

October 23, 2025 | Hazard Mitigation Plan





Credits

Hazard Mitigation Planning Team

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Miguel Valdez	Operations	Director
Jaclyn Makarzec	Engineering	Director
Melissa Trujillo	Finance and Administration	HR Generalist / Safety & Facilities Coordinator
Yvonne Reyes	Engineering	Engineering Assistant (Former)
Martha Navarro Perez	Finance and Administration	Customer Service/Accounts Payable Manager
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Emergency Planning Consultants		
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Acknowledgements

Board of Directors

- ✓ Hank Trueba Jr., Board President
- ✓ Diana Leja, Board Vice-President
- ✓ John Skerbelis, Director
- ✓ Bernard Murphy, Director
- ✓ Leslie Altamirano, Director

Mapping

The maps in this plan were provided by the Rubidoux Community Services District, County of Riverside, Federal Emergency Management Agency (FEMA), or were acquired from other public sources. Care was taken in the creation of the maps contained in this plan, however they are provided "as is". The district cannot accept any responsibility for any errors, omissions or positional accuracy, and therefore, there are no warranties that accompany these products (the maps). Although information from land surveys may have been used in the creation of these products, in no way does this product represent or constitute a land survey. Users are cautioned to field-verify information on this product before making any decisions.

Mandated Content

In an effort to assist the readers and reviewers of this document, the jurisdiction has inserted "markers" emphasizing mandated content as identified in the Disaster Mitigation Act of 2000 (Public Law – 390). The following is a sample marker:

EXAMPLE

Q&A | ELEMENT A: PLANNING PROCESS | A1-a.

Q Does the plan document how the plan was prepared, including the schedule or time frame and activities that made up the plan's development, as well as who was involved? (Requirement 44 CFR § 201.6(c)(1))

A:



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Executive Summary

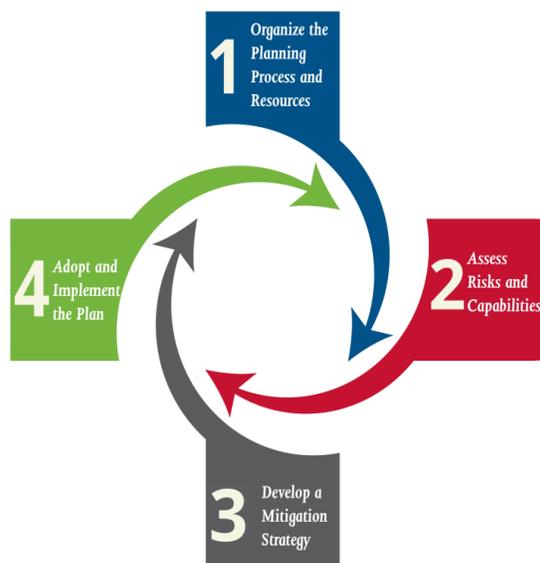
The Rubidoux Community Services District’s Hazard Mitigation Plan (HMP) is a strategic framework designed to reduce the loss of life and property by lessening the impact of disasters. The primary goal of the HMP is to identify potential hazards, assess their risks, and implement long-term strategies to mitigate their effects on a planning area. This comprehensive plan involves a systematic process of identifying hazards, evaluating vulnerabilities, and developing actions to minimize the damage and disruption caused by natural hazard events.

Before we go into the details of the planning process, it’s important to define hazard mitigation as actions taken to minimize or eliminate threats associated with hazards.

In 2019, the National Institute of Building Sciences issued an update to its landmark report “Natural Hazard Mitigation Saves”. The study analyzed the benefit cost ratio of a range of mitigation activities including mitigation planning and building retrofits. The findings revealed a dramatic return on investment. For mitigation activities, every dollar spent yielded a six-dollar return on avoided losses in the future. For building retrofits, every dollar spent yielded a four-dollar return on avoided losses in the future.



FEMA’s mitigation website recommends 4 steps in the overall planning process: Step #1 is to organize the planning process and resources. Step #2 is to assess risks and capabilities. Step #3 is to develop a Mitigation Strategy. Step #4 is to Adopt and Implement the Plan.



FEMA’s April 11, 2025, Local Mitigation Planning Policy Guide divides requirements into seven elements: A - Planning Process, B - Risk Assessment, C - Mitigation Strategy, D - Plan Maintenance, E - Plan Update, F - Plan Adoption, G - High Hazard Potential Dams.

Element A: Planning Process lays out how the plan was developed, who was involved and what data and information were used to build the plan. Much of the content focuses on the robust community outreach process. In developing the HMP, a Planning Team was formed to undertake a detailed analysis of the district’s unique risks and

challenges. The Team included department representatives from the General Manager’s Office, Operations, Engineering, and Finance. The Team met four times with the consultant, contributing to the Initial Draft Plan. In addition to the planning document itself, the Team developed and was actively involved in a community outreach strategy.

The planning process involved collaboration among adjoining local governments and special districts, businesses organization, residents, and other stakeholders to gather data, assess



vulnerabilities, and prioritize mitigation actions. The process ensured that the District is better prepared to respond to and recover from disasters, while enhancing overall resilience.

Throughout the entire planning process, the Planning Team kept the customers and stakeholders informed of the Team's progress and opportunities to provide input. These outreach activities began with a project briefing to the Board of Directors in October 2023, followed by press releases, social media postings, solicitations to participate in a mitigation survey, and to provide input to the First Draft Plan.

Once customer and stakeholder input are incorporated, the Second Draft Plan will be submitted for a formal review by Cal OES and FEMA. That process will result in FEMA's issuance of Approvable Pending Adoption. Next, the plan will need to be adopted by the Board of Directors. Following submission of the resolution to adopt the plan, FEMA will issue a Letter of Approval which will grant eligibility for mitigation-related grants for a period of five years. The Planning Team will immediately begin the process of plan implementation which will continue with the tradition of sharing and incorporating input from customers and stakeholders.

The ability to communicate with others during a disaster is imperative for residents to be able to take the necessary precautions related to the disaster. When individuals do not speak the language in which emergency information is presented, it can negatively influence the individual's ability to comprehend the situation and take appropriate action.

Element B: Risk Assessment is divided into three sub-sections: District Profile, Hazard Assessment, Vulnerability and Impacts. The District Profile describes the features of the planning area as a public retail urban water supplier. According to the 2022 Master Water Plan, RCSD's service area consists mainly of single-family residential customers, but also includes some commercial, industrial, institutional, and landscape connections. The district's water service area is entirely within the City of Jurupa Valley. A small area of unincorporated San Bernardino County is technically within the district boundary, but water service is not provided there.

The Hazard Analysis sub-section includes a comprehensive evaluation of the hazard events that could result in significant losses. In the case of RCSD, the profiled hazards include drought, earthquake, flood, wind, power outages, and wildfire. The sub-section on Vulnerability and Impacts focuses on the district's assets including people, structures, economy, natural, historic, and cultural resources, and activities that bring value to the community.

Element C: Mitigation Strategy includes a discussion on the plan's goals as well as the jurisdiction's existing capabilities to conduct mitigation activities. Also, the Mitigation Actions Matrix identifies more than 50 projects and policies that will create a more resilient community.

Element D: Plan Maintenance describes a planning process for the Planning Team to use once the plan is adopted and approved. Implementation of the mitigation action items, gathering updates on hazards, and keeping the public and stakeholders involved are the priorities for the 5-year life of the plan.

Element E: Plan Update content is applicable only to plans that are being updated from a previous FEMA-approved version. Required information would include significant changes in the district's built environment as well as changes in the jurisdiction's priorities since the last version of the plan. *Since this HMP is not an update, Element E is not applicable.*



Element F: Plan Adoption identifies the process and documentation involved in the plan's adoption by the Board of Directors.

Element G: High Hazard Potential Dams is an optional section of the plan for those jurisdictions with critical infrastructure like dams and levees. This Element is required if a jurisdiction seeks funding from the High Hazard Potential Dams (HHPD) Grant Program. *Since the District is not planning to seek monies through HHPD, Element G is not included.*



Element A: Planning Process

Q&A | ELEMENT A: PLANNING PROCESS | A1-a.

Q: Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement 44 CFR § 201.6(c)(1))

A: See **Graphic A.1, Credits, Tables A.1-4, Plan Writing** below.

Q&A | ELEMENT A: PLANNING PROCESS | A1-b.

Q: Does the plan list the jurisdiction(s) participating in the plan that seek approval, and describe how they participated in the planning process? (Requirement 44 CFR § 201.6(c)(1))

A: See **Planning Process** below.

Q&A | ELEMENT A: PLANNING PROCESS | A2-a.

Q: Does the plan identify all stakeholders involved or given an opportunity to be involved in the planning process, and how each stakeholder was presented with this opportunity? (Requirement 44 CFR § 201.6(b)(2))

A: See **Table A.1, Stakeholder Outreach, Stakeholder Opportunities for Input by Category, Table A.3, Tables A.4-6** below.

Q&A | ELEMENT A: PLANNING PROCESS | A3-a.

Q: Does the plan document how the public was given the opportunity to be involved in the planning process and how their feedback was included in the plan? (Requirement 44 CFR § 201.6(b)(1))

A: See **Customer Outreach, Table A.5, Table A.6** below.

Q&A | ELEMENT A: PLANNING PROCESS | A4-a.

Q: Does the plan document what existing plans, studies, reports, and technical information were reviewed for the development of the plan, as well as how they were 44 CFR § 201.6(b)(3)) incorporated into the document? (Requirement

A: See **Use of Existing Data** below.

Introduction

This Hazard Mitigation (HMP) is the first for the Rubidoux Community Services District and prepared in response to the Disaster Mitigation Act of 2000 (DMA 2000). DMA 2000 (also known as Public Law 106-390) since 2005 has required state and local governments (including special districts and joint powers authorities) to prepare mitigation plans to document their mitigation planning process, and identify hazards, potential losses, mitigation needs, goals, and strategies. This type of planning supplements the district's facility planning and emergency management programs. Once adopted by the Board of Directors and approved by FEMA, the HMP will ensure eligibility for Hazard Mitigation Grant Program (HMGP) and other funding requiring hazard mitigation plans.

Planning Area

The boundary of the district constitutes the planning area and is what FEMA refers to as the "planning participant." This is a single-jurisdiction plan.

Regulations and Guidance

DMA 2000 was designed to establish a national program for pre-disaster mitigation, streamline disaster relief at the federal and state levels, and control federal disaster assistance costs. Congress believed these requirements would produce the following benefits:

- ✓ Reduce loss of life and property, human suffering, economic disruption, and disaster costs.
- ✓ Prioritize hazard mitigation at the local level with increased emphasis on planning and public involvement, assessing risks, implementing loss reduction measures, and ensuring critical facilities/services survive a disaster.
- ✓ Promote education and economic incentives to form community-based partnerships and leverage non-federal resources to commit to and implement long-term hazard mitigation activities.

Planning Approach

The four-step planning approach outlined below is from FEMA. It is the approach used by the Planning Team throughout the planning process.

Graphic A.1: Planning Approach

Source: FEMA's Hazard Mitigation Planning Website



Step 1: Organize the Planning Process and Resources

At the start, a state, local (including special districts), tribal nation, or territorial government should focus on assembling the resources needed for a successful mitigation planning process. This includes securing technical expertise, defining the planning area, and identifying key individuals, agencies, neighboring jurisdictions, businesses, and/or other stakeholders to participate in the process. The planning process for local governments and tribal nations must include opportunities for the public to comment on the plan.

Step 2: Assess Risks and Capabilities

Next, the state, local, tribal nation, or territorial government needs to identify

the characteristics and potential consequences of hazards. It is important to understand what geographic areas the hazards might impact and how people, property, or other assets might be vulnerable. The four basic components of a risk assessment are:

- Hazard identification
- Profiling of hazard events
- Inventory of assets
- Estimation of potential human and economic losses based on the exposure and vulnerability of people, buildings, and infrastructure



Step 3: Develop a Mitigation Strategy

The state, local, tribal nation, or territorial government then sets priorities and develops long-term strategies for avoiding or minimizing the undesired effects of disasters. The strategy is based on an assessment of the unique set of regulatory, administrative, and financial capabilities to undertake mitigation. The mitigation strategy also includes a description of how the mitigation actions will be implemented and administered.

Step 4: Adopt and Implement the Plan

Once FEMA has received proof of adoption from the governing body, the plan will be approved by FEMA. Next, the state, local, tribal nation, or territorial government can bring the mitigation plan to life in a variety of ways, ranging from implementing specific mitigation actions to changing aspects of day-to-day organizational operations. To ensure success, the plan must remain a relevant, living document through routine maintenance. The state, local, tribal nation, or territorial government needs to conduct periodic evaluations to assess changing risks and priorities and make revisions as needed.

Planning Process

Planning Team

Throughout the entire planning process, the departments represented on the Planning Team served as stakeholders while also making a concerted effort to gather input and ideas from other stakeholders and the public.

The District's Hazard Mitigation Planning Team was the core group of people responsible for:

- Developing and reviewing drafts of the plan
- Informing the risk assessment
- Developing the mitigation goals and strategy
- Submitting the plan for local adoption
- Promoting the project through various community outreach venues

RCSD chose to build a Planning Team from internal departments with expertise about the service area's assets as defined by FEMA to include people, structures (including community lifelines), economy, and other assets. Other assets include natural, historic, and cultural resources as well as activities bringing value to a community. Represented departments included General Manager's Office, Engineering, Administration, and Operations.

The Planning Team worked with Emergency Planning Consultants to create the plan. Planning Team members were invited via email announcing the purpose of the Team and overall schedule and expectations of the Planning Team. The department representatives on the Planning Team served as active stakeholders and contributors to the plan's update. Throughout the plan development process, the Team confirmed the planning approach, drafted and reviewed content, made revisions, and engaged members of the public. As indicated below, the meetings were designed to maximize contributions from the Team. Insights, opinions, and facts were gathered ranging from hazard history and rankings, capabilities, ongoing and future mitigation activities, and opportunities to engage the customers and stakeholders through existing venues and meetings. See **Attachments** for Planning Team Meeting Minutes.



Table A.1: Planning Team Level of Participation

	RCSD	Brandon Thomas, Chair	Ted Beckwith	Jaclyn Makarzec	Martha Navarro Perez	Melissa Trujillo	Yvonne Reyes	Anthony Strey	Miguel Valdez	Brian Laddusaw	Kirk Hamblin	EPC	Carolyn Harshman	Jill Caputi
Outreach – Announce Planning Process at Board of Directors			X							X				
Research and Writing of Plan			X				X		X	X			X	X
Planning Team Meeting #1			X				X	X	X				X	
Planning Team Meeting #2			X				X		X		X		X	
Planning Team Meeting #3			X						X	X			X	
Outreach – Inform Customers and Stakeholders of Planning Process and Encourage Participation in Mitigation Survey		X			X	X								
Planning Team Meeting #4		X		X	X	X			X	X	X		X	
Incorporate Planning Team Input into First Draft Plan													X	
Outreach – Inform Customers and Stakeholders of Opportunity to Provide Input to the First Draft Plan														
Incorporate Input from Customers and Stakeholders into Second Draft Plan for Submission to Cal OES and FEMA														
FEMA Issues Approvable Pending Adoption														
Outreach – Invite Customers and Stakeholders to Adoption Meeting.														
Post Final Draft Plan for Board of Directors meeting														
Submit Resolution to FEMA														
FEMA Issues Letter of Approval														
Incorporate Letter of Approval into Final Plan														



Table A.2: Project Timeline

Tasks	October 2023	November-December	January 2024	February	March-December	January 2025	February	March	April	May	June	July	August	September	October	November
Outreach – Announce Planning Process at Board of Directors	X															
Research and Writing of Plan		X	X	X	X	X	X	X	X	X	X	X				
Planning Team Meeting #1 (1/30/2024)			X													
Planning Team Meeting #2 (2/8/2024)				X												
Planning Team Meeting #3 (2/29/2024)				X												
Outreach – Inform Customers and Stakeholders of Planning Process and Encourage Participation in Mitigation Survey									X	X						
Planning Team Meeting #4 (6/24/2025)											X					
Incorporate Planning Team Input to Initial Draft Plan											X	X	X	X		
Outreach – Inform Customers and Stakeholders of Opportunity to Provide Input to First Draft Plan															X	
Incorporate Input from Customers and Stakeholders into Second Draft Plan for Submission to Cal OES and FEMA																
FEMA Issues Approvable Pending Adoption																
Outreach – Invite Customers and Stakeholders to Adoption Meeting																
Post Final Draft Plan for Board of Directors Meeting																
Submit Resolution to FEMA																
FEMA Issues Letter of Approval																
Incorporate Resolution and Letter of Approval into Final Plan																



Plan Writing

The first community outreach activity took place in September 2023 during the announcement of the beginning of the planning process to the Board of Directors. Next, the Planning Team was identified and invited to the first of the Planning Team meetings scheduled and held on January 30, 2024.

A total of four Planning Team Meetings gathered vital information and insights. During the first meeting, an initial Hazard Analysis was reviewed and a Community Outreach Strategy developed. The rest of the meetings focused on finalizing the profiled hazards, developing a capability assessment, mitigation actions matrix, list of critical facilities, and results of the mitigation survey.

In April 2025, the second community outreach event announced the availability of the Mitigation Survey. Flyers, email, social media, and bill inserts were used to update the customers and stakeholders on the planning process and to ask for participation in the Survey. The Survey was designed to provide guidance and insights to the Planning Team on the hazards as well as possible mitigation activities. A dedicated website was created for the Hazard Mitigation Plan and used to post the survey, video, press release, and First Draft Plan. Planning Team Meeting #4 was dedicated to reviewing the input gathered from the Survey (see **Attachments**) as well as contributing to the Initial Draft Plan.

The third outreach event took place in July 2025 focusing on the availability of the First Draft Plan and the Team's desire for input. The Planning Team wanted to ensure gathering as many perspectives as possible. Also, sharing and gathering input served as an excellent means to enlist local champions interested in mitigation opportunities regarding their own homes and businesses.

After documenting the input gathered on the First Draft Plan, the Second Draft Plan was ready for submission to Cal OES and FEMA along with a request for a formal review and a determination of "approvable pending adoption". Throughout the formal review process, the Planning Team and consultant completed amendments to the Plan as mandated by Cal OES and FEMA.

Upon receipt of FEMA's Approvable Pending Adoption notice, the Final Draft Plan will be posted in advance of RCSD Board of Directors public meeting. The fourth community outreach event will be to inform and encourage attendance by the customers and stakeholders of the Board meeting. The purpose of the meeting will be to provide a public forum where additional comments can be gathered from the Board and attendees. The public meeting will include a presentation of a staff report and PowerPoint outlining the planning process and benefits of hazard mitigation. Staff will request the plan be adopted by the Board and will follow up with forwarding a signed resolution to FEMA. Upon receipt of the proof of adoption, FEMA will issue a Letter of Approval.

Community Outreach Strategy

The planning process was powered by District staff, customers, and stakeholders from across the private, public and non-governmental sectors. All of these resources were needed to assist with technical expertise, historical knowledge, and insights into hazards and mitigation strategies.

Stakeholder Outreach

The FEMA Handbook defines the need to identify specific stakeholders with a vested interest in the jurisdiction's mitigation planning. **Table A.3** defines each of the stakeholder categories as



defined in the Handbook. Outreach to stakeholders was accomplished through direct emails and mail.

Table A.3: Stakeholder Categories Defined

Local and Regional Agencies Involved in Hazard Mitigation Activities. Examples include public works, emergency management, local floodplain administration and Geographic Information Systems (GIS) departments.
Agencies with Authority to Regulate Development. Examples include zoning, planning, community and economic development departments, building officials, planning commission, and other elected officials.
Neighboring Communities. Examples include adjacent local governments, including special districts, such as those that are affected by similar hazard events or may share a mitigation action or project that crosses jurisdictional boundaries. Neighboring communities may be partners in hazard mitigation and response activities, or maybe where critical assets, such as dams, are located.
Business Organizations, Academia and other Private Organizations. Examples include a chamber of commerce, institutions of learning, private utilities or major employers that sustain community lifelines (providers of vital services in a community that when stabilized enable all other aspects of society to function).
Nonprofit Organizations and Community-Based Organizations. These organizations work directly with and/or provide support to underserved communities and socially vulnerable populations, among others. It is key to bringing partners to the table who can speak to the unique needs of these groups. Examples include housing, healthcare and social services agencies.

Table A.4 is the Stakeholder List by Category prepared by the Planning Team.

Table A.4: Stakeholder List by Category

Agency Name, Name of Individual, Individual's Job Title	Local and Regional Agencies Involved in Hazard Mitigation	Agencies with Authority to Regulate Development	Neighboring Communities	Business Organizations, Academia, and other Private Organizations	Nonprofit and Community-Based Organizations	Other
Local and Regional Agencies Involved in Hazard Mitigation Activities						
Rubidoux Community Services District Planning Team						
Brandon Thomas, Chair Assistant General Manager	X					
Kirk Hamblin, Director of Finance and Administration	X					
Brian Laddusaw, General Manager	X					
Jaclyn Makarzec, Director of Engineering	X					
Martha Navarro Perez, Customer Service / Accounts Payable Manager	X					
Anthony Strey (Contractor – Acorn Technologies) Managed Service Provider/IT Business Systems	X					
Melissa Trujillo, Human Resources Generalist / Safety & Facilities Coordinator	X					
Miguel Valdez, Director of Operations	X					
California Office of Emergency Services (Cal OES) - Constantin Raether, Mitigation Planning Division Chief	X					



Agency Name, Name of Individual, Individual's Job Title	Local and Regional Agencies Involved in Hazard Mitigation	Agencies with Authority to Regulate Development	Neighboring Communities	Business Organizations, Academia, and other Private Organizations	Nonprofit and Community-Based Organizations	Other
Federal Emergency Management Agency (FEMA) Region IX - Kathryn Lipiecki, Region IX Mitigation Officer	X					
Agencies with Authority to Regulate Development						
RCSD Board of Directors						
John Skerbelis, Board Member		X				
Hank Trueba, Board Member		X				
Diana Leja, Board Member		X				
Bernard Murphy, Board Member		X				
Leslie Altamirano, Board Member		X				
California Department of Public Health (CDPH) - Hoa Tan, Emergency Preparedness Program Manager		X				
Southern California Edison (SCE) - David Ford, Emergency Management Coordinator		X				
Southern California Gas Company (SoCalGas) - David Barrett, Emergency Management Coordinator and Brennen Thornton, Watch Desk Specialist		X				
Western Municipal Water District (WMWD) - Craig Miller, General Manager		X				
Metropolitan Water District of Southern California (MWD) - Andy Hui, Manager, Regional Supply Unit		X				
Neighboring Communities						
Riverside County Emergency Management Department - Brice Bartlette, Emergency Services Coordinator	X					
Riverside County Flood Control & Water Conservation District - Brian Teig, Senior Safety Coordinator Flood	X					
City of Riverside Public Utilities (RPU) - David A. Garcia, General Manager and Gilbert Hernandez, Public Works Director		X				
Riverside County Sheriff's Department - Chad Bianco, Sheriff			X			
Riverside County Department of Waste Resources -			X			
City of Jurupa Valley - Victoria Wasko, City Clerk, Rod Butler, City Manager, and Paul Toor, Public Works Director			X			
Jurupa Community Services District (JCSO) - Maria Ayala, Executive Services Manager and Mathew Abel, Director of Operations			X			
Jurupa Unified School District - Dr. Trenton Hansen, Superintendent			X			



Agency Name, Name of Individual, Individual's Job Title	Local and Regional Agencies Involved in Hazard Mitigation	Agencies with Authority to Regulate Development	Neighboring Communities	Business Organizations, Academia, and other Private Organizations	Nonprofit and Community-Based Organizations	Other
Jurupa Area Recreation & Park District - Colby Diuguid, General Manager			X			
Business Organizations, Academia, and Private Organizations						
Jurupa Chamber of Commerce - April Jordan, Director of Operations				X		
Major Rate Payer (Water) – Multi-Residential						
Jurupa Hills Cascade – Scott Vlahos, Property Manager				X		
Old Plantation Crestmore – Jovita Esquivel, Property Manager				X		
Garden Estates – Kimberly Miller, Property Manager				X		
Major Rate Payer (Water) – Commercial						
Alpha Materials – Kelley, Administrative Analyst				X		
Sierra Aluminum – Samuel Sons, Manager				X		
Lineage Logistics – Gena Sari, Foreman				X		
Nonprofit Organizations						
Sacred Heart Church – Name not available					X	
Rubidoux Missionary Baptist Church – Name not available						
St. John the Evangelist - Name not available						
Community-Based Organizations						
Jurupa District Lions Club - Brenda Grunder President					X	
Chriss Jones - Director, Club Services					X	
Veterans of Foreign Wars - David Barns President						
Other Organizations						
California State Senate – Senator Roth						
Alejandro Martinez, Primary Contact						X

Customer Outreach

Equally important are the customers who reside, work, study, and play in the service area. Outreach to the customer was accomplished through social media, flyers, public forums, newsletters, a dedicated website, bill inserts, and public postings.

Outreach Methods and Activities

The outreach methods identified in **Table A.5** include an extensive list of activities utilized throughout the planning process.



Table A.5: Outreach Methods and Activities for Public and Stakeholders

Outreach Methods and Activities (See Attachments for samples)	Stakeholder Categories					Customers
	Local and Regional Agencies Involved in Hazard Mitigation Activities	Agencies with Authority to Regulate Development	Neighboring Communities (including adjacent local governments and special districts)	Businesses, Academia, and other Private Interests	Nonprofit Organizations, Community-Based Organizations	
Email or Mail to Stakeholders – direct communication for each of the community outreach events.	X	X	X	X	X	
Public Forums – Board of Directors (Quarterly briefings)	X	X	X	X	X	X
Survey Flyer – shared electronically via email, website and social media while hard copies were shared at RCSD office, Veterans Memorial Park, Louis Robidoux Library, and City Hall (Jurupa Valley)	X	X	X	X	X	X
District’s Website – Posted plan- related documents and community outreach materials. Website had a total of 36 views.	X	X	X	X	X	X
Social Media – Facebook, X, and Instagram	X	X	X	X	X	X
Bill Inserts – sent to all customers						X

Customer and Stakeholder Input

Table A.6 will provide details on input gathered on the Mitigation Survey as well as comments received via the website and the First Draft Plan. Input gathered from customers and stakeholders will be listed in the right column. In addition to the input gathered, the table also documents how the gathered information was utilized in the plan.

Table A.6: Customer and Stakeholder Input

Date(s) of Invite	Agency, Recipient’s Name, Position Title	Information Received and Incorporated into Plan
CUSTOMERS		
		Information Received:
		Response to Information:
STAKEHOLDERS		
Local and Regional Agencies Involved in Hazard Mitigation Activities		



Date(s) of Invite	Agency, Recipient's Name, Position Title	Information Received and Incorporated into Plan
Agencies with Authority to Regulate Development		
Neighboring Communities		
Business Organizations, Academia, and Private Organizations (including Community Lifelines)		
Nonprofit and Community-Based Organizations		

Use of Existing Data

The Planning Team gathered and reviewed existing data and plans during plan writing and specifically noted as “sources”. Numerous documents were used to support the planning process:

Rubidoux Community Services District Website

<https://www.rcsd.org/hazard-mitigation-plan>

Applicable Incorporation: Department Information used in Element B: Risk Assessment - Capability Assessment, Element B: Risk Assessment - Community Profile

RCSD Urban Water Management Plan 2020

Applicable Incorporation: Information about hazards contributed to Element B: Risk Assessment - Community Profile, and Element B: Risk Assessment – Hazard Profiles.

City of Jurupa Valley General Plan – Community Safety, Services, and Facilities Element 2014, Housing Element 2017

Applicable Incorporation: Information about hazards contributed to Element B: Risk Assessment - Community Profile, and Element B: Risk Assessment – Hazard Profiles.

County of Riverside Local Hazard Mitigation Plan (2023)

<https://rivcoready.org/about-emd/plans/local-hazard-mitigation-plan>

Applicable Incorporation: Information about the planning area and geography used in Element B: Risk Assessment - Community Profile, and Element B: Risk Assessment – Hazard Profiles.

State of California Hazard Mitigation Plan

<https://www.caloes.ca.gov/office-of-the-director/operations/recovery-directorate/hazard-mitigation/state-mitigation-planning/>

Applicable Incorporation: Hazard identification information used in Element B: Risk Assessment – Identify Hazards.



HAZUS Maps and Reports

Created by Emergency Planning Consultants

Applicable Incorporation: Numerous HAZUS maps and reports have been included in Element B: Risk Assessment – Hazard Profiles - Earthquake.

National Flood Insurance Program

www.fema.gov/national-flood-insurance-program

Applicable Incorporation: Element C: Mitigation Strategy – Capabilities.

California Department of Conservation

www.conservation.ca.gov/cgs

Applicable Incorporation: Element B: Risk Assessment – Hazard Profiles - Earthquake.

U.S. Geological Survey

www.usgs.gov

Applicable Incorporation: Element B: Risk Assessment – Hazard Profiles - Earthquake.

California's Fourth Climate Change Assessment: Los Angeles Region Report (2019)

<https://www.ioes.ucla.edu/project/los-angeles-regional-climate-assessment/>

Applicable Incorporation: Element B: Risk Assessment – Vulnerability and Impacts Assessment.

Weather Spark

<https://weatherspark.com/>

Applicable Incorporation: Element B: Risk Assessment - Community Profile.



Element B: Risk Assessment

Q&A | ELEMENT B: RISK ASSESSMENT | B1-a.

Q: Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Identify Hazards, Table B.1, Table B.2, Hazard Profiles, and Table B.5** below.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-b.

Q: Does the plan include information on the location of each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Drought, Earthquakes, Flood, Power Outages, Wildfire, and Wind Local Conditions** below.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-c.

Q: Does the plan describe the extent for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(ii))

A: See **Table B.8, Maps B.2, B.3, B.4, B.7, B.8** below.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-d.

Q: Does the plan include the history of **previous** hazard events for each identified hazard? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Previous Drought, Earthquakes, Flood, Power Outages, Wildfire, and Wind Impacting RCSD, Previous Earthquakes Impacting Riverside County** below.

Q&A | ELEMENT B: RISK ASSESSMENT | B1-e.

Q: Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards? (Requirement 44 CFR § 201.6(c)(2)(i))

A: See **Probability of Future Drought, Earthquakes, Flood, Power Outage, Wildfire, and Wind**

Q&A | ELEMENT B: RISK ASSESSMENT | B2-a.

Q: Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii))

A: See **Vulnerability of People, Vulnerability of Structures, Vulnerability of Economy, Vulnerability of Natural, Historic, and Cultural Resources, Vulnerability of Activities Bringing Value to the Community, Table B.5** below.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-b.

Q: For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction? (Requirement §201.6(c)(2)(ii))

A: See **Impact Profile of People, Impact Profile of Structures, Impact Profile of Economy, Impact Profile of Natural, Historic, and Cultural Resources, Impact Profile of Activities Bringing Value to the Community,** below.

Q&A | ELEMENT B: RISK ASSESSMENT | B2-c.

Q: Does the Plan address NFIP-insured structures within each jurisdiction that have been repetitively damaged by floods? (Requirement 44 CFR § 201.6(c)(2)(ii))

A: See **Repetitive Loss Properties/Severe Repetitive Loss Properties,** below.

FEMA requires this part of the plan to include a description of the type, location, and extent of all natural hazards that can affect the jurisdiction. In addition, the plan includes information on previous occurrences of hazard events and on the probability of future hazard events. Also, the plan is required to include a summary of the jurisdiction's vulnerability and the impacts on the



community from the identified hazards. This includes the National Flood Insurance Program - insured structures that have been repetitively damaged by floods.

Element B: Risk Assessment is divided into three sections: 1) District Profile which provides a brief look at the history and facts about the community, 2) Hazard Assessment which focuses on ranking and describing the hazards, and 3) Vulnerability and Impacts Assessment which links the profiled hazards with the district's assets.

Before delving into the hazards and vulnerability, the jurisdiction believes it is important to share history and background information in the form of a District Profile. Additional information on the assets (People, Structures, Economy, Natural/Historic/Cultural Resources, and Activities Bringing Value to the Community) can be found later in Element B: Risk Assessment – Vulnerability and Impacts Assessment.

