokelumne River EAP
  - Deployment Analysis WMR

- California Fire Code
- California Building Code
- California Fire and Rescue Mutual Aid Plan
- California Fire and Rescue Mutual Aid Operational Area Coordinator Manual

### 18.4.2 Fiscal Capabilities

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. An assessment of fiscal capabilities is presented in Table 18-4.

**Table 18-4 Fiscal Capabilities**

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		No
If yes, specify:	N/A	
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

### *Opportunities to Expand Fiscal Capabilities*

One of the primary objectives in developing the 2026 MJHMP is to establish eligibility to pursue FEMA HMA grant funding opportunities (e.g., FMA and HMGP). HMA funding streams typically require up to a 25 percent local match. The District has identified local funding resources in Table 18-4 that can provide the local match for projects in the mitigation action plan that list HMA grants as a potential primary funding source.

### 18.4.3 Administrative and Technical Capabilities

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 18-5.

**Table 18-5 Administrative and Technical Capabilities**

Staff/Personnel Resource		Available?
Planners or engineers with knowledge of land development and land management practices		Yes
If Yes, Department /Position:	Fire District Personnel: Fire Chief, Fire Marshall, Board of Directors	
Engineers or professionals trained in building or infrastructure construction practices		Yes
If Yes, Department /Position:	Fire District Personnel: Fire Chief, Fire Marshall, Board of Directors	
Planners or engineers with an understanding of natural hazards		Yes
If Yes, Department /Position:	Fire District Personnel: Fire Chief, Fire Marshall, Board of Directors	
Staff with training in benefit-cost analysis		Yes
If Yes, Department /Position:	Fire District Personnel: Fire Chief, Administrative Secretary	
Surveyors		No
If Yes, Department /Position:	Through Consultant if Needed	
Personnel skilled or trained in GIS applications		No
If Yes, Department /Position:	Through Consultant if Needed	
Scientist familiar with natural hazards in local area		No
If Yes, Department /Position:	Through Consultant if Needed	
Emergency manager		Yes
If Yes, Department /Position:	Fire Chief	
Grant writers		Yes
If Yes, Department /Position:	Fire Chief, Fire Marshall	
Procurement Services and Management		Yes
If Yes, Department /Position:	Fire Chief, Administrative Assistant	

### ***Opportunities to Expand Administrative and Technical Capabilities***

Administrative and technical capabilities are a community’s staff, skills and tools. These capabilities can be used for mitigation planning and to carry out specific mitigation actions. They also include the ability to access, coordinate and implement these resources effectively (FEMA, 2023). An assessment of administrative and technical capabilities is presented in Table 18-5.

#### **18.4.4 Education and Outreach Capabilities**

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 18-6.

**Table 18-6 Education and Outreach Capabilities**

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
If yes, briefly describe:	-	
Do you use social media for hazard mitigation education and outreach?		Yes
If yes, briefly describe:	Facebook, Instagram, etc.	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?		Yes
If yes, briefly describe:	Morada Municipal Advisory Council, Morada Area Association	
Do you have any other programs in place that could be used to communicate hazard-related information?		Yes
If yes, briefly describe:	Electronic billboard	
Do you have any established warning systems for hazard events?		Yes
If yes, briefly describe:	Yes, Through County OES Community can be notified	

***Opportunities to Expand Education and Outreach Capabilities***

The District will continue to utilize their website, social media, and electronic billboard to reach the public and advertise programs.

**18.4.5 Community Classifications**

Other programs, such as NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 18-7.

**Table 18-7 Community Classifications**

	Participating?	Classification or Number	Date Classified
Unique Identity ID (UEI)	Yes	ZLXZZ2Q1W478	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	N/A	N/A
Public Protection (ISO for Fire Districts)	Yes	4/4y	2019 (Currently under Review)
NWS StormReady	No	N/A	N/A
Firewise USA	No	N/A	N/A

### 18.4.6 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The District’s adaptive capacity for the impacts of climate change is presented in Table 18-8.

