



## Introduction

This Annex of the Rowland Water District Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) details the hazard mitigation planning elements specific to the Pico Water District (PWD). This Annex is not intended to be a standalone document but appends to and supplements the information contained in the Rowland Water District Base Plan (RWD Base Plan) document.

The MJHMP consists of two parts: 1) RWD Base Plan, including the planning process, risk assessment and other FEMA mandated information, and 2) Annexes for each of the other agencies participating in the MJHMP planning process.

This Annex provides additional information specific to PWD including the planning process, district profile, risk assessment, vulnerability and impacts assessment, and mitigation strategy.

## Planning Process

In coordination with the MJHMP Planning Team discussed in Chapter 1: Planning Process of the RWD Base Plan, the agency representative shared the planning process with the Pico Water District Planning Team (District Planning Team). In addition to providing representation on the MJHMP Planning Team, the agency representative shared hazard information and draft plans within the agency. The table below indicates the steps in the planning process and the representative's involvement.

### 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:** See **Table 1** below.

Table 1: District Planning Team Participation

	Joe D. Basulto, General Manager	Matt S. Tryon, Superintendent	Tomas Rivera, Production Supervisor	Sondra Tututi, Production Supervisor
Research and Writing of Plan	X	X		
Planning Team Meeting 1: 9/14/22	X			
Planning Team Meeting 2: 9/28/22	X			
Strategic Staff Meeting: 11/04/2022	X			
Collaborative Meeting: 12/6/22	X	X		
Planning Team Meeting 3: 1/19/23	X	X		
Strategic Staff Meeting: 2/27/2023				
One-on-One Meeting Session: 03/06/2023	X	X		
Strategic Staff Meeting: 3/02/2023, 3/26/2023, 3/24/2023	X	X		
<b>Planning Team Meeting 4: 06/28/2023</b>	X	X		
Planning Team Comment on Initial Draft Plan	X	X	X	X
Strategic Staff Meeting: 07/12/2023, 07/24/2023, 09/19/2023,	X	X		
Strategic Staff Meeting: 01/25/2024, 09/24/2024, 10/16/2024	X	X	X	X

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Conduct Community Outreach including distribution of First Draft RWD Base Plan and PWD Annex to Customers and Stakeholders	X	X	X	X
Assist Consultant with Revisions Mandated by Cal OES and FEMA	X			
Post Final Draft RWD Base Plan and PWD Annex in Advance of Board of Directors Meeting	X			
Present Final Draft RWD Base Plan and PWD Annex to Board of Directors for Adoption	X			

**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 **Community Outreach – Customers, Input** 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 **Community Outreach – Stakeholders, Input, Table 2** below.

*Community Outreach*

Customers

The RWD Base Plan – Planning Process provides details on the community outreach campaign conducted during the plan writing phase. In January 2024 each planning participant distributed information to their customers and stakeholders about the planning process and the availability of the draft plan. PWD utilized public forums (Board of Directors), social media, bill inserts, newsletter, and PWAG and PWD websites to inform the customers of the planning process and plan’s availability.

Stakeholders

The stakeholders were informed via email and directed to the websites.

Input

PWD did not receive any input from the customers or stakeholders as a result of the outreach activities mentioned above.

**Table 2** is the list of stakeholders identified for this project. In compliance with FEMA requirements, the stakeholders were categorized by:

- ✓ Local and Regional Agencies Involved in Hazard Mitigation Activities
- ✓ Agencies with Authority to Regulate Development
- ✓ Neighboring Communities
- ✓ Business Organizations, Academia, and Private Organizations
- ✓ Nonprofit Organizations and Community-Based Organizations

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Table 2: Stakeholder List by Category