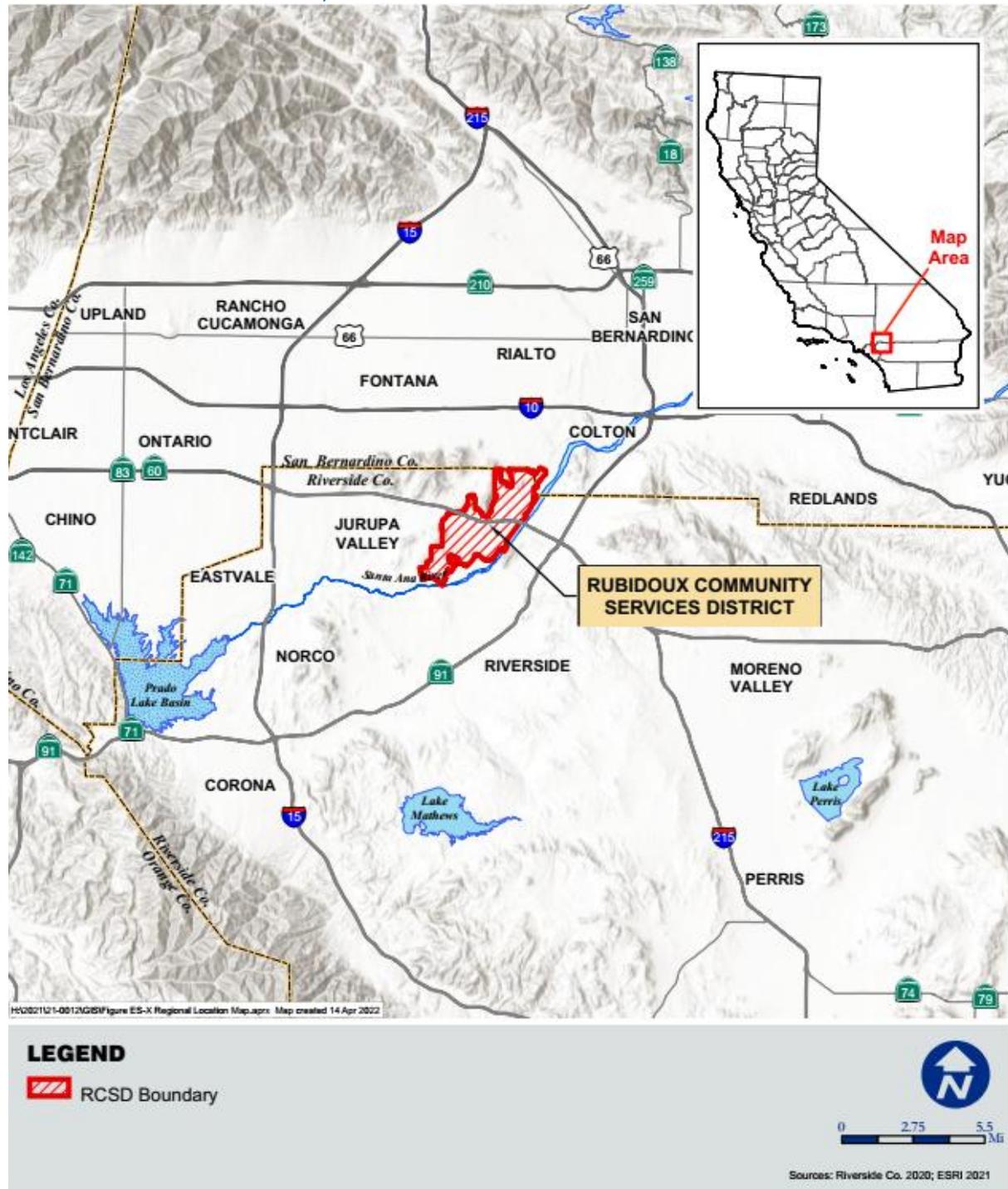
District Profile

The Rubidoux Community Services District provides water, wastewater, trash, weed abatement, street lighting, and fire protection services to a community that has grown from 4,000 to over 35,000 over the past 50 plus years. The service area is located in the eastern region of the City of Jurupa Valley. According to Jurupa Valley's General Plan, the City of Jurupa Valley is located in Riverside County and neighbors the cities of Riverside and Corona to the south, San Bernardino and Fontana to the north, Pomona and Ontario to the northwest, and Orange County to the west. Jurupa Valley is located in the northwestern portion of Riverside County, and it stretches east beyond the curve of the Santa Ana River, just touching the corner of San Bernardino County's City of Colton.

The distinctiveness of the Jurupa Valley area can be found in its unique communities and wonderful natural setting. From the lush riparian corridor of the Santa Ana River, to the slightly undulating flatlands of Mira Loma, to the dramatic rolling terrain of the Pedley Hills, to the stark, rugged outcroppings of the Jurupa Mountains, Jurupa Valley provides diverse habitat for wildlife and an outstanding location for a semi-rural city that values preservation of its equestrian heritage in balance with new, high-quality economic and residential growth. The western portion of Jurupa Valley is primarily flat, with gentle rolling foothills scattered throughout the Glen Avon and Mira Loma areas. North of SR 60 lies the dramatic sloping terrain of the Jurupa Mountains, which provide a natural backdrop for the communities of Sunnyslope and Belltown. The Pedley Hills provide a picturesque setting for the community of Pedley as well as a pleasing backdrop for communities adjacent to the hills. The Santa Ana River, with its lush riparian habitat, provides a natural contrast along the southern boundary of Jurupa Valley. Though not located within the Jurupa Valley's boundaries, Mount Rubidoux serves as a prominent visual landmark for residents in Jurupa Valley's eastern communities.

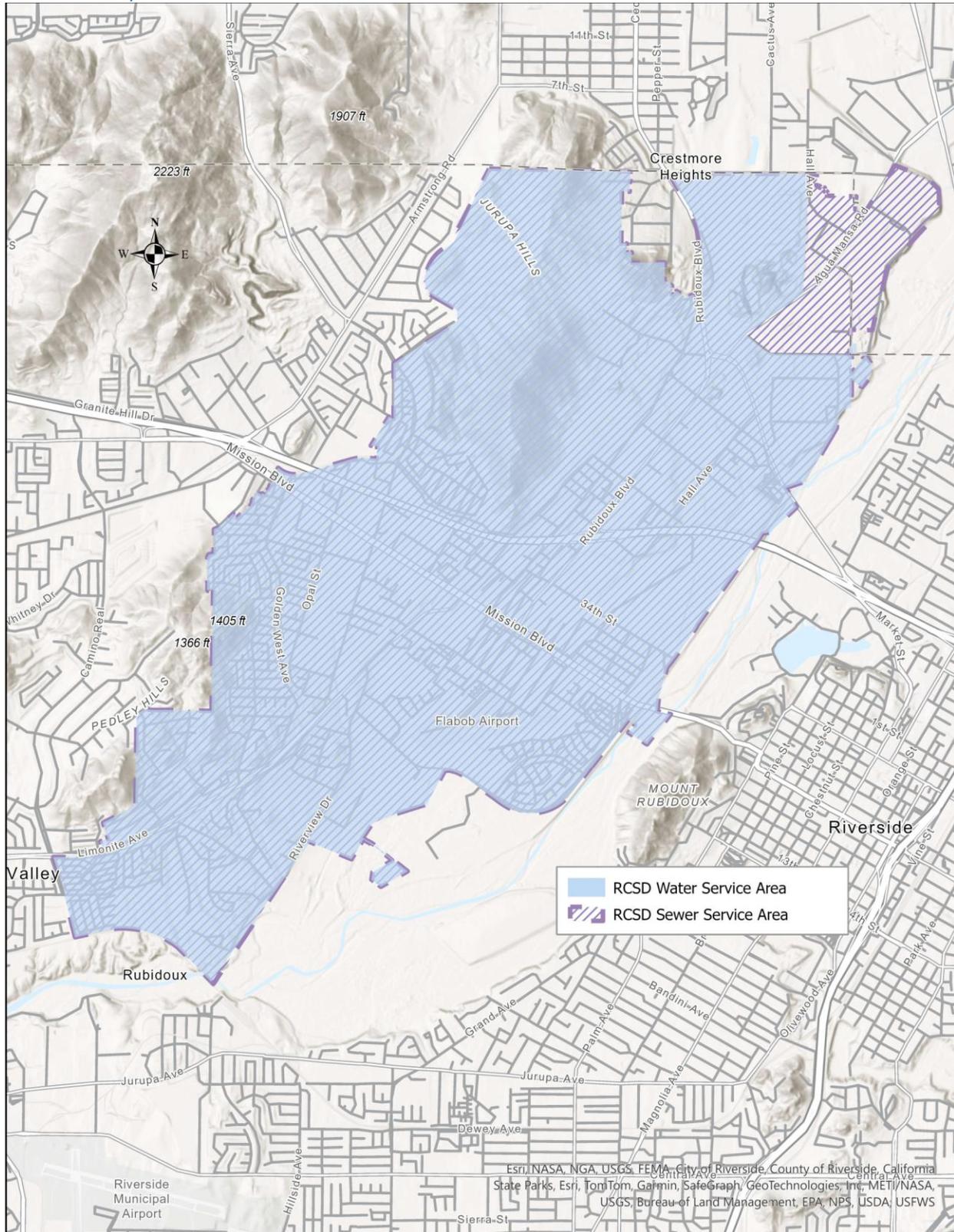


Map B.1: RCSD Regional Location
Source: RCSD Water Master Plan, 2022





Map B.2: RCSD Service Area
Source: RCSD, 2025





Also see Element B: Risk Assessment – Vulnerability and Impacts Assessment for more information about the district’s people, economy, structures, and other assets.

National Flood Insurance Program

Established in 1968, the NFIP provides federally backed flood insurance to homeowners, renters, and businesses in communities that adopt and enforce floodplain management ordinances to reduce future flood damage. Although the District is not required to participate in NFIP, the majority of its service area is located within the boundaries of the City of Jurupa Valley. The City adopted a floodplain management ordinance (Municipal Code Chapter 8.15 - FLOODPLAIN MANAGEMENT) in 2013 and has Flood Insurance Rate Maps (FIRM) that show floodways, 100-year flood zones, and 500-year flood zones.

NFIP Participation

The District is not required to participate in NFIP.

Repetitive Loss Properties and Severe Repetitive Loss Properties

Repetitive Loss Properties (RLPs) and Severe Repetitive Loss Properties (SRLPs) are most susceptible to flood damage; therefore, they have been the focus of flood hazard mitigation programs. Unlike a countywide program, the Floodplain Management Plan (FMP) for repetitive loss properties involves highly diversified property profiles, drainage issues, and property owner’s interest. It also requires public involvement processes unique to each RLP area. The objective of an FMP is to provide specific potential mitigation measures and activities to best address the problems and needs of communities with repetitive loss properties. According to FEMA resources, none of the properties within RCSD are designated as Repetitive Loss Property (RLPs) or Severe Loss Property (SLPs).

Risk Assessment

Conducting a risk assessment can provide information regarding: the types of hazards a jurisdiction is exposed to; the location where the hazard might occur; the history of the hazard in the RCSD and surrounding area; and the future risk they pose. Specifically, the five levels of risk assessment are as follows:

1. *Identify Hazards*
2. *Hazard Profiles*
3. *Identify Community Assets*
4. *Analyze Impacts*
5. *Summarize Vulnerability*

Hazard Assessment

Identify Hazards

This section is the description of the geographic extent, potential intensity, and the probability of occurrence of a given hazard. Maps are used in this plan to display hazard identification data. To determine the hazard with significant potential to impact the Planning Team examined three



resources: California’s 2023 State Hazard Mitigation Plan, 2023 County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan, and the City of Jurupa Valley’s 2017 General Plan - Safety, Services, and Facilities Element. The Planning Team reviewed existing documents to determine which of the hazards posed the most significant threat to the planning area and its ability to deliver services. In other words, which hazard would likely result in a local declaration of emergency. The Planning Team also reviewed Federal Disaster Declarations for Riverside County which experienced 14 federal disaster declarations from 2018 – 2024.

Table B.1: Federal Disaster Declarations 2020-2024 Riverside County
Source: FEMA website State and County Disaster Declarations, 2024

Year	Declaration Number	Declaration Title
2024	DR-4750-CA	Tropical Storm Hilary
2023	EM-3591-CA	Severe Winter Storms, Flooding, And Mudslides
2022	FM-5451-CA	Fairview Fire
2021	FM-5381-CA	Blue Ridge Fire
2020	FM-5325-CA	Apple Fire
2020	FM-5300-CA	46 Fire
2020	FM-5299-CA	Hill Fire
2020	EM-3428-CA	Covid-19
2020	DR-4482-CA	Covid-19 Pandemic

The Team utilized FEMA’s Calculated Priority Risk Index (CPRI) ranking technique to quantify the probability, magnitude/severity, warning time and duration for each of the hazards. The hazard ranking system is described below in **Table B.2**.

Table B.2: Calculated Priority Risk Index
Source: Federal Emergency Management Agency

CPRI Category	Degree of Risk			Assigned Weighting Factor
	Level ID	Description	Index Value	
Probability	Unlikely	Extremely rare with no documented history of occurrences or events. Annual probability of less than 1 in 1,000 years.	1	45%
	Possibly	Rare occurrences. Annual probability of between 1 in 100 years and 1 in 1,000 years.	2	
	Likely	Occasional occurrences with at least 2 or more documented historic events. Annual probability of between 1 in 10 years and 1 in 100 years.	3	
	Highly Likely	Frequent events with a well-documented history of occurrence. Annual probability of greater than 1 every year.	4	
Magnitude and Severity	Negligible	Negligible property damage (less than 5% of critical and non-critical facilities and infrastructure. Injuries or illnesses are treatable with first aid and there are no deaths. Negligible loss of quality of life. Shut down critical public facilities for less than 24 hours.	1	30%



	Limited	Slight property damage (greater than 5% and less than 25% of critical and non-critical facilities and infrastructure). Injuries or illnesses do not result in permanent disability, and there are no deaths. Moderate loss of quality of life. Shut down critical public facilities for more than 1 day and less than 1 week.	2	
	Critical	Moderate property damage (greater than 25% and less than 50% of critical and non-critical facilities and infrastructure). Injuries or illnesses result in permanent disability and at least 1 death. Shut down critical public facilities for more than 1 week and less than 1 month.	3	
	Catastrophic	Severe property damage (greater than 50% of critical and non-critical facilities and infrastructure). Injuries and illnesses result in permanent disability and multiple deaths. Shut down critical public facilities for more than 1 month.	4	
Warning Time	> 24 hours	Population will receive greater than 24 hours of warning.	1	15%
	12-24 hours	Population will receive between 12-24 hours of warning.	2	
	6-12 hours	Population will receive between 6-12 hours of warning.	3	
	< 6 hours	Population will receive less than 6 hours of warning.	4	
Duration	< 6 hours	Disaster event will last less than 6 hours.	1	10%
	< 24 hours	Disaster event will last less than 6-24 hours.	2	
	< 1 week	Disaster event will last between 24 hours and 1 week.	3	
	> 1 week	Disaster event will last more than 1 week.	4	



Table B.3: Calculated Priority Risk Index Ranking for RCSD
 Source: RCSD Planning Team

Hazard	Probability	Weighted 45% (x.45)	Magnitude Severity	Weighted 30% (x.3)	Warning Time	Weighted 15% (x.15)	Duration	Weighted 10% (x.1)	CPRI Total	Hazard Priority Ranking * (H-High, M-Medium, L-Low)
Drought	3	1.35	4	1.20	1	.15	1	.10	2.35	H
Earthquake	3	1.35	4	1.20	4	.45	1	.10	3.25	H
Flood	3	1.35	3	.90	1	.15	1	.10	2.50	H
Power Outage	4	1.80	2	.60	1	.15	1	.10	2.65	H
Wildfire	3	1.35	2	.60	1	.15	4	.40	2.50	M
Wind	4	1.80	2	.60	1	.15	1	.10	2.65	H

***Hazard Priority Ranking**
 High=CPRI score for probability + magnitude/severity (impact) = 6 or higher
 Medium=CPRI score for probability + magnitude/severity (impact) = 5
 Low=CPRI score for probability + magnitude/severity (impact) = 3 or 4
 N/A=CPRI score for probability + magnitude/severity (impact) = 2



Table B.4: Hazard Source Review and Inclusion/Omission by Planning Team
Source: Planning Team (PT); California State Hazard Mitigation Plan (SHMP); Riverside County (MJHMP); Jurupa Valley General Plan (GP), National Risk Index (NRI)
Note: The Planning Team chose to profile only those hazards with a “Medium” or “High” Hazard Priority Ranking

Hazard	Source	Profiled in HMP	Reason for Inclusion	Reason for Omission
Avalanche	NRI, SHMP	N		Does not pose a significant threat to the community.
Climate Change	MJHMP, GP, PT	N		The Planning Team chose to integrate climate change information into each of the profiled hazards.
Coastal Flooding	NRI	N		Does not pose a significant threat to the community.
Cold Wave	NRI, SHMP	N		Does not pose a significant threat to the community.
Dam Inundation	SHMP, MJHMP, GP	N		Does not pose a significant threat to the community.
Drought	NRI, SHMP, MJHMP	Y	The Planning Team assigned hazard priority ranking of “High”.	
Earthquake	NRI, SHMP, MJHMP, GP	Y	The Planning Team assigned hazard priority ranking of “High”.	
Hail	NRI	N		Does not pose a significant threat to the community.
Heat Wave	NRI, MJHMP	N		Does not pose a significant threat to the community.
Hurricane	NRI	N		Does not pose a significant threat to the community.
Ice Storm	NRI	N		Does not pose a significant threat to the community.
Landslide	NRI, SHMP, MJHMP	N		Does not pose a significant threat to the community.
Levee Failure	SHMP	N		Does not pose a significant threat to the community.



Hazard	Source	Profiled in HMP	Reason for Inclusion	Reason for Omission
Lighting	NRI	N		Does not pose a significant threat to the community.
Power Outage	PT	Y	The Planning Team assigned hazard priority ranking of "High".	
Riverine Flooding	NRI, SHMP, MJHMP, GP	Y	The Planning Team assigned hazard priority ranking of "High".	
Strong Wind	NRI, SHMP	Y	The Planning Team assigned hazard priority ranking of "High".	
Subsidence	SHMP	N		Does not pose a significant threat to the community.
Tornado	NRI	N		Does not pose a significant threat to the community.
Tsunami	NRI, SHMP	N		Does not pose a significant threat to the community.
Volcanic Activity	NRI, SHMP	N		Does not pose a significant threat to the community.
Wildfire	NRI, SHMP, MJHMP	Y	The Planning Team assigned hazard priority ranking of "Medium".	
Winter Weather	NRI	N		Does not pose a significant threat to the community.

Hazard Profiles

Table B.2 (Calculated Priority Risk Index) included all of the natural hazards that can affect the jurisdiction. **Table B.3** (CPRI Ranking) emphasizes the importance of considering the “scope and scale” of a possible event. In other words, the Planning Team members were reminded to envision an event of such significance that a local declaration of emergency would likely be issued. The planning team chose to profile only those hazards with a medium or high hazard priority ranking (probability + magnitude/severity) which included drought, earthquake, flood, power outage, wildfire, and wind. **Table B.4** provided a justification for why or why not a hazard was profiled in the plan. Next, **Table B.5** provides a summary of the profiled hazards indicating a generalized perspective of the community’s vulnerability according to extent, location, and probability, and previous significant event.



Table B.5: Hazard Profile of Location, Extent, Probability, Previous Significant Event
 Source: Planning Team

Hazard	Location (Where)	Extent (How Big an Event)	Probability * (How Often)	Previous Significant Event
Drought	District Wide	Droughts in urban areas vary considerably in scope and intensity. Likely emergency water shortage regulations would restrict such activities as watering of landscape, washing of cars, and other non-safety related activities	Likely	No Significant Event on Record
Earthquake	District Wide	Powerful and widespread rupture or shaking ground can cause buildings to move off their foundations or collapse; damage buildings and other structures, roads, and other public infrastructure; damage utility lines and set off fires; and threaten the lives of people and animals	Likely	M6.6 Earthquake in 1918 caused minor damage in Jurupa Valley
Flood	Central and southern regions of the District	100-year floodplain with parts protected by a levee	Likely	2010 Damage to District-owned wastewater infrastructure
Power Outage	District Wide	All electrical power vulnerable to Public Safety Power Shutoff directives ranging from hours to days	Likely	January 2025 Los Angeles Wildfires
Wildfire	District Wide	Wildland-Urban Interface	Likely	No Significant Event on Record
Wind	District Wide	Sustained winds of 50 mph or greater	Highly Likely	No recent events
* Probability is defined as: Unlikely = 1:1,000 years, Possibly = 1:100-1:1,000 years, Likely = 1:10-1:100 years, Highly Likely = 1:1 year				
¹ Uniform California Earthquake Rupture Forecast				

Drought

Description

Drought is defined as a deficiency of precipitation over an extended period of time, usually a season or more. This deficiency results in a water shortage for some activity, group, or environmental sector. Drought should be considered relative to some long-term average condition of balance between precipitation and evapotranspiration (i.e., evaporation + transpiration) in a particular area, a condition often perceived as "normal". It is also related to the



timing (e.g., principal season of occurrence, delays in the start of the rainy season, occurrence of rains in relation to principal crop growth stages) and the effectiveness of the rains (e.g., rainfall intensity, number of rainfall events).

Other climatic factors such as high temperature, high wind, and low relative humidity are often associated with it in many regions of the world and can significantly aggravate its severity. Drought should not be viewed as merely a physical phenomenon or natural event. Its impacts on society result from the interplay between a natural event (less precipitation than expected resulting from natural climatic variability) and the demand people place on water supply. Human beings often exacerbate the impact of drought. Recent droughts in both developing and developed countries and the resulting economic and environmental impacts and personal hardships have underscored the vulnerability of all societies to this natural hazard.

One dry year does not normally constitute a drought in California but serves as a reminder of the need to plan for droughts. California's extensive system of water supply infrastructure — its reservoirs, groundwater basins, and inter-regional conveyance facilities — mitigates the effect of short-term dry periods for most water users. Defining when a drought begins is a function of drought impacts to water users. Hydrologic conditions constituting a drought for water users in one location may not constitute a drought for water users elsewhere, or for water users having a different water supply. Individual water suppliers may use criteria such as rainfall/runoff, amount of water in storage, or expected supply from a water wholesaler to define their water supply conditions.

Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Most natural disasters, such as floods or forest fires, occur relatively rapidly and afford little time for preparing for disaster response. Droughts occur slowly, over a multiyear period. There is no universal definition of when a drought begins or ends. Impacts of drought are typically felt first by those most reliant on annual rainfall - - ranchers engaged in dry land grazing, rural residents relying on wells in low-yield rock formations, or small water systems lacking a reliable source. Criteria used to identify statewide drought conditions do not address these localized impacts. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline.

There are four different ways that drought can be defined:

- **Meteorological** - a measure of departure of precipitation from normal. Due to climatic differences, what is considered a drought in one location may not be a drought in another location.
- **Agricultural** - refers to a situation when the amount of moisture in the soil no longer meets the needs of a particular crop.
- **Hydrological** - occurs when surface and subsurface water supplies are below normal.
- **Socioeconomic** - refers to the situation that occurs when physical water shortage begins to affect people.

U.S. Drought Monitor

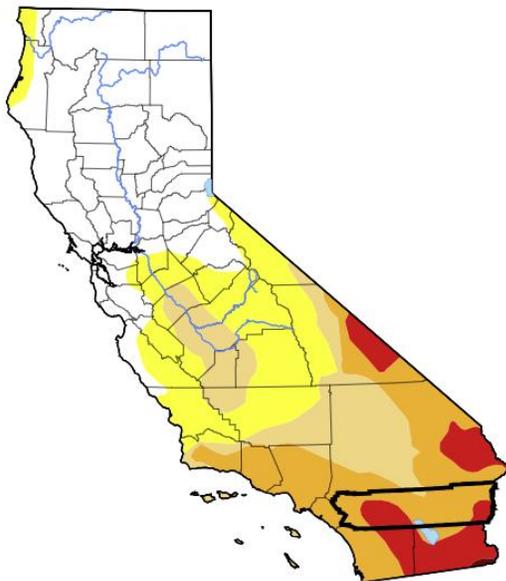
The U.S. Drought Monitor (USDM) is a map that is updated weekly to show the location and intensity of drought across the country. The USDM uses a five-category system (USDM, 2021):

- D0—Abnormally Dry
 - Short-term dryness slowing planting, growth of crops

- Some lingering water deficits
- Pastures or crops not fully recovered
- D1—Moderate Drought
 - Some damage to crops, pastures
 - Some water shortages developing
 - Voluntary water-use restrictions requested
- D2—Severe Drought
 - Crop or pasture loss likely
 - Water shortages common
 - Water restrictions imposed
- D3—Extreme Drought
 - Major crop/pasture losses
 - Widespread water shortages or restrictions
- D4—Exceptional Drought
 - Exceptional and widespread crop/pasture losses
 - Shortages of water creating water emergencies

The USDM categories show experts’ assessments of conditions related to drought. These experts check variables including temperature, soil moisture, stream flow, water levels in reservoirs and lakes, snow cover, and meltwater runoff. They also check whether areas are showing drought impacts such as water shortages and business interruptions. Associated statistics show what proportion of various geographic areas are in each category of dryness or drought, and how many people are affected. U.S. Drought Monitor data go back to 2000.

Infographic B.1: U.S. Drought Monitor – Riverside County, California
 Source: Website – U.S. Drought Monitor 6.5.2025



Map released: Thurs. June 5, 2025

Data valid: June 3, 2025 at 8 a.m. EDT

Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data



Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2025-06-03	0.00	100.00	100.00	98.01	25.47	0.00	323
Last Week to Current	2025-05-27	0.00	100.00	100.00	98.01	25.46	0.00	324
3 Months Ago to Current	2025-03-04	0.00	100.00	100.00	98.02	76.06	4.31	378
Start of Calendar Year to Current	2024-12-31	0.00	100.00	100.00	28.93	5.32	0.00	234
Start of Water Year to Current	2024-10-01	23.15	76.85	41.08	0.00	0.00	0.00	118
One Year Ago to Current	2024-06-04	92.38	7.62	0.00	0.00	0.00	0.00	8

Local Conditions

According to the 2022 Water Master Plan, the District adopted Ordinance No. 111 on October 15, 2009 to establish a landscape water use efficiency program providing compliance measures in support of State landscape model ordinance requirements. This ordinance remains in-effect and works in conjunction with the City of Jurupa Valley’s landscape requirements.

California endured significant drought conditions from 2012 until at least 2017. During this drought, statewide emergency conservation regulations were mandated statewide by the State Water Resources Control Board (SWRCB) to reduce water demand and conserve supplies. The District adopted Resolution No. 2015-817 (January 15, 2015) and subsequently Resolution No. 2015-820 (June 18, 2015) to declare a modified Stage 2 of the water shortage contingency plan with a revised list of water use prohibitions consistent with the SWRCB’s emergency regulations dated March 17, 2015, and May 5, 2015. The SWRCB then rescinded most of the emergency conservation regulations in 2017 and likewise the district adopted Resolution No. 2019-858 (November 7, 2019) to rescind Resolution No. 2015-820; however, Resolution No. 2019-858 encourages customers to continue to conserve water, albeit voluntarily in addition to a standing prohibition against any form of water waste, consistent with State law.

The district adopted a revised Water Shortage Contingency Plan (WSCP) on June 17, 2021, as part of the adoption of its 2020 UWMP (WEBB(a)). The WSCP outlines the actions that can be taken with each level of a declared water shortage, with each level ranging from a shortage of less than 10% to more than 50%. The shortage could be the result of drought or catastrophic supply interruptions. The district is currently preparing a new ordinance to codify the enforceable elements of the WSCP, including proposed statewide regulations on water waste.

Previous Drought Impacting RCSD

Fortunately, there is no history of severe drought within the district’s service area. Even so, California as a whole has experienced drought conditions most recently since 2021.

Previous Droughts Impacting Riverside County

According to Riverside County 2023 MJHMP, the County chronically experiences drought cycles. Drought causes stress on the County’s ability to provide water to the community. In addition, drought conditions can cause extensive weakening of trees in forested areas causing them to become highly vulnerable to disease and insect infestation. Many trees have weakened and died, creating a severe fire hazard. Furthermore, wildland brush areas were dry, presenting wildfire risk. See additional historical details above in “Local Conditions”.



Probability of Future Droughts

Droughts occur every day throughout California. When conducting the risk assessment, the planning team determined that the probability of a serious drought affecting the district is likely with an annual probability between 1 in 10 years and 1 in 100 years.

Climate Change Considerations

According to the Fifth National Climate Assessment, drought is such a complex phenomenon that it is a challenge to even define what it is: more than 150 different definitions have appeared in scientific literature. Broadly, drought results when there is a mismatch between moisture supply and demand. Meteorological drought happens when there is a severe or ongoing lack of precipitation. Hydrological drought results from deficits in surface runoff and subsurface moisture supply. Drying soil moisture affects crop yields and can lead to agricultural droughts. The timing of droughts is also complex. Droughts can last for weeks or decades. They may develop slowly over months or come on rapidly. A drought may be immediately apparent or detectable only in retrospect.

Despite this complexity, some robust regional trends are emerging. Colorado River streamflow over the period 2000–2014 was 19% lower than the 20th-century average, largely due to a reduction in snowfall, less reflected sunlight, and increased evaporation. The period 2000–2021 in the Southwest had the driest soil moisture of any period of the same length in at least the past 1,200 years. While this drought is partially linked to natural climate variability, there is evidence that climate change exacerbated it, because warmer temperatures increase atmospheric “thirst” and dry the soil. Droughts in the region are lasting longer and reflect not a temporary extreme event but a long-term aridification trend—a drier “new normal” occasionally punctuated by periods of extreme wetness consistent with expected increases in precipitation volatility in a warming world.

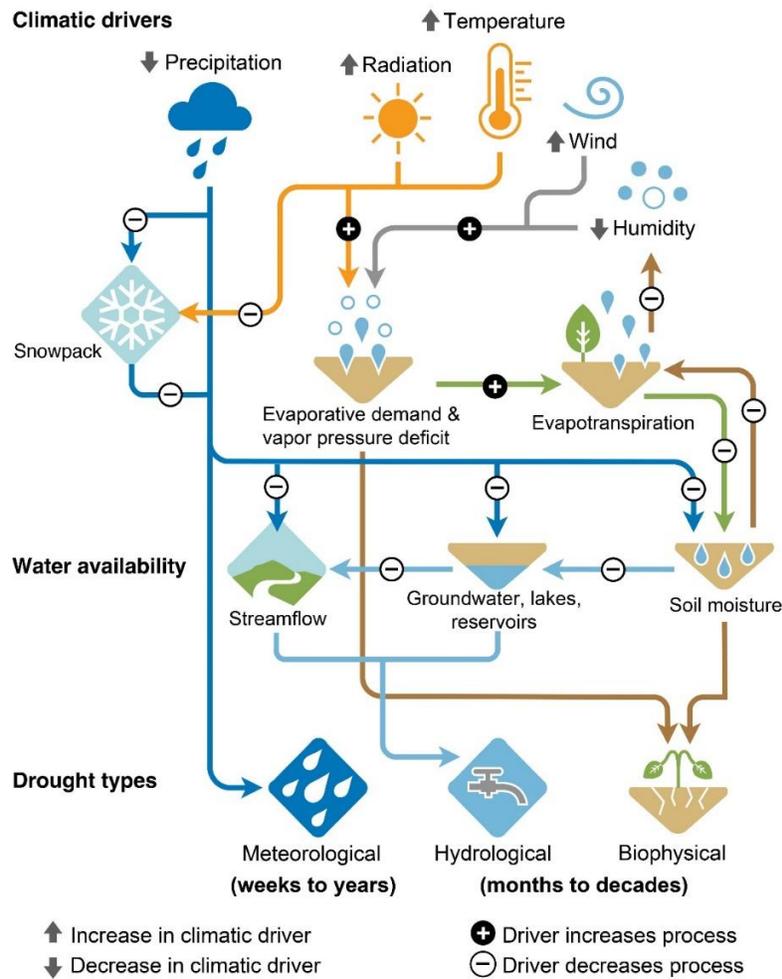
The Southwest is the only region in which the total area of unusually dry soil moisture is increasing. In the eastern regions of the country, hydrological droughts have become less frequent since the late 19th century due to increases in precipitation that compensate for warming-driven increases in evaporation. However, there is evidence that the likelihood of drought in the Northeast did not decrease as much as would be expected given these wetter conditions and that higher increases in evapotranspiration make the Southeast more drought-prone than the Northeast. Additionally, much of the US is vulnerable to rapid-onset flash droughts that can materialize in a matter of days, driven by extreme high temperatures or wind speeds and a lack of rainfall. These events are difficult to predict and prepare for and can have outsized impacts. There is evidence that these events are drying out soil more quickly as the world warms.

Climate change alters the hydrologic cycle and is expected to increase drought in some regions through various process pathways. The figure below shows how climate change alters the hydrologic cycle. According to the Fifth National Climate Assessment (2023), changes in climatic drivers (e.g., precipitation, temperature, wind, etc.) affect different aspects of the hydrologic cycle (e.g., evapotranspiration, snowpack, streamflow, soil moisture). In turn, these hydrologic shifts translate into changes in the severity, frequency, and risk of different drought types. Plus, and minus signs denote the direction of change in the driver that would cause increases in drought. For example, where precipitation declines (down arrow), all drought types will increase because this reduces snowpack, streamflow, groundwater and reservoir storage, and soil moisture. Similarly, increasing temperatures (up arrow) are also expected to increase hydrological and

biophysical drought by reducing snowpack and increasing evaporative losses from streams, surface reservoirs, and soils.

Figure B.1: Climate Drivers of Drought, Effects on Water Availability, and Impacts
 Source: Fifth National Climate Assessment, 2023

Climatic Drivers of Drought, Effects on Water Availability, and Impacts



Earthquake

Description

An earthquake is a sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of the Earth's tectonic plates. The effects of an earthquake can be felt far beyond the site of its occurrence. They usually occur without warning and, after just a few seconds, can cause massive damage and extensive casualties. Common effects of earthquakes are ground motion and shaking, surface fault ruptures, and ground failure.

Ground Shaking

Ground shaking is the motion felt on the earth's surface caused by seismic waves generated by the earthquake. It is the primary cause of earthquake damage. The strength of ground shaking



depends on the magnitude of the earthquake, the type of fault, and distance from the epicenter (where the earthquake originates). Buildings on poorly consolidated and thick soil will typically see more damage than buildings on consolidated soil and bedrock.