**Table 18-8 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	Low
Jurisdiction-level monitoring of climate change impacts	Low
Technical resources to assess proposed strategies for feasibility and externalities	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
Capital planning and land use decisions informed by potential climate impacts	Low
Participation in regional groups addressing climate risks	Low
<b>Implementation Capacity</b>	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
Identified strategies for greenhouse gas mitigation efforts	Low
Identified strategies for adaptation to impacts	Low
Champions for climate action in local government departments	Low
Political support for implementing climate change adaptation strategies	Low
Financial resources devoted to climate change adaptation	Low
Local authority over sectors likely to be negative impacted	Low
<b>Public Capacity</b>	
Residents’ knowledge of and understanding of climate risk	Low
Residents’ support of adaptation efforts	Low
Residents’ capacity to adapt to climate impacts	Unsure
Local economy current capacity to adapt to climate impacts	Low
Local ecosystems capacity to adapt to climate impacts	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.

## 18.5 National Flood Insurance Program Compliance

Districts are not eligible to participate in the National Flood Insurance Program (NFIP). However, any new assets or infrastructure developed by the District are in compliance with the floodplain regulations established by the surrounding municipal entities.

## 18.6 Integration

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.

### 18.6.1 Existing Integration

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

- San Joaquin County Ordinance 4286 Pertaining to Fire Prevention and Weed Abatement
- San Joaquin County Ordinance 4535 Operational Fire Fees
- California Building and Fire Code Adoption 2022
- Capital Improvement Plan

### 18.6.2 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 Plan Revisions
- California Building and Fire Code Future Adoptions
- State Fire Severity Zone Mapping Adoptions
- Fire Safe Communities Program, Fire Wise etc.

## 18.7 Risk Assessment

### 18.7.1 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	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Levee Failure	Victoria Island Levee Incident	CA25-162	5/28/25	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Wildfire	Wildfire Prevention Projects	N/A	3/1/25	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/23	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February- Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022- January 2023 Storms	CA23-1	1/4/23	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Extreme Heat	Heat/Energy Extreme Temp Response Plan	N/A	8/31/22	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.

Type of Event	Declaration Title	Disaster # (Federal or State) if Applicable	Declaration Date (Federal or State)	Damage Assessment
Wildfire	SCU Complex Fire	CA20-2	8/18/20	While this event impacted San Joaquin County, the District did not identify any additional damages associated with this event.
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	The District was subject to closures and social distancing/masking requirements.

### 18.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for Waterloo-Morada Fire District is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the District in identifying hazards that pose the most significant threat. 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 the economy.

**Table 18-10 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.3	.9	.2	.1	.3	1.8	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

Notes:  
 PRI Value 1 to 1.9 = Low Hazard Risk Ranking  
 PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking  
 PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### 18.7.3 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.

#### Other Noted Vulnerabilities

- The District has a railway moving Hazardous Materials, Petroleum and unknown commodities through multiple residential neighborhoods. This is a concern if the district experiences seismic activity that buckles train tracks.

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

## 18.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 18-11 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter Energy Communications Transportation	Existing	1, 3, 4	Lead: Fire Chief Support: Administrative Secretary, Board Clerk	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund, Grant Funding	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans that address natural hazards within the service area including: <ul style="list-style-type: none"> <li>• Capital Improvement Plan</li> <li>• Fire Impact Fee Program</li> <li>• Mokelumne River EAP</li> </ul>	Safety and security Communications Transportation Water Systems	New	6	Lead: Fire Chief Support: Administrative Secretary, Board Clerk	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
	<ul style="list-style-type: none"> <li>Deployment Analysis WMR</li> <li>California Fire Code</li> <li>California Building Code</li> <li>California Fire and Rescue Mutual Aid Plan</li> <li>California Fire and Rescue Mutual Aid Operational Area Coordinator Manual</li> <li>Fire Safe Communities Program</li> </ul>								
3	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	N/A	New	6	Lead: Fire Chief Support: Administrative Secretary, Board Clerk	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
4	Purchase generators for District-owned critical facilities and infrastructure that lack adequate backup power.	Safety and security Energy Communications	Existing	3, 5	Lead: Fire Chief Support: Administrative Secretary, Board Clerk	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
5	Develop and implement a program to capture perishable data after significant events to support future mitigation efforts including the implementation and maintenance of the mitigation plan	Safety and security	Existing	3, 4, 5, 6	Lead: Fire Chief Support: Battalion Chief, Logistics Chief	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
6	Coordinate with railway operators on emergency response procedures when a natural hazard event such as an earthquake impacts rail lines or hazardous materials releases from the carrier.								