Local and Regional Agencies Involved in Hazard Mitigation Activities	Agencies with Authority to Regulate Development	Neighboring Communities	Business Organizations, Academia, and other Private Interests (Including Community Lifelines)	Nonprofit and Community-Based Organizations	Agency Represented, Name, Position Title
					Pico Water District Planning Team
X					Joe D. Basulto, General Manager
X					Matt S. Tryon, Superintendent
X					Tomas Rivera, Production Supervisor
X					Sondra Tututi, Production Supervisor
					Pico Water District Board of Directors
	X				<b>Elpidio "Pete" Ramirez, President</b>
	X				Raymond Rodriguez, Vice President
	X				David E. Argudo, Director
	X				John P. Escalera, Director
	X				Cesar J. Barajas, Director
					External Agencies
	X				County of Los Angeles (Public Works), Janice Hahn, Supervisor 4th District
	X				Los Angeles County Fire Department, Shelia Kelliher, Public Information Office
	X				Army Corps of Engineers (Los Angeles District), N/A, Emergency Management
	X				Los Angeles County Sheriff (Pico Rivera Station), Jody Hutak, Captain
	X	X			City of Pico Rivera, Steve Carmona, City Manager
	X	X			City of Pico Rivera (Department of Community & Economic Development), Alvie Bentancourt, Director
		X			Montebello Land & Water Co., Korey Bradbury, General Manager
		X			South Montebello Irrigation District, Alberto Corrales, General Manager
		X			City of Whittier, Brian Saeki, City Manager
			X		Central Basin Municipal Water District, Auner Lopez, Senior Accountant
			X		Water Replenishment District, Stephen Tucker, General Manager
		X			South El Monte, Rene Salas, City Manager
		X			City of Montebello, Raul Alvarez, City Manager
			X		Pico Rivera Chambers of Commerce, Julian Balderas, Executive Director



Local and Regional Agencies Involved in Hazard Mitigation Activities	Agencies with Authority to Regulate Development	Neighboring Communities	Business Organizations, Academia, and other Private Interests (including Community Lifelines)	Nonprofit and Community-Based Organizations	Agency Represented, Name, Position Title
			X		Rio Hondo College, Marilyn Flores, Superintendent
			X		El Rancho School District, Marco Villegas, Superintendent
			X		Los Angeles County Library, Lauren Talbott, Library Manager
				X	<b>Pico Rivera Women's Club, Carolyn Castillo, Treasurer</b>
				X	Pico Rivera Senior Center, Lizet Olmos, Supervisor
				X	American Red Cross (Los Angeles Region), Erica Frausto -Aguado, Regional Disaster Officer
				X	See RWD Base Plan for Nonprofit and Community-Based Organizations List

**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.

### NFIP Participation

The Pico Water District is exempt from implementing or purchasing flood insurance through NFIP.

**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 and Severe Repetitive Loss Properties** below.

### *Repetitive Loss and Severe Repetitive Loss Properties*

Repetitive Loss Properties (RLPs) and Severe Repetitive Loss Properties (SRLPs) are most susceptible to flood damage and therefore have been the focus of flood hazard mitigation programs. Unlike a countywide program, a 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 and SRLP 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 Repetitive Loss Properties or Severe Repetitive Loss Properties are located in the Annex project area.

<b>Q&amp;A   ELEMENT C. MITIGATION STRATEGY   C1-a.</b>
<b>Q:</b> 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))
<b>A:</b> See <b>Capability Assessment, Table 3</b> below.

## Capability Assessment

The district will incorporate mitigation planning as an integral component of daily operations. This will be accomplished through the leadership of the agency’s Planning Team representative in coordination with agency departments involved in integrating mitigation strategies into their planning documents and operational guidelines. FEMA identifies four types of capabilities (see RWD Base Plan for definitions of the capability types):

- ✓ Planning and Regulatory
- ✓ Administrative and Technical
- ✓ Financial
- ✓ Education and Outreach

**Table 3** below includes a broad range of capabilities within the agency to successfully accomplish mitigation.

Table 3: Capability Assessment for Pico Water District  
Source: District Planning Team

Type of Capability				Name of Capability	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Finance	Education and Outreach		
X	X	X	X	Board of Directors	The District is governed by a five-member board. The Directors are <b>elected by registered voters who reside within the District’s service area.</b> The Board of Directors establishes District policy and makes <b>decisions based on the District’s mission statement, goals and operational needs. The Board’s policies are administered and implemented by the General Manager, who is hired by the Board.</b> Board elections are held every two years and Directors serve a four-year term of office. Terms are staggered to ensure continuity. Board members are obliged to uphold the Constitution of the United States and the Constitution of the State of California, and to act in accordance with local, state and federal laws regulating Board member conduct, including conflict of interests and financial