Liquefaction

Liquefaction is a phenomenon in which the strength and stiffness of soil is reduced by earthquake shaking or other events. Liquefaction occurs in saturated soils, which are soils in which the space between individual soil particles is completely filled with water. This water exerts pressure on the soil particles that influences how tightly the particles themselves are pressed together. Prior to an earthquake, the water pressure is relatively low. However, earthquake shaking can cause water pressure to increase to the point where the soil particles can readily move with respect to each other. Because liquefaction only occurs in saturated soil, its effects are most commonly observed in low lying areas. Typically, liquefaction is associated with shallow groundwater, which is less than 50 feet beneath the earth’s surface. See Liquefaction Areas discussion below for more information.

Modified Mercalli Scale and Peak Ground Acceleration Comparison

One tool used to describe earthquake intensity is the Magnitude Scale. The Magnitude Scale is sometimes referred to as the Richter Scale. The two are similar but not exactly the same. The Magnitude Scale was devised as a means of rating earthquake strength and is an indirect measure of seismic energy released. The Scale is logarithmic with each one-point increase corresponding to a 10-fold increase in the amplitude of the seismic shock waves generated by the earthquake. In terms of actual energy released, however, each one-point increase on the Richter scale corresponds to about a 32-fold increase in energy released. Therefore, a Magnitude 7 (M7) earthquake is 100 times (10 X 10) more powerful than a M5 earthquake and releases 1,024 times (32 X 32) the energy. **Table B.6** compares the Modified Mercalli Scale and Peak Ground Acceleration.

Table B.6: Modified Mercalli Scale and Peak Ground Acceleration Comparison

Source: USGS

Modified Mercalli Scale	Perceived Shaking	Potential Structure Damage		Estimated PGAa (%g)
		Resistant Buildings	Vulnerable Buildings	
I	Not Felt	None	None	<0.17%
II-III	Weak	None	None	0.17% - 1.4%
IV	Light	None	None	1.4% - 3.9%
V	Moderate	Very Light	Light	3.9% - 9.2%
VI	Strong	Light	Moderate	9.2% - 18%
VII	Very Strong	Moderate	Moderate/Heavy	18%-34%
VIII	Severe	Moderate/Heavy	Heavy	34%-65%
IX	Violent	Heavy	Very Heavy	65% - 124%
X-XIII	Extreme	Very Heavy	Very Heavy	>124%

a. PGA = peak ground acceleration. Measured in percent of g, where g is the acceleration of gravity

Sources: USGS, 2008; USGS, 2010

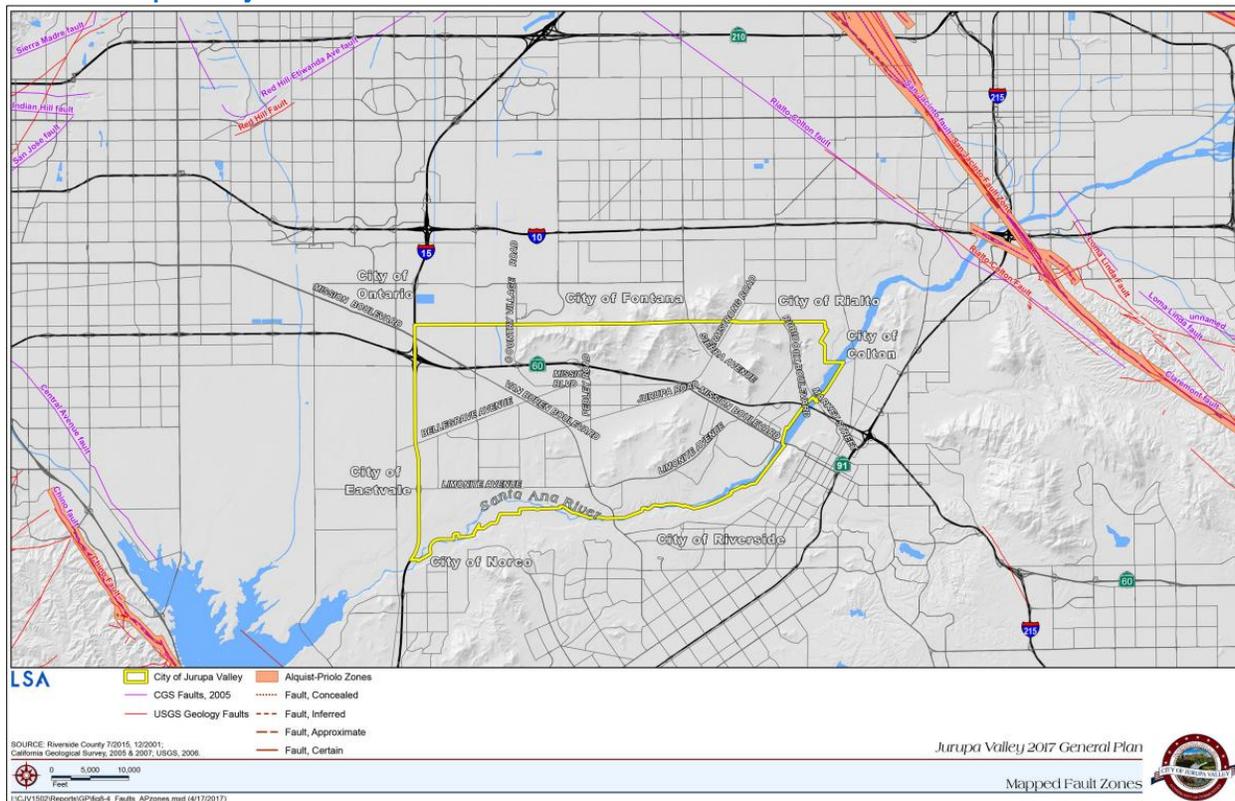
Local Conditions

According to the General Plan – Community Safety, Services and Facilities Element, seismic hazards are related to earthquakes and earth movement, such as fault rupture, liquefaction, landslides, and rock falls. The Alquist Priolo Earthquake Fault Zoning Act of 1972 requires the



mapping of known surface faults to minimize the direct impact surface fault rupture would have on structures designed for human habitation. Although Riverside County as a whole is considered seismically active, no known seismic faults exist within Jurupa Valley, nor is Jurupa Valley located within a mapped Alquist-Priolo Earthquake Fault Zone. While the potential earthquake risk is considered low, regional faults such as the Rialto-Colton, San Jacinto, and Chino faults pose earthquake risks to the West Riverside County area, including Jurupa Valley. New faults and fault traces may be identified in the future; consequently, new structures designed for human occupancy should be required to be set back from newly identified and potential seismic hazards. **Map B.3** shows the mapped fault zones in and around Jurupa Valley.

Map B.3: Earthquake Faults near RCSD
Source: Jurupa Valley General Plan



Estimation of Potential Human and Economic Losses Based on the Exposure and Vulnerability of People, Buildings, and Infrastructure

A vulnerability assessment in its simplest form is a simultaneous look at the geographical location of hazards and an inventory of the underlying land uses (populations, structures, etc.). Facilities that provide critical and essential services following a major emergency are of particular concern because these locations house staff and equipment necessary to provide important public safety, emergency response, and/or disaster recovery functions.

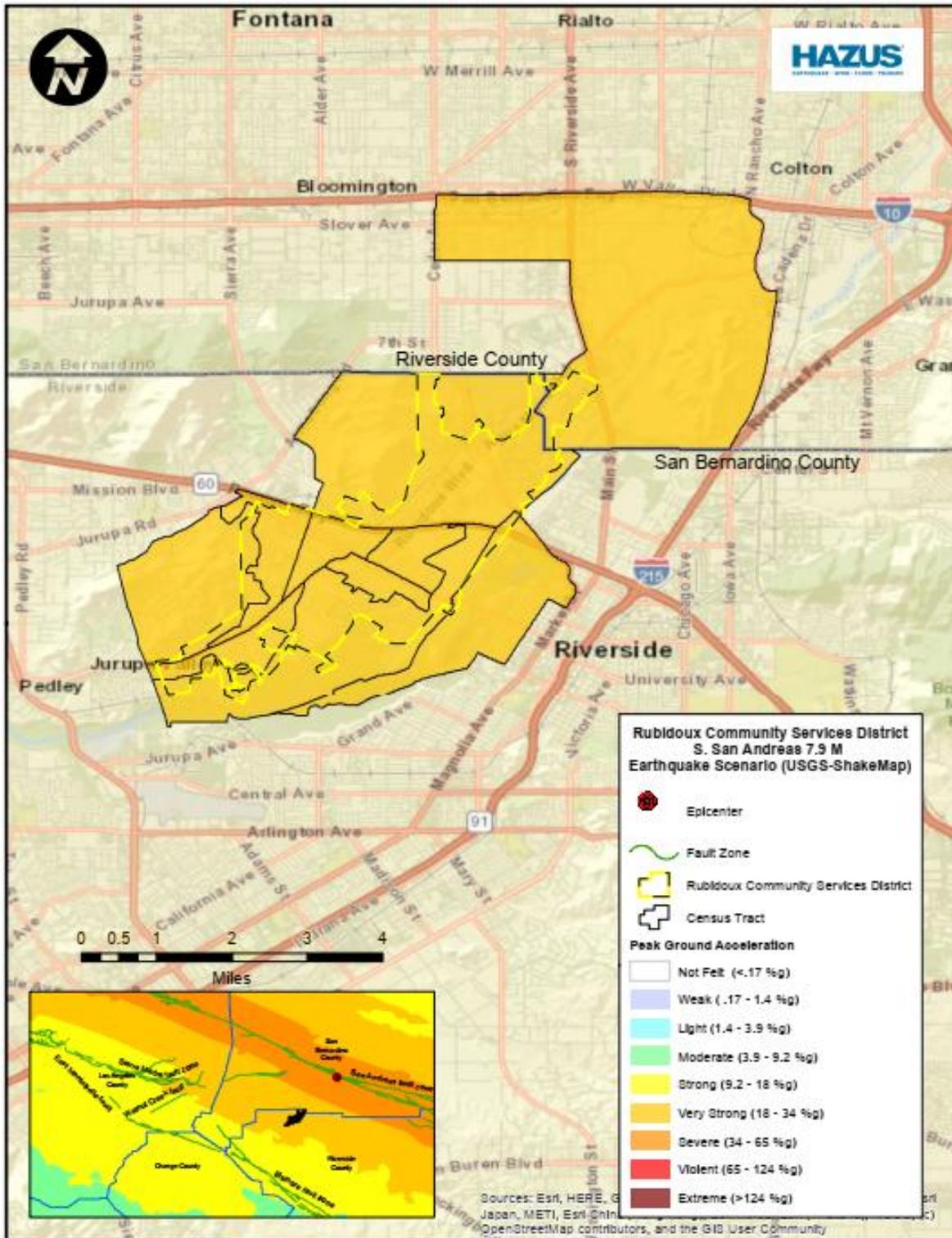


HAZUS



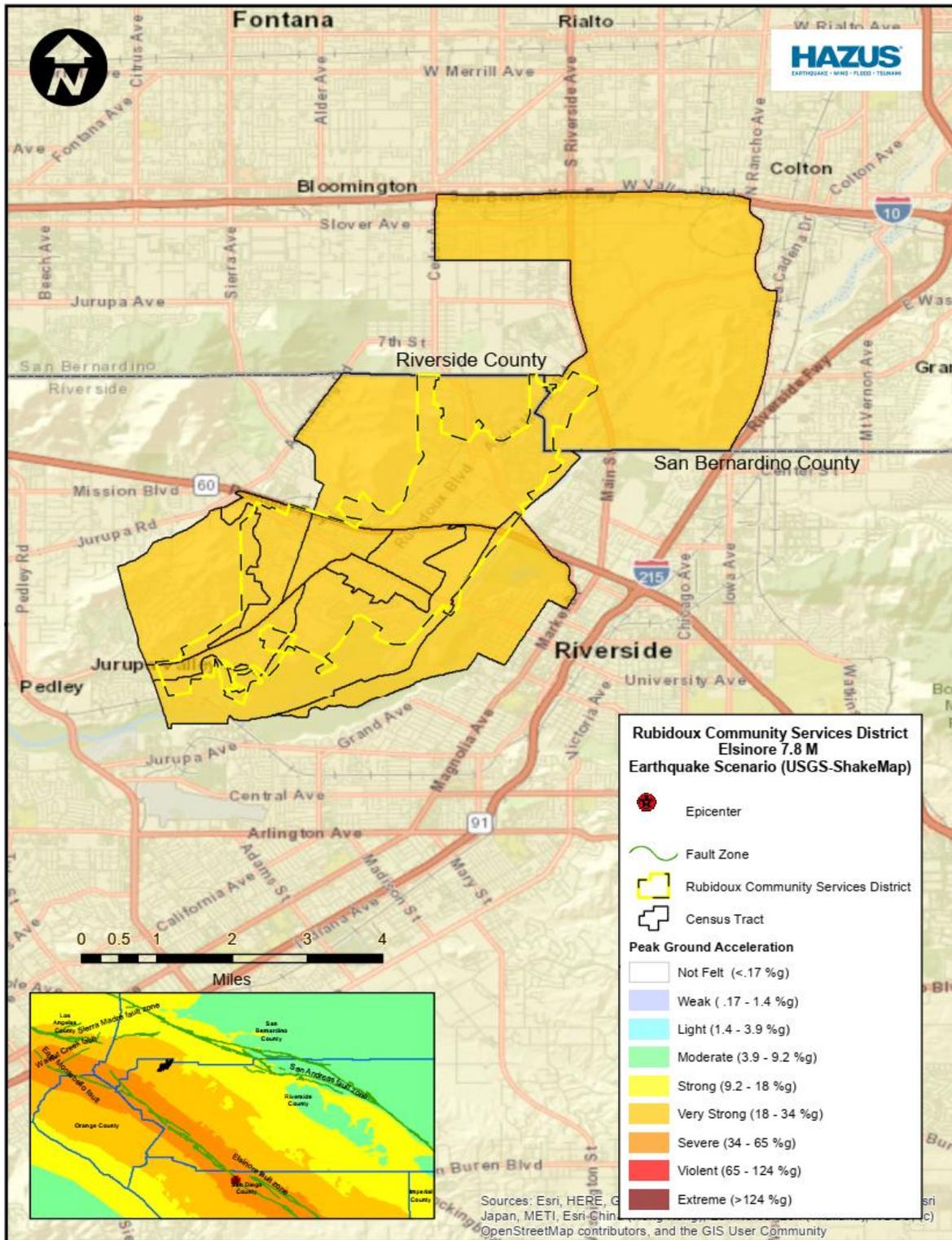
The hazard maps in the mitigation plan were generated by Emergency Planning Consultants using FEMA’s Hazards United States – Multi Hazard (HAZUS-MH) software program. Below are the maps generated by HAZUS. The associated reports are available separately. Once the location and size of a hypothetical earthquake are identified, HAZUS-MH estimates the intensity of the ground shaking, the number of buildings damaged, the number of casualties, the amount of damage to transportation systems and utilities, the number of people displaced from their homes, and the estimated cost of repair and clean up. It’s important to note that the “project area” is based on Census tracts not jurisdictional boundaries.

Map B.4: HAZUS – South San Andreas, M 7.9
 Source: Emergency Planning Consultants, 2024





Map B.5: HAZUS – Elsinore, M 7.8
 Source: Emergency Planning Consultants, 2024



Liquefaction Area

Liquefaction presents the most prominent secondary earthquake ground failure issue in the region. Liquefaction-related lateral spreads can occur adjacent to stream channels and deep washes that provide a free face toward which the liquefied mass of soil fails. Lateral spreads can cause extensive damage to pipelines, utilities, bridges, roads and other structures.

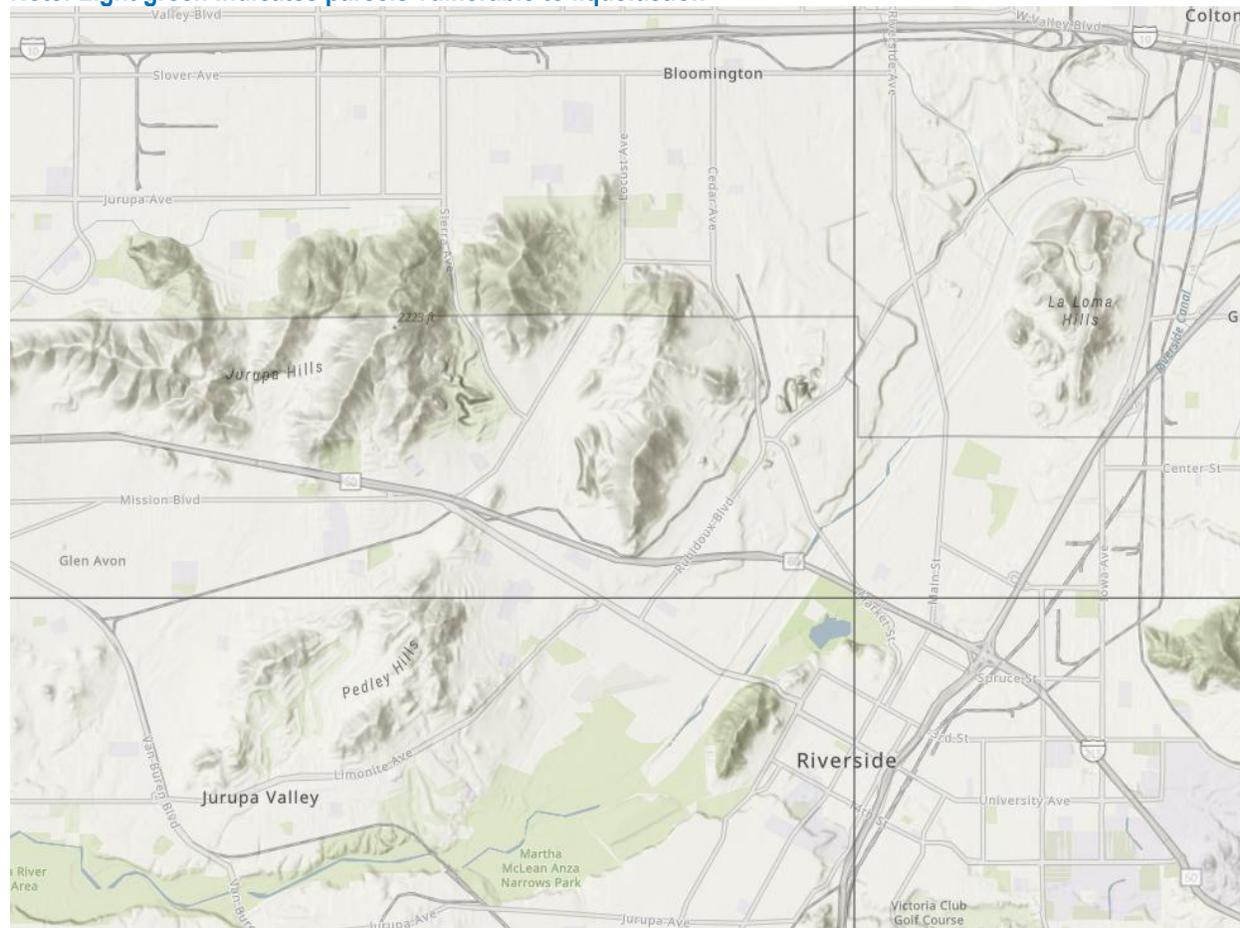
According to the General Plan – Community Safety, Services and Facilities Element, liquefaction presents the most prominent secondary earthquake ground failure issue in the City of Jurupa Valley. Liquefaction-related lateral spreads can occur adjacent to stream channels and deep washes that provide a free face toward which the liquefied mass of soil fails. Lateral spreads can cause extensive damage to pipelines, utilities, bridges, roads and other structures.

Map B.6 depicts the liquefaction areas in the district. Liquefaction hazards are moderate and focused along the north shore of the Santa Ana River.

Map B.6: Liquefaction Areas

Source: California Department of Conservation – California Geological Survey, 2025

Note: Light green indicates parcels vulnerable to liquefaction





Previous Earthquakes Impacting RCSD

According to the City of Jurupa Valley Local Hazard Mitigation Plan (2017), the City of Jurupa Valley is located in a Seismic Hazard Zone. The nearest active earthquake fault is the San Andreas Fault located on the northern part of the city. In the past, Jurupa Valley experienced damaging earthquakes in December 1899 and in April 1918. The earthquakes each had magnitudes of approximately 6.6 on the Richter Scale and caused substantial damage to existing buildings, including several deaths related to the events. There have been several noticeable ground movements in recent years, most notably the Landers and Big Bear earthquakes in 1992, and the 1994 Northridge Earthquake, but no local damage was sustained during these more recent events.

Previous Earthquakes Impacting Riverside County

According to the County of Riverside Multi-Jurisdictional Local Hazards Mitigation Plan (2023), significant earthquakes in the county over the past 50 years included the following:

Table B.7: Previous Hazard Events of Earthquakes in Riverside County
Source: County of Riverside MJLHMP

Date	Richter Scale Magnitude	Location
2022	6.4	Ferndale/ Humboldt County
2021	6.0	Antelope Valley/ Los Angeles County
2020	5.8	Lone Pine/ Inyo County
2020	5.5	Searles Valley/ San Bernardino County
2019	7.1	Ridgecrest/ Kern County
2019	6.4	Ridgecrest/ Kern County
2016	5.2	Borrego Springs/ San Diego County
2014	5.1	La Habra/ Orange County

Probability of Future Earthquakes

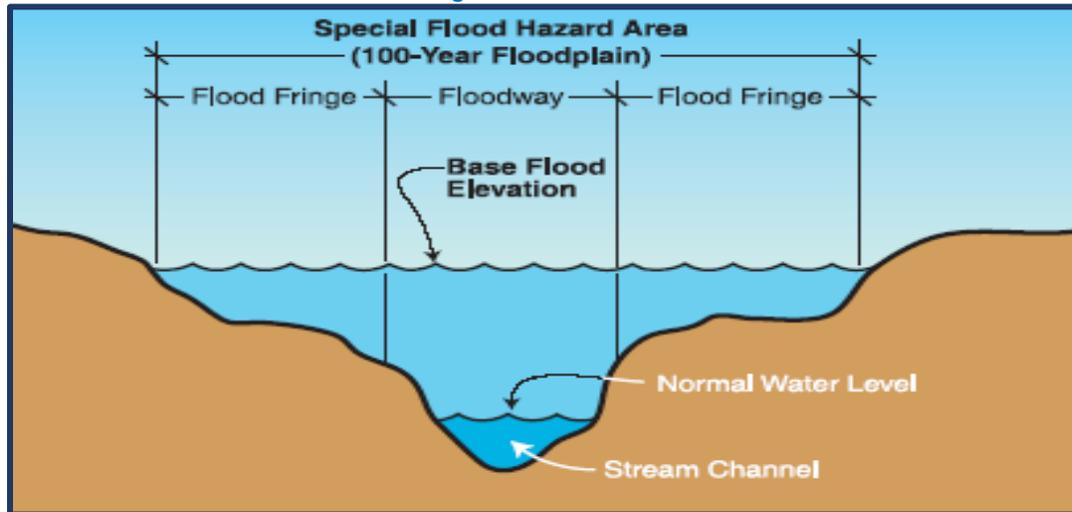
Earthquakes occur every day throughout California. However, earthquakes that cause widespread catastrophic damage do not happen often. When conducting the risk assessment, the planning team determined that the probability of a catastrophic earthquake affecting the district is likely with an annual probability of occurrence being between 1 in 10 and 1 in 100 years.

Flooding

Description

A floodplain is a land area adjacent to a river, stream, lake, estuary, or other water body that is subject to flooding. This area, if left undisturbed, acts to store excess flood water. The floodplain is made up of two sections: the floodway and the flood fringe. The 100-year flooding event is the flood having a one percent chance of being equaled or exceeded in magnitude in any given year. Contrary to popular belief, it is not a flood occurring once every 100 years. The 100-year floodplain is the area adjoining a river, stream, or watercourse covered by water in the event of a 100-year flood. **Figure B.2:** Floodplain and Floodway shows the relationship between the floodplain and the floodway.

Figure B.2: Floodplain and Floodway
 Source: FEMA How-To-Guide Assessing Hazards



Types of Flooding

Two types of flooding primarily affect the region: slow-rise or flash flooding. Slow-rise floods may be preceded by a warning period of hours or days. Evacuation and sandbagging for slow-rise floods have often effectively lessened flood related damage. Conversely, flash floods are most difficult to prepare for, due to extremely limited, if any, advance warning and preparation time.

The floodplains impacting RCSD are controlled by infrastructure while localized or urban flooding continues to pose a problem from time to time.

Atmospheric Rivers

According to the National Oceanic and Atmospheric Administration (NOAA), atmospheric rivers are relatively long, narrow regions in the atmosphere – like rivers in the sky – that transport most of the water vapor outside of the tropics. These columns of vapor move with the weather, carrying an amount of water vapor roughly equivalent to the average flow of water at the mouth of the Mississippi River. When the atmospheric rivers make landfall, they often release this water vapor in the form of rain or snow.





Definitions of FEMA Flood Zone Designations

Flood zones are geographic areas that the FEMA has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map. Each zone reflects the severity or type of flooding in the area.

Table B.8: FEMA Flood Zones

Source: FEMA

Moderate to Low-Risk Areas

In communities that participate in the NFIP, flood insurance is available to all property owners and renters in these zones:

ZONE	DESCRIPTION
B and X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
C and X (unshaded)	Area of minimal flood hazard usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that do not warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.

High-Risk Areas

In communities that participate in the NFIP, mandatory flood insurance purchase requirements apply to all of these zones:

ZONE	DESCRIPTION
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
A1-30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply,

ZONE	DESCRIPTION
	but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
A99	Areas with a 1% annual chance of flooding will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.

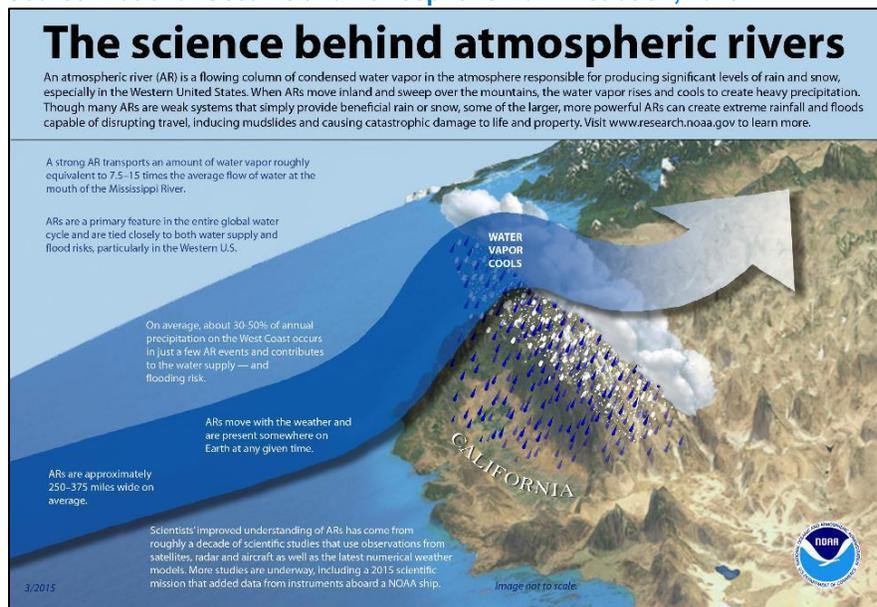
Undetermined Risk Areas

ZONE	DESCRIPTION
D	Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.

Although atmospheric rivers come in many shapes and sizes, those that contain the largest amounts of water vapor and the strongest winds can create extreme rainfall and floods, often by stalling over watersheds vulnerable to flooding. These events can disrupt travel, induce mudslides, and cause catastrophic damage to life and property. A well-known example is the "Pineapple Express," a strong atmospheric river that can bring moisture from the tropics near Hawaii over to the US West Coast.

Figure B.3: Atmospheric Rivers

Source: National Oceanic and Atmospheric Administration, 2023



While atmospheric rivers are responsible for great quantities of rain that can produce flooding, they also contribute to beneficial increases in snowpack. A series of atmospheric rivers fueled the strong winter storms that battered the U.S. West Coast from western Washington to southern California from December 10–22, 2010, producing 11 to 25 inches of rain in certain areas. These



rivers also contributed to the snowpack in the Sierras, which received 75 percent of its annual snow by December 22, the first full day of winter.

NOAA research (e.g., [NOAA Hydrometeorological Testbed](#) and Cal Water) uses satellite, radar, aircraft and other observations, as well as major numerical weather model improvements, to better understand atmospheric rivers and their importance to both weather and climate

Local Conditions

According to the General Plan – Community Safety, Services, and Facilities Element, the Santa Ana River is tremendous asset to the service area, providing open space, environmental, recreational, and visual amenities. It also presents the potential for flood hazards and inundation. Throughout the years, flooding events on the Santa Ana River have resulted in the loss of livestock, infrastructure, property, and even lives. To manage and minimize the risk of flooding, the Riverside County Flood Control and Water Conservation District was formed in 1945 to reduce the risks and damage due to flooding in western Riverside County.

The district's responsibilities include the maintenance and construction of flood control structures and facilities, as well as regulating development in and near floodplains. Despite major improvements in flood management methods and planning, portions of Jurupa Valley are still at risk of flooding during major events.

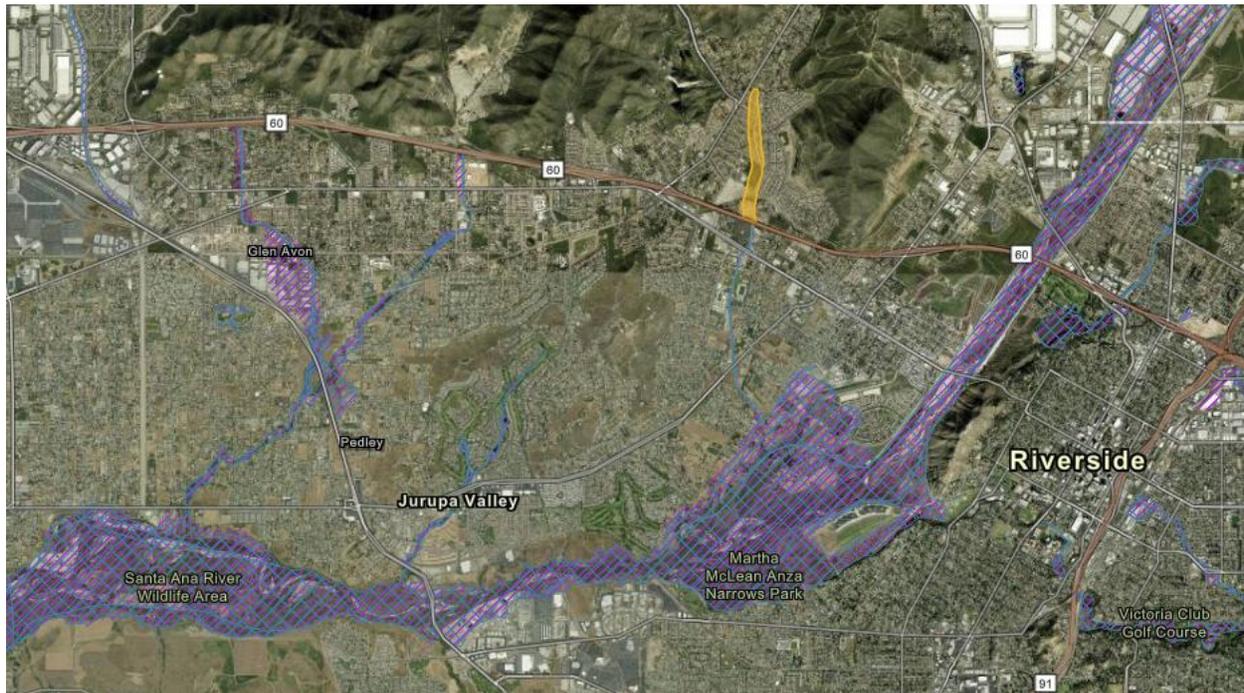
The Federal Emergency Management Agency (FEMA) prepares Flood Insurance Rate Maps, or FIRM maps, to graphically show areas prone to flooding during 100-year and 500-year frequency floods. **Map B.7** identifies the flood prone areas of Jurupa Valley.

In addition to the Santa Ana River, the Riverside Basin (northeast of the Interstate 15/SR 60 interchange), and those areas bordering the Etiwanda Flood Control Channel, Pyrite Channel, and the Riverside Canal, are part of the 100-year floodplain. Most of these areas are also where a substantial amount of development exists or is intended to occur. Many techniques may be used to address the danger of flooding, such as preventing or limiting development in floodplains, reducing urban runoff, maintaining floodways, using special building techniques, elevating foundations and structures, and enforcing building setbacks.

One effective technique for maintaining floodways and reducing flood hazards is controlling the spread of *Arundo donax* (giant cane) and other non-native plant species. Giant cane is a highly invasive, non-native aquatic plant that grows in the Santa Ana River and other local drainage courses. The plant is hazardous from a flooding perspective because it grows quickly, clogs channels, and increases flood risks. Left unchecked, the plant can easily take over riparian areas, excluding native plants and damaging natural habitat. However, the Santa Ana Watershed Project Authority (SAWPA), the County of Riverside, and other agencies have been working to eliminate giant cane from the Santa Ana River Watershed and restore natural habitat.