**Table 18-12 Mitigation Action Prioritization**

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#4	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium
#5	3	3	3	1	1	1	0	3	3	1	3	3	1	1	1	28	Medium

Notes:  
 31 or more = High Priority  
 15 to 30 = Medium Priority  
 0 to 14 = Low Priority

Table 18-13 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■		■		■		■	■	■	■	■	■	■
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■		■				■	■	■	■	■	■	■	■	■	■	■
#4					■		■		■	■			■	■	■		■
#5	■		■		■		■	■	■	■	■	■	■	■	■	■	■

## 18.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 18-14.

**Table 18-14 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Elementary School Events	Multiple Dates Every Year	2,000
Waterloo-Morada Fire District and Firefighters Association Events	Multiple Dates Every Year	5,000
Morada Area Association Events	Multiple Dates Every Year	4,000
National Night Out	Every August	1,000
Morada Municipal Advisory Committee Meetings	Monthly	30
Supported the countywide outreach efforts for this plan including promoting the public survey	Throughout the planning process	TBD

## 18.10 Information Sources Used for This Annex

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

- **Mokelumne River EAP** - Used in the assessment of District capabilities
- **California Fire and Rescue Mutual Aid Plan** - Basis for mutual aid and statewide response
- **California Fire and Rescue Mutual Aid Operational Area Coordinator Manual** – Applied Statewide Organization process locally in the XSJ Operational Area

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. WOODBRIDGE RURAL COUNTY FIRE PROTECTION DISTRICT



Source: Woodbridge County Rural Fire Protection District

### 19.1 Local Hazard Mitigation Planning Team

This annex was developed by the local hazard mitigation planning team for the Woodbridge Fire District. Members are listed in Table 19-1.

Table 19-1 Hazard Mitigation Planning Team

Primary Point of Contact		Alternate Point of Contact	
Name and Title:	Darin Downey, Fire Chief	Name and Title:	Brian Bernier, Operations Chief
Address:	400 E. Augusta St, Woodbridge, CA 95258	Address:	400 E. Augusta St, Woodbridge, CA 95258
Phone Number:	(209) 369-1945 *150	Phone Number:	(209) 369-1945 *122
Email:	<a href="mailto:Darin.downey@woodbridgefire.org">Darin.downey@woodbridgefire.org</a>	Email:	<a href="mailto:Brian.bernier@woodbridgefire.org">Brian.bernier@woodbridgefire.org</a>

Primary Point of Contact		Alternate Point of Contact
<b>Additional Planning Team Members:</b>		
Name and Title: Method of Participation:	Diana Tidwell, Administrative Assistant Attended planning meetings, helped develop annex.	
Name and Title: Method of Participation:	Lawrence Richards, Battalion Chief, Prevention Officer Attended planning meetings, helped develop annex.	
Name and Title: Method of Participation:	Eric Edwards, Battalion Chief, Training Officer Attended planning meetings, helped develop annex.	
Name and Title: Method of Participation:	Eric Johnson, Battalion Chief, Maintenance Officer Attended planning meetings, helped develop annex.	