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Type of Capability				Name of Capability	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Finance	Education and Outreach		
					disclosure laws. Board members should work in full cooperation with other public officials unless prohibited by law or prohibited by an officially recognized confidentiality of their work.
X	X	X	X	General Manager	Under general direction from the Board of Directors, the General Manager is in charge of the day to day activities of the District (administrative, public relations, personnel, and general affairs of <b>the District</b> ); carries out the Board's policies and programs with employees, community organizations, and the general public; reviews budget requests and makes recommendations to the Board on final expenditure levels; and is responsible for employer-employee relations.
X	X	X		Director of Operations	Under general direction from the General Manager, plans, organizes, schedules, assigns, inspects; and reviews the construction, maintenance, repair and operation of water production and distribution systems; provides technical staff assistance and does related work as required.
X	X	X		Office Manager	Under general direction from the General Manager, plans and supervises the accounting, billing, payroll, data processing, customer service and collection activities. Also assures that complex and advanced financial record keeping and analysis is performed, and performs other related work as required.
X				Production Supervisor	Under general direction from the Director of Operations, the Production Supervisor performs a wide variety of duties that support the Field Superintendent with the operation and <b>maintenance of the District's production system and fills in for the Superintendent</b> when Superintendent is absent.
X				Water Maintenance Lead Worker	Under general supervision from the Director of Operations the Lead Worker performs the full range of maintenance, installation, and repair assignments with minimal supervision and training and provides coordination and work direction to field staff and leads <b>field crews in the maintenance and repair of the District's distribution system.</b>
X				Water Maintenance II Worker	Under general supervision from the Director of Operations, the Water Maintenance II classification performs the full range of water service system maintenance, installation, and repair assignments with minimal supervision and training.
X				Water Maintenance I Worker	Under close supervision from the Director of Operations or his designee, the Water Maintenance I classification performs the

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Type of Capability				Name of Capability	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Finance	Education and Outreach		
					more routine and repetitive maintenance, installation, and repair assignments. As incumbents develop job knowledge and skills, they may begin performing duties and responsibilities characteristic of a more advanced job. When sufficient experience has been obtained, as well as all required certifications and an ability to work independently has been demonstrated, an incumbent may be eligible for promotion to a higher-level position.
X	X	X		Billing Clerk	Under general supervision of the Office Manager, performs clerical work in connection with the processing of bills; maintains detailed accounting records of customer accounts; responds to general customer inquiries and complaints; performs related duties as required.
X			X	Customer Service Representative	Under general supervision from the Office Manager, provides a variety of customer service duties, involving the processing of water applications and billings; responds to general customer complaints and inquiries; performs more advanced and technical customer service support to the office staff including backup to the Billing Clerk.
Allied Partner					
X	X	X	X	Public Water Agencies Group	The PWAG Emergency Management Coordinator provides emergency management services to all of the 20 PWAG members. Services include development and maintenance of agency-specific Emergency Response Plans, updates to AWIA reports, training and exercises, and support throughout the development of the Rowland Water District MJHMP.
Plans and Policies					
X	X			Building Code	The Pico Water District is a special district.  Special districts and mutual water companies are subject to different requirements when it comes to permitting for buildings and facilities. Special districts are only subject to the local permitting authority (city, county, or state) when constructing <b>publicly accessible buildings within a local jurisdiction's</b> 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 infrastructure. For such water-related



Type of Capability				Name of Capability	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Finance	Education and Outreach		
					<p>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.</p> <p>Mutual water companies are subject to the permitting authority of a local agency having jurisdiction (city, county, or state) and the codes adopted by that agency will apply. For mutual water companies this includes publicly accessible buildings, as well as water-related facilities such as water storage/production facilities, treatment facilities, and distribution infrastructure.</p>
X	X			Land Use and Development Regulations	The District manages its own land use and development. Concurrently, the District provides services based on the land use and development regulations for the jurisdictions they serve.

**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 District Capabilities** below.

## Expanding and Improving District Capabilities

*Planning and Regulatory Capabilities* – The Pico Water District General Manager is responsible for directing and supervising the administrative functions and operations of the District. These responsibilities include leading and supervising all departments to achieve goals within available resources while providing leadership and direction in the development and execution of short- and long-range plans. The General Manager also monitors and takes action to protect the District’s interests involving new legislation, including developing and maintaining relationships with legislators and other local governing bodies. PWD’s Urban Water Management Plan was last updated in 2020. This plan outlines the water infrastructure needs until the District reaches build-out. The General Manager will be instrumental in supporting the development, maintenance, and implementation of the Hazard Mitigation Plan, including the mitigation actions. See **Mitigation Actions Matrix** for specific actions.