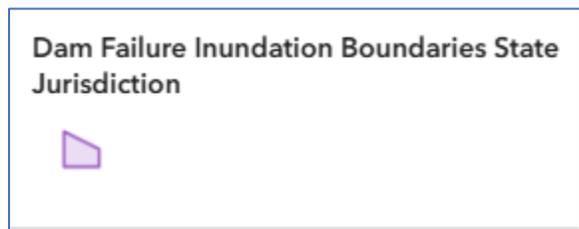
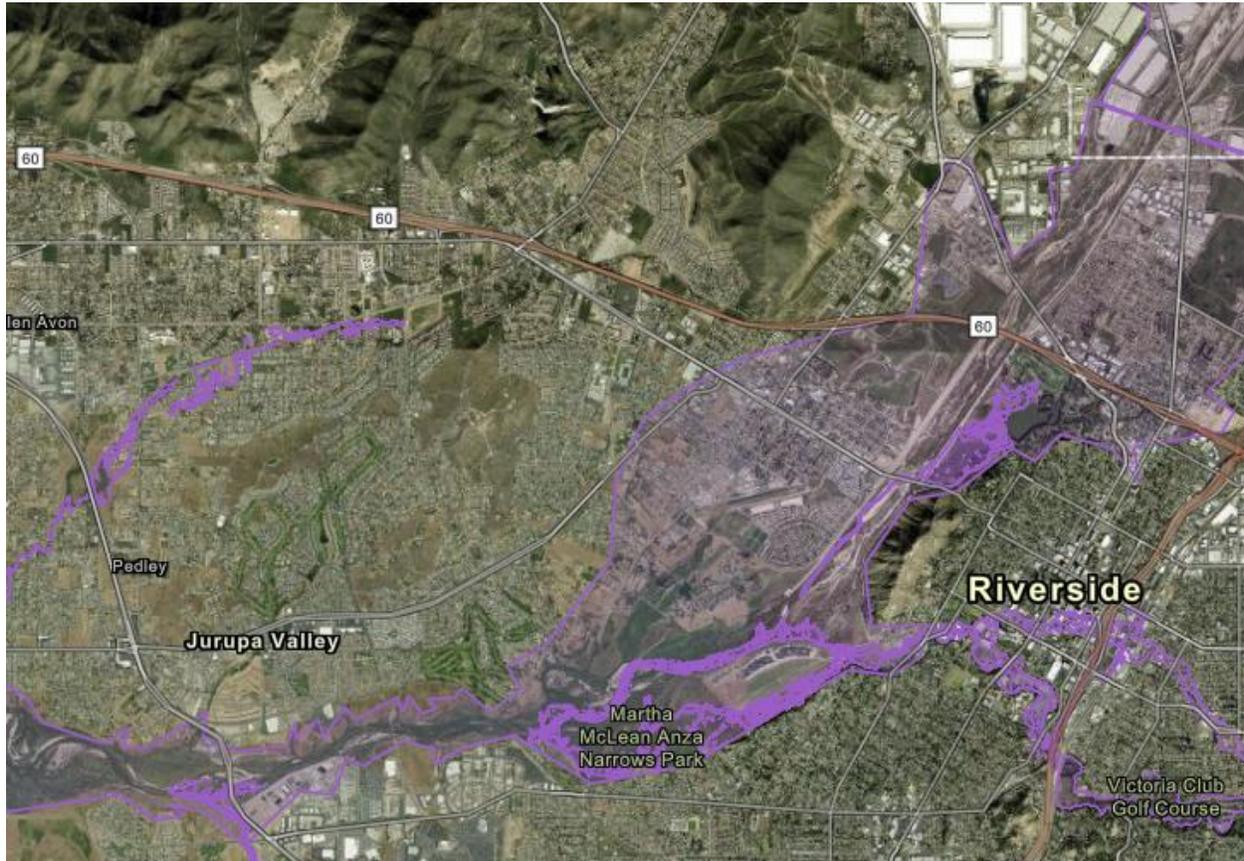
Map B.7 identifies the flood prone areas of Jurupa Valley.

Map B.7: MyPlan 2.0 Jurupa Valley Floodplains
 Source: MyPlan 2.0 Cal OES, 2025



Below, **Map B.8** depicts the dam inundation area for the Garvey Reservoir and Laguna Basin.

Map B.8: MyPlan 2.0 Jurupa Valley Dam Failure Inundation Area
 Source: MyPlan 2.0 Cal OES, 2025



Previous Flooding Impacting RCSD

Flooding has been a serious hazard to Jurupa Valley, and the risk of serious flooding in the RCSD service area is considered elevated. Parts of the area are located within a 100- or 500- year floodplain, as delineated by the Federal Emergency Management Agency (FEMA).

On January 10, 2005, the inflow to Prado Dam was 26,150cfs or 16.9 billion gallons. The increase caused considerable damage to RCSD wastewater infrastructure in the impacted area.

Figure B.4: Prado Dam Inflow on January 10, 2005
 Source: RCSD

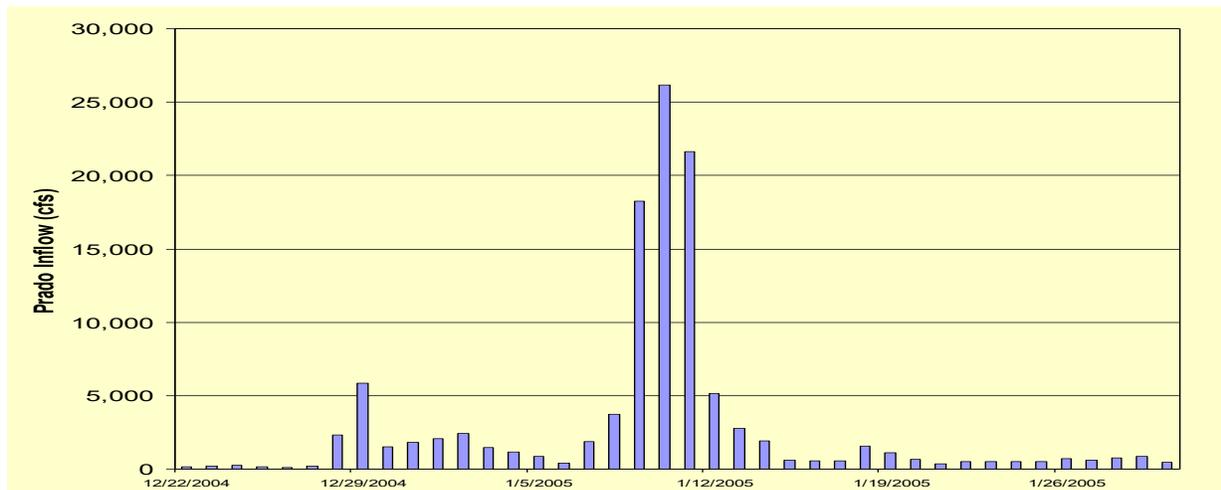


Photo B.1: Damage to RCSD Wastewater on January 11, 2005
 Source: RCSD



Photo B.2: Aerial Photo of Damage - January 14, 2005
Source: RCSD



Previous Flooding Impacting Riverside County

According to the County of Riverside MJLHMP, Riverside County has experienced various weather patterns are associated with flood events such as El Niño conditions, La Niña conditions, Summer Monsoons, and “Pineapple Express”. Floods that affect Riverside County can be attributed to three different types of storm events:

1. A general winter storm that combines high-intensity rainfall and a rapid melting of the mountain snowpack.
2. A tropical storm out of the southern Pacific Ocean.
3. A summer thunderstorm, particularly in the desert areas.

There are three principal types of flood hazards:

1. Stream flooding (including bridge scour and stream erosion)
2. Flash flooding (including debris and mud flows)
3. Sheet flow flooding (including alluvial fan flooding)

The major rivers in the South Coast hydrologic region of Riverside County are dry most of the year and pose flood threats to developments within the floodplain during general storms of long duration. When a major storm moves into the area, the excess precipitation becomes surface runoff. Resultant flood flows have predominantly short durations and sharp peaks. Increased



urbanization increases flood potential by increasing the percentage of impervious surfaces. In the Desert hydrologic region, high-intensity rainfall from the period of July to August can produce severe flash flooding. Winter rains are generally more widespread in the desert and flash flood potential is less due to the lower intensity of rainfall. Winter rains are nonetheless capable of producing flooding but are somewhat more predictable. There is a severe danger to motorists who may attempt to drive through flooded washes which are typically dry.

Storms with high volumes of precipitation in a short period of time have occurred in the County causing flash floods, contaminated drinking water, disrupted electrical service, and damaged homes and contents. In addition, land that has been denuded of foliage and trees due to fire or human activity has experienced serious erosion from the rainfall.

Excessive precipitation can inundate soil in slopes causing mudslides and landslides. These events can destroy homes, block highways, and destroy power lines. The County is vulnerable to this type of flood damage. Heavy storms also can strand individuals playing near or crossing streams, rivers, flood control channels and intersections.

Riverside County has several major river systems and reservoirs. Excessive rainfall can stress these systems causing serious damage to property and potential loss of life. Rivers can overflow their banks, destroying bridges and washing out roads and highways during major flood events.

Table B.9 lists the declared flood disasters in Riverside County.

Table B.9: Previous Hazard Events of Flooding in Riverside County
(Source: FEMA Disaster Declaration, 2024)

Declaration	Date	Incident	Declaration Title
EM-3591-CA	2023-01-09	Flood	Severe Winter Storms, Flooding, Mudslides
DR-4305-CA	2017-03-16	Flood	Severe Winter Storms, Flooding, Mudslides
DR-1952-CA	2011-01-26	Flood	Severe Winter Storms, Flooding, Debris, Mud Flows
DR-979-CA	1993-02-03	Flood	Severe Winter Storm, Mud Landslides, Flooding
DR-690-CA	1983-09-22	Flood	Flash Flooding
DR-687-CA	1983-07-01	Flood	Flooding
DR-615-CA	1980-02-21	Flood	Severe Storms, Mudslides, Flooding
DR-594-CA	1979-07-27	Flood	Heavy Rains, Flash Floods, Mud Flows
DR-547-CA	1978-02-15	Flood	Coastal Storms, Mudslides, Flooding
DR-521-CA	1976-09-21	Flood	Flooding, Tropical Storm Kathleen
DR-253-CA	1969-01-26	Flood	Severe Storms, Flooding
DR-223-CA	1967-01-02	Flood	Severe Storms, Flooding
DR-211-CA	1965-12-07	Flood	Heavy Rains, Flooding

Probability of Future Flooding Events

When conducting the Risk Assessment, the Planning Team determined that the probability of a serious flood event affecting the RCSD service area is likely with an annual probability of occurrence being between 1 in 10 and 1 in 100 years.



Power Outage

Description

Utility providers provide communities with vital services. Because of training and rigorous safety programs, delivery of services is typically very reliable and without incident. However, in certain hazardous circumstances, like an earthquake, power outage, or high wind, utility providers are impacted just like their customers. In an effort to minimize this vulnerability, power utility providers have developed protocols like Public Safety Power Shutoff.

Over the last decade, California has experienced increased, intense, and record-breaking wildfires in California. These wildfires have resulted in a devastating loss of life and billions of dollars in property and infrastructure damage. Historically, electric utility infrastructure has been responsible for less than 10% of reported wildfires. However, wildfires attributed to electrical infrastructure consist of roughly half of the most destructive wildfires in California history. With the continuing threat of wildfire, the electric investor-owned utilities (IOUs) may proactively cut power to electrical lines as a measure of last resort if the utility reasonably believes that there is an imminent and significant risk that strong winds may topple power lines or cause major vegetation-related issues leading to increased risk of wildfires. This effort is called a Public Safety Power Shutoff (PSPS). While PSPS events may reduce the risk of utility-associated wildfires, PSPS events can leave communities and essential facilities without power, which brings its own risks and hardships, especially for vulnerable communities and individuals.

Local Conditions

Southern California Edison (SCE) provides electricity to the RCSD service area. There have been brief power failures and deliberate outages (Public Safety Power Shutoff). According to the 2023 State Hazard Mitigation Plan, California's 33 reported PSPS events between 2013 and 2019 represent an average of almost five events per year. The State is expected to continue to experience multiple PSPS events each year. Specific PSPS events impacting Riverside County was not available, however, it is reasonable to assume that if severe weather threatens a portion of electrical grids, it may be necessary for SCE to turn off electricity in the interest of public safety.

Power failure is defined as any interruption or loss of electrical service caused by disruption of power transmission caused by accident, sabotage, natural hazards, or equipment failure (also referred to as a loss of power or power outage). A significant power failure is defined as any incident of a long duration, which would require the involvement of the local and/or State emergency management organizations to coordinate provision of food, water, heating, cooling, and shelter. Power failures in the planning area are usually localized and are usually the result of a natural hazard event involving high winds or storms.

The massive 2011 Southern California electricity outage brought to light many critical issues surrounding the state's power generation and distribution system, including its dependency on out-of-state resources. Although California has implemented effective energy conservation programs, the state continues to experience both population growth and weather cycles that contribute to a heavy demand for power.

Hydro-generation provides approximately 25% of California's electric power, with the balance coming from fossil fuels, nuclear, and green sources. As experienced in 2000 and 2001, blackouts can occur due to losses in transmission or generation and/or extremely severe temperatures that lead to heavy electric power consumption.



The effects of an energy shortage would affect all occupants of the project area. Perhaps most at risk would be medically challenged individuals with health care equipment reliant on electricity (e.g., oxygen), businesses, emergency service locations, and vulnerable population centers (e.g., schools).

In 2018, the California Public Utilities Commission (CPUC) directed California's three largest energy companies to coordinate to prepare all Californians for the threat of wildfires and power outages during times of extreme weather. To help protect customers and communities during extreme weather events, electric power may now be shut off for reasons of public safety. This new protocol is referred to as Public Safety Power Shutoff (PSPS).

Types of Outages

The unexpected outages are the ones posing the greatest threat to RCSD. They include rotating outages during times of extreme demand and Public Safety Power Shutoff which is a preventative strategy during times of high wind and wildfire conditions.

Rotating Outage

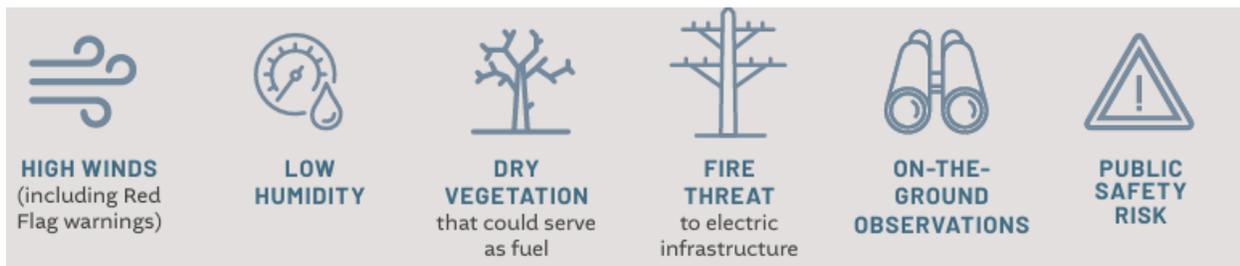
A rotating outage is a brief, controlled power outage mandated by the California Independent System Operator (CAISO). It is enacted by California's publicly owned utilities, including SCE, to protect the integrity of our statewide electric system by easing demand on the overall electric supply during times of critically high usage, preventing wider, longer power outages. Such an outage is named for the way it alternates evenly throughout our service territory to ensure that no neighborhood is impacted more than any other. It remains rare and lasts only about one hour.

Public Safety Power Shutoff

As a safety precaution, San Diego Gas & Electric (SDG&E), Southern California Edison (SCE) and Pacific Gas and Electric (PG&E) monitor local fire danger and extreme weather conditions across California and evaluate whether to turn off electric power. The decision and action to turn off power is made by each individual energy company and is based on a combination of the following factors.

Infographic B.2

Source: Power of Being Prepared Website, 2025



Previous Power Outages in RCSD

The most recent PSPS event impacting RCSD was in January 2025 during the Los Angeles Wildfires.



Previous Power Outages in Riverside County

The most recent PSPS event impacting Riverside County was in January 2025 during the Los Angeles Wildfires.

Probability of Future Power Outages

Any widespread power outage can have a serious impact on RCSD. When conducting the Risk Assessment, the Planning Team determined that the probability of a long-term power outage affecting RCSD is highly likely with an annual probability of greater than 1 every year.

Wildfire

Description

Wildfire is an uncontrolled fire spreading through vegetative fuels and exposing or possibly consuming structures. They often begin unnoticed and spread quickly. Naturally occurring and non-native species of grass, brush, and trees fuel wildfires. A wildland fire is a wildfire in an area in which development is essentially nonexistent, except for roads, railroads, power lines and similar facilities. A wildland/urban interface fire is a wildfire in a geographical area where structures and other human development meet or intermingle with wildland or vegetative fuels.

Wildfire Characteristics

There are three categories of wildland/urban interface fire. The classic wildland/urban interface exists where well-defined urban and suburban development presses up against open expanses of wildland areas; the mixed wildland/urban interface is characterized by isolated homes, subdivisions, and small communities situated predominantly in wildland settings.

The occluded wildland/urban interface exists where islands of wildland vegetation occur inside a largely urbanized area. Certain conditions must be present for significant interface fires to occur. The most common conditions include hot, dry and windy weather; the inability of fire protection forces to contain or suppress the fire; the occurrence of multiple fires that overwhelm committed resources; and a large fuel load (dense vegetation). Once a fire has started, several conditions influence its behavior, including fuel, topography, and weather.

Local Conditions

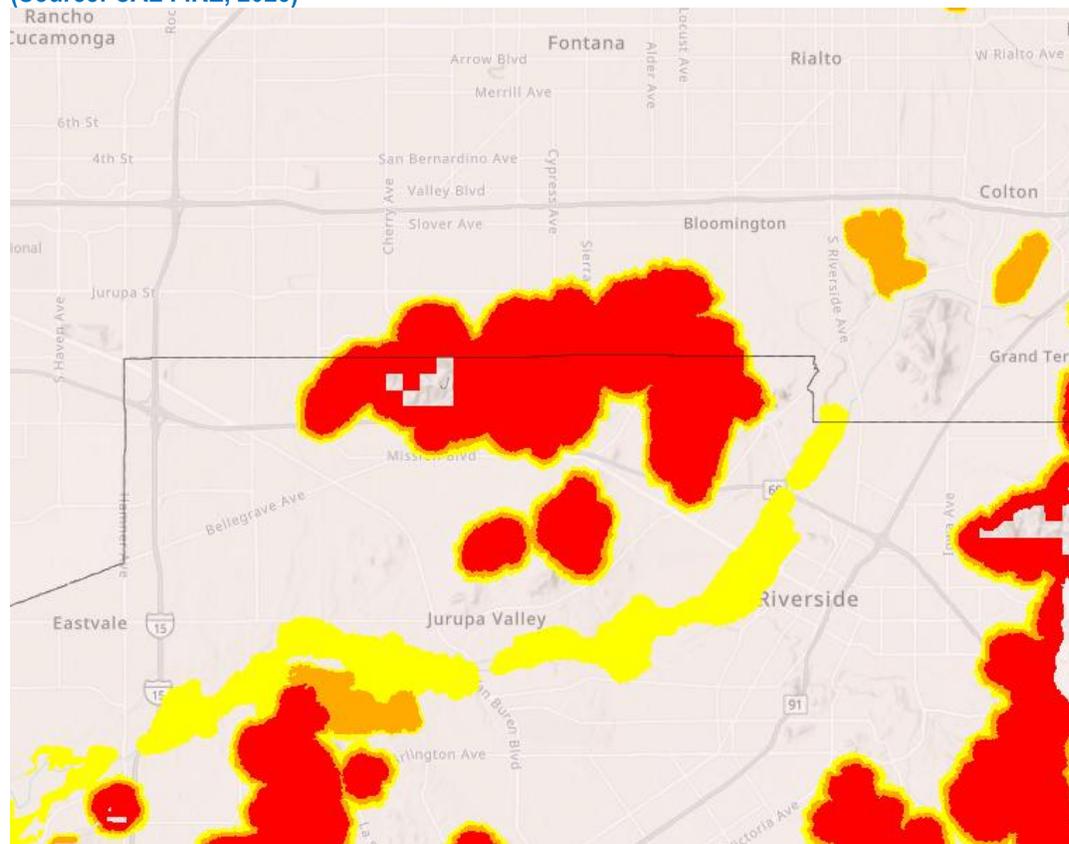
According to the Jurupa Valley General Plan, due to the rural and somewhat mountainous nature of the City of Jurupa Valley, and some of the flora, such as oak woodlands and chaparral habitat, the foothill areas and mountainsides are subject to a risk of fire hazards. The lush riparian vegetation of the Santa Ana River also poses conditions conducive to wildfires, and giant cane, where present in the watershed, is even more combustible than native species. The highest danger of wildfire can be found in the most rugged terrain where, fortunately, development intensity is relatively low. Methods to address this hazard include such techniques as not building in high-risk areas, creating setbacks that buffer development from hazard areas, maintaining brush clearance to reduce potential fuel, establishing low fuel landscaping, and applying special building techniques. In still other cases, safety-oriented organizations, such as the California Fire Safe Council, can provide assistance in educating the public and promoting practices that contribute to improved public safety.

As stated in the State of California's General Plan Guidelines, "California's increasing population and expansion of development into previously undeveloped areas is creating more 'wildland-

urban interface’ issues with a corresponding increased risk of loss to human life, natural resources, and economic assets associated with wildland fires.” To address this issue, the state passed Senate Bill 1241 to require that General Plan Safety Elements address the fire severity risks in State Responsibility Areas (SRAs) and Local Responsibility Areas (LRAs).

As shown in **Map B.9**, RCSD contains several areas within Very High and High fire severity zones that are located in an SRA. SRAs are those areas of the state in which the responsibility of preventing and suppressing fires is primarily that of the Department of Forestry and Fire Protection, also known as CAL FIRE.

Map B.9: Fire Hazard Severity Zones - RCSD
 (Source: CAL FIRE, 2025)



2025 Fire Hazard Severity Zones in Local Responsibility Area, as Recommended by the State Fire Marshal

Fire Hazard Severity Zone

- Very High
- High
- Moderate

Previous Wildfires Impacting RCSD

Although the possibility is very real, there is no history of recent wildfires impacting RCSD.

Previous Wildfires Impacting Riverside County

The most recent significant wildfire event to impact Riverside County was the Fairview Fire which was a deadly and destructive wildfire that burned during the 2022 wildfire season southwest of Valle Vista and east of Hemet in Riverside County. The fire ignited on September 5, 2022, during a severe heatwave that had plagued much of the southwest throughout early September and, due to the extreme weather conditions, grew to a deadly and destructive conflagration in the chaparral-filled foothills within just several hours of igniting.

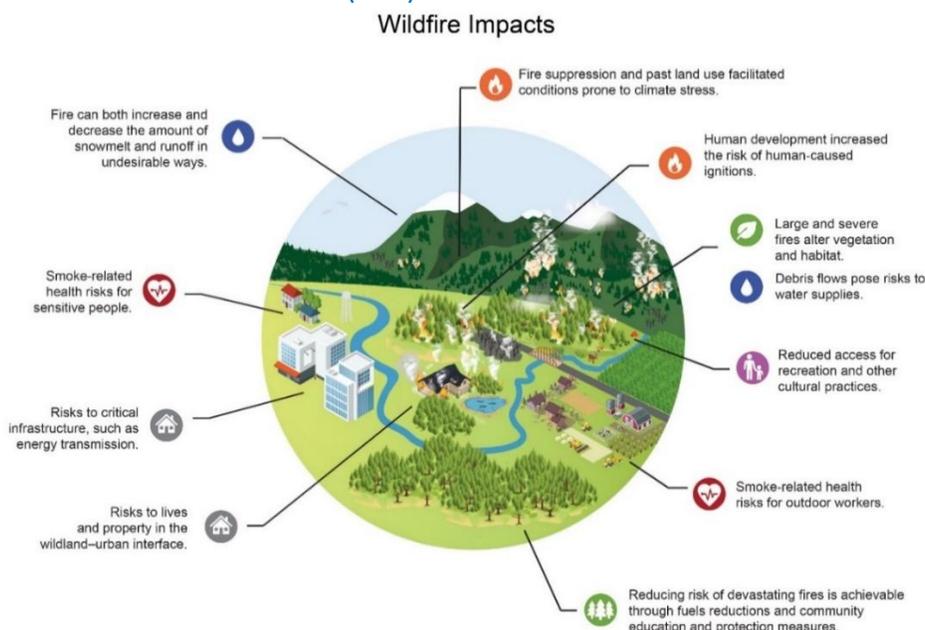
Table B.10: Wildfires Impacting Riverside County 2019-2022
(Source: NOAA Storm Events Database)

Year	Declaration Number	Declaration Title
2022	FM-5451-CA	Fairview Fire
2021	FM-5381-CA	Blue Ridge Fire
2020	FM-5325-CA	Apple Fire
2020	FM-5300-CA	46 Fire
2020	FM-5299-CA	Hill Fire

Probability of Future Events

When conducting the risk assessment, the Planning Team determined that the probability of a catastrophic wildfire affecting the district is “likely” with an annual probability of occurrence being between 1 in 10 and 1 in 100 years.

Figure B.5: Wildfire Impacts
Source: Fifth National Climate Assessment (2023)





Wind

Description

High wind conditions have caused injury, property damage, and fanned wildfires. The most common wind condition is Santa Ana winds. Regionally, wind velocities of up to 111 mph have been generated from these winds, resulting in the loss of life due to flying debris.

Local Conditions

According to the City of Jurupa Valley General Plan – Community Safety, Services, and Facilities Element, Jurupa Valley is susceptible to wind erosion. Wind erosion generates soil movement as blowing air exerts force against the surface of the ground, releasing soil particles, or dust. Atmospheric dust causes respiratory discomfort, may carry pathogens that cause eye infections and skin disorders, and reduce highway and air traffic visibility. Buildings, fences, roads, crops, trees, and shrubs can also be damaged by abrasive blowing soil.

Historically, high wind conditions have caused injury, property damage, and fanned wildfires. The most common wind condition is the Santa Ana Wind. Regionally, this condition has generated winds that have exceeded 100 mph. Wind velocities of up to 111 mph have been generated from the same Santa Ana wind, resulting in the loss of life due to flying debris.

Santa Ana Winds

Based on local history, most incidents of high wind in the City of Jurupa Valley are the result of the Santa Ana wind conditions. While high impact wind incidents are not frequent in the area, significant Santa Ana wind events and sporadic microburst activity have been known to negatively impact the local community. When conditions are right, the winds come down through the mountain passes and can reach hurricane force and be sustained for days at a time.

Santa Ana winds are generally defined as warm, dry winds that blow from the east or northeast (offshore). These winds occur below the passes and canyons of the coastal ranges of Southern California and in the Los Angeles basin. Santa Ana winds often blow with exceptional speed in the Santa Ana Canyon. Forecasters at the National Weather Service offices in Oxnard and San Diego usually place speed minimums on these winds and reserve the use of “Santa Ana” for winds greater than 25 knots. These winds accelerate to speeds of 35 knots as they move through canyons and mountain passes with gusts to 50 or even 60 knots.

The complex topography of Southern California combined with various atmospheric conditions creates numerous scenarios that may cause widespread or isolated Santa Ana events.

Commonly, Santa Ana winds develop when a region of high pressure builds over the Great Basin (the high plateau east of the Sierra Mountains and west of the Rocky Mountains including most of Nevada and Utah). Clockwise circulation around the center of this high-pressure area forces air down slope from the high plateau. The air warms as it descends toward the California coast at the rate of 5 °F per 1,000 feet due to compressional heating. Thus, compressional heating provides the primary source of warming. During Santa Ana conditions, the air is dry since it originates in the desert and dries out even more as it is heated.

These regional winds typically occur from October to March, but with climate change those months can vary each year. According to most accounts, the winds are named either for the Santa Ana River Valley where they originate or for the Santa Ana Canyon, southeast of Los Angeles, where they pick up speed.

Microbursts

Microbursts are strong, damaging winds which strike the ground and often give the impression a tornado has struck. They frequently occur during intense thunderstorms. The origin of a microburst is downward moving air from a thunderstorm's core. But unlike tornadoes, they affect only a rather small area. Macrobursts are downbursts with winds up to 117 mph which spread across a path greater than 2.5 miles wide at the surface and which last from 5 to 30 minutes. The microburst on the other hand is confined to an even smaller area, less the 2.5 miles in diameter from the initial point of downdraft impact. An intense microburst can result in damaging winds near 270 km/hr (170 mph) and often last for less than five minutes.

Downbursts of all sizes descend from the upper regions of severe thunderstorms when the air accelerates downward through either exceptionally strong evaporative cooling or by very heavy rain which drags dry air down with it. When the rapidly descending air strikes the ground, it spreads outward in all directions, like a fast-running faucet stream hitting the sink bottom.

When the microburst wind hits an object on the ground such as a house, garage or tree, it can flatten the buildings and strip limbs and branches from the tree. After striking the ground the powerful outward running gust can wreak further havoc along its path. Damage associated with a microburst is often mistaken for the work of a tornado, particularly directly under the microburst. However, damage patterns away from the impact area characteristic of straight-line winds rather than a twisted pattern of tornado damage.

Graphic B.1: Santa Ana Winds

Source: AccuWeather



Table B.10: Beaufort Scale

Source: National Weather Service



Force	Speed (MPH)	Descriptions
0	0 to 1	Calm: Smoke rises vertically
1	1 to 3	Light air: The direction of the wind is shown by smoke drift, but not wind vanes
2	4 to 7	Light breeze: Wind is felt on the face, leaves rustle, and wind vanes are moved
3	8 to 12	Gentle breeze: Leaves and small twigs are in motion, light flags are extended.
4	13 to 18	Moderate breeze: Dust and loose paper become airborne, and small branches are moved
5	19 to 24	Fresh breeze: Small trees begin to sway
6	25 to 31	Strong breeze: Large branches are in motion, and using an umbrella becomes difficult
7	32 to 38	High wind: Whole trees are in motion and walking against the wind can be hard
8	39 to 46	Strong wind: Walking is difficult, and twigs break off trees
9	47 to 54	Severe wind: Slight structural damage
10	55 to 63	Storm: Trees are uprooted and there is considerable damage to structures.
11	63 to 72	Violent storm: Widespread damage
12	73 and above	Hurricane: Devastating damage

Climate Change Considerations

Climate change is causing storms to become more frequent and more severe. With the increase in frequency and severity for storms, the risk of high damaging winds increases. According to California’s Fourth Climate Change Assessment, there is uncertainty in future changes to Santa Ana events. One study that examined two global climate models found an increase in future Santa Ana events, though others have found that the number of Santa Ana events may decrease around 20% in the future, as relatively greater warming over the interior land masses may weaken the ocean-to-desert temperature gradient that partly drives Santa Ana winds.

Previous Hazard Events of Windstorms in RCSD

Severe windstorms pose a significant risk to life and property in RCSD by creating conditions that disrupt essential systems such as public utilities, telecommunications, and transportation routes. High winds can and do occasionally cause tornado-like damage to local homes and businesses in and near the community. High winds can have destructive impacts, especially on trees, power lines, and utility services.

There have been no federal disaster declarations relating to windstorms within the RCSD in the past 5 years.