## 19.2 Jurisdictional Profile

### 19.2.1 Overview

The Woodbridge County Rural Fire Protection District is a special district formed in 1942 to provide fire protection services. The District maintains four career fire stations, an administrative office, training facility and a maintenance facility. The District staffs four engine companies 24/7 through the staff of 33 personnel; one fire chief, one operations chief, one administrative officer, three battalion chiefs, twelve captains, five engineers, and 10 firefighters, all who work a 48/96 ABC shift rotation. Funding comes from property tax, special assessments, service fees, and grants.

### 19.2.2 Service Area

The Woodbridge Fire District is located in Northern San Joaquin County and provides all-risk fire, rescue, and emergency medical services to the rural communities of Woodbridge, Lodi, Acampo, Forest Lake, Flag City, and Tower Park. The Woodbridge Fire District covers approximately 197 square miles and 500 nautical miles in the Delta. The District serves an approximate population of 15,000 and growing, with major highways including Highway 99, Interstate 5, and Highway 12. The yearly call average is around 2,000 calls a year. The District also staffs an assortment of specialized equipment as needed. This equipment includes a rescue, water tender, State of California OES type 1 and type 6 engines, Type 6 brush engine, ACB fire boat with a 500 gpm pump, and Moose fire boat with a 1,500 gpm pump.

Within the boundaries of the District are expansive wildland urban interface (WUI) areas, large single-family homes, multi-family residential complexes, dairies, airports, hotels, award-winning wineries, and historic downtown Woodbridge, CA.

The Woodbridge Fire District has automatic aid agreements with the City of Lodi, City of Stockton, Thornton Rural Fire District, Clements Fire District, Cosumnes Community Services District, Mokelumne Fire District, Waterloo-Morada Fire District, Liberty Fire District, and River Delta Fire District.

### 19.2.3 Governance

The Fire District is governed by the board of directors which is composed of five individuals who are elected by the voters within the District. Board members serve a fixed four-year term ensuring members are representative of the community they serve.

The Board of Directors assumes responsibility for the adoption of this plan; the Fire Chief will oversee its implementation.

### 19.2.4 Assets

**Table 19-2 Assets**

Asset	Value
Property	
Woodson Road Pump- 3803 E. Woodson Rd, Acampo, CA 95220	\$147,588
Equipment	
Six Type 1 Engines	\$2,158,600
One Type 6 Engine	\$32,567
One Heavy Rescue Apparatus	\$1,010,000
One Water Tender	\$156,000
One Type 3 Engine	\$185,000
Four Command Vehicles	\$178,303
Hose, Rescue Equipment, Firefighting Equipment	\$2,194,868
Safety Equipment, Personal Protective Equipment	\$630,000
2 Fire Boats	\$783,000
<i>Total:</i>	<i>\$7,328,338</i>
Critical Facilities	
Station 71/District Administration Building/Training Facility – 400 E. Augusta Street, Woodbridge, CA 95258	\$2,861,305
Station 72- 2691 East Armstrong Road, Lodi, CA 95240	\$467,224
Station 73- 25440 North Eunice Avenue, Acampo, CA 94220	\$695,823
Station 74- 6365 Capital Avenue, Lodi, CA 95242	\$862,272
<i>Total:</i>	<i>\$4,886,624</i>

## 19.3 Current Trends

The Woodbridge County Rural Fire Protection District originally formed to serve approximately 30 square miles and was enlarged to 64 square miles within the first year of its formation covering rural Lodi. In 1996 the District

merged with the Forest Lake Fire District bringing the total square mile served to 79 square miles. Then in 2003 the District merged with the Delta Fire District, adding an additional 118 square miles and an additional 300 miles of waterways. These mergers brought the total square miles covered by the District to 197 square miles of land and 500 nautical miles of waterways.