*Administrative and Technical* - The District has existing capabilities that are typical for water agencies. The District has a General Manager who leads strategic planning and overall management of day-to-day activities. Third party consultants manage the information technology, engineering, engineering design, and Geographic Information Systems. The District also has a



mix of in house and third-party consultants to manage inspections, water treatment operations, facilities operations, and fleet maintenance. Additionally, the District has an Emergency Response Plan to reference and guide operations during a major emergency impacting the company. See **Mitigation Actions Matrix** for specific actions.

*Finance* - The PWD long-term financial master plan is reviewed and updated annually basis to evaluate long-term goals, last conducted during FY 2022. The development, maintenance, and implementation of the Hazard Mitigation Plan will benefit from having mitigation projects outlined in the financial master plan. See **Mitigation Actions Matrix** for specific actions.

*Education and Outreach* – Pico Water District has outsourced its strategic communications, community outreach, water conservation outreach, special events, school education programs, and media relations Mitigation actions related to the private construction of new structures or retrofits or improvements to existing structures may be supported with public education and other efforts of the Communications & Outreach Division. See **Mitigation Actions Matrix** for specific actions.

## Plan Implementation

As identified in the RWD Base Plan, the MJHMP Planning Team has agreed to reconvene on a bi-annual basis to review the Base Plan and Annexes. In addition to those meetings, the district representative will gather a Planning Team together on a quarterly basis to discuss the Agency's Mitigation Actions Matrix. The members of the District's Planning Team will represent the departments/positions with responsibilities identified in the Mitigation Actions Matrix. See RWD Base Plan – Mitigation Strategies section for a description of the categories portrayed in the Matrix.

## Integration with Existing Programs

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's Local Mitigation Officer will be responsible for implementing recommended mitigation action items through existing programs and procedures.

Some of the goals and action items in the MJHMP will be achieved through activities recommended in the agency's policy, capital, and funding documents. The MJHMP will be reviewed on a bi-annual basis during a gathering of the various MJHMP Local Mitigation Officers. Upon the bi-annual review, the District's Local Mitigation Officer will work with other agency departments or positions to identify areas where the Mitigation Actions Matrix items are consistent with the policy, capital, and funding documents to ensure the Plan goals and action items are implemented in a timely fashion.

Upon FEMA approval, the MJHMP Planning Team will begin the process of incorporating risk information and mitigation action items into existing planning mechanisms. The bi-annual meetings of the Team will provide an opportunity for Team members to report back on the progress made on the integration of mitigation planning elements into the planning documents and procedures of the various jurisdictions. Specifically, the District's Local Mitigation Officer will utilize the following sections of the Plan to make revisions to other documents within the agency:



- ✓ Risk Assessment Section (RWD Base Plan), Agency Profile, Planning Process (stakeholders) – Emergency Response Plan, Facilities Maintenance Plans, Urban Water Management Plan, Risk and Resilience Assessment, etc.
- ✓ Mitigation Actions Matrix – Capital Projects, Grants, Bonds

## Pico Water District Profile

The profile includes an overview of the district, population, geography, and climate.

Pico Water District was formed in 1926 as a County Water District under the State Water Act of 1913, to provide water service to the 243 homes then situated in the community of Pico. Prior to the incorporation of Pico Rivera in 1958, the area consisted of two unincorporated towns, Pico and Rivera. Before the formation of the District, those homes were served by five small water systems, which depended on groundwater wells to provide water to the residents. The problem with those systems was that the residents who lived near the wells got most of the water and the strongest water pressure, while people who lived further away from the wells received water at very low pressure. The Pico-Rivera Chamber of Commerce was instrumental in creating the District, by showing the residents that if they wanted to maintain and increase the value of their homes, they needed an improved water system.



The residents began efforts to form the District. However, because the assessed valuation of the residents' properties did not exceed the \$1 million necessary to secure the \$130,000 in bond funding to construct the new water system, the residents convinced local ranchers to join in the District so that the assessed valuation would exceed the required \$1 million threshold. Voters approved the proposal and Pico Water District was established.