Previous Hazard Events of Windstorms in Riverside County

Based on local history, most incidents of high wind in Riverside County are the result of the Santa Ana and El Niño–related wind conditions. While high-impact wind incidents are not frequent in the area, significant wind events and sporadic tornado activity have been known to negatively affect the county. Between 2018-2023, Riverside County experienced 55 wind related events in excess of 60 kts. **Table B.12** below is a history of wind related events in Riverside County within the last five years:



Table B.12: High Winds Impacting Riverside County, 2018-2023
 Source: NOAA, Storm Events Database, Above 60kts, 2024

Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
Totals:								0	0	0.00K	1.00K
RIVERSIDE COUNTY MOUNTAIN...	RIVERSIDE COUNTY MOUNTAIN...	CA	01/21/2019	06:00	PST-8	High Wind	64 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	10/10/2019	12:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	10/25/2019	08:00	PST-8	High Wind	67 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	10/30/2019	08:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	10/30/2019	09:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	12/17/2019	03:00	PST-8	High Wind	76 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	12/17/2019	07:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	12/17/2019	07:00	PST-8	High Wind	61 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	02/02/2020	22:00	PST-8	High Wind	62 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	02/03/2020	05:00	PST-8	High Wind	64 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	02/04/2020	00:00	PST-8	High Wind	60 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	02/04/2020	10:00	PST-8	High Wind	68 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	02/10/2020	06:00	PST-8	High Wind	61 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	02/26/2020	07:00	PST-8	High Wind	61 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	06/28/2020	14:50	PST-8	High Wind	61 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	10/26/2020	00:00	PST-8	High Wind	61 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	10/26/2020	00:00	PST-8	High Wind	73 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	11/26/2020	16:00	PST-8	High Wind	69 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	12/02/2020	17:00	PST-8	High Wind	66 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	12/02/2020	19:00	PST-8	High Wind	70 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	12/02/2020	19:00	PST-8	High Wind	69 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAIN...	RIVERSIDE COUNTY MOUNTAIN...	CA	12/07/2020	16:00	PST-8	High Wind	60 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAIN...	RIVERSIDE COUNTY MOUNTAIN...	CA	01/14/2021	17:00	PST-8	High Wind	76 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	01/19/2021	12:00	PST-8	High Wind	70 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	01/19/2021	12:00	PST-8	High Wind	64 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAIN...	RIVERSIDE COUNTY MOUNTAIN...	CA	02/03/2021	18:00	PST-8	High Wind	60 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	02/12/2021	00:00	PST-8	High Wind	71 kts. MG	0	0	0.00K	0.00K



SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	02/24/2021	00:00	PST-8	High Wind	70 kts. EG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	02/24/2021	18:00	PST-8	High Wind	85 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	05/15/2021	09:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	10/25/2021	12:00	PST-8	High Wind	75 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	11/25/2021	02:51	PST-8	High Wind	64 kts. EG	0	0	0.00K	0.50K

SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	11/25/2021	03:40	PST-8	High Wind	65 kts. MG	0	0	0.00K	0.50K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	11/25/2021	08:50	PST-8	High Wind	66 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	12/14/2021	07:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	12/31/2021	20:33	PST-8	High Wind	65 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	01/21/2022	17:00	PST-8	High Wind	72 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	01/21/2022	20:00	PST-8	High Wind	66 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	01/21/2022	21:50	PST-8	High Wind	64 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	01/21/2022	22:00	PST-8	High Wind	61 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	01/21/2022	22:00	PST-8	High Wind	77 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	01/22/2022	02:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	02/09/2022	00:00	PST-8	High Wind	67 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	02/09/2022	00:00	PST-8	High Wind	60 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	02/15/2022	00:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	02/15/2022	00:00	PST-8	High Wind	64 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	02/22/2022	00:00	PST-8	High Wind	62 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	02/26/2022	00:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	03/10/2022	00:00	PST-8	High Wind	60 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	03/22/2022	00:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	04/10/2022	21:00	PST-8	High Wind	62 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	04/16/2022	09:00	PST-8	High Wind	61 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	04/16/2022	09:00	PST-8	High Wind	62 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	04/19/2022	02:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	04/21/2022	17:00	PST-8	High Wind	64 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	05/07/2022	00:00	PST-8	High Wind	73 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	05/19/2022	21:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	05/28/2022	05:00	PST-8	High Wind	67 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	11/15/2022	00:00	PST-8	High Wind	74 kts. MG	0	0	0.00K	0.00K



SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	11/15/2022	00:00	PST-8	High Wind	65 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	11/24/2022	00:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	12/27/2022	12:00	PST-8	High Wind	67 kts. MG	0	0	0.00K	0.00K
RIVERSIDE COUNTY MOUNTAI...	RIVERSIDE COUNTY MOUNTAI...	CA	12/31/2022	12:00	PST-8	High Wind	69 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	01/01/2023	00:00	PST-8	High Wind	62 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	01/10/2023	12:00	PST-8	High Wind	61 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	01/22/2023	22:51	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	01/23/2023	04:10	PST-8	High Wind	60 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	01/23/2023	06:29	PST-8	High Wind	62 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	01/23/2023	10:00	PST-8	High Wind	62 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	01/26/2023	06:00	PST-8	High Wind	62 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	01/26/2023	07:10	PST-8	High Wind	80 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	01/26/2023	09:00	PST-8	High Wind	70 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	02/14/2023	00:00	PST-8	High Wind	67 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	02/21/2023	18:00	PST-8	High Wind	69 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	04/03/2023	00:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	10/10/2023	19:00	PST-8	High Wind	70 kts. MG	0	0	0.00K	0.00K
SAN GORGONIO PASS NEAR B...	SAN GORGONIO PASS NEAR B...	CA	10/28/2023	04:00	PST-8	High Wind	63 kts. MG	0	0	0.00K	0.00K
SANTA ANA MOUNTAINS AND ...	SANTA ANA MOUNTAINS AND ...	CA	10/29/2023	07:00	PST-8	High Wind	65 kts. MG	0	0	0.00K	0.00K
SAN BERNARDINO AND RIVER...	SAN BERNARDINO AND RIVER...	CA	10/29/2023	07:00	PST-8	High Wind	66 kts. MG	0	0	0.00K	0.00K
Totals:								0	0	0.00K	1.00K



Vulnerability and Impacts Assessment

The Vulnerability and Impacts Assessment process analyzes the potential harm of the prioritized hazard events discussed in Element B: Risk Assessment – Hazard Assessment.

Vulnerability and Impact Assessment Process

The assessment examines the potential harm that may result from a hazard event, without factoring in its likelihood. This means that equal attention is given to hazards regardless of their probability. The assessment evaluates three key aspects of each hazard on assets: the physical threat posed to facilities, the social threat to vulnerable populations, and the potential impact on other assets. The FEMA Handbook categorizes assets as follows:

- People*
- Structures*
- Economy*
- Natural, Historic, and Cultural Resources*
- Activities Bringing Value to the Community*

People

People are the community’s most important asset. In the context of this discussion, people are defined as individuals who live and/or work in the RCSD service area.

Vulnerability of People



Disasters affect all populations; however, some populations are more adversely affected because of a higher level of social vulnerability. According to **The Guide to Expanding Mitigation – Making the Connection to Equity**, social vulnerability is defined in terms of the characteristics of a person or group that affect “their capacity to anticipate, cope with, resist, and recover from the impact” of a discrete and identifiable disaster in nature or society.

Using **FEMA’s Resilience Analysis and Planning Tool (RAPT)**, census tract data was used to understand what census tracts might be more vulnerable. Many of the maps in the People section were created using data provided by RAPT. RAPT is a free, publicly available geographic information systems (GIS) tool to help emergency managers and community partners of all GIS skill levels to visualize and assess potential challenges to community resilience. RAPT includes over 100 pre-loaded data layers and the tool’s functionality allows users to visualize combinations of these data layers for a specific location. One of the layers includes community demographics for counties, census tracts, and tribes drawn primarily from the U.S. Census Bureau. RAPT includes 27 demographic layers, including 22 community resilience challenges indicators identified from peer-reviewed research, and **FEMA’s Community Resilience Challenges Index (CRCI)** for counties and census tracts, a composite value of all 22



community resilience challenges indicators. The graphics below outline the community resilience indicators.

Graphic B.2: People & Community Indicators
Source: FEMA Resilience Analysis and Planning Tool (RAPT)

People & Community Indicators

County and Census Tract Community Resilience Challenges Index (CRCI) combining 22 indicators.

Population Characteristics	Household Characteristics	Housing
<ul style="list-style-type: none"> • Population without a High School Education • Population 65 and Older • Population with a Disability • Population by Race and Hispanic Origin 	<ul style="list-style-type: none"> • Households without a Vehicle • Households with Limited English • Single-Parent Households • Households without a Smartphone • Households without Broadband Subscription 	<ul style="list-style-type: none"> • Mobile Homes as Percentage of Housing • Owner-Occupied Housing • Rental Housing Costs • Residential Structures in SHFA with Flood Insurance
Healthcare	Economic	Connection to Community
<ul style="list-style-type: none"> • Number of Hospitals • Medical Professional Capacity • Population without Health Insurance • Medicare Recipients with Power-Dependent Devices 	<ul style="list-style-type: none"> • Population Below Poverty Level • Median Household Income • Unemployed Labor Force • Unemployed Women Labor Force • Income Inequality • Workforce in Predominant Sector 	<ul style="list-style-type: none"> • Presence of Civic and Social Organizations • Population without Religious Affiliation • Percentage of Inactive Voters • Population Change



Graphic B.3: Infrastructure Indicators
Source: FEMA Resilience Analysis and Planning Tool

Infrastructure Indicators

Homeland Infrastructure Foundation-Level Data (Open)

- Hospitals
- Nursing Homes
- Pharmacies
- Urgent Care Facilities
- Dialysis Centers
- Mobile Home Parks
- Fire Stations
- Local Law Enforcement Locations
- Public Health Departments
- 911 Service Area Boundaries
- SNAP Authorized Retailers
- Places of Worship
- Colleges and Universities
- Private Schools
- Public Schools
- Prison Boundaries
- Power Plants
- Wastewater Treatment Plants
- Solid Waste Landfills
- High-Hazard Dams
- Electric Power Transmission Lines

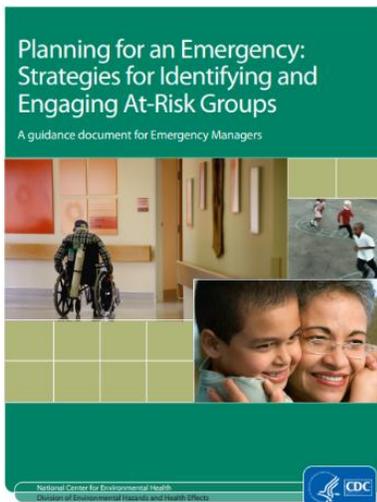


Graphic B.4: Hazard and Risk Indicators
Source: FEMA Resilience Analysis and Planning Tool

Hazard & Risk Indicators

National Weather Service Live Data Feeds

- Live Stream Gauges
- Flood Hazard
- Hurricane Tracks (1990+)
- Historical Tornado Tracks
- Wildfires - Current Incidents (Points)
- Wildfires - Current incidents (Perimeters)
- Seismic Hazard
- National Risk Index Census Tracts
- NOAA Sea Level Rise (4-6 ft.)
- NWS Severe Weather Watches and Warnings
- NWS Severe Weather Outlook
- NWS Atlantic/Caribbean Tropical Cyclones
- NWS Eastern Pacific Tropical Cyclones
- NWS Excessive Rainfall Outlook
- NEXRAD Real-Time Weather Radar

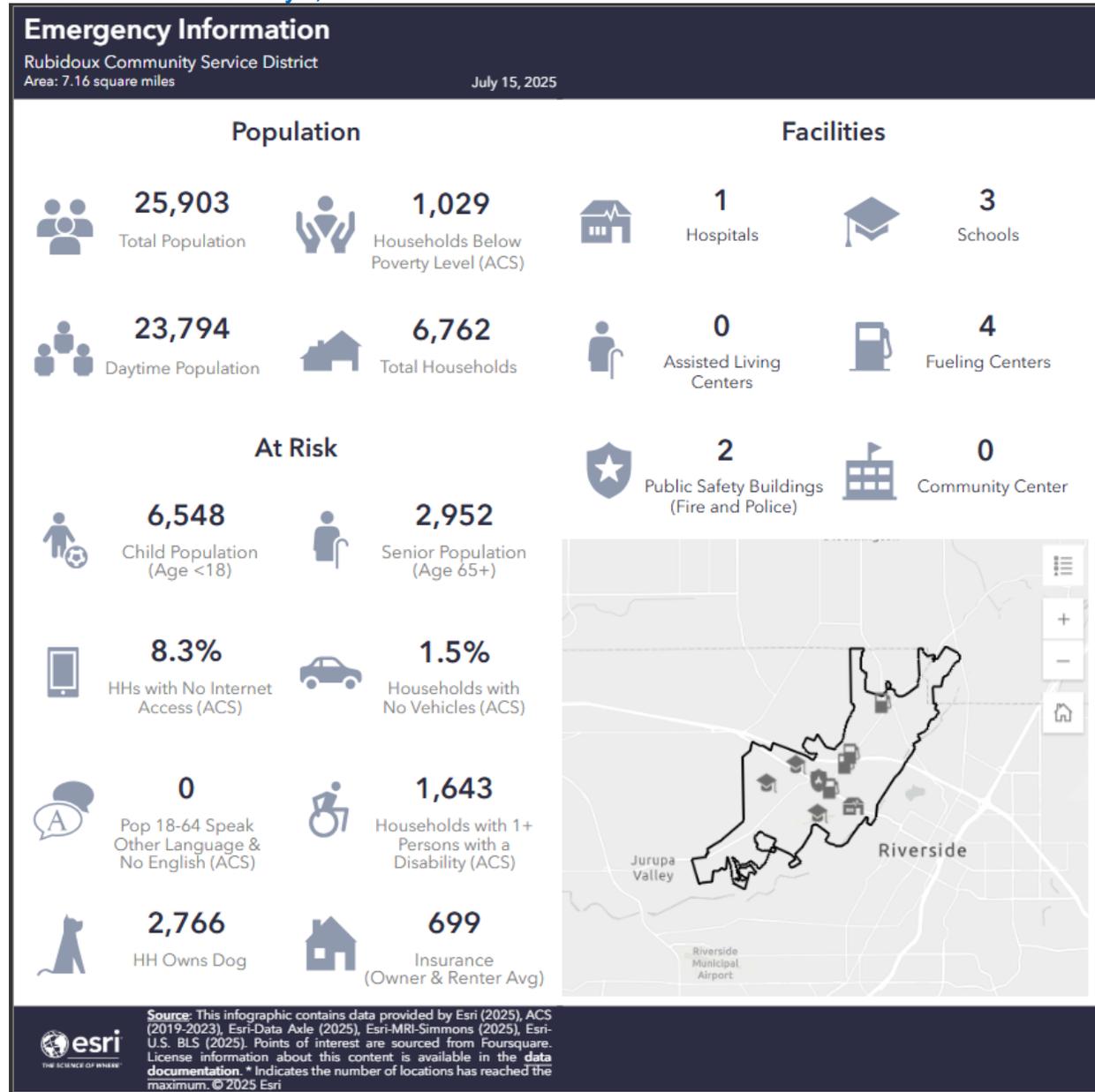


A person's vulnerability to disaster is influenced by many factors. According to **CDC's Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Group**, the following six categories are among the most commonly accepted factors: socioeconomic status, age, gender, race and ethnicity, English language proficiency, and medical issues and disability. These categories were used to analyze the vulnerability of people in the RCSD service area. The compounding effects of these factors will further impact an individual's ability to withstand the effects of disasters and other hazards.

Below is an overview of the district's population served. Due to a limitation on data, it is not known exactly where in the service area those who are more vulnerable may reside or work.



Graphic B.5: At Risk Population – RCSD
Source: Esri Business Analyst, 2025





Graphic B.6: Emergency Information – RCSD
 Source: Esri Business Analyst, 2025





Map B.10: Census Tracts – RCSD
Source: Emergency Planning Consultants, 2025

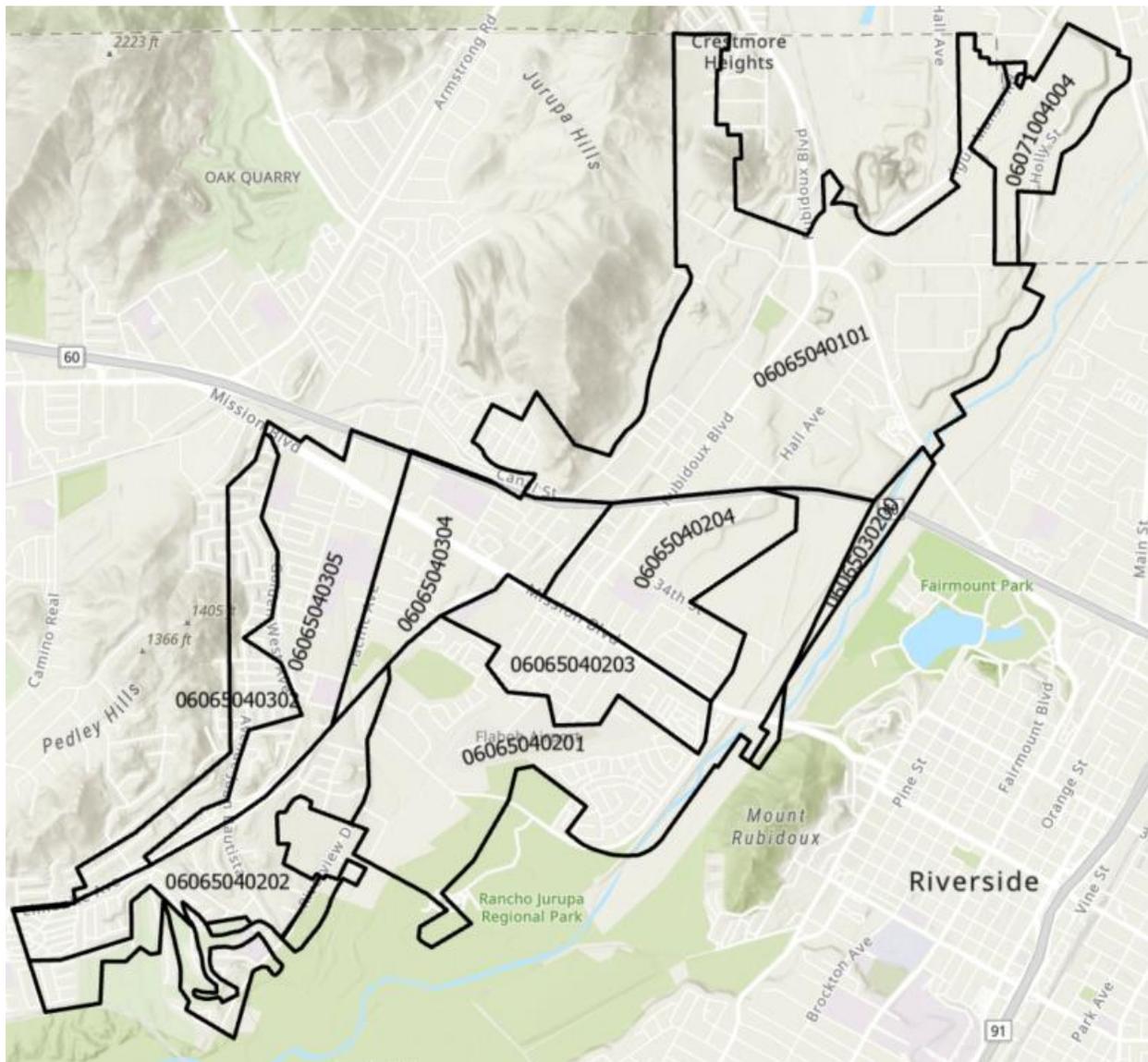




Table B.13: Hazard Vulnerability to People
Source: Emergency Planning Consultants

Census Tracts in RCSD	Drought	Earthquake	Flood	Power Outage	Wildfire	Wind
06065030200	X	X	X	X		X
06065040101	X	X	X	X	X	X
06065040201	X	X	X	X		X
06065040202	X	X		X		X
06065040203	X	X		X		X
06065040204	X	X		X		X
06065040302	X	X		X	X	X
06065040304	X	X		X		X
06065040305	X	X		X		X
06071004004	X	X		X		X

Impact Profile of People

Drought

Drought conditions in the Rubidoux Community Services District (RCSD), which serves parts of Jurupa Valley in Riverside County, have significant impacts on residents. As local water supplies—primarily drawn from groundwater basins and imported sources—become strained during prolonged dry periods, RCSD implements various conservation measures. These may include voluntary or mandatory water usage restrictions, particularly targeting outdoor irrigation. Residents may experience limits on lawn watering, car washing, and other non-essential uses to help preserve dwindling supplies.

Beyond water supply issues, drought also contributes to broader environmental and health challenges in the Rubidoux area. The community faces increased risk of extreme heat and wildfires, which are worsened by dry vegetation and prolonged high temperatures. These conditions can endanger public health, especially for vulnerable populations such as the elderly or those with existing medical conditions. As a result, RCSD and regional partners continue to promote public education, conservation programs, and fire preparedness to help residents adapt to an increasingly dry climate.

Earthquake

The district’s service area includes a diverse population with several vulnerable population groups, such as elderly residents, low-income families, non-English speakers, and disabled individuals. The elderly population in RCSD, some of whom may live alone or in care facilities, can be particularly vulnerable during emergencies due to mobility issues and potential isolation. Low-income families in the service area may lack the resources to adequately prepare for or recover from a disaster, such as securing emergency supplies or making necessary housing repairs. Non-English speakers face language barriers that can impede their access to crucial information and services during an emergency. Additionally, individuals with physical, sensory, or cognitive disabilities face added challenges in evacuating and accessing emergency services.



In the event of an earthquake, these vulnerable populations could face significant risks and challenges. Elderly residents may have difficulty evacuating quickly and could be living in older, less earthquake-resistant buildings. The disruption of healthcare services could critically impact those with medical needs. Low-income families might struggle with the financial burden of property damage and loss of income if their workplaces are affected, with limited access to insurance and emergency funds exacerbating their vulnerability. Non-English speakers could be hindered by communication barriers that prevent them from receiving timely warnings and instructions, and they may also face difficulties in navigating relief services and understanding available resources. Disabled individuals may face increased risks due to mobility issues and the potential inaccessibility of emergency shelters and services.

Flood

Flooding in RCSD can severely impact water service and public health. When heavy rainfall or storm events overwhelm local drainage systems or nearby rivers like the Santa Ana River, water infrastructure including pipelines, pumping stations, and treatment facilities can be damaged or rendered inoperable. This may lead to low water pressure, service outages, and disruptions in the delivery of clean drinking water.

Floodwaters also pose serious water quality concerns. If contaminated runoff enters the water system or affects treatment operations, RCSD may issue boil-water advisories or emergency restrictions to safeguard customer health. Contaminants such as bacteria, chemicals, and sediment can degrade water safety, requiring testing and system flushing before normal service can resume.

Beyond the water system, flooding can damage customer property, affect sewer lines, and limit access to homes and businesses. Flood-prone streets in the district may experience repeated issues, placing additional strain on residents and emergency services. While RCSD partners with the City of Jurupa Valley and Riverside County agencies to implement flood control measures, intense storm events can still overwhelm infrastructure. As a result, customers are encouraged to stay informed, prepare emergency water supplies, and take steps to protect their homes against flood risks.

Power Outage

Power outages in RCSD can significantly disrupt water service for customers, as the district relies on electric-powered pumps and treatment systems to maintain water supply and quality. When electricity is lost, these systems may shut down, leading to low or no water pressure in homes and businesses. Extended outages can compromise the district's ability to treat water properly, which could result in boil water advisories or temporary service interruptions.

Customers may also face health and safety challenges during a major power outage, especially if they rely on clean water for medical needs or cooling systems during extreme heat. In addition, outages can affect other essential utilities, such as refrigeration and communication, compounding the impact on daily life. Vulnerable populations, including the elderly, those with disabilities, and individuals with chronic health conditions, may be disproportionately affected by service disruptions.



Wildfire

A wildfire in the RCSD service area would pose serious threats to community health, safety, infrastructure, and continuity of services. Wildfires generate hazardous air quality, which can be especially dangerous for sensitive groups such as children, seniors, and individuals with respiratory or mobility challenges. Evacuation may be difficult for residents with limited transportation options or disabilities, increasing their exposure to harm.

Critical infrastructure such as water systems, power lines, and emergency facilities are at risk of damage or disruption. Water pressure and availability may be compromised if firefighting demands strain the system or if power outages affect pumping stations. Emergency services could be overwhelmed, and damaged roads or limited access to fueling centers may hinder response and recovery efforts.

Additionally, communication during a wildfire can be a challenge, especially for residents with limited English proficiency. Timely evacuation notices and safety information may not reach everyone effectively. Businesses may face temporary closures or long-term impacts if infrastructure is damaged or employees are displaced.

Wind

Windstorms can significantly impact the community served by RCSD by disrupting essential services, endangering public safety, and increasing vulnerability for certain populations. Strong winds can damage homes, power lines, trees, and public infrastructure, potentially leading to widespread power outages. These outages can disrupt water and wastewater services, impair communication systems, and limit access to heating or cooling during extreme weather conditions.

For residents with mobility challenges, limited transportation, or disabilities, fallen debris and blocked roads can restrict access to emergency services or evacuation routes. Children and older adults are particularly at risk from falling objects and unstable structures during high-wind events. Damage to schools, medical facilities, and public safety buildings may further strain the community's response capabilities.

Structures

Vulnerability of Structures

Structures include critical facilities, properties and structures that serve vital functions in government operations and the services offered to the community. These may include local government offices and yards, community centers, public safety buildings such as police and fire stations, schools, and other properties deemed essential for district operations. Additionally, some critical facilities may serve dual roles if designated as public assembly points during emergencies. While many critical facilities are owned by the district, others such as utilities and telecommunication infrastructure, may be privately owned and operated.

FEMA separates critical buildings and facilities into the five categories shown below based on their loss potential. All of the following elements are considered critical facilities:



Essential Facilities are essential to the health and welfare of the whole population and are especially important following hazard events. Essential facilities include hospitals and other medical facilities, police and fire stations, emergency operations centers and evacuation shelters, and schools.

Transportation Systems include airways – airports, heliports; highways – bridges, tunnels, roadbeds, overpasses, transfer centers; railways – trackage, tunnels, bridges, rail yards, depots; and waterways – canals, locks, seaports, ferries, harbors, drydocks, piers.

Lifeline Utility Systems such as potable water, wastewater, oil, natural gas, electric power and communication systems.

High Potential Loss Facilities are facilities that would have a high loss associated with them, such as nuclear power plants, dams, and military installations.

Hazardous Materials Facilities include facilities housing industrial/hazardous materials, such as corrosives, explosives, flammable materials, radioactive materials, and toxins.

Table B.14 below illustrates the hazards with potential to impact critical facilities owned by or providing critical services to RCSD.

Table B.14: Hazard Vulnerability to RCSD Structures
 Source: Planning Team, Emergency Planning Consultants
 Note: “X” indicates affirmative

RCSD-owned Critical and Essential Buildings and Facilities	Drought	Earthquake	Flood	Power Outage	Wildfire	Wind
Leland Thompson Treatment Plant Address: 5245 34 th Street	X	X		X		X
Main Office Address: 3590 Rubidoux Boulevard	X	X		X		X
Field Office Building Address: 6131 Limonite Avenue	X	X		X		X
Vacant Lot Address: South Sedona Drive	X	X		X		X
Vacant Lot Address: Mission Avenue	X	X		X		X
Vacant Lot Address: Golden West Avenue	X	X		X		X
Nitrate Wellhead Treatment Facility Address: 2100 Fleetwood Drive	X	X		X		X
Manganese Treatment Facility Address: 5245 34 th Street	X	X		X		X



RCSD-owned Critical and Essential Buildings and Facilities	Drought	Earthquake	Flood	Power Outage	Wildfire	Wind
Well Site #18 Address: 5245 34 th Street	X	X		X		X
Fort Fremont Parcel	X	X		X		X
Land Adjacent to District Office	X	X		X		X
Goldenwest Reservoir Site	X	X		X		X
Fire Station 38 Address: 5721 Mission Avenue	X	X		X		X
Office Building Address: 5473 Mission Boulevard	X	X		X		X
9 Water Well Sites	X	X		X		X
4 Reservoir Tanks	X	X		X		X

Impact Profile of Structures

Drought

The most immediate impact of a drought is on the water supply. RCSD relies on both surface and groundwater sources, which can become depleted during prolonged droughts. This could lead to water rationing, affecting residential, institutional, commercial, and industrial users. Reduced water availability could strain the district's ability to provide adequate water for drinking, sanitation, and fire suppression, compromising public health and safety. All properties in RCSD could be directly impacted or affected by drought. Most of the impact will be from the related hazards such as competition for water supply and disruption of public infrastructure. Reduced water supply could leave property vulnerable to fires. Dried vegetation around properties could also increase the vulnerability to fires.

Prolonged drought conditions could weaken soil stability, leading to ground subsidence. This can cause damage to roads, bridges, and pipelines, increasing maintenance costs and potentially leading to hazardous conditions. Water mains and sewage systems could be impacted by a loss of water or pressure. Also, those systems could be affected by soil movement, leading to leaks and breaks that further strain the district's water resources. Public parks and recreational areas may face restrictions on water use for irrigation, leading to degraded landscapes and reduced green spaces.

Earthquake

Structures include physical buildings, lifelines, and critical infrastructure in a community. All properties and occupants in the RCSD service area can be either directly impacted or affected by earthquakes. It is estimated more than a third of the planning area's building stock was built prior to 1975, when seismic provisions became uniformly applied through building code applications. These buildings are at a higher risk of damage from earthquakes. Due to limitations in current modeling abilities, the risk to critical facilities in the planning area from the earthquake hazard is likely understated. A more thorough review of the age of critical facilities, codes they were built to, and location on liquefiable soils should be conducted. Damage to transportation systems in



the planning area after an earthquake has the potential to significantly disrupt response and recovery efforts and lead to isolation of populations. Additionally, seismic events can damage communication systems, complicating efforts to coordinate response to the event. Many structures may need seismic retrofits in order to withstand a moderate earthquake. Residential retrofit programs, such as Earthquake Brace+Bolt, may be able to assist in the costs of these efforts.

Flood

All properties and occupants in RCSD can be directly impacted or affected by flooding. Structures in the planning area built before any regulations existed on floodplain development may be particularly vulnerable to some level of flood hazard. The risk associated with the flood hazard overlaps the risk associated with other hazards such as earthquake, landslide, and severe weather. Although none of the RCSD-owned facilities are vulnerable to riverine flooding, infrastructure has been impacted in the past. Urban flooding is another potential hazard that could impede responses as well as impacting facilities and infrastructure.

Existing infrastructure protects RCSD from floodplains, however excessive rain and blocked or insufficient storm drains can result in increasing the extent of urban flooding while resulting in damage to buildings and infrastructure and can exceed 100-year floodplains. Structures can also be damaged from trees falling as a result of water-saturated soil. In the event of electrical power outages, related interruptions can cause major problems throughout the community. Also, loss of power is a common precursor to closure of schools. The District may be impacted by City-activated crews rerouting traffic or closing access to impacted properties.

Power Outage

Power outages can have significant impacts on a water district, affecting both its operations and the communities it serves. If the water supply or treatment facilities are disrupted, residents and businesses may face immediate shortages of clean water, compromising public health and sanitation. Loss of electricity can halt water pumping, treatment processes, and distribution systems, leading to service outages. Infrastructure damage, such as broken pipes or compromised water reservoirs, could further exacerbate water shortages or contamination risks. In addition, there may be challenges in restoring service due to transportation disruptions, difficulties accessing repair sites, or a lack of necessary resources or personnel. The economic and social consequences could be severe, especially if the district struggles to maintain operations or provide clean water for an extended period.

Wildfire

Wildfire in the RCSD could severely impact district-owned structures and infrastructure, particularly facilities related to water supply, irrigation, and drainage systems. Given the area's terrain and dry vegetation, wildfire damage could compromise pumping stations, pipelines, and water storage facilities, potentially leading to service disruptions for residents who rely on district-managed water resources. Burned vegetation could also increase soil erosion, leading to sediment buildup in reservoirs and drainage channels, which may require extensive post-fire cleanup and maintenance.

If power lines supplying electricity to pumping stations and water treatment facilities are damaged, it could halt water distribution and reduce firefighting capabilities, making it more difficult to contain



future fires. The destruction of above-ground infrastructure, such as pipes, meters, and irrigation equipment, could result in significant repair costs and delays in restoring service.

Economy

Vulnerability to Economy

RCSD has several assets that have an important impact on the economy of the service area. Several of these economic assets overlap with the assets outlined earlier in this Element under “Structures” as they are community lifelines. These assets include major employers and top rate payers impacted by hazards given the potential of causing debilitating consequences to the local economy.

Table B.15: Hazard Vulnerability to Economic Assets

Source: Planning Team, Emergency Planning Consultants

Note: “X” indicates affirmative, asterisk indicates asset is included as a Structure as well

	Drought	Earthquake	Flood	Power Outage	Wildfire	Wind
Economic Assets – Top Rate Payers						
Residential						
Jurupa Hills Cascade, 6130 Camino Real	X	X		X		X
Old Plantation Crestmore, 3825 Crestmore	X	X		X		X
Garden Estates, 5596 42nd Street	X	X		X		X
Commercial						
Alpha Materials, 6170 20th Street	X	X		X	X	X
Sierra Aluminum, 2345 Fleetwood Drive	X	X		X		X
Lineage Logistics, 2356 Fleetwood Drive	X	X		X		X

Impact Profile of Economy

Top Rate Payers - Residential

Jurupa Hills Cascade and Old Plantation Crestmore are mobile home communities while Garden Estates are apartment homes.

Drought

Drought conditions can have widespread impacts on customers of RCSD. As water availability declines, customers may face mandatory water use restrictions, reduced irrigation allowances, and higher water rates to encourage conservation and offset increased operational costs. These measures can affect daily routines, landscaping practices, and agricultural operations for both residential and commercial users. Prolonged drought can also lead to lower water pressure, reduced supply reliability, and a greater risk of service interruptions. Vulnerable populations, such as low-income households and the elderly, may be disproportionately affected due to limited resources to adapt to conservation measures or increased costs. In extreme cases, prolonged



drought may also impact water quality as groundwater levels decline, concentrating contaminants and requiring additional treatment.

Earthquake

All structures are vulnerable to earthquakes. Older buildings – particularly mobile homes - may lack modern seismic reinforcements, making them susceptible to damage that could disrupt operations. Systems such as power, water, and wastewater are at risk of failure during a quake, while unsecured items like bookshelves may become hazards. Accessibility challenges due to damaged transportation routes can complicate emergency response.

Flood

While none of these locations are in flood prone areas, urban flooding can impact individual properties and ingress and egress to the development. Activities and services within the community may be impacted.

Power Outage

A power outage can have notable impacts on customers of RCSD, especially concerning water and wastewater services. Water distribution systems depend on electrically powered pumps and treatment facilities. Without power, these systems may not function properly, leading to reduced water pressure or temporary service disruptions. In some cases, customers could lose access to potable water until backup systems are activated or power is restored.

Wastewater services are also at-risk during outages, as pump stations may fail without electricity. This can lead to backups or overflows, posing potential health and environmental hazards. Extended outages may further strain RCSD's emergency response capabilities and increase customer frustration, especially among vulnerable populations.

Wildfire

Wildfires can have severe impacts on customers of RCSD. Smoke, heat, and flames can threaten residential and commercial properties, prompting evacuations and disrupting daily life. During wildfire events, water demand often increases due to firefighting needs, while infrastructure such as pipelines, tanks, and pumping stations may be damaged by fire or rendered inoperable by power outages. This can lead to reduced water pressure or service interruptions, affecting both domestic use and fire suppression efforts.

Air quality during wildfires can also deteriorate significantly, posing health risks - especially to vulnerable populations such as the elderly, children, and those with respiratory conditions. If evacuation shelters or emergency response centers are needed, water and sanitation services must be maintained to support displaced residents.

Wind

Windstorms can disrupt essential services for customers of the RCSD. Strong winds may damage power lines and water infrastructure, leading to service interruptions such as reduced water pressure or temporary water outages. In cases where pumping stations lose power and backup systems fail, customers may experience limited access to clean water or delays in wastewater service.