The District continues to lose property through annexation by the Cities of Lodi and Stockton due to their spheres of influence. The District has the potential to experience commercial growth along the Interstate 5 and Highway 12 corridors within its jurisdictional boundaries. Though this potential development will not expand the District’s geographic service area, it will increase demand for service delivery with an increase in the daily commerce population. Additionally, several housing development projects currently under way within the District’s service area are projected to add an additional 60 to 100 residential structures that will increase the population served.

## 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 or improve upon 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.

### 19.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop plans and programs and to implement regulations to protect and serve community members. An assessment of planning and regulatory capabilities is presented in Table 19-3.

**Table 19-3 Planning and Regulatory Capabilities**

Plan, Study or Program	Date of Most Recent Update	Comment
District Strategic Plan	Updated annually, 2023	Covers a four to five-year time frame
Capital Improvement Plan	2024	Updated as needed annually

### *Opportunities to Expand Planning and Regulatory Capabilities*

The planning and regulatory capabilities of the District can be expanded by integrating the County-wide hazard mitigation plan into the District Strategic Plan and the Capital Improvement Plan as listed in Table 19-11 and below:

- Action 2: Integrate the hazard mitigation plan into other plans that address natural hazards within the service area including:
  - District Strategic Plan
  - Capital Improvement Plan

### 19.4.2 Fiscal Capabilities

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. An assessment of fiscal capabilities is presented in Table 19-4.

**Table 19-4 Fiscal Capabilities**

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	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

### ***Opportunities to Expand Fiscal Capabilities***

One of the primary objectives in developing this MJHMP is to establish eligibility to pursue FEMA HMA grant funding opportunities. HMA funding streams typically require a 25 percent local match. The District has identified local funding resources in Table 19-4 that can provide the local match for projects in the mitigation action plan that list HMA grants as a potential primary funding source.

### **19.4.3 Administrative and Technical Capabilities**

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the 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 and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 19-5.

**Table 19-5 Administrative and Technical Capabilities**

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	No
If Yes, Department /Position:	N/A
Engineers or professionals trained in building or infrastructure construction practices	No
If Yes, Department /Position:	N/A

Staff/Personnel Resource		Available?
Planners or engineers with an understanding of natural hazards		No
If Yes, Department /Position:	N/A	
Staff with training in benefit-cost analysis		No
If Yes, Department /Position:	N/A	
Surveyors		No
If Yes, Department /Position:	N/A	
Personnel skilled or trained in GIS applications		No
If Yes, Department /Position:	N/A	
Scientist familiar with natural hazards in local area		No
If Yes, Department /Position:	N/A	
Emergency manager		Yes
If Yes, Department /Position:	Fire District/Fire Chief	
Grant writers		Yes
If Yes, Department /Position:	Fire District/ Operations Chief, Captain, Contracted Writer	
Procurement Services and Management		Yes
If Yes, Department /Position:	Fire District/ Administrative Assistant, Fire Chief	

### ***Opportunities to Expand Administrative and Technical Capabilities***

Administrative and technical capabilities are a community’s staff, skills and tools. These capabilities can be used for mitigation planning and to carry out specific mitigation actions. They also include the ability to access, coordinate and implement these resources effectively (FEMA, 2023). An assessment of administrative and technical capabilities is presented in Table 19-5.

#### **19.4.4 Education and Outreach Capabilities**

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 19-6.

**Table 19-6 Education and Outreach Capabilities**

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?		Yes
If yes, briefly describe:	<a href="http://www.woodbridgefire.org">www.woodbridgefire.org</a>	
Do you use social media for hazard mitigation education and outreach?		Yes
If yes, briefly describe:	Instagram and Facebook	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?		No
If yes, briefly describe:	N/A	
Do you have any other programs in place that could be used to communicate hazard-related information?		No
If yes, briefly describe:	N/A	
Do you have any established warning systems for hazard events?		Yes
If yes, briefly describe:	The District has access to Everbridge through the County Office of Emergency Services.	

### ***Opportunities to Expand Education and Outreach Capabilities***

While no opportunities to expand education and outreach capabilities, the District will continue to explore opportunities.