Over the years, the District has grown from its initial 243 service connections, to 608 in 1936, 1,048 in 1946, 4,765 in 1956 (as you can see, significant growth occurred in the post-World War II years), 5,076 in 1966, 5,233 in 1976, to 5,403 connections in 2020, serving the District's 2.3-square-mile service area. Today the District provides water service to its customers through the use of five active wells ranging in water production from 700 to 2,800 gallons per minute, and one 1.25-million-gallon reinforced concrete reservoir. The District pumps all of its water from the underground aquifer known as the Central Basin, which is an adjudicated water basin. The District delivers water to residential, commercial, industrial, and governmental customers.

In 2008, the District's Board of Directors approved development of a Water System Master Plan to determine areas in need of improvement and help management make strategic decisions that would improve upon the reliability and efficiency of the District. Pico Water District is fortunate to sit on top of the Central Groundwater Basin, a large underground body of sand and gravel that holds billions of gallons of fresh groundwater that is naturally filtered as it slowly moves through these sediments. Because of this, Pico Water District uses wells to pump out this groundwater to meet 100% of our supply needs. Therefore, we do not need to buy more expensive imported

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water from the Metropolitan Water District of Southern California (MWD), saving our customers money on their monthly water bills.

The basin is replenished naturally by rainfall and river water, which can originate as snowmelt from the San Gabriel Mountains. The Water Replenishment District of Southern California (WRD) adds to this natural recharge through the use of highly treated recycled water from the Los Angeles County Sanitation Districts and the Albert Robles Center. WRD ensures that the basin remains replenished with much more groundwater than Pico Water District needs. Pico Water District's system is comprised of the following facilities:

- 5 active wells
- 1.25 million gallon storage tank
- 52 miles of pipelines ranging in size from 4 to 14 inches in diameter
- 3 booster pumps with combined pumping output of 2400 gallons per minutes
- 5581 total meters

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Map 1: Pico Water District Boundary  
Source: PWD Website, 2023



The District’s assets are as follows:

The Pico Water District office is located at 4843 S. Church Street, Pico Rivera, CA 20660. The majority of the District’s service area is within the City of Pico Rivera.

Table 4: Pico Water District Assets  
Source: District Planning Team

Facility Name and Type	# Occupants	# Buildings	\$ Structure Value	\$ Contents Value	\$ Total Value
District Office & Yard 4843 Church Street, Pico Rivera	10	4	\$1,655,030	\$1,868,036	\$3,523,066



Facility Name and Type	# Occupants	# Buildings	\$ Structure Value	\$ Contents Value	\$ Total Value
Well #2	0	1	\$406,000	\$96,854	\$502,854
Well #4A	0	1	\$261,000	\$189,668	\$450,668
Well #5A	0	1	\$493,000	\$262,205	\$755,205
Well #6	0	1	\$118,784	\$83,257	\$202,041
Well #7	0	1	\$403,100	\$260,835	\$663,935
Well #8	0	1	\$339,300	\$260,835	\$600,135
Well #9A / Cate Reservoir	0	2	\$1,403,136	\$2,041,598	\$3,444,734
Well #10	0	1	\$329,208	\$228,252	\$557,460
Well #11	0	2	\$573,040	\$968,879	\$1,541,919
Totals	10	16	\$ 5,981,598	\$ 6,260,419	\$ 12,242,017

## Geography and Climate

According to the 2020 County of Los Angeles All-Hazards Mitigation Plan, the 2018 Our County: Landscapes and Ecosystems, and the City of Pico Riviera General Plan the following information identifies the geography and climate of the project area.

### Geography

Underlying the livability and economic vitality of a community is its perceived image. Quality in the design of the built environment is an investment that pays dividends in residents' perceptions of their quality of life and the perceptions that prospective employers and retailers will have regarding the desirability of Pico Riviera as a location for their businesses.

Pico Riviera's existing community character is a result of its natural setting, a compact community flanked by two rivers, and the history of the area, which began as Spanish and Mexican ranchos and later evolved into two small separate residential communities situated between the rivers – the towns of Pico and Riviera—that were ultimately incorporated into the City of Pico Riviera.