Additionally, wind-driven debris and fallen trees can block roads and hinder emergency or maintenance response efforts, potentially prolonging restoration times. Vulnerable populations including senior citizens, individuals with medical needs, or those without transportation, may be especially affected if access to water or sanitation is limited.

Top Rate Payers - Commercial

Alpha Materials is a construction company specializing in the delivery of Ready Mix Concrete, Gunite, Rock and Sand. Sierra Aluminum is a manufacturing facility with a fully integrated aluminum extrusion mill, delivering custom shapes in a broad range of finishes. Lineage Logistics is a dynamic temperature-controlled warehousing and logistics company by protecting the global food supply chain and fighting food insecurity and eliminating waste.

Drought

Drought conditions can have several significant impacts on commercial customers within RCSD. Water use restrictions, rate increases, and supply limitations are common drought responses that directly affect businesses. Commercial operations that rely heavily on water may experience operational disruptions, reduction in service capacity, or increased costs to comply with conservation mandates.

Earthquake

Costco plays a crucial role in providing a wide variety of products, including groceries, electronics, clothing, furniture, and home goods to the community. Earthquake damage could result in the loss of inventory, structural damage to buildings, and potential safety hazards for both employees and customers. The stores might also face supply chain disruptions, affecting their ability to restock essential items quickly. Even if the stores remained operational, the economic impacts of the earthquake could lead to a decrease in consumer spending, impacting the revenue of these stores. Damage to the store and inventory might also delay recovery efforts as home repair items will not be readily available after an earthquake.

Flood

Flooding could damage inventory, infrastructure, and equipment, leading to temporary store closures. Damage to the store and inventory might also delay recovery efforts as home repair items will not be readily available after a flood. Access to stores might be hindered by flooded roads, affecting both customers and supply chains. Even if the stores remained operational, the economic impacts of urban flooding could lead to a decrease in consumer spending, impacting the revenue of these stores.

Power Outage

A power outage can significantly affect RCSD's commercial customers by disrupting essential water and wastewater services critical to business operations. Without electricity, RCSD's ability to maintain water pressure and operate wastewater pumping stations may be compromised, especially if backup systems are limited or overwhelmed. This can lead to reduced water availability, low pressure, or even temporary service interruptions, all of which hinder business continuity for restaurants, manufacturing facilities, retail stores, and other commercial enterprises. Additionally, commercial customers that rely on consistent water supply for operations—such as food service establishments or businesses requiring sanitation—may face temporary closures, lost revenue, and safety compliance issues. Prolonged outages may also affect fire suppression systems if water pressure drops below required levels.



Wildfire

Wildfires can have serious consequences for the commercial customers served by RCSD. During a wildfire event, businesses may face water service disruptions due to infrastructure damage, power outages affecting pumping stations, or emergency restrictions on water use for firefighting. These disruptions can interrupt daily operations, particularly for water-dependent businesses such as restaurants, manufacturing facilities, and car washes. Smoke and fire threats may also force temporary closures, leading to revenue loss and operational setbacks. In some cases, commercial structures may be directly damaged or destroyed, resulting in long-term displacement or costly rebuilding. Additionally, poor air quality and road closures can reduce customer access and employee availability, compounding economic impacts.

Wind

Windstorms can disrupt operations for commercial customers within RCSD by affecting both utility services and business continuity. High winds can lead to power outages that interrupt water supply and wastewater services—essential for businesses such as restaurants, retail stores, medical offices, and manufacturing facilities. Without reliable water access, some businesses may be forced to reduce hours or temporarily close, especially those dependent on sanitation and equipment cooling. Wind damage to infrastructure, such as fallen trees, debris, or downed power lines, can also restrict access to commercial properties, delay deliveries, or affect customer foot traffic. In more severe cases, physical damage to commercial structures (e.g., broken windows, roof damage) may require costly repairs and insurance claims. As a result, windstorms can lead to both immediate service disruptions and longer-term financial impacts for RCSD's commercial customers.

Natural, Historical, and Cultural Resources

Natural, historical, and cultural resources are essential elements that define the identity and heritage of a community. Natural resources include native flora and fauna, water bodies, landscapes, and climate, providing ecological and recreational benefits. Historical resources consist of buildings, archaeological sites, monuments, and historic districts that hold historical significance. Cultural resources encompass museums, traditional practices, languages, literature, festivals, and public art, reflecting the community's cultural heritage and values. Together, these resources contribute to preserving the community's history, environment, and cultural identity, enriching the quality of life for its residents.

Vulnerability of Natural, Historical, and Cultural Resources*

Natural Resources

In partnership with other agencies, such as the Riverside County Regional Park and Open Space District, the Jurupa Area Recreation and Park District, the City of Jurupa Valley offers a wide range of protected open spaces, parks and recreational areas. Open space and recreation facilities provide a variety of recreational opportunities and help maintain a distinct urban boundary and buffer between the City of Jurupa Valley and adjacent urbanized areas.

The Santa Ana River is an integral part of the City's and the region's multi-purpose open space and trail systems. In 2014, the California state legislature created the Santa Ana River Conservancy Program within the Coastal Conservancy. The Program addresses the resource and recreational goals of the corridor including the Santa Ana River Trail that, upon completion, will incorporate 100 miles of trail system from San Bernardino County in the north to Orange



County in the south. Beyond that, the Santa Ana River is the centerpiece of a massive 2,840-square-mile watershed that involves major portions of three counties. The river drains southwest toward Prado Dam and serves as a prominent natural buffer between Jurupa and the cities of Riverside and Norco. Several natural and channelized drainage courses connect with the river. In addition to their fundamental water-related functions, these watercourses provide corridors through developed land and link open spaces together. Among other things, this creates biologically essential wildlife corridors that allow wildlife to move from one open space to another without crossing streets, highways, or developed land. The following policies preserve and protect this important natural and recreational feature.

Historic Resources

Jurupa Valley includes an array of resources – particularly historic ones. The General Plan discusses its Historic Overlay Zone which serves to protect numerous locations throughout the community.

The Rubidoux Drive-In Theatre, with its original 1948 screen tower still standing tall, is the last of the classic drive-in theatres remaining in Southern California. Though it retains much of its original character, time has transformed this gem into a thoroughly modern outdoor theatre. The incorporation of FM transmitters and Technalight digital projection ensures the best possible picture and sound available.

The “Rubidoux” was built as a single screen venue with a capacity of about 690 cars. The original art deco styled screen tower was designed for movies shown in the old academy format, but was remodeled when Cinemascope, a wide screen format, was introduced in the mid-1950s. To attract an audience looking for an evening of family fun, the theatre also offered a variety of pre-show entertainment, such as a full-service snack bar, miniature railroad, playground, and petting zoo.

Cultural Resources

The Jensen-Alvarado Ranch was the first kiln-fired brick building built in Riverside County and the oldest non-adobe structure in the Inland Empire. Ranch house and grounds serve as an 1880s living history interpretive museum administered by Riverside County Parks. The Ranch is registered as a California Historical Landmark and is included in the National Register of Historic Places.

*The vulnerability of city parks is included in the section discussing the vulnerability of **Structures**

*The vulnerability of community events is discussed in the **Activities Bringing Value to the Community** section.



Table B.15: Hazard Vulnerability to Natural, Historical, and Cultural Resources
 Source: Planning Team, Emergency Planning Consultants
 Note: “X” indicates affirmative

Natural, Historical, and Cultural Resources	Drought	Earthquake	Flood	Power Outage	Wildfire	Wind
Natural						
Santa Ana River Corridor		X	X	X		
Historic						
Rubidoux Drive-in Theater Address: 3770 Opal Street, Jurupa Valley	X	X		X		X
Cultural						
Jensen-Alvarado Ranch Address: 4307 Briggs Street, Jurupa Valley	X	X		X		

Impact Profile on Natural, Historical, and Cultural Resources

Drought

Drought can have widespread **effects on natural, historic, and cultural resources.**

Natural Resources

Drought reduces surface water availability, lowers groundwater levels, and stresses local vegetation and wildlife. Prolonged dry periods can lead to habitat loss, increased wildfire risk, and degradation of local ecosystems. Native plants may die off or be replaced by drought-tolerant invasive species, altering the ecological balance.

Historic Resources

Historic sites, especially those constructed with traditional materials such as adobe or untreated wood, are vulnerable to drought-induced damage. Soil shrinkage from dehydration can cause foundational instability, while reduced humidity may accelerate the deterioration of aging structures and artifacts. Additionally, water restrictions may limit the ability to maintain landscaping or protective vegetation around these sites.

Cultural Resources

Public parks, gardens, community gathering spaces, and outdoor cultural facilities may suffer during droughts due to water use restrictions. Landscaped cultural landmarks may experience drying, browning, or plant loss, which diminishes their visual and cultural appeal. Drought may also lead to the cancellation or scaling back of community events and festivals that rely on outdoor spaces or water features.

Earthquake

An earthquake can have significant impacts on the natural, historic, and cultural resources in the RCSD service area affecting both the environment and the community's heritage.



Natural Resources

The physical landscape and natural habitats may suffer from direct damage due to ground shaking and potential landslides, particularly in areas near the foothills. Parks and green spaces may be impacted by falling trees, damaged infrastructure, and disrupted ecosystems, affecting local wildlife and recreational opportunities. Additionally, water supply systems and utilities may be disrupted, posing risks to public health and safety.

Historic Resources

Historic buildings and structures, including those recognized for their architectural significance, are particularly vulnerable to earthquake damage. Cracks, structural failures, and falling debris can lead to loss or severe damage to these important assets, diminishing the community's historical identity.

Cultural Resources

The cultural fabric of the community can be affected as well, as events and gatherings that celebrate local heritage may be canceled or postponed following an earthquake. Cultural centers and organizations may face operational disruptions and resource challenges, limiting their ability to promote community engagement and cultural education. The psychological impact of an earthquake can also affect community cohesion, as residents may experience anxiety and displacement, making it harder to participate in cultural activities.

Flood

Riverine and urban flooding can significantly impact the natural, historic, and cultural resources in RCSD's service area leading to a range of consequences that affect the community's environment and heritage.

Natural Resources

Flooding can cause erosion, habitat destruction, and water pollution, adversely affecting local parks and green spaces. Floodwater may lead to the loss of native vegetation and wildlife habitats, compromising the ecological balance in the area. Additionally, excessive water can damage recreational facilities and trails, reducing opportunities for outdoor activities and community engagement with nature.

Historic Resources

Historic buildings and sites may suffer from water damage, compromising their structural integrity and leading to costly repairs. Flooding can erode the foundations of historic structures and damage key architectural features, ultimately threatening the preservation of the city's cultural heritage.

Cultural Resources

Cultural resources may be directly impacted by flooding.

Power Outage

A serious power outage could have varied impacts on **natural, historic, and cultural resources**, depending on their function, infrastructure, and reliance on electricity.



Natural Resources

Power outages can disrupt water pumping and irrigation systems that support parks, green spaces, and natural habitats. Extended outages may affect water quality monitoring, air filtration systems in environmental preserves, or temperature regulation in sensitive ecosystems. Wildlife may also be indirectly impacted if lighting or security systems fail in protected areas.

Historic Resources

Historic buildings and landmarks often depend on controlled environments for preservation. Loss of climate control (e.g., HVAC systems) during a power outage can lead to humidity or temperature fluctuations that damage sensitive materials such as wood, paper, textiles, and artifacts. Additionally, lack of lighting or security systems may increase vulnerability to vandalism or theft.

Cultural Resources

Museums, libraries, community centers, and performing arts venues often require electricity for lighting, temperature control, digital exhibits, and security. A power outage can force temporary closures, damage equipment or exhibits, and disrupt scheduled events or educational programs, reducing community access and engagement.

Wildfire

Wildfires can have significant indirect impacts on natural, historic, and cultural resources, often extending well beyond the immediate burn area.

Natural Resources

Wildfires can degrade air and water quality, increase soil erosion, and disrupt local ecosystems. After a fire, rain events may trigger sediment runoff into rivers, harming aquatic habitats and reducing water quality for surrounding communities. The loss of vegetation also reduces habitat for wildlife and can lead to long-term changes in biodiversity and native plant regeneration.

Historical Resources

Even if not directly burned, historic buildings and landmarks near wildfire zones may suffer from smoke damage, exposure to extreme heat, or water damage from firefighting efforts. Ash and airborne particulates can accelerate the deterioration of historic materials, while access limitations may delay preservation or maintenance work.

Cultural Resources

Cultural institutions such as museums, community centers, and places of worship may experience closures due to air quality concerns, evacuation orders, or road closures. Additionally, sacred sites or locations of cultural significance to Indigenous communities may be indirectly impacted by fire suppression activities or landscape alterations that affect their traditional use and meaning.

Wind

Wind can have direct and indirect impacts on the natural, historic, and cultural resources in RCSD's service area. The impacts can be significant, affecting the community's environmental health, heritage preservation, and cultural practices.

Natural Resources

Debris can affect both wildlife habitats and recreational areas.



Historic Resources

Historic buildings and sites may face direct threats from the wind. The cultural significance of historic resources may also be diminished if they become less accessible or are damaged.

Cultural Resources

Cultural events and traditions, particularly those linked to the local community's heritage, can be disrupted by winds.

Activities Bringing Value to the Community

Activities bringing value to the community are those that contribute positively to the well-being, cohesion, and development of the community as a whole. These activities can take various forms and serve different purposes, but they generally aim to enhance the quality of life for community members and promote a sense of belonging and connectedness.

Vulnerability of Activities Bringing Value to the Community

Table B.17: Hazard Vulnerability of Activities Bringing Value to the Community

Source: Planning Team, Emergency Planning Consultants

Note: "X" indicates affirmative

Activities Bringing Value to the Community	Drought	Earthquake	Flood	Power Outage	Wildfire	Wind
City of Jurupa Valley Veteran's Day Parade	X	X		X		X

Impact Profile on Activities Bringing Value to the Community

Community activities like the City of Jurupa Valley Veteran's Day Parade can be significantly affected by various natural hazards and utility disruptions. Each hazard poses unique challenges that can impact planning, safety, and participation.

Drought

Drought may not directly cancel the event, but it can lead to restrictions on landscaping and water features along the parade route, reduce the appeal of the environment, and impact related festivities like food vendors or post-parade gatherings in parks with limited water access.

Earthquake

Earthquakes can cause physical damage to infrastructure such as roads, sidewalks, and public buildings used for staging or crowd control. If an earthquake occurs shortly before the event, it may lead to cancellation due to safety inspections or emergency response needs, and deter public attendance due to aftershock concerns.



Flood

Flooding can wash out streets, make parade routes inaccessible, and damage parks or facilities where the event is hosted. Even minor urban flooding may lead to road closures or pose safety risks for spectators and participants, forcing postponement or cancellation.

Power Outage

Power outages affect lighting, sound systems, traffic signals, and communication systems essential for safe event coordination. Food vendors, first aid stations, and staging areas may also be impacted, reducing the parade's scale or disrupting emergency response capabilities.

Wildfire

Wildfire poses both direct and indirect threats. Smoke and poor air quality may make it unsafe for large gatherings, especially for vulnerable populations. If fires are active nearby, emergency resources may be diverted, and evacuation plans could supersede public events.

Wind

Windstorms can endanger participants and attendees through blowing debris, falling branches, or damaged tents and displays. High winds may force the removal of banners, floats, or structures and create hazards that make holding the event unsafe.



Element C: Mitigation Strategy

Q&A | ELEMENT C. MITIGATION STRATEGY | C1-a.

Q: Does the plan describe how the existing capabilities of each participant are available to support the mitigation strategy? Does this include a discussion of the existing building codes and land use and development ordinances or regulations? (Requirement 44 CFR § 201.6(c)(3))

A: See **Capability Assessment – Existing Processes and Programs, Table C.1** below.

Q&A | ELEMENT C: MITIGATION STRATEGY | C1-b.

Q: Does the plan describe each participant’s ability to expand and improve the identified capabilities to achieve mitigation? (Requirement 44 CFR § 201.6(c)(3))

A: See **Expanding and Improving Capabilities** below.

Q&A | ELEMENT C: Mitigation Strategy | C2-a.

Q: Does the plan contain a narrative description or a table/list of their participation activities? (Requirement 44 CFR § 201.6(c)(3)(ii))

A: See **NFIP Participation** below.

Q&A | ELEMENT C. MITIGATION STRATEGY | C3-a.

Q: Does the plan include goals to reduce the risk from the hazards identified in the plan? (Requirement 44 CFR § 201.6(c)(3)(i))

A: See **State Hazard Mitigation Plan Goals, HMP Goals** below.

Q&A | ELEMENT C: MITIGATION STRATEGY | C4-a.

Q: Does the plan include an analysis of a comprehensive range of actions/projects that each jurisdiction considered to reduce the impacts of hazards identified in the risk assessment? (Requirement 44 CFR § 201.6(c)(3)(ii))

A: See **Mitigation Actions Matrix (Action Items), Priority Rating** below.

Q&A | ELEMENT C: MITIGATION STRATEGY | C4-b.

Q: Does the plan include one or more action(s) per jurisdiction for each of the hazards as identified within the plan’s risk assessment? (Requirement 44 CFR § 201.6(c)(3)(ii))

A: See **Mitigation Actions Matrix (Action Items)** below.

Q&A | ELEMENT C: MITIGATION STRATEGY | C5-a.

Q: Does the plan describe the criteria used for prioritizing actions? (Requirement 44 CFR § 201.6(c)(3)(ii))

A: See **Mitigation Actions Matrix (Priority, Goals), Benefit/Cost Ratings** below.

Q&A | ELEMENT C: MITIGATION STRATEGY | C5-b.

Q: Does the plan identify the position, office, department, or agency responsible for implementing/administering the identified mitigation actions, as well as potential funding sources and expected time frame? (Requirement 44 CFR § 201.6(c)(3)(iii))

A: See **Lead Department** below.

Overview of Mitigation Strategy

As the cost of damage from disasters continues to increase nationwide, the Rubidoux Community Services District (District) recognizes the importance of identifying effective ways to reduce vulnerability to disasters. Mitigation plans assist communities in reducing risk from natural hazards by identifying resources, information and strategies for risk reduction, while helping to guide and coordinate mitigation activities at District facilities.



The plan provides a set of action items to reduce risk from hazards through education and outreach programs, and to foster the development of partnerships. Further, the plan provides for the implementation of preventative activities.

Resources and information within the mitigation plan include:

1. Establishing a basis for coordination and collaboration among agencies and the public in the district,
2. Identifying and prioritizing future mitigation projects, and
3. Assisting in meeting the requirements of federal assistance programs.

The mitigation plan is integrated with other city plans including the Emergency Operations Plan, General Plan, Capital Improvement Program, as well as department-specific standard operating procedures.

Capability Assessment – Existing Processes and Programs

The district will incorporate mitigation planning as an integral component of daily operations. This will be accomplished by the Planning Team members with their respective departments to integrate mitigation strategies into their planning documents and operational guidelines. In addition to the Capability Assessment below, the Planning Team will strive to identify additional policies, programs, practices, and procedures that could be created or modified to address mitigation activities.

FEMA identifies four types of capabilities: Planning and Regulatory, Administrative and Technical, Financial, and Education and Outreach. Following are explanations drawn from “Beyond The Basics” a website developed as part of a multi-year research study funded by the U.S. Department of Homeland Security, Coastal Resilience Center and led by the Center for Sustainable Community Design within the Institute for the Environment at the University of North Carolina at Chapel Hill and the Institute for Sustainable Coastal Communities at Texas A&M University. This excellent resource ties FEMA regulations together with best practices in hazard mitigation.

Planning and Regulatory

Planning and regulatory capabilities are based on the implementation of ordinances, policies, local laws and State statutes, and plans and programs that relate to guiding and managing growth and development. Examples of planning capabilities that can either enable or inhibit mitigation include comprehensive land use plans, capital improvements programs, transportation plans, small area development plans, disaster recovery and reconstruction plans, and emergency preparedness and response plans. Plans describe specific actions or policies that support community goals and drive decisions. Likewise, examples of regulatory capabilities include the enforcement of zoning ordinances, subdivision regulations, and building codes that regulate how and where land is developed and structures are built. Planning and regulatory capabilities refer not only to the current plans and regulations, but also to the community’s ability to change and improve those plans and regulations as needed.

Administrative and Technical

Administrative and technical capability refers to the community’s staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions. It also refers to the ability to access and coordinate these resources effectively. Think about the types of personnel employed by each jurisdiction, the public and private sector resources that may be



accessed to implement mitigation activities in your community, and the level of knowledge and technical expertise from all of these sources. These include engineers, planners, emergency managers, GIS analysts, building inspectors, grant writers, floodplain managers, and more. For jurisdictions with limited staff resources, capacity should also be considered; while staff members may have specific skills, they may not have the time to devote themselves to additional work tasks.

The planning team can identify resources available through other government entities, such as counties or special districts, which may be able to provide technical assistance to communities with limited resources. For example, a small town may turn to county planners, engineers, or a regional planning agency to support its mitigation planning efforts and provide assistance. For large jurisdictions, reviewing administrative and technical capabilities may involve targeting specific staff in various departments that have the expertise and are available to support hazard mitigation initiatives. The degree of intergovernmental coordination among departments also affects administrative capability.

Financial

Financial capabilities are the resources that a jurisdiction has access to or is eligible to use to fund mitigation actions. The costs associated with implementing mitigation activities vary. Some mitigation actions, such as building assessment or outreach efforts, require little to no costs other than staff time and existing operating budgets. Other actions, such as the acquisition of flood-prone properties, could require substantial monetary commitments from local, state, and federal funding sources. Some local governments may have access to a recurring source of revenue beyond property, sales, and income taxes, such as stormwater utility or development impact fees. These communities may be able to use the funds to support local mitigation efforts independently or as the local match or cost-share often required for grant funding.

Education and Outreach

This type of capability refers to education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information. Examples include fire safety programs that the Fire Department delivers to students at local schools; and participation in community programs, such as Firewise.

Table C.1 below includes a broad range of capabilities within the District to successfully accomplish mitigation.



Table C.1: Capability Assessment - Existing Processes and Programs
 Source: RCSD Website, 2024

Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and	Financial	Education and Outreach		
Roubidoux Community Services District Departments					
				Office of the General Manager	<i>The Office of the General Manager provides executive leadership, strategic direction, and organizational oversight to ensure the effective delivery of essential community services, including water, sewer, trash, fire protection, weed abatement, and street lighting. It serves as the primary liaison between the Board of Directors, staff, and the public, ensuring transparency, accountability, and operational excellence across all service areas.</i>
				Operations	<i>The Operations Department is responsible for the day-to-day management, maintenance, and delivery of essential services to the community. This department plays a vital role in ensuring that residents receive reliable and efficient public services. The services include water supply, wastewater treatment, and solid waste management. The Department oversees the operation and maintenance of water treatment plants, distribution systems, sewage treatment facilities, and sewer collection systems. This includes ensuring water quality, monitoring water usage, and addressing any wastewater issues. Engaging with the community and addressing residents' concerns is vital. Its functions are important to maintaining the well-being and best quality of life for the community and residents of Jurupa Valley.</i>
				Engineering	<i>The Engineering Department plays a vital role in ensuring the reliable and efficient delivery of safe and clean drinking water to the community of Jurupa Valley. The Director of Engineering provides leadership and oversight to the engineering department, including strategic planning, project management, and budget management. The department duties involve planning for water supply, water quality control, and long-term sustainability of water sources. It also ensures that the District adheres to environmental regulations and manages any permits required for water source extraction, treatment, and discharge. The District complies with federal, state, and local regulations related to water quality, environmental protection, and public health.</i>
				Finance and Administration	<i>The Finance Department of the District is responsible for managing the financial aspects of the District's operations, ensuring fiscal responsibility, and maintaining financial records and reporting. The Director of Finance/Administration is responsible for overseeing all financial aspects of the district, including budgeting, financial planning, financial reporting,</i>



Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and	Financial	Education and Outreach		
					and financial strategy development. Additionally, the Department provides financial transparency to stakeholders and support the District's overall mission and objectives.
Rubidoux Community Services District Plans and Policies					
				Urban Water Management Plan	<i>The purpose of the 2020 UWMP is to outline progress toward conservation and supply reliability goals since the District's 2015 UWMP was prepared, as well to outline future long-term opportunities to meet projected water demands while also assessing the impact of long-term drought and climate change. The identification of future opportunities for water supplies in the UWMP neither commits RCSD to any stated endeavor, nor precludes them from exploring a different project that is not identified in the UWMP.</i>
				Master Water Plan and Master Wastewater Plan	<i>The District updates on a regular basis its 2022 Water Master Plan and Wastewater Master Plans. These Master Plans are based on the best known information at the time they were prepared considering proposed development within the District's Boundary and Area of Influence which are areas proposed to be annexed to be within the District. These Master Plans represent the Capital Improvement Projects (CIP) and their value in 2021 dollars in order for the District to meet system demand for water and sewer capacity to complete system build out. Values shown are currently being evaluated to keep up to date with current construction costs and are subject to change by Fall 2024. These CIP costs are used to determine Connection and Capacity Fees for new construction projects to join into the District's Water and Sewer Systems.</i>
				Strategic Plan	<i>In February 2025, RCSD issued a contract for the preparation of a Strategic Plan which will serve as a roadmap for the District, ensuring its mission, vision, and objectives align with community expectations, regulatory requirements, and economic and environmental conditions. Additionally, the plan will help the District prioritize projects, allocate resources effectively and establish measurable goals to track progress. The Plan is expected to be completed by Fall 2025.</i>
				California Building Code	<i>Rubidoux Community Services District is classified as a special district. Special districts are only subject to the local permitting authority (city, county, or state) when constructing publicly accessible buildings within a local jurisdiction's boundaries. Special districts are not subject to the local permitting authority of a local agency when constructing or repairing water-related facilities, such as water storage, treatment, and distribution</i>



Capability Type				Capability Name	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and	Financial	Education and Outreach		
					<i>infrastructure. For such water-related facilities, special districts are subject to California Code of Regulations, Title 22 Division 4, Chapter 16 California Waterworks Standards that apply when constructing public water system sources, materials, disinfection, and operations.</i>

Expanding and Improving Capabilities

This identifies the capability categories and applicability to individual mitigation action items. Sub-category indicators are P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach.

Planning and Regulatory Capabilities – The District builds and maintains its own buildings and infrastructure and regulates all construction within the community as per the California Building Code. Future plans are laid out in the Urban Water Management Plan and Capital Improvement Program. Some of the funding of future construction relies on successful bond measures where plans and justifications are shared with the public. See **Element C: Mitigation Strategy - Mitigation Actions Matrix** column “Expanding and Improving Capabilities”.

Administrative and Technical – The District’s existing capabilities are typical for a medium-sized provider of utility services. The district already has grant writing and GIS capabilities along with mutual aid agreements, and a warning/notification system. Grant writing capabilities will continue to be especially important once the mitigation plan is approved by FEMA. That approval will trigger eligibility for a range of federal and state grants. Also, the Board of Directors could task a sub-committee dedicated to mitigation plan implementation. The Plan’s opportunities for success will be increased by the Board’s involvement. See **Element C: Mitigation Strategy - Mitigation Actions Matrix** column “Expanding and Improving Capabilities”.

Finance - All types of local governments have a broad range of funding sources. Taxation, impact fees, bonds, grants, in-kind donations, and philanthropic donations are included in the spectrum. As such, the district needs to keep these resources in mind for future mitigation activities. See **Element C: Mitigation Strategy - Mitigation Actions Matrix** column “Expanding and Improving Capabilities”.

Education and Outreach – Continue to encourage District staff to participate in community groups such as CERT to support and encourage mitigation as well as home and business mitigation. See **Element C: Mitigation Strategy - Mitigation Actions Matrix** column “Expanding and Improving Capabilities”.



NFIP Participation

The district is not required to participate in NFIP. See additional information in Element B: Risk Assessment – District Profile.

State Hazard Mitigation Plan Goals

The 2023 State Hazard Mitigation Plan identified the following goals that reflect State's current priorities:

Goal 1 - Significantly reduce risk to life, community lifelines, the environment, property, and infrastructure by planning and implementing whole-community risk reduction and resilience strategies.

Goal 2 - Build capacity and capabilities to increase disaster resilience among historically underserved populations, individuals with access and functional needs, and communities disproportionately impacted by disasters and climate change.

Goal 3 - Incorporate equity metrics, tools, and strategies into all mitigation planning, policy, funding, outreach, and implementation efforts.

Goal 4 - Apply the best available science and authoritative data to design, implement, and prioritize projects that enhance resilience to natural hazards and climate change impacts.

Goal 5 - Integrate mitigation principles into laws, regulations, policies, and guidance to support equitable outcomes to benefit the whole community.

Goal 6 - Significantly reduce barriers to timely, efficient, and effective hazard mitigation planning and action.

2025 RCSD Hazard Mitigation Plan Goals

Following review of the SHMP goals, the Planning Team discussed the 2025 HMP goals while reflecting on the profiled hazards and a desire to represent a long-term vision for hazard reduction and enhanced mitigation capabilities.

Each of the goals is supported by mitigation action items. The Planning Team developed these action items through its knowledge of the local area, risk assessment, review of past efforts, identification of mitigation activities, and qualitative analysis. See **Mitigation Actions Matrix**.

The five mitigation goals and descriptions are listed below.

Protect Life and Property

Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other properties more resistant to losses from natural, human-caused, and technological hazards.

Reduce losses and repetitive damage for chronic hazard events while promoting insurance coverage for catastrophic hazards.



Improve hazard assessment information to make recommendations for avoiding new development in high hazard areas and encouraging preventative measures for existing development in areas vulnerable to natural, human-caused, and technological hazards.

Enhance Public Awareness

Develop and implement education and outreach programs to increase public awareness of the risks associated with natural hazards.

Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.

Preserve Natural Systems

Balance watershed planning, natural resource management, and land use planning with natural hazard mitigation to protect life, property, and the environment. Preserve, rehabilitate, and enhance natural systems to serve natural hazard mitigation functions.

Encourage Partnerships and Implementation

Strengthen communication and coordinate participation among and within public agencies, citizens, non-profit organizations, business, and industry to gain a vested interest in implementation. Encourage leadership within public and private sector organizations to prioritize and implement local, county, and regional hazard mitigation activities.

Strengthening Emergency Services

Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure. Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry. Coordinate and integrate natural hazard mitigation activities, where appropriate, with emergency operations plans and procedures.

How are the Mitigation Action Items Organized?

The action items are a listing of activities in which the district's departments, customers, and stakeholders can be engaged to reduce risk. The action items are organized within the following Mitigation Actions Matrix, categorized by hazard. Data collection and research and the public participation process resulted in the development of these action items. The Matrix includes the following information for each action item:

Lead Department

The Mitigation Actions Matrix assigns primary responsibility for each of the action items to either a department or specific position within the district. The primary responsibility for implementing the action items falls to the entity shown as the "Lead Department". The lead department has the regulatory responsibility to address hazards, or is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitor, and evaluate. The lead department is a District staff or contracted while supporting agencies may include local governments, county, or regional agencies.



Timeline

The mitigation plan will be updated every 5 years according to FEMA regulations. However, there are projects and programs in the Mitigation Actions Matrix that will require more than 5 years to complete. Some of the actions are identified as “ongoing” since they are already in place and will continue on a regular basis through the 2025 HMP. These items are indicated as either Ongoing-Annual/Quarterly/Monthly, or Ongoing-As Needed with an explanation of what triggers the action (e.g., amending the Water Master Plan, a Board of Directors meeting, etc.).

Funding Source

External resources could include a range of FEMA mitigation grants perhaps including the Hazard Mitigation Grant Program (HMGP). Internal resources could include general fund, capital improvement budgets, impact fees, human capital, in-kind resources, etc.

Plan Goals Addressed

As mentioned earlier, the plan goals addressed by each action item are included as a way to monitor and evaluate how well the mitigation plan is achieving its goals once implementation begins. The plan goals are organized into the following five areas:

- ✓ Protect Life and Property
- ✓ Enhance Public Awareness
- ✓ Preserve Natural Systems
- ✓ Encourage Partnerships and Implementation
- ✓ Strengthening Emergency Services

Expanding and Improving Capabilities

This identifies the capability categories and applicability to individual mitigation action items. Sub-category indicators are P – Planning and Regulatory; A – Administrative and Technical; F – Finance; E – Education and Outreach. *See information earlier in this Element on Expanding and Improving Capabilities.*

Planning Mechanism

It's important that each action item be implemented. Perhaps the best way to ensure implementation is through integration with one or many of the district's existing “planning mechanisms” including the “internal resources” including the Urban Water Management Plan, Strategic Plan, Capital Improvement Projects, General Fund, and “external resources” including Grants. Opportunities for integration will be simple and easy in cases where the action item is already compatible with the content of the planning mechanism. As an example, if an action item is copied from the Strategic Plan, then the Strategic Plan will assist in implementation. On the contrary, action items in the 2025 HMP not already included in other planning mechanisms, could be added during the next update to those documents.

The Capital Improvement Program, depending on the budgetary environment, is updated every 5 years. The CIP includes infrastructure projects built and owned by the district. As such, the CIP is an excellent medium for funding and implementing action items from the Mitigation Plan. The Mitigation Actions Matrix includes several items from the existing CIP. The authors of the CIP served on the Planning Team and are already looking to funding addition Mitigation Plan



action items in future CIPs. The General Fund is the budget document that guides all of the District's expenditures and is updated on an annual basis. Although primarily a funding mechanism, it also includes descriptions and details associated with tasks and projects. Grants come from a wide variety of sources – some annually and others triggered by events like disasters. Whatever the source, the District uses the General Fund to identify successful grants as funding sources. Also see Element D: Plan Maintenance for discussion on Integration Into Other Planning Mechanisms.