### **19.4.5 Community Classifications**

Other programs, such as NWS StormReady, can enhance a jurisdiction’s ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction’s desire to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 19-7.

**Table 19-7 Community Classifications**

	Participating?	Classification	Date Classified
Unique Identity ID (UEI)	Yes	QFFQFMK27S1	N/A
Building Code Effectiveness Grading Schedule (BCEGS)	No	N/A	N/A
Public Protection (ISO for Fire Districts)	Yes	4 / 4y	2021
NWS StormReady	No	N/A	N/A
Firewise USA	No	N/A	N/A

### 19.4.6 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction’s ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low. The District’s adaptive capacity for the impacts of climate change is presented in Table 19-8.

**Table 19-8 Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts	Unsure
Jurisdiction-level monitoring of climate change impacts	Unsure
Technical resources to assess proposed strategies for feasibility and externalities	Unsure
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Unsure
Capital planning and land use decisions informed by potential climate impacts	Unsure
Participation in regional groups addressing climate risks	Unsure
<b>Implementation Capacity</b>	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Unsure
Identified strategies for greenhouse gas mitigation efforts	Unsure
Identified strategies for adaptation to impacts	Unsure
Champions for climate action in local government departments	Unsure
Political support for implementing climate change adaptation strategies	Unsure
Financial resources devoted to climate change adaptation	Unsure
Local authority over sectors likely to be negative impacted	Unsure
<b>Public Capacity</b>	
Residents’ knowledge of and understanding of climate risk	Unsure
Residents’ support of adaptation efforts	Unsure
Residents’ capacity to adapt to climate impacts	Unsure
Local economy current capacity to adapt to climate impacts	Unsure
Local ecosystems capacity to adapt to climate impacts	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.

## 19.5 National Flood Insurance Program Compliance

Districts are not eligible to participate in the National Flood Insurance Program (NFIP). However, any new assets or infrastructure developed by the District are in compliance with the floodplain regulations established by the surrounding municipal entities.

## 19.6 Integration

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.

### 19.6.1 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 Plan – The District will act to ensure consistency between the hazard mitigation actions and future capital improvement plan projects.
- Strategic Plan – The results of the risk assessment for this hazard mitigation plan may be used in future annual updates to the strategic plan.

## 19.7 Risk Assessment

### 19.7.1 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	Declaration Title	Disaster # (Federal or State)	Declaration Date (Federal or State)	Damage Assessment
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	February 2023 Winter Storms	CA23-3	6/16/23	Additional staffing to help with disaster impacts in a mobile home park and residential community. Wind damage to station property including damaging fencing. Power loss including a backup generator failure.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, And Mudslides; Late February-Early March 2023 Winter Storms	DR-4699-CA CA23-3	4/3/23 3/1/23	Additional staffing to help with disaster impacts in a mobile home park and residential community. Wind damage to station property including damaging fencing. Power loss including a backup generator failure.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Winter Storms, Flooding, Landslides, and Mudslides; December 2022-January 2023 Storms	CA23-1	1/4/23	Additional staffing to help with disaster impacts in a mobile home park and residential community. Wind damage to station property including damaging fencing. Power loss including a backup generator failure.
Wildfire	Fires - River, Jones, LNU Lightning Complex, Weather Conditions	CA20-2	8/18/20	Provided mutual aid response to fires.
Wildfire	SCU Complex Fire	CA20-2	8/18/20	Provided mutual aid response to fires.
Biological	COVID-19 Pandemic	DR-4482-CA CA20-01	3/4/20	Suspended all training. Employees offered mutual aid throughout the state in hospitals. Health and quarantine impacts put a strain on staffing.
Drought	Central Valley Drought	CA08-03	6/12/08	Halted hydrant testing to reduce strain on water supplies. This decreased the ISO rating which subsequently increased insurance rates for the service area.