The city has enjoyed a marked improvement in the quality of its built environment over the past 20 years. New investments have been made in large-scale commercial development along Whittier and Washington Boulevards, and a modern industrial park has replaced the former Northrup manufacturing plant. In addition, significant investment has been made in upgrading streetscapes, as evidenced by recent improvements along Beverly, Rosemead, Washington, and Paramount Boulevards including the Parsons Boulevard Underpass project.



**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 44 CFR § 201.6(c)(2)(ii))

A: See **Climate** below.

### *Climate*

Los Angeles County has a Mediterranean-type climate, characterized by cool wet winters and warm dry summers. With a population of over 10 million residents, the county is the most populated in California, and one of the largest counties in size in the nation. Los Angeles County boasts a diversity of landscapes, and species and is made up of a vast unincorporated area and 88 cities that span mountains, deserts, beaches, and islands. The County is also biologically diverse. Southern California is home to the largest set of threatened and endangered plants and animals in the continental United States, making it the most urbanized area to be designated one of Conservation International's global Biodiversity Hotspots.

Urban ecosystems are dynamic combinations of natural, social, and constructed features. The County's ecosystems span natural and urban landscapes and can be thought of as an interconnected system of biological communities with organisms interacting with a range of physical environments. This diverse ecosystem not only serves as important habitat for the region's biodiversity, but provides extraordinary value to residents through recreational and educational opportunities, agricultural and other extractive land uses, aesthetic enjoyment, and a variety of other ecosystem services such as shading, air purification, water filtration, and flood control. (<https://ourcountyla.lacounty.gov>)

### **Climate Vulnerability Assessment**

According to "California's Fourth Climate Change Assessment" developed by the State of California, continued climate change will have a severe impact on California. Increased temperatures, drought, wildfires, and sea level rise are several of the main concerns related to climate change in the Southwest. Other impacts anticipated from climate change include food insecurity, increases in vector-borne diseases, degradation of air quality, reduced ability to enjoy outdoors, and potential economic impacts due to uncertainty and changing conditions.

Climate change disproportionately affects those with existing disadvantages. Low-income communities and communities of color often live in areas with conditions that expose them to more severe hazards, such as higher temperatures and worse air quality. These communities also have fewer financial resources to adapt to these hazards. For instance, low-income populations may reduce air conditioning usage out of concerns about cost. Outdoor workers, individuals with mobility constraints, and sensitive populations such as the very young, elderly, and poor, as well as those with chronic health conditions, are particularly at risk from climate change hazards.

To understand how climate change might affect the Pico Water District, the Cal-Adapt tool was used to analyze data. "Cal-Adapt provides a way to explore peer-reviewed data that portrays how climate change might affect California at the state and local level" ([cal-adapt.com](http://cal-adapt.com)). Cal-Adapt can provide a climate snapshot for an address, county, city, census tract, or watershed. Since the majority of the Pico Water District service area is within the City of Pico Riviera, the City's data was used for this analysis. Below is a summary of the data reviewed for the City of Pico Riviera.



**Increased Temperature:** Annual maximum temperatures in the City of Pico Riviera are expected to rise steadily through the end of the century. The City’s historical average maximum temperature is based on data from 1961-1990, is 78.3°F. Under the medium emissions scenario, the average annual maximum temperature is projected to increase to 82.4°F during the Mid-Century (2035-2064). Between 2070 and 2099 the annual average maximum temperature under the high-emission scenario is projected to increase to 86.5°F.

**More Extreme Heat Days:** Extreme Heat Days occur when the maximum temperature is above 100.5°F. Historically the City of Pico Riviera has experienced an average of 3 extreme heat days per year. By mid-century, 2025-2064, the annual number of extreme heat days is expected to rise to 12 under medium emission scenarios and 15 under high emission scenarios. By the end of the century, 2070 and 2099, the number of extreme heat days is expected to rise to 16 under medium emission scenarios and 33 under high emission scenarios.

**Static Annual Precipitation:** Historically the City of Pico Riviera has experienced an annual average of 15.5 inches of precipitation. Annual precipitation is expected to remain static during the mid-century. Under the medium emission scenario, it is expected that the annual precipitation will remain steady at 15.1 inches. Under the high emission scenario, it is expected that the annual precipitation will be 15.2 inches. By the end of the century, annual precipitation is expected to increase to 15.6 inches under the medium emission scenario and 15.3 inches under the high emission scenario.