Building and Infrastructure

This addresses the issue of whether or not a particular action item results in the reduction of the effects of hazards on new and existing buildings and infrastructure.

Comments

The purpose of the "Comments" is to capture the notes and status of the various action items.

Benefit/Cost Ratings

The benefits of proposed projects were weighed against estimated costs as part of the project prioritization process. The benefit/cost analysis was not of the detailed variety required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP). A less formal approach was used because some projects may not be implemented for up to 10 years, and associated costs and benefits could change dramatically in that time. Therefore, a review of the apparent benefits versus the apparent cost of each project will be performed in the future as needed. Parameters were established for assigning subjective ratings (high, medium, and low) to the costs and benefits of these projects.

Cost ratings were defined as follows:

High: Existing funding within the jurisdiction will not cover the cost of the action item so outside sources of revenue would be required.

Medium: The action item could be funded through existing jurisdictional funding but would require budget modifications.

Low: The action item could be funded under existing jurisdictional funding within the assigned lead department.

Benefit ratings were defined as follows:

High: The action item will provide short-term and long-term impacts on the reduction of risk exposure to life and property.

Medium: The action item will have long-term impacts on the reduction of risk exposure to life and property.

Low: The action item will have only short-term impacts on the reduction of risk exposure to life and property.



Priority Rating System

The Planning Team utilized the Priority Rating System designations of “High”, Medium”, or “Low” priority were assigned to each of the action items.

Does the Action:

- solve the problem?
- address Vulnerability Assessment?
- reduce the exposure or vulnerability to the highest priority hazard?
- address multiple hazards?
- benefits equal or exceed costs?
- implement a goal, policy, or project identified in the Strategic Plan or Capital Improvement Project?

Can the Action:

- be implemented with existing funds?
- be implemented by existing state or federal grant programs?
- be completed within the 5-year life cycle of the HMP?
- be implemented with currently available technologies?

Will the Action:

- be accepted by the community?
- be supported by community leaders?
- adversely impact segments of the population or neighborhoods?
- require a change in local ordinances or zoning laws?
- positive or neutral impact on the environment?
- comply with all local, state and federal environmental laws and regulations?

Is there:

- sufficient staffing to undertake the project?
- existing authority to undertake the project?

As mitigation action items were updated or written the Planning Team, representatives were provided worksheets for each of their assigned action items. Answers to the criteria above determined the priority according to the following scale.

- 1-6 = Low priority
- 7-12 = Medium priority
- 13-18 = High priority



Mitigation Actions Matrix

Table C.2: Mitigation Actions Matrix
Source: RCSD Planning Team

Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
MULTI-HAZARD MITIGATION ACTION ITEMS															
MH-1 Purchase of critical piping or hardware to facilitate emergency repairs (water and sewer facilities).	Operation (Water and Sewer)	Ongoing - Annual	R, A, F	X			X	X	Yes	CIP, HMGP	CIP, GR, SP	H	H	M	Some District piping is in excess of 50 years old.
MH-2 Seismic and Structural Retrofit of District Reservoirs/Tanks	Operations / Engineering	1-3 Years	R, A, F	X		X	X		Y	GF, HMGP	GF, CIP, GR	H	H	H	
MH-3 Construct drying bed for sewer sludge at	Operations (Sewer)	1-3 Years	R, A, F				X	X	Y	CIP, HMGP	CIP, GR	M	L	M	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
Regional lift station as current operational procedure is subject to failure in seismic or heavy rain event.															
MH-4 Purchase an Emergency Water Quality Treatment Trailer for use in Emergency Disinfection.	Operations (Water)	2 Years	R, A, F	X	X	X	X	X	Y	CIP, HMGP	CIP, GR	H	H	L	District does not currently have any mobile water treatment systems
MH-5 Purchase of Emergency Inter-tie Pumps, Pressure Regulators, and Piping for the Potable Water System.	Operations (Water)	0-5 Years	R, A, F	X	X		X	Y		CIP, HMGP	CIP, GR	H	L	H	
MH-6 Purchase a trailer or truck mounted Fuel Mobile Tanker (<500 gal) to	Operations (Water and Sewer)	0-5 Years		X	X	X	X	Y		CIP, HMGP	CIP, GR	L	L	L	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
facilitate the on-site fueling of equipment during emergency events.															
MH-7 Purchase construction equipment (i.e. shoring plates and excavators) to facilitate response and recovery in emergency events.	Operations (Water and Sewer)	0-5 Years		X		X	X	X	Y	CIP, HMGP	CIP, GR	M	H	L	
MH-8 Purchase of a Trailer Mounted Sewer By-Pass Pump / Hose to facilitate the response and recovery of emergency events within the sewer system.	Operations (Sewer)	1-3 Years		X		X	X	X	Y	CIP, HMGP	CIP, GR	H	L	M	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
MH-9 Purchase of specialized equipment and training for confined space rescue.	Operations (Water and Sewer)	1-3 Years		X		X			N	CIP, HMGP	CIP, GR	H	L	L	
MH-10 Purchase and store Emergency Shelter, Food, and Water Supplies for 35 Staff and Families to facilitate response and recovery to long term emergency event.		1 Year		X		X			N	GF	GF	H	L	H	
MH-11 Purchase and provide training for personal protective equipment for following natural hazard events. Equipment includes level III		1-3 Years		X					N	GF	GF	M	L	L	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
Protective Equipment and Globe Lighting.															
MH-12 Install Ham Radio digital models and train RCSD staff to become Ham operators.	Operations	1-5 Years	A, E	X	X		X	Y	GF, HMGP	GP, GR	M	M	L		
MH-13 Purchase satellite phones for use during heavy storms and other natural events along with other events resulting in utility outages.		1- 5 Years	A	X			X	Y	GF, HMGP	GP, GR	M	H	M		
MH-14 Participate in ERNIE Disaster Ham Radio Group.	Operations	1- 5 Years	A	X	X	X	X	Y	GF, HMGP	GP, GR	M	M	L		



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
MH-15 Prepare and promulgate mutual aid and other cooperative agreements to allow for efficient and effective emergency response. This is to include agencies outside the immediate area in the case of a major emergency.	Operations	1-2 Years	A	X	X	X	X	X	Y	GF, HMGP	GP, GR	H	H	H	
MH-16 Purchase 8" high line water piping for emergency water repairs and distribution.	Operations	1-2 Years	P	X	X	X	X	X	Y	GF, HMGP	GF, GR	H	H	H	
MH-17 Purchase 2 tracked off-road utility vehicles for use during inclement weather and other	Operations	1- 5 Years	P	X	X	X	X	X	Y	GF, HMGP	GF, GR	M	M	H	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
emergencies requiring immediate access to otherwise impassable service areas.															
MH-18 Purchase video inspection equipment and a support truck for use with water and sewer piping inspections to determine condition and vulnerability.	Operations	1 Year	P	X	X	X	X	Y		GF, HMGP	GF, GR	H	H	H	
MH-19 Purchase line cleaning Vector truck which will provide operations crews with ability to clean sewers by combining high-pressure water jetting and a high-flow vacuum source to scour pipes clean then	Operations	1-2 Years	P	X	X	X	X	Y		GF, HMGP	GF, GR	H	H	H	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
vacuum up the material causing blockages to restore and maintain normal sewer flow.															
MH-20 Purchase a large articulating forklift for placing K-Rails and other heavy equipment during emergency mitigation, response, and recovery.	Operations	1-3 Years	P, A	X			X	X	N	GF, HMGP	GP, GF, GR	H	M	M	
MH-21 Purchase property and build a centralized storage facility for emergency repairs supplies including valves and pumps.	Operations	1-2 Years	P, A, F, E	X	X	X	X	X	Y	GF, HMGP	GP, GR	H	H	M	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
MH-22 Consider providing laptops, tablets, smartphones, wireless data, SCADA and DMMS to staff to increase communications	Operations	1-3 Years	A	X	X	X	X	N	GF, HMGP	GP, GF, GR	H	H	H		
MH-23 Investigate and purchase water and sewer diversion devices that would be used during emergency mitigation, response, and recovery.	Operations	1-3 Years	P	X		X	X	N	GF, HMGP	GP, GF, GR	H	H	H		
MH-24 Purchase and installation of rain- and fire-resistant enclosures for SCADA and Telemetry Equipment.	Operations	1-2 Years	P	X		X	X	Y	GF, HMGP	GF, GR	H	L	H		



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
MH-25 Upgrade and capital improvement of older Infrastructure to enhance fire-fighting capabilities. (Upsize piping, storage and pumping capacity).	Engineering / Operations	1-5 Years	P	X		X	X	Y	GF, HMGP	GF, GR	H	H	H		
MH-26 Purchase valve exercising truck and equipment.	Operations	1-2 Years	P	X	X	X	X	Y	GF, HMGP	GF, GR	H	M	H		
MH-27 Retrofit of 5473 Mission Blvd for seismic resistance (Old CMU building built in 1940's and vulnerable to seismic collapse)	Operations	1 Year	P	X	X	X	X	Y	GF, HMGP	GF, GR	H	H	H		
MH-28 Retrofit of 3590 Rubidoux Blvd for Seismic	Operations	1 Year	P	X	X	X	X	Y	GF, HMGP	GF, GR	H	H	H		



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
Resistance (Old wood framed and partial CMU building built in 1950's).															
MH-29 Advanced Metering Infrastructure Phase I will replace 5,000 or the District's existing 7,000 traditional meters. Software. Phase II will address the remaining units.	Operations / Admin	2-5 Years	P, A	X	X		X		Y	GF, HMGP	GF, GR	H	H	M	Phase I in bidding process in 2025.
MH-30 Investigate the forced main from the Regional Lift Station to the Riverside Water Quality Control Plant (Sewage Treatment Plant) for flood and seismic vulnerability;	Operations / Engineering	1-5 Years	P	X		X	X		Y	GF, HMGP	GF, CIP, GR	H	M	M	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
implement appropriate mitigation measures.															
DROUGHT MITIGATION ACTION ITEMS															
DR-1 Construct Intertie with West Valley Water District	Engineering	1-2 Years	A, F	X	X	X	X	X	Y	GF, HMGP	GP, GR	H	M	H	
DR-2 Construct Intertie with West Valley Water District and or Riverside Public Utilities	Engineering	2-5 Years	A, F	X		X	X	X	Y	GF, HMGP	GP, GR, CIP	H	H	L	
DR-3 Construct Additional Wells for redundant Ground Water Supply	Engineering	3-7 Years	P	X		X	X	X	Y	GF, HMGP	GP, GR, CIP	H	H	M	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
DR-4 Construct Additional Reservoirs for redundant Water Storage	Engineering	3-7 Years	P	X	X	X	X	Y		GF, HMGP	GP, GR, CIP	H	H	M	
DR-5 Buy Customers Weather Based Irrigation Controllers	Admin	1-3 Years	E		X		X		N	GF, HMGP	GP, GR, UWMP	M	L	H	
EARTHQUAKE MITIGATION ACTION ITEMS															
EQ-1 Install seismic automatic shut off valves for natural gas services to District Facilities (Buildings and Generators).	Operations	1 Year	P	X			X	X	Y	GF, HMGP	GF, GR	H	L	H	
EQ-2 Reservoir Retrofit program for seismic	Engineering	1-5 Years	P	X	X	X	X	Y		GF, HMGP	GF, GR	H	H	H	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
stability and to increase the freeboard capacity.															
EQ-3 Purchase and Installation of Engineered Seismic Retrofits (e.g. Seismic Valves and Couplings) at Water Storage Facilities (Reservoirs) and Water Treatment Vessels where either not adequately anchored and/or have rigid piping connections.	Engineering	1-5 Years	P	X	X	X	X	X	Y	GF, HMGP	GF, GR	H	H	H	
EQ-4 Develop a retrofit program for all electrical control panels and power	Operations / Engineering	1-3 Years	P	X	X	X	X	X	Y	GF, HMGP	GF, GR	M	M	L	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
panels for proper seismic resistance and resilience.															
EQ-5 Atkinson Reservoir – Install flexible couplings for inlet and outlet piping to reservoirs to allow for movement in case of seismic activity.	Operations / Engineering	1-5 years	P	X	X	X	X	X	Y	GF, HMGP	GF, GR	H	M	L	
EQ-6 Hunter No. 1 Reservoir – Install flexible couplings for inlet and outlet piping to reservoirs to allow for movement in case of seismic activity.	Operations / Engineering	1-5 years	P	X	X	X	X	X	Y	GF, HMGP	GF, GR	H	M	L	
EQ-7 Perrone Reservoir – Install flexible couplings for inlet and outlet piping to	Operations / Engineering	1-5 years	P	X	X	X	X	X	Y	GF, HMGP	GF, GR	H	M	L	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
reservoirs to allow for movement in case of seismic activity.															
FLOOD MITIGATION ACTION ITEMS															
FLD-1 Purchase K-Rails for use in retaining and controlling flood waters and other spills during emergencies.	Operations	1-3 Years	P	X			X	X	N	GF, HMGP	GP, GR	M	M	H	
FLD-2 Purchase sandbag filling machine or other form of barrier protection equipment for use during flood and other emergencies.	Operations	1-3 Years	P, A, E	X	X	X	X	X	N	GF, HMGP	GP, GR	H	M	M	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
POWER OUTAGE MITIGATION ACTION ITEMS															
PO-1 Purchase Solar Power Equipment and Charging Stations for Emergency and SCADA Equipment. Natural Gas Fuel Systems - Equipment and Generators.	Operations	1-5 years	A, F	X			X	X	Yes	GF, CIP, HMGP	GP, CIP, GR, SP	M	H	L	District currently has no solar power alternative. District does not currently have generators at all critical sites.
PO-2 Upgrade District Fuel Storage Capacity to be able to fuel District Fleet and generators for duration of events up to possibly more than a week.	Operation (Water and Sewer)	1-5 Years	A, F	X			X	X	Yes	CIP, HMGP	CIP, GR, SP	L	H	L	District currently has a 1,000 gallon gasoline storage container on-site. District does not have a diesel fuel storage tank.



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
PO-3 Purchase additional portable generators in case permanent generators are taken out of service.	Operations (Water and Sewer)	1-3 Years	A, F	X	X	X	X	Y		CIP, HMGP	CIP, GR	M	H	L	District currently has 2 portable generators but none big enough to run well sites.
PO-4 Purchase Emergency Mobile & Fixed Power Generators (Water and Sewer Facilities).	Operations (Water and Sewer)	1-3 Years	R, A, F	X	X	X	X	Y		CIP, HMGP	CIP, GR	M	H	L	District currently has 2 portable generators but none big enough to run well sites.
WILDFIRE MITIGATION ACTION ITEMS															
WLD-1 Seek out methods to harden RCSD facilities to protect against wildfire.	Operations / Engineering	1-5 years	P	X	X	X	X	Y		GF, HMGP	GF, GR	H	H	L	



Mitigation Action Item	Lead Department	Timeline	Expanding and Improving Capabilities: P-Planning & Regulatory; A-Administrative & Technical; F-Finance; E-Education & Outreach	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Partnerships & Implementation	Goal: Protect Natural Systems	Goal: Protect Emergency Services	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Program, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GP-General Plan, CIP-Capital Improvement Program, GF-General Fund, GR-Grant, SP-Strategic Plan, UWMP-Urban Water Management Plan	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	2025 Comments
WLD-2 Conduct inventory of existing water delivery capabilities to ensure readiness in a wildfire.	Operations / Engineering	1-5 years	P	X	X	X	X	Y	GF	GF	H	L	L		
WIND MITIGATION ACTION ITEMS															
WND-1 Construct buildings, fencing, and gates to withstand 70 mph winds.	Operations / Engineering	1-5 years	P	X	X	X	X	Y	GF, HMGP	GF, GR	H	H	L		
WND-2 Underground electrical and other utilities to protect against 70 mph winds.	Operations / Engineering	1-5 years	P	X	X	X	X	Y	GF, HMGP	GF, GR	H	H	L		



Element D: Plan Maintenance

Q&A | ELEMENT D: PLAN MAINTENANCE | D1-a.

Q: Does the plan describe how communities will continue to seek future public participation after the plan has been approved? (Requirement 44 CFR § 201.6(c)(4)(iii))

A: See **Continued Public Involvement** below.

Q&A | ELEMENT D: PLAN MAINTENANCE | D2-a.

Q: Does the plan describe the process that will be followed to track the progress/status of the mitigation actions identified within the Mitigation Strategy, along with when this process will occur and who will be responsible for the process? (Requirement 44 CFR § 201.6(c)(4)(i))

A: See **Local Mitigation Officer, Method and Scheduling of Plan Implementation, Monitoring and Implementing the Plan, Annual Implementation Matrix** below.

Q&A | ELEMENT D: PLAN MAINTENANCE | D2-b.

Q: Does the plan describe the process that will be followed to evaluate the plan for effectiveness? This process must identify the criteria that will be used to evaluate the information in the plan, along with when this process will occur and who will be responsible. (Requirement 44 CFR § 201.6(c)(4)(i))

A: See **Evaluation** below.

Q&A | ELEMENT D: PLAN MAINTENANCE | D2-c.

Q: Does the plan describe the process that will be followed to update the plan, along with when this process will occur and who will be responsible for the process? (Requirement 44 CFR § 201.6(c)(4)(i))

A: See **Formal Update Process** below.

Q&A | ELEMENT D: PLAN MAINTENANCE | D3-a.

Q: Does the plan describe each community will follow to integrate the ideas, information and strategy of the mitigation plan into other planning mechanisms? (Requirement 44 CFR § 201.6(c)(4)(ii))

A: See **Integration into Other Planning Mechanisms** below.

Q&A | ELEMENT D: PLAN MAINTENANCE | D3-b.

Q: Does the plan identify the local planning mechanisms where hazard mitigation information/actions may be integrated? (Requirement 44 CFR § 201.6(c)(4)(ii))

A: See **Planning Mechanisms** below (repeated from Element C).

The plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and producing a plan revision every five years. This section describes how the Rubidoux Community Services District (District) will integrate public participation throughout the plan maintenance process.

Continued Public Involvement

The District is dedicated to involving the public directly in the continual review and updates to the mitigation plan. Copies of the plan will be made available at District Headquarters/Administration Building and on the District's Hazard Mitigation Plan website. The dedicated website will also contain an email address and phone number of a staff member welcoming any comments, questions, or concerns. At the discretion of the Local Mitigation Officer, a public meeting may be held after the Annual Implementation Meeting. The meeting could provide a public forum in which interested individuals and/or agencies could express their concerns, opinions, or ideas about the plan.



The Local Mitigation Officer will be responsible for using the district’s resources to publicize any public meetings and always free to maintain public involvement through the public access channel, web page, and newspapers.

Local Mitigation Officer

The Planning Team involved in research and writing of the Plan will also be responsible for implementation. The Planning Team will be led by the Planning Team Chair Brandon Thomas who will be referred to as the Local Mitigation Officer. Under the direction of the Local Mitigation Officer, the Planning Team will take responsibility for plan maintenance and implementation. The Local Mitigation Officer will facilitate the Planning Team meetings and will assign tasks such as updating and presenting the Plan to the members of the Planning Team. Plan implementation and evaluation will be a shared responsibility among all of the Planning Team members. The Local Mitigation Officer will coordinate with District leadership to ensure funding for 5-year updates to Plan as required by FEMA. The Planning Team will be responsible for coordinating the implementation of plan action items and undertaking the formal review process. The Local Mitigation Officer will be authorized to make changes in assignments to the current Planning Team.

The Planning Team will meet no less than monthly. Meeting dates will be scheduled once the final Planning Team has been established. These meetings will provide an opportunity to discuss the progress of the action items and maintain the partnerships that are essential for the sustainability of the mitigation plan. The Local Mitigation Officer (or designee) will be responsible for contacting the Planning Team members and organizing the meetings.

Plan updates will need to be approved by FEMA every 5 years. However, adequate time should be allowed to secure grant funding (if necessary), allow adequate time for a thorough planning process, and time for the formal review by Cal OES and FEMA. All said, if grant funding is going to be needed, the update timeline should begin 3 years prior to the plan’s due date to FEMA.

Method and Scheduling of Plan Implementation

	Year 1	Year 2	Year 3	Year 4	Year 5
Monitoring	Monthly	Monthly	Monthly	Monthly	Monthly
Evaluating					
Internal Planning Team Evaluation	Annual	Annual	Annual	Annual	Annual
Cal OES and FEMA Evaluation					Annual
Updating					Annual

Monitoring and Implementing the Plan

Monitoring the Plan

The Local Mitigation Officer will hold monthly meetings with representatives from the lead departments (as identified in the Mitigation Actions Matrix) in order to gather status updates on the mitigation action items. These meetings will provide an opportunity to discuss the progress of the action items and maintain the partnerships that are essential for the sustainability of the mitigation plan. See the Monthly Implementation Report (discussed below) which will be a



valuable tool for the Planning Team to measure the success of the Hazard Mitigation Plan. The focus of the annual meeting will be on the progress and changes to the Mitigation Action Items.

Evaluating and Updating the Plan

Evaluation

As discussed at the beginning of this section, the representatives from the coordinating agencies (as identified in the Mitigation Actions Matrix) will meet monthly to gather status updates on the mitigation action items. Once a year, the Local Mitigation Officer will lead a discussion with the lead departments on the success (or failure) of the Mitigation Plan to be effective and to meet the plan goals. Examples of measuring the plan's effectiveness will include assessing effectiveness include evaluating whether new hazards have emerged, whether community vulnerability has shifted, and whether stated mitigation strategies are still appropriate for the community's circumstances. The plan goals are defined at the beginning of Element C: Mitigation Strategy and each of the mitigation action items is aligned with a goal or goals.

The results of that discussion will be added to the Evaluation portion of the Monthly Implementation Report for inclusion in the 5-year update to the Plan. Efforts will be made immediately by the Local Mitigation Officer to address any failed plan goals.

Formal Update Process

As identified above, the Mitigation Action Items will be monitored for status on an annual basis as well as an evaluation of the plan's goals. The Local Mitigation Officer or designee will be responsible for contacting the coordinating agency members and organizing the annual meeting which will take place based on the month of the plan's approval. Planning Team members will also be responsible for participating in the formal update to the Plan every fifth year of the planning cycle. In the event the District desires to seek grant funding for the update, the application process should begin 2 years in advance of the plan's expiration. Even without grant funding, the planning process should begin at least 1.5 years ahead of the plan's expiration.

The Planning Team will begin the update process by reviewing the goals and mitigation action items to determine their relevance to changing situations within the district as well as changes in state or federal policy, and to ensure they are addressing current and expected conditions. The Planning Team will also review Element B: Risk Assessment portion of the Plan to determine if this information should be updated or modified, given any new available data. The lead departments responsible for the various action items will report on the status of their projects, including the success of various implementation processes, difficulties encountered, success of coordination efforts, and which strategies should be revised. Amendments will be made to the Mitigation Actions Matrix and other sections in the Plan as deemed necessary by the Planning Team.

Integration into Other Planning Mechanisms

The district addresses statewide planning goals and legislative requirements through the Strategic Plan, Capital Improvement Plan, and General Fund. The mitigation plan provides a series of recommendations - many of which are closely related to the goals and objectives of existing planning programs. The district will implement recommended mitigation action items through existing programs and procedures.



In addition, the district is responsible for adhering to the State of California's Building and Safety Codes. In addition, the district may work with other agencies at the state level to review, develop and ensure Building and Safety Codes are adequate to mitigate or prevent damage by hazards. This is to ensure that life-safety criteria are met for new construction.

Some of the goals and action items in the mitigation plan will be achieved through activities recommended in the strategic and other budget documents. The various departments involved in developing the plan will review it on an annual basis. Upon annual review, the Planning Team will work with the departments to identify areas in the plan's action items that are consistent with the strategic and budget documents. This will ensure the mitigation plan goals and action items are implemented in a timely fashion.

Upon FEMA approval, the Planning Team will begin the process of incorporating risk information and mitigation action items into existing planning mechanisms including the General Fund (Operating Budget and Capital Projects - see Mitigation Actions Matrix for links between individual action items and associated planning mechanisms). The annual meetings of the Planning Team will provide an opportunity for Planning Team members to report back on the progress made on the integration of mitigation planning elements into the district's planning documents and procedures. The timing of integration will depend on the cycles of the various planning mechanisms. As an example, state regulations require the Emergency Operations Plan to be updated every 3 years while the Strategic Plan may not be updated for another 5 years. The department representatives should be mindful of opportunities to update or implement action items assigned to their departments.

The 2025 HMP will be the first mitigation plan for the district and therefore has not yet been integrated into any other planning documents. In the future, the Planning Team will utilize the updates of the following HMP Elements into other planning documents:

- ✓ Element A: Planning Process – Stakeholders into Emergency Operations Plan, Training, and Exercises
- ✓ Element B: Risk Assessment - District Profile, Risk Assessment, Vulnerability and Impacts Assessment into Emergency Operations Plan – Hazard Analysis and Urban Water Management Plan
- ✓ Element C: Mitigation Strategy – Capability Assessment and Mitigation Actions Matrix into General Fund, Capital Improvement Program, and Grants.

Monthly Implementation Matrix

The Monthly Implementation Matrix is the same as the Mitigation Actions Matrix but with a column added to track the annual status of each Action Item. Upon approval and adoption of the Plan, the Monthly Implementation Report will be added to the Plan's **Attachments**. Following is a view of the Monthly Implementation Matrix:

Monthly Implementation Matrix will be inserted here following FEMA approval

An equal part of the monitoring process is the need to maintain a strategic planning process which needs to include funding and organizational support. In that light, at least one year in advance of the FEMA-mandated 5-year submission of an update, the Local Mitigation Officer will convene the Planning Team (as well as any other departments with responsibilities on the Mitigation



Actions Matrix) to discuss funding and timing of the update planning process. On the fifth year of the planning cycles, the Planning Team will broaden its scope to include discussions and research on all of the sections within the Plan with particular attention given to goal achievement and public participation.

Economic Analysis of Mitigation Projects

FEMA's approach to identifying the costs and benefits associated with hazard mitigation strategies, measures, or projects fall into two general categories: benefit/cost analysis and cost-effectiveness analysis.

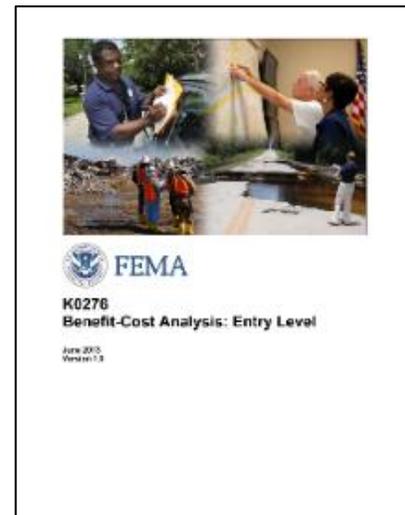
Conducting benefit/cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now, in order to avoid disaster-related damage later. Cost-effectiveness analysis evaluates how best to spend a given amount of money to achieve a specific goal. Determining the economic feasibility of mitigating hazards can provide decision-makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.

Given federal funding, the Planning Team will use a FEMA-approved benefit/cost analysis approach to identify and prioritize mitigation action items. For other projects and funding sources, the Planning Team will use other approaches to understand the costs and benefits of each action item and develop a prioritized list.

The “benefit”, “cost”, and overall “priority” of each mitigation action item was included in the Mitigation Actions Matrix located in Element C: Mitigation Strategy. A more technical assessment will be required in the event grant funding is pursued through the Hazard Mitigation Grant Program. FEMA Benefit-Cost Analysis Guidelines are discussed below.

FEMA Benefit-Cost Analysis Guidelines

The Stafford Act authorizes the President to establish a program to provide technical and financial assistance to state and local governments to assist in the implementation of hazard mitigation measures that are cost effective and designed to substantially reduce injuries, loss of life, hardship, or the risk of future damage and destruction of property. To evaluate proposed hazard mitigation projects prior to funding FEMA requires a Benefit-Cost Analysis (BCA) to validate cost effectiveness. BCA is the method by which the future benefits of a mitigation project are estimated and compared to its cost. The end result is a benefit-cost ratio (BCR), which is derived from a project's total net benefits divided by its total project cost. The BCR is a numerical expression of the cost effectiveness of a project. A project is considered to be cost effective when the BCR is 1.0 or greater, indicating the benefits of a prospective hazard mitigation project are sufficient to justify the costs.



Although the preparation of a BCA is a technical process, FEMA has developed software, written materials, and training to support the effort and assist with estimating the expected future benefits over the useful life of a retrofit project. It is imperative to conduct a BCA early in the project



development process to ensure the likelihood of meeting the cost-effective eligibility requirement in the Stafford Act.

The BCA program consists of guidelines, methodologies, and software modules for a range of major natural hazards including:

- ✓ Flood (Riverine, Coastal Zone A, Coastal Zone V)
- ✓ Hurricane Wind
- ✓ Hurricane Safe Room
- ✓ Damage-Frequency Assessment
- ✓ Tornado Safe Room
- ✓ Earthquake
- ✓ Wildfire

The BCA program provides up to date program data, up to date default and standard values, user manuals and training. Overall, the program makes it easier for users and evaluators to conduct and review BCAs and to address multiple buildings and hazards in a single BCA module run.



Element F: Plan Adoption

Q&A | ELEMENT F: PLAN ADOPTION | F1-a.

Q: Does the participant include documentation of adoption? (Requirement 44 CFR § 201.6(c)(5))

A: See **Plan Adoption Process** below.

Plan Adoption Process

Adoption of the plan by the local governing body will demonstrate the Rubidoux Community Services District's (District) commitment to meeting mitigation goals and objectives. Governing body approval legitimizes the plan and authorizes responsible agencies to execute their responsibilities.

The Second Draft Plan will be submitted to Cal OES and FEMA for review and approval. When Cal OES determines the plan to be compliant, the document will be forwarded to FEMA. When FEMA determined the plan to be compliant, an Approvable Pending Adoption notice will be issued. That will trigger the Board of Directors to conduct a public meeting. Staff will recommend adoption of the Final Draft Plan. Assuming adoption by the Board of Directors, the signed resolution will be forwarded to FEMA along with a request for a FEMA Letter of Approval.

In preparation for the public meeting with the Board of Directors, the Planning Team will post the Final Draft Plan on the District's website. Notification of the Plan's availability will also be announced via the mediums utilized during the community outreach activities. Also, the Team will prepare a staff report including an overview of the Planning Process, Risk Assessment, Mitigation Goals, and Mitigation Actions. The staff presentation will include a summary of the input received during the community outreach activities. The meeting participants will be encouraged to present their views and make suggestions on possible mitigation actions.

The Board of Directors heard the item on [REDACTED]. The Board of Directors voted to [REDACTED] the Final Draft of the Hazard Mitigation Plan. The Resolution of adoption by the Board of Directors is below:

Insert

Plan Approval

Upon adoption by the Board of Directors, the resolution was forwarded to FEMA. The FEMA Letter of Approval was issued on [REDACTED] and is below:

insert



Attachments

District Website – Landing Page – April 2025

Hazard Mitigation Plan

Notice of Public Hearing

[READ MORE >](#)

Hazard Mitigation Plan

🌟 Help Shape Our Community's Future!

Rubidoux Community Services District is creating its first Hazard Mitigation Plan (HMP) — and we need your voice!

[READ MORE >](#)

Fire Hazard Severity Zone Maps

As required by California law, the Rubidoux Community Services District is responsible for posting and maintaining up-to-date fire hazard severity zone maps for areas within its jurisdiction. These...

[READ MORE >](#)





District's Dedicated Website Postings

HAZARD MITIGATION PLAN

Hazard Mitigation Plan

🌟 Help Shape Our Community's Future! 🌟

Rubidoux Community Services District is creating its first Hazard Mitigation Plan (HMP) — and we need your voice!

🗣️ Why It Matters:

The HMP will help us identify and reduce risks from natural disasters, improve emergency strategies, and protect lives and property in our community.

📣 We Want to Hear from You!

Take our quick survey to share your thoughts and priorities:

👉 <https://www.surveymonkey.com/r/RubidouxHMP>

📞 Questions? Contact:

Melissa Trujillo

✉️ mtrujillo@rcsd.org

📞 (951) 684-7580

Together, we can build a safer, more resilient Rubidoux! 🤝

📄 [LHMP SURV.SPANISH.pdf](#)

📄 [LHMP SURV.ENGLISH.pdf](#)

📄 [Video Hazard Mitigation Overview 4.21.2025.pptx](#)



Flyers – English and Spanish – April 2025

RUBIDOUX COMMUNITY SERVICES DISTRICT

HAZARD MITIGATION PLAN

The Rubidoux Community Services District is preparing its first Hazard Mitigation Plan (HMP), and community involvement is crucial for shaping the direction of our emergency preparedness efforts. The HMP will enable the District to reassess and mitigate risks posed by natural disasters, refine current strategies, and formulate new ones aimed at safeguarding lives and property against future natural disaster events.

To learn more about the hazard mitigation plan, please visit this URL <https://www.surveymonkey.com/r/RubidouxHMP> to the Hazard Mitigation Survey. If you have any questions, please reach out to:

Melissa Trujillo, at (mtrujillo@rcsd.org) or (951-684-7580)

SCAN ME!



Please scan the QR code to the right or visit the URL listed above to participate in the survey.