Type of Event	Declaration Title	Disaster # (Federal or State)	Declaration Date (Federal or State)	Damage Assessment
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding	Severe Storms, Flooding, Landslides, and Mudslides; Spring Storms 2006	DR-1646-CA CA06-03	6/5/06 4/10/06	Provided mutual aid personnel for responses within the county to monitor impacts on levees and to work in the County EOC.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Storms, Flooding, Mudslides, and Landslides; 2005/06 Winter Storms	DR-1628-CA CA06-01	2/3/06 1/12/06	Provided Mutual Aid personnel for responses within the county to monitor impacts on levees and to work in the County EOC.
Levee Failure	Flooding as a Result of Levee Break; Upper Jones Levee Break	DR-1529-CA CA04-04	6/30/04 6/4/04	Increased Staffing to provide ground support for helicopter LZ near incident.
Severe Wind, Weather and Storms; Riverine, Stream and Alluvial Flooding; Landslide	Severe Storms, Flooding, Mud and Landslides; 1997 January Floods	DR-1155-CA CA97-01	1/4/97 1/2/97	Increase staffing levels due to response to flooding, level patrols and staffing of EOC at the fire station for the incident.

### 19.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for Woodbridge County Rural Fire Protection District is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the District in identifying hazards that pose the most significant threat. 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 the economy.

**Table 19-10 Hazard Risk Ranking Summary**

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
Dam Failure	.3	.9	.2	.1	.3	1.8	Low
Drought	1.2	.3	.8	.1	.4	2.8	Medium
Earthquake	.3	.9	.8	.4	.3	2.7	Medium
Extreme Heat	1.2	.6	.8	.1	.4	3.1	High

Hazard	Weighted Risk Factors					PRI	Risk Ranking
	Probability	Impact	Spatial Extent	Warning Time	Climate Change		
Landslide, Debris Flow & Other Mass Movements	1.2	.3	.2	.1	.4	2.2	Medium
Levee Failure	.3	.9	.2	.1	.3	1.8	Low
Lightning	.9	.3	.2	.1	.2	1.7	Low
Riverine, Stream and Alluvial Flooding	1.2	.6	.6	.4	.4	3.2	High
Severe Wind, Weather and Storms	1.2	.6	.6	.1	.4	2.9	Medium
Subsidence	1.2	.3	.2	.4	.4	2.5	Medium
Wildfire	1.2	.6	.6	.1	.4	2.9	Medium

Notes:  
 PRI Value 1 to 1.9 = Low Hazard Risk Ranking  
 PRI Value 2.0 to 2.9 = Medium Hazard Risk Ranking  
 PRI Value 3.0 to 4.0 = High Hazard Risk Ranking

### 19.7.3 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.

#### **Other Noted Vulnerabilities**

The jurisdiction has not identified any other issues other than what is in the risk assessment.

## 19.8 Hazard Mitigation Strategy

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

**Table 19-11 Hazard Mitigation Action Plan Matrix**

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
1	Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas.	Food, hydration, shelter Energy Communications Transportation	Existing	1, 3, 4	Lead: Fire Chief, District Board of Directors Support: Line Personnel	Yes	Very High (\$1,000,000 and above)	Staff Time, General Fund, Grant Funding	Long-Term (5 years or more)
2	Integrate the hazard mitigation plan into other plans that address natural hazards within the service area including: <ul style="list-style-type: none"> <li>• District Strategic Plan</li> <li>• Capital Improvement Plan</li> </ul>	Safety and security Communications Transportation Water Systems	New	6	Lead: Fire Chief, District Board of Directors Support: Line Personnel	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
3	Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	N/A	New	6	Lead: Fire Chief, District Board of Directors Support: Line Personnel	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
4	Purchase generators for District-owned critical facilities and infrastructure that lack adequate backup power, including: <ul style="list-style-type: none"> <li>Station 7-2</li> <li>Station 7-4</li> </ul>	Safety and security Energy Communications	Existing	3, 5	Lead: Fire Chief, District Board of Directors Support: Line Personnel	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
5	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.	Safety and security, energy Communications Transportation Water systems	Existing and new	3, 5	Lead: Fire Chief, District Board of Directors Support: Line Personnel	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)
6	Develop a post-disaster recovery plan and a debris management plan.	Safety and security, energy Communications Transportation Water systems	Existing	3, 5	Lead: Fire Chief, District Board of Directors Support: Line Personnel	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