**Longer and More Extreme Droughts:** The City of Pico Riviera can expect to see a 11.3% Increase in average temperature and a 26.7% decrease in precipitation during drought conditions. This will lead to longer, more extreme drought conditions in the late century.

**Steady Wildfire Threat:** Wildfire data is analyzed at the county level. The City of Pico Riviera is within the county of Los Angeles. Based on historical data from 1961–1990, Los Angeles County experiences a decadal average loss of 4,436.1 hectares to wildfire. The probability that wildfire will occur in any one year over a 10-year period, known as the decadal probability, is projected to remain constant through 2099 under both high-emissions and low emissions scenarios. Under the low-emissions scenario, the decadal average loss to wildfire is expected to increase to 5,719.2 hectares by mid-century and 5662.9 hectares by 2099. Under the high-emissions scenario, the decadal average loss to wildfire is projected to rise to 5,579.7 hectares by 2065 and 5,275.4 hectares by the end of the century.

## Land Use

The District reviewed the current and projected land uses within its service area during the preparation of this 2020 Plan. Information regarding current and projected land uses are included in the Los Angeles County 2035 General Plan. The existing land uses within the District’s service area include residential (single-family and multi-family), industrial, commercial, and open space. Based on the Los Angeles County 2035 General Plan, the projected land uses within the District’s service area are expected to remain similar to the existing land uses.