RUBIDOUX COMMUNITY SERVICES DISTRICT

Plan de mitigación de Riesgos

El Distrito de Servicios Comunitarios de Rubidoux está preparando su primer Plan de Mitigación de Riesgos (PMR), y la participación comunitaria es crucial para definir la dirección de nuestros esfuerzos de preparación para emergencias. El PMR permitirá al Distrito reevaluar y mitigar los riesgos que plantean los desastres naturales, perfeccionar las estrategias actuales y formular nuevas para proteger vidas y bienes ante futuros desastres



Para obtener más información sobre el plan de mitigación de riesgos, visite este URL <https://www.surveymonkey.com/r/RubidouxHMP> to the Hazard Mitigation Survey.

Si tiene alguna pregunta, comuníquese con nosotros.

Melissa Trujillo, a (mtrujillo@rcsd.org) o 951-684-7580



ESCANEAME!

Escanee el código QR a la derecha o visite la URL que aparece arriba para participar en la encuesta.



Social Media

Instagram



Facebook

Rubidoux Community Services District

Public & Government Service

3590 Rubidoux Blvd.

+1 951-684-7580

hr@rcsd.org

rcsd.org

Promote Website

Not yet rated (0 Reviews)

Edit details

Add featured

Rubidoux Community Services District

June 4 at 3:43 PM

Reminder, Rubidoux! Have you taken our Hazard Mitigation Plan Survey yet? We... See more

HAZARD MITIGATION PLAN

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My Streamline

Item	Count	Type	Category	Date	Staff
Service Line Inventory Map	171	Page		6/12/2025	Streamline Staff
Will-Serve Letter Request Form	23	Page		6/12/2025	Streamline Staff
Street Sweeping Services	107	Page		6/11/2025	Melissa Trujillo
Street Sweeping Services	15	Page		6/11/2025	Melissa Trujillo
Holiday Closure Notice	48	Page	Homepage	6/11/2025	Melissa Trujillo
Notice of Public Hearing	64	Page	Homepage	6/5/2025	Melissa Trujillo
Personnel Committee	65	Group	Meetings	6/5/2025	Melissa Trujillo
Notice of Public Hearing	82	Page	Homepage	6/5/2025	Melissa Trujillo
Hazard Mitigation Plan	174	Page	Homepage	6/3/2025	Melissa Trujillo
Notice of Public Hearing	36	Page		5/22/2025	Melissa Trujillo
Memorandum of Understanding (MOU), Rubidoux Community Services District	0	Page		5/20/2025	Melissa Trujillo
Finance and Budget Committee	23	Group	Meetings	5/13/2025	Melissa Trujillo
Notice of Public Hearing - Water	24	Page		5/13/2025	Melissa Trujillo
Notice of Public Hearing - Wastewater	25	Page		5/13/2025	Melissa Trujillo

Hazard Mitigation Plan | 2025 Attachments

- 128 -



Press Release – June 5, 2025

Rubidoux Community Services District

Board of Directors
 Hank Truoka Jr., President
 Dawn Leja, Vice-President
 Bernard Murphy
 John Sherbels
 Leslie Altamirano

General Manager
 Brian E. Leckner



Water Resource Management Refuse Collection Street Lights Fire / Emergency Services Wood Abatement

PUBLIC NOTICE

**OF THE RUBIDOUX COMMUNITY SERVICES DISTRICT
REGARDING THE DEVELOPMENT OF A HAZARD MITIGATION PLAN**

The Rubidoux Community Services District is pleased to announce the planning process to prepare its first Hazard Mitigation Plan. The plan is required in order to maintain eligibility for certain mitigation-related funding opportunities prior to and following a major disaster. The plan is required to be updated every five years. The first task of the 2025 plan was to identify a list of hazards posing the greatest threat to the service area. These hazards included Drought, Earthquake, Flood, Wildfire, and Windstorm. The next step in the planning process was to assess the hazard vulnerabilities and impacts faced by RCSD. Future work will include identifying the proximity of critical facilities to the identified hazards followed by developing mitigation action items to minimize or eliminate threats associated with the hazards.

As the Planning Team continues its preliminary work, we want to ensure that our customers and stakeholders have an opportunity to learn and contribute to the plan. Project-related materials are now available on the District's Hazard Mitigation web page including a link to a Hazard Mitigation Survey which will help us to better understand your needs before, during, and after a major emergency.

Since the beginning of local mitigation plans back in 2005, FEMA has provided guidance relating to the preparation of local hazard mitigation plans. In 2023, the newest regulations added four areas of focus: 1) climate change impacts on hazards, 2) analysis and location of socially vulnerable populations, 3) hazard-specific impacts on socially vulnerable populations, and 4) a more robust community outreach strategy to inform and engage customers and stakeholders.

FEMA defines stakeholders as:

- ✓ Local and Regional Agencies involved in Hazard Mitigation
- ✓ Agencies with Authority to Regulate Development
- ✓ Neighboring Communities (including adjacent local governments and servicing special district)
- ✓ Business Organizations, Academia, and Community Lifelines
- ✓ Nonprofit and Community-Based Organizations working with Socially Vulnerable Populations

3090 Rubidoux Blvd., Jureka Valley, CA 92309 P.O. Box 3098 Jureka Valley, CA 92319 951-684-7500 Fax: 951-349-4861
www.rcsd.org

Water Resource Management Refuse Collection Street Lights Fire / Emergency Services Wood Abatement

In response to the new requirements regarding identification and outreach to socially vulnerable populations, the Planning Team will utilize an online tool from the U.S. Centers for Disease Control and Prevention (CDC) to identify location and ranking of the community's socially vulnerable population. The CDC has identified 16 social attributes that are used to determine percentages of social vulnerability. The CDC's Socially Vulnerable Index was designed to help emergency managers identify and map communities that will most likely need support before, during, and after a disaster. The graphic to the right depicts the 16 social attributes for social vulnerability.

Overall Vulnerability	Socioeconomic Status	Below 150% Poverty Unemployed Housing Cost Burden No High School Diploma No Health Insurance Aged 65 & Older
	Household Characteristics	Aged 13 & Younger Children with a Disability Single-Parent Households English Language Proficiency
	Racial & Ethnic Minority Status	Hispanic/Latino (any race) Black or African American, Not Hispanic or Latino Asian, Not Hispanic or Latino American Indian or Alaska Native, Not Hispanic or Latino Native Hawaiian or Pacific Islander, Not Hispanic or Latino Native Born Asian, Not Hispanic or Latino Other Asian, Not Hispanic or Latino
	Housing Type & Transportation	Multi-unit structures Mobile Homes Crowding No Vehicle Group Quarters

For any questions or comments, please contact Melissa Inajilo at 951-684-7580 or via email at inajilo@rcsd.org.

BRANDON THOMAS
Assistant General Manager

June 5, 2025



Mitigation Overview Video



Hazard Mitigation Overview

Carolyn J. Harshman, CEM
Emergency Planning Consultants



What is Hazard Mitigation?

Hazard Mitigation includes Actions Taken to Minimize or Eliminate Threats Associated with Hazards

Excellent Return on Investment

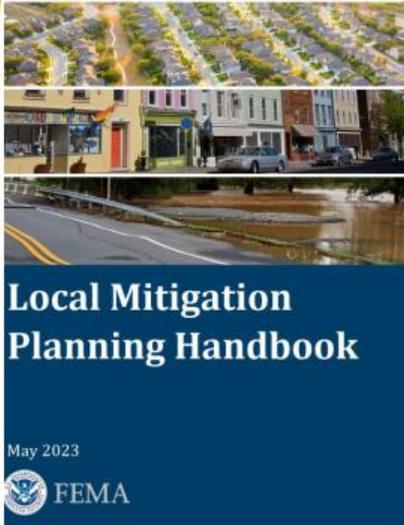
- ▶ **Mitigation:** Every \$1 spent yields a \$6 return on avoided losses in the future.
- ▶ **Building Retrofit:** Every \$1 spent yields a \$4 return on avoided losses in the future.



Benefits of Mitigation

Reductions in:

- Deaths and injuries
- Property repair costs
- Additional living expenses
- Direct and indirect business interruption
- Loss of service to the community
- Urban search and rescue costs



New FEMA Requirements

Planning Process

#1 Organize Planning Process and Resources

- ▶ Community Outreach Strategy
- ▶ Planning Team Meetings

#2 Assess Risks & Capabilities

- ▶ Risk Assessment, Vulnerability & Impacts Assessment, Mapping and Demographics
- ▶ Review Capabilities

#3 Develop Mitigation Strategy

- ▶ Develop Mitigation Actions

#4 Adopt and Implement Plan

- ▶ Community Outreach
- ▶ Formal Review Cal OES and FEMA
- ▶ Adoption by Board of Directors



Community Outreach Strategy

1st: Develop Stakeholder List

- ▶ Local and Regional Agencies Involved in Hazard Mitigation
- ▶ Agencies with Authority to Regulate Development
- ▶ Neighboring Jurisdictions
- ▶ Representatives of Businesses, Academia, and Community Lifelines
- ▶ Nonprofit and Community-Based Organizations providing services to socially vulnerable populations

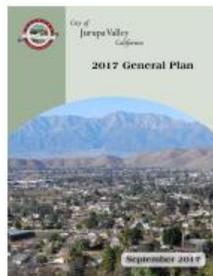
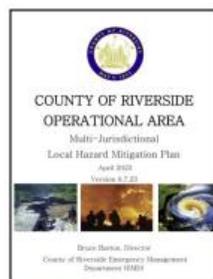
2nd: Announce Planning Process Activities to Customers and Stakeholders

- ▶ Press Release, Website, Social Media, Public Forums
 - ▶ Hazard Mitigation Survey
 - ▶ Hazard Mitigation Overview Video

3rd: Announce Availability and Gather Input on the First Draft Plan

- ▶ Customers and Stakeholders

Identifying Hazards



- ▶ Review: FEMA Hazards
- ▶ Review: California State Hazard Mitigation Plan
- ▶ Review: County of Riverside Multi-Jurisdictional Hazard Mitigation Plan and City of Jurupa Valley General Plan - Safety Element
- ▶ RCSD Planning Team chose:
 - ▶ Drought
 - ▶ Earthquake
 - ▶ Flood
 - ▶ Wildfire
 - ▶ Windstorm



Existing and Future Capabilities to Increase Resilience

- ▶ **Planning and Regulatory** - Codes, Ordinances, Policies, Laws, Plans and Programs Guiding Growth and Development
- ▶ **Administrative and Technical** - Staff, Skills, and Tools
- ▶ **Financial** - Taxes, General Funds, Utility Service Fees, Impact Fees, Grants, etc.
- ▶ **Education and Outreach** - Fire Safety, Flood Safety, Preparedness Information, etc.

Develop a Mitigation Strategy

- ▶ **Goals**
- ▶ **Coordinate Strategy with Capital Improvement Plans**
- ▶ **Comprehensive Range of Actions that will Reduce the Impacts of the Identified Hazards.**
 - ▶ **Example:**
“Purchase and install generators at all District-owned facilities.”



FEMA

Approval and Implementation

Review, Adoption, and Approval

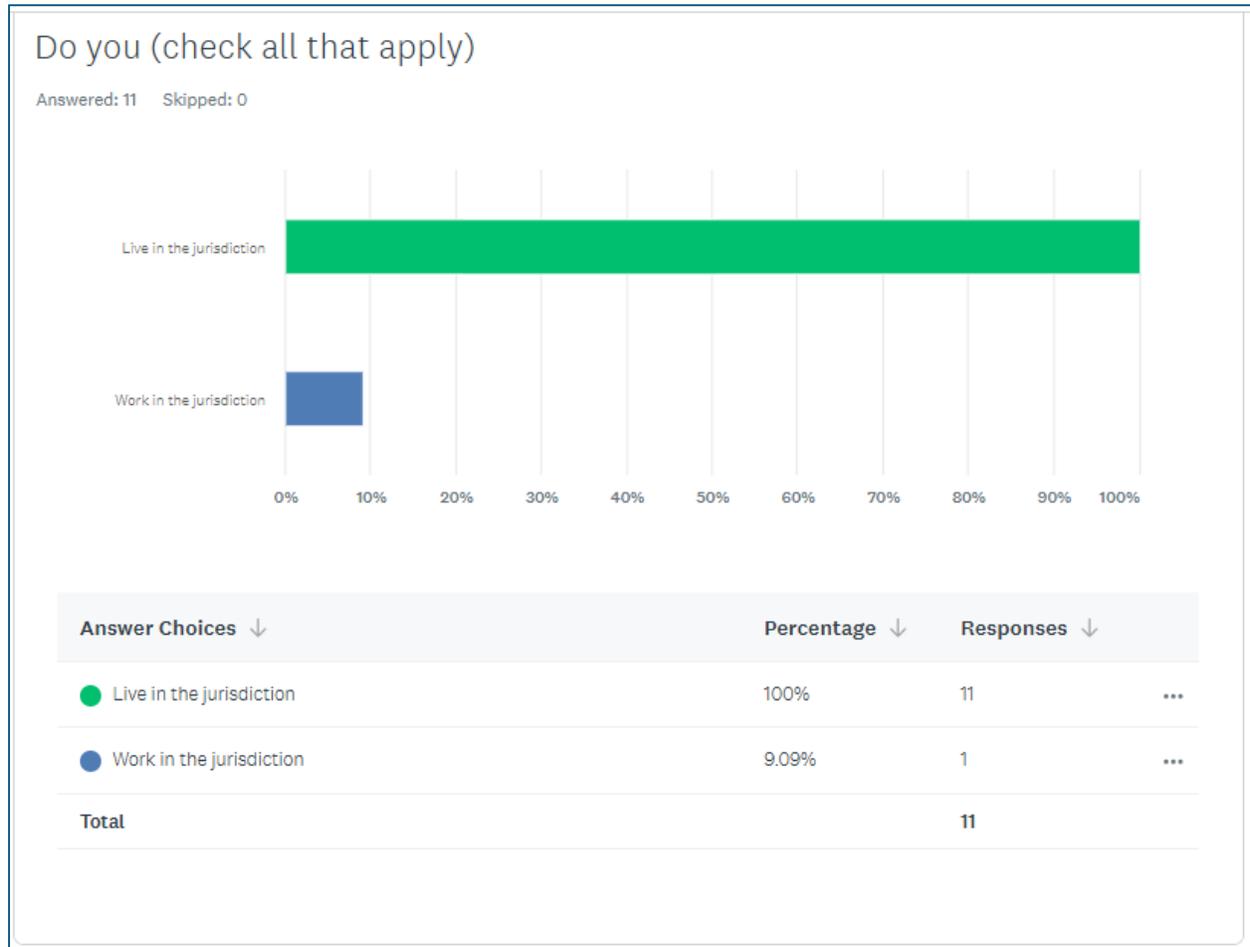
- ▶ Formal Review by Cal OES and FEMA
- ▶ FEMA Issues Approvable Pending Adoption
- ▶ Board of Directors Adoption
- ▶ FEMA Issues Letter of Approval

Implementation

- ▶ Planning Team Meets Annually
- ▶ Coordinate with CIP
- ▶ Seek Grant Funds
- ▶ Five-Year Update



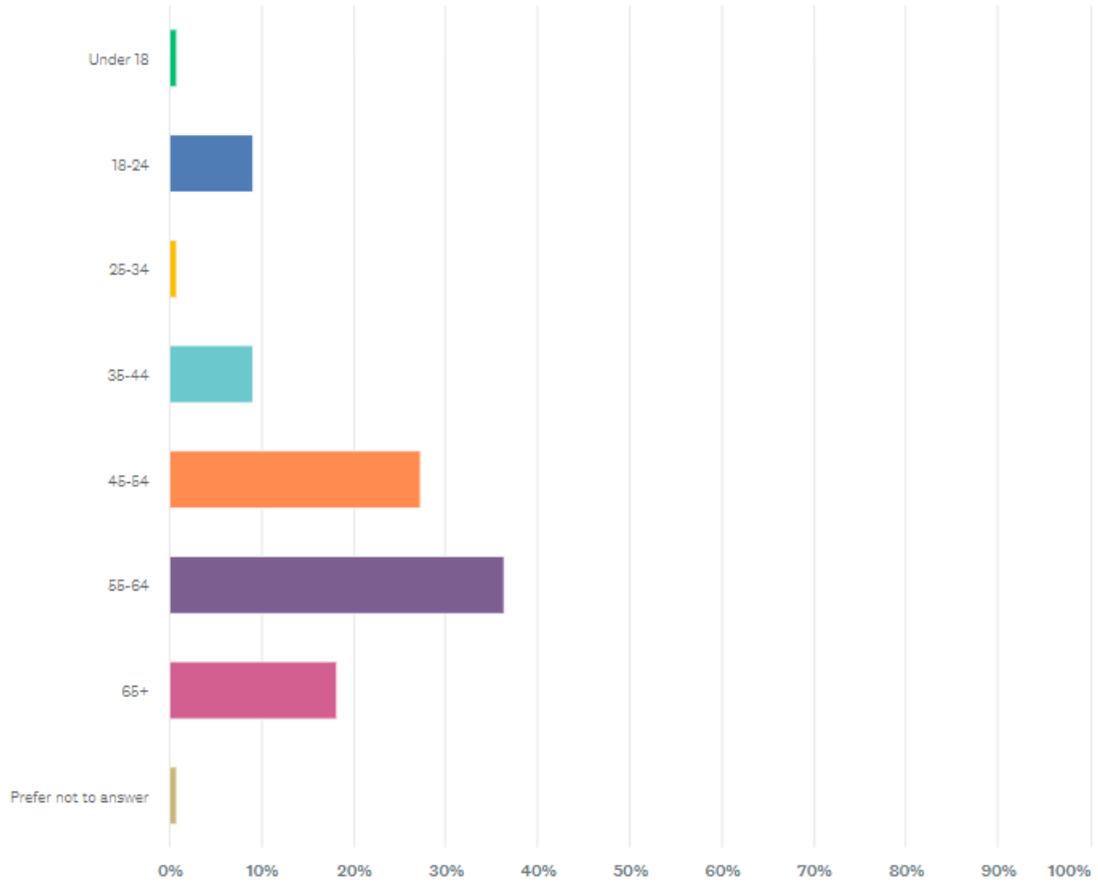
Survey Monkey Results





What is your age group?

Answered: 11 Skipped: 0





Q3

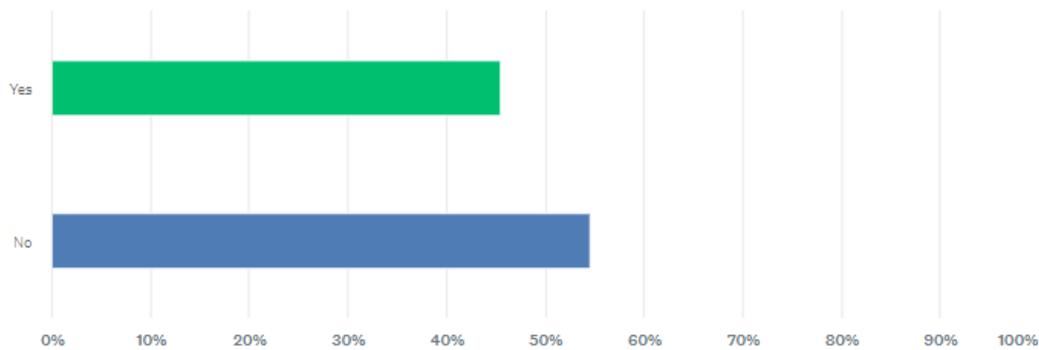


Customize

Export

During the past 5 years in Rubidoux, have you or someone in your household directly experienced a natural hazard? This could be an earthquake, severe windstorm, flood, wildland fire, or other type of natural hazards.

Answered: 11 Skipped: 0



Q4

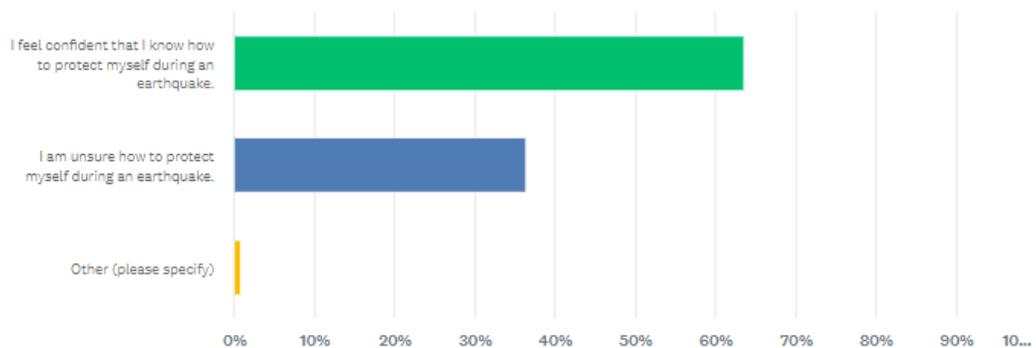


Customize

Export

If a large earthquake were to strike tomorrow...

Answered: 11 Skipped: 0





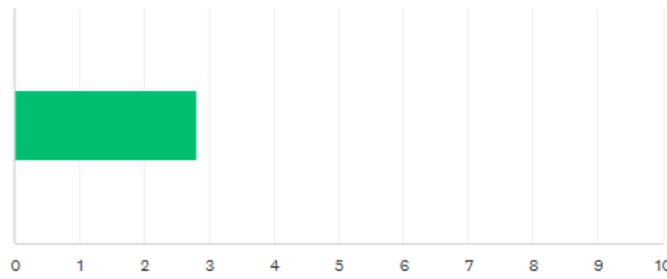
Q5

Customize

Export

How prepared is your household for a natural hazard (for example, wildland fire, flood, earthquake) on a scale of 1 to 5 with 1 being not prepared and 5 being very prepared?

Answered: 11 Skipped: 0



Q6

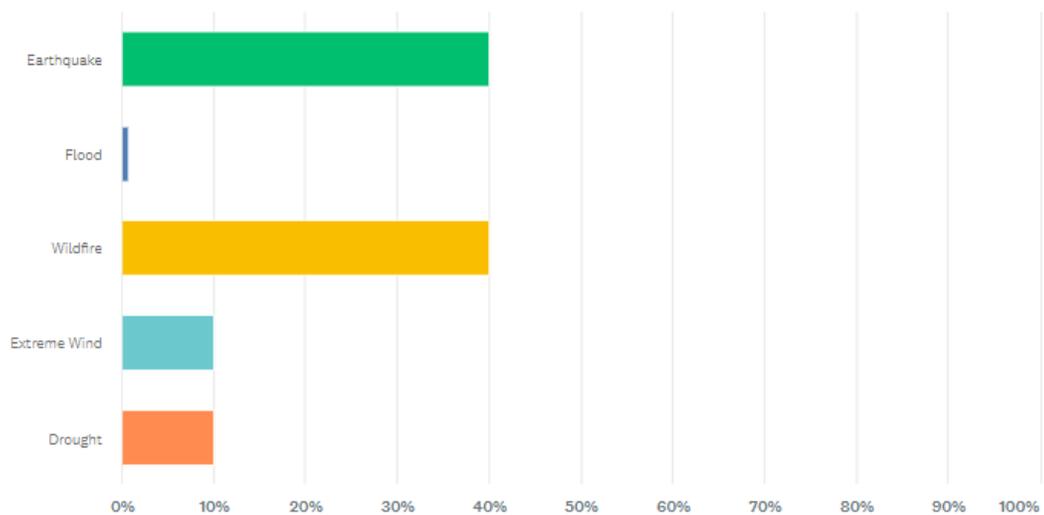


Customize

Export

The District's Mitigation Planning Team has identified a range of natural hazards that could pose a threat to the District. Select the one natural hazard that concerns you the most?

Answered: 10 Skipped: 1



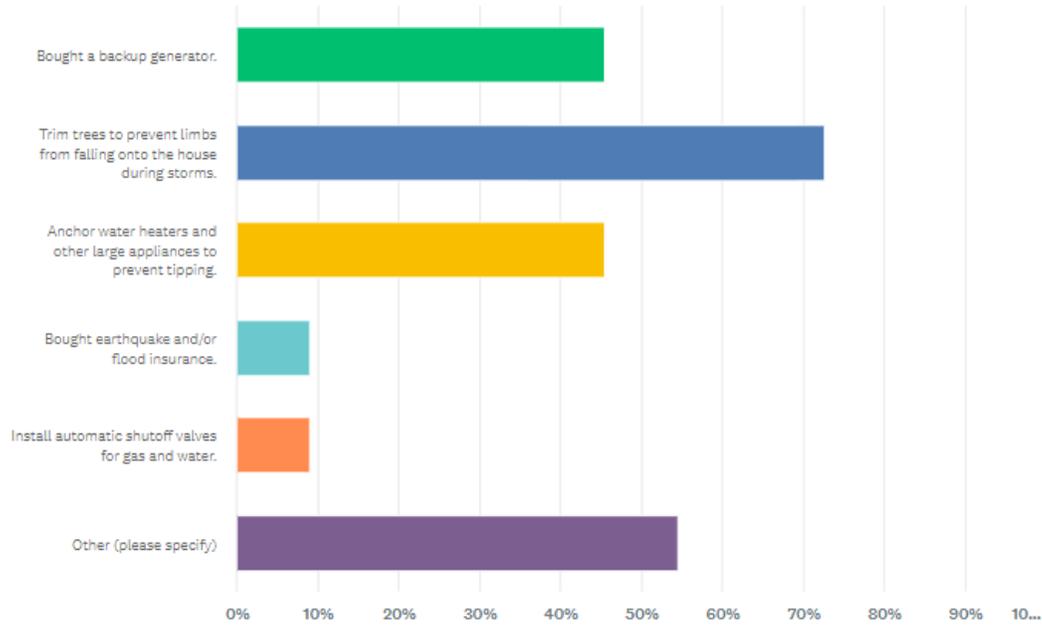


Q7

[Customize](#) [Export](#)

What steps has your household taken to Mitigate against natural hazards? (Check all that apply)

Answered: 11 Skipped: 0





Q8



Customize

Export

According to FEMA's Guide for Expanding Mitigation: Making the Connection to Equity, social vulnerability is defined as the potential for loss within an individual or social group. The term recognizes that some traits influence an individual's or group's resilience. This is their ability to prepare, respond, cope or recover from an event. Please select if you fall into any of the following groups.

Answered: 11 Skipped: 0



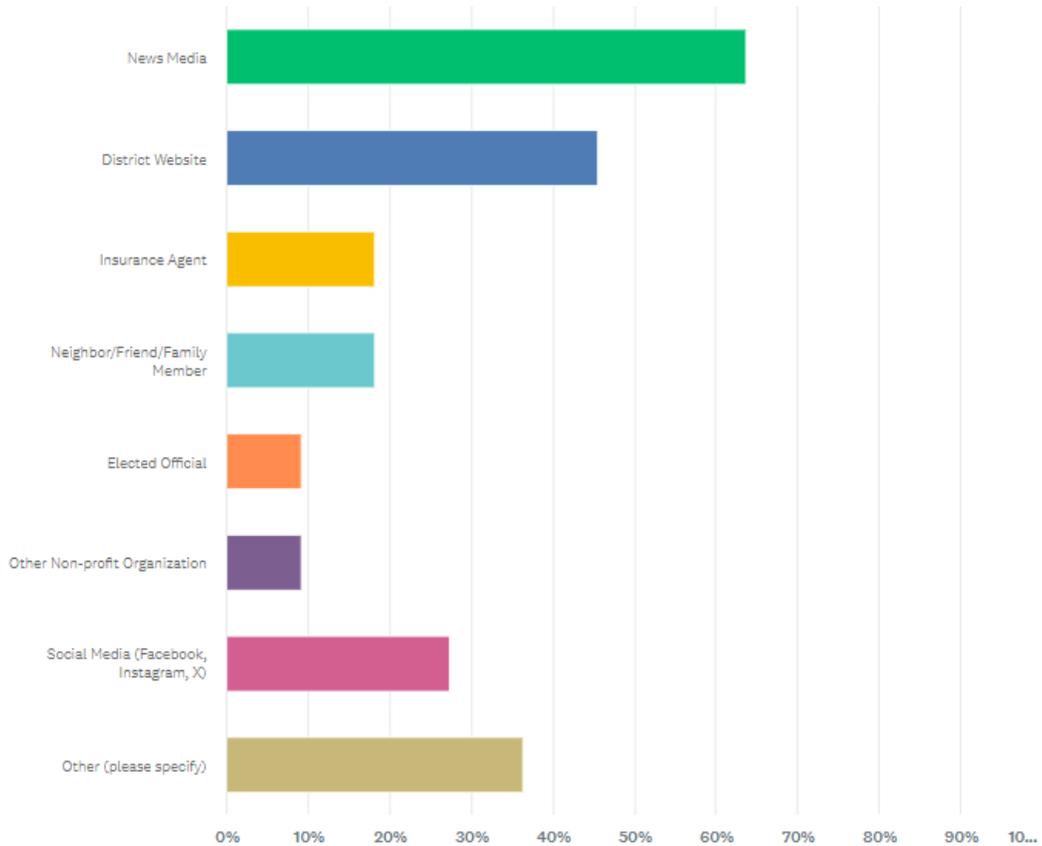


Q9

Customize Export

Choose the ways you prefer to seek information about how to make your home and neighborhood more resilient from hazards?

Answered: 11 Skipped: 0





Q10

 Export ▼

Please provide any additional comments or insight below into how local natural hazards should be mitigated.

Answered: 3 Skipped: 8

Answer #1: Provide residents with free services and install of automatic shutoff valves for gas and water, back-up generators, tree trimming, etc.

Answer #2: Newsletter

Answer #3: More local government involvement

Q11

 Export ▼

If you have any questions or additional information you would like to share regarding local natural hazards, we invite you to provide your information. This survey and your comments are completely confidential.

Answered: 1 Skipped: 10

Answer #1: More maintenance/mitigation in the river bottom.



Planning Team Meeting Minutes

January 30, 2024

Minutes
PowerPoint attached separately
Rubidoux Community Services District
Planning Team Meeting #1 (Virtual)
January 30, 2024

Attendees

Carolyn Harshman (Emergency Planning Consultants)
Ted Beckwith, Planning Team Chair
Yvonne Reyes
Anthony Strey
Miguel Valdez

1. Reviewed the purpose of hazard mitigation and examples of mitigation activities.
2. Discussed the concepts and terms related to hazard mitigation planning.
3. Reviewed the Project Schedule and Hazard Overview.

Schedule - Four meetings lasting 2-hours will be held on a monthly basis.

4. Hazard Overview - Discussed hazards identified in the County's Hazard Mitigation Plan, City of Jurupa Valley's HMP, and the State Hazard Mitigation Plan. The conclusion was to rank the following hazards during Meeting #2: earthquake, flooding, extreme wind, drought, and wildfire. The consultant shared hazard intensity maps and other information on each of the hazards.
5. Request for Pertinent Documents:
 - a. Capital Improvement Program, Strategic Plan, Emergency Response Plan.



February 8, 2024

Minutes
PowerPoint attached separately
Rubidoux Community Services District
Planning Team Meeting #2 (Virtual)
February 8, 2024

Attendees

Carolyn Harshman (Emergency Planning Consultants)
Ted Beckwith, Planning Team Chair
Yvonne Reyes
Miguel Valdez
Kirk Hamblin

1. Recapped Meeting #1 including project schedule and introduction to hazards.
2. Team using Calculated Priority Risk Index to rank hazards discussed during Meeting #1. Ranking yielded the following as “high” hazard: earthquake, drought, flood, and extreme wind. Wildfire was ranked as a “low” hazard.
3. Introduced draft Capability Assessment drawn from information on the District’s website. Minor changes were provided by the Team.
4. Introduced need to create a Critical Facilities List including values.
4. Introduced examples of hazard mitigation activities from Jurupa Community Services District and Cucamonga Valley Water District. Ted offered to put together a “project wish list” which will be distributed in advance of Meeting #3. Prior to distribution, Carolyn will transfer the projects into the format required for the Mitigation Actions Matrix. Team members will be asked to provide details including timeline, funding source, etc. for projects that would likely be assigned to their department.

Meeting #3 scheduled for February 29, 2024.



February 29, 2024

Minutes
PowerPoint attached separately
Rubidoux Community Services District
Planning Team Meeting #3 (Virtual)
February 29, 2024

Attendees

Carolyn Harshman (Emergency Planning Consultants)
Ted Beckwith, Planning Team Chair
Miguel Valdez
Brian Laddusaw

1. Recapped Meeting #2 including project schedule, Community Outreach, and Mitigation Actions Matrix.
2. Lengthy discussion on the Matrix.



July 11, 2024

Minutes
PowerPoint attached separately
Rubidoux Community Services District
Special Meeting – Community Outreach Strategy
July 11, 2024

Attendees

Carolyn Harshman (Emergency Planning Consultants)
Ted Beckwith
Miguel Valdez

Background

On May 17, 2024, Carolyn sent an email to Ted and Miguel explaining FEMA's new regulations and, more specifically, how they are being interpreted by the Cal OES and FEMA reviewers. It's clear that prior to issuing the Initial Draft Plan to the Planning Team, a Community Outreach Strategy needs to be developed and executed. A Stakeholder List needs to be developed and outreach techniques for reaching the customers about the planning process that is underway.

Meeting Discussion

A lengthy discussion ensued on the need for a robust outreach throughout the entire planning process. Carolyn emphasized the efficiency and effectiveness of taking the messaging to public forums that take place on a regular basis.

Carolyn will provide a sample press release, video, survey, and flyer (with QR code) to direct readers to the district's website. A dedicated webpage will be developed for posting project related documents including announcements, draft plans, surveys, videos, and flyers.

Also, Carolyn emphasized the importance of documenting the outreach activities (e.g., dates, screenshots, photo, social media, email/mail to Stakeholders, etc.).

Planning Team Meeting #4 won't be scheduled until the initial outreach activities have taken place and input incorporated into the Initial Draft Plan.