Action Number	Action Description	Community Lifeline Addressed	Benefits New or Existing Assets	Goals Met	Lead and Support Implementers	Benefits Equity Priority Community?	Estimated Cost	Potential Funding Sources	Timeline
7	Develop and/or update plans that support or enhance continuity of operations following disasters.	Safety and security, energy Communications Transportation Water systems	Existing	3, 5	Lead: Fire Chief, District Board of Directors Support: Line Personnel	Yes	Low (\$0-\$50,000)	Staff Time, General Fund	Short-Term (less than 5 years)

**Table 19-12 Mitigation Action Prioritization**

Action Number	Life Safety	Property Protection	Cost-Effectiveness	Technically Feasible	Legal Authority	Funding Available	Environmental	Climate Change	Equity Priority Community	Administrative Capacity	Multi-Hazard	Timeline	Stakeholder Support	Other Local Objective	Support Policies	Total Score	Priority
#1	3	3	3	1	1	1	3	3	3	1	3	1	1	1	1	29	Medium
#2	1	3	3	3	1	3	1	1	3	3	3	3	3	3	3	34	High
#3	1	1	1	3	1	3	1	1	3	3	3	3	1	3	3	31	High
#4	3	1	3	1	3	3	0	1	0	3	3	3	3	0	0	27	Medium
#5	3	3	1	3	3	1	1	3	3	1	3	3	1	1	3	33	High
#6	3	3	3	3	3	1	3	3	3	1	3	3	1	1	3	35	High
#7	3	3	3	3	3	1	3	3	3	1	3	3	1	3	3	39	High

Notes:

31 or more = High Priority  
15 to 30 = Medium Priority  
0 to 14 = Low Priority

Table 19-13 Mitigation Action Classification and Natural Hazards Addressed

Action	Mitigation Classification						Natural Hazards										
	Local Plans and Regulations	Structure and Infrastructure Projects	Education and Awareness Programs	Natural Systems Protection	Climate Resiliency	Community Capacity Building	Dam Failure	Drought	Earthquake	Extreme Heat	Landslide, Debris Flow and Other Mass Movements	Levee Failure	Lightning	Riverine, Stream and Alluvial Flooding	Severe Wind, Weather and Storms	Subsidence	Wildfire
#1		■			■		■		■		■	■	■	■	■	■	■
#2	■		■				■	■	■	■	■	■	■	■	■	■	■
#3	■		■				■	■	■	■	■	■	■	■	■	■	■
#4					■		■		■	■		■	■	■			■
#5	■	■			■		■				■	■	■	■		■	■
#6	■	■			■		■		■		■		■	■			■
#7	■	■			■		■		■		■		■	■			■

## 19.9 Public Outreach

Broad public participation in the planning process helps ensure that diverse points of view about the jurisdiction’s needs are considered and addressed. Jurisdictional outreach efforts are listed in Table 19-14.

**Table 19-14 Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Annual Pancake Breakfast	October (annually)	300 - 400
National Night Out	August (annually)	250
Downtown Woodbridge Christmas	December (annually)	300 - 400
School and Class Fire Safety Presentations and Tours	Several times a year	30 - 100
Easter at Mickey Grove	April (annually)	300 - 400
Supported the countywide outreach efforts for this plan including promoting the public survey	Throughout the planning process	TBD

## 19.10 Information Sources Used for This Annex

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

- Schedule of Insurance – Used to obtain assets costs.
- Book asset detail – Used to obtain asset costs.

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.