### 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 **Hazard Identification and Profile** below.

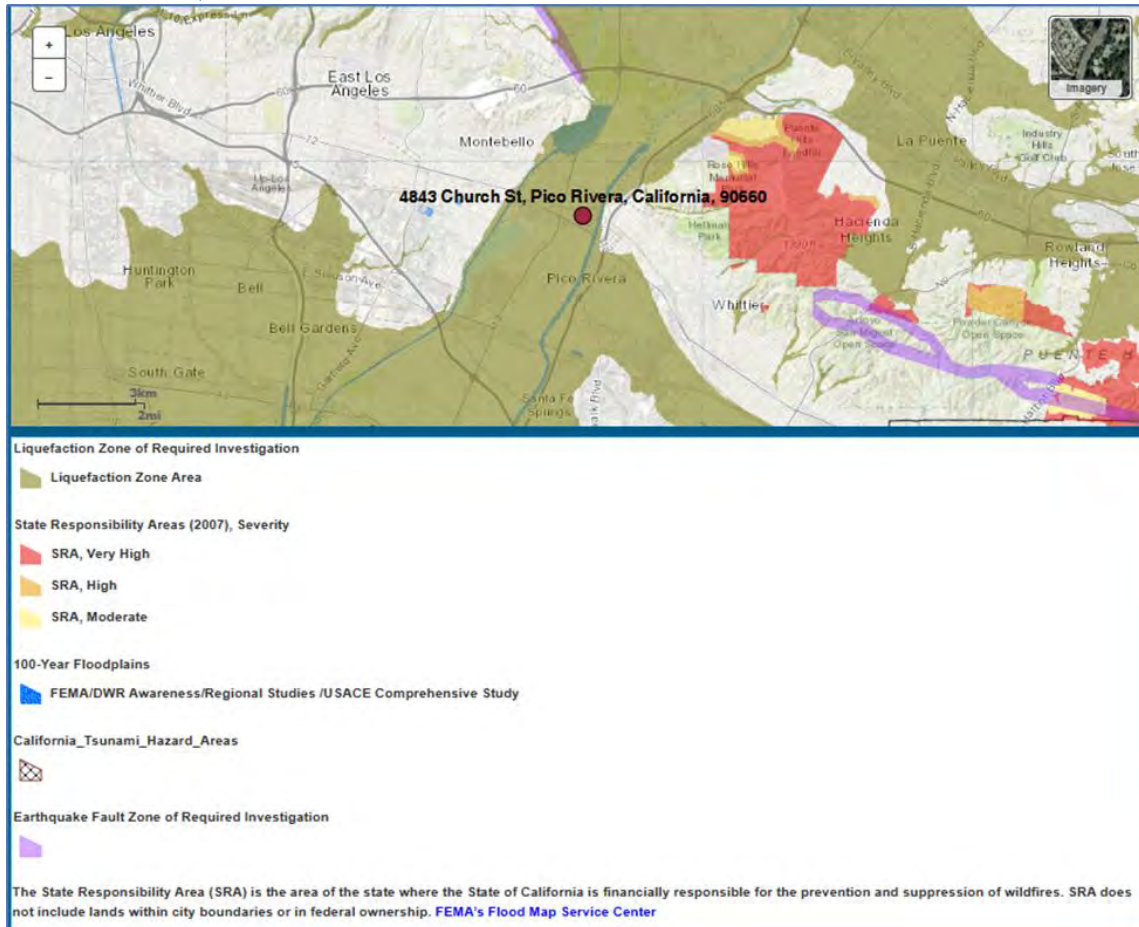


## Hazard Identification and Profile

Utilizing California's "MyHazards" online hazard mapping resource, the following map identifies earthquake, flooding, liquefaction, and wildfire threats. MyHazards was designed by the State of California as a tool for the general public to discover hazards in their area (earthquake, flood, fire, and tsunami) and learn steps to reduce personal risk. Using the MyHazards tool, users may enter an address, city, zip code, or may select a location from a map. The map targets the location and allows users to zoom and scroll to their desired view. The screen then presents information on the risks identified within the search radius, and recommended actions. Hazard Data is approximate and data layer visibility are subject to the extent of the Map. To access MyHazards to create a map of your own, follow the link to MyHazards (<https://myhazards.caloes.ca.gov/>).

**Map 2** is the MyHazards map prepared for the Pico Water District.

Map 2: MyHazards for Pico Water District  
Source: Cal OES, 2024



The MJHMP Planning Team identified hazards posing a significant threat to the entire project area. That determination was based on reviewing the State Hazard Mitigation Plan and the 2020 County of Los Angeles All-Hazards Mitigation Plan. The MJHMP Planning Team chose to analyze all of the hazards included in the County of Los Angeles AHMP which included: earthquake, flood, landslide, wildfire, tsunami, dam failure, climate change, and drought.



Next, the MJHMP Planning Team utilized a hazard ranking tool known as the Calculated Priority Risk Index. The MJHMP Planning Team completed a CPRI for the project area. The RWD Base Plan also includes a risk assessment and hazard profiles for each of the prioritized hazards including hazard identification, previous occurrences, local conditions, impacts, and vulnerabilities.

Then, each of the participating agencies worked off of the Project Area CPRI to rank the hazards for their particular agency. Each agency was provided with a list of the Project Area hazards, a copy of the project area CPRI, instructions, and index key to complete an agency-specific CPRI with the assistance of district staff. The results were used to prioritize hazard rankings (high, medium, and low) which drove development of the agency's Mitigation Actions Matrix (located at the end of the Annex). Table 5 is the Pico Water District CPRI and the CPRI Index Key which explains the rating system.

**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 **Table 5, Table 6** below.

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

**Q:** For participating jurisdictions in a multi-jurisdictional plan, does the plan describe any hazards that are unique to and/or vary from those affecting the overall planning area? (Requirement 44 CFR § 201.6(c)(2)(ii))

**A:** See **Table 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 **Table 5** below.

Rowland Water District Multi-Jurisdictional Hazard Mitigation Plan  
Annex: Pico Water District



Table 5: Pico Water District CPRI

Source: District Planning Team, Emergency Planning Consultants, 2023

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)
Dam Failure	2	0.90	2	0.60	1	0.15	3	0.30	1.95	L
Drought	3	1.35	2	0.60	1	0.15	4	0.40	2.50	M
Earthquake	3	1.35	4	1.20	4	0.60	1	0.10	3.25	H
Flood	2	0.90	2	0.60	2	0.30	3	0.30	2.10	L
Power Outage	2	0.90	1	0.30	4	0.60	1	0.10	1.90	L
Wildfire	2	0.90	4	1.20	2	0.30	3	0.30	2.70	H
Windstorm	2	0.90	2	0.60	1	0.15	3	0.30	1.95	L

\* 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

Rowland Water District Multi-Jurisdictional Hazard Mitigation Plan  
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Table 6: Calculated Priority Risk Index Key  
Source: FEMA Emergency Management Institute

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/ Severity	Negligible	Negligible property damage (less than 5% of agency-owned 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. Shutdown of critical public facilities for less than 24 hours.	1	30%
	Limited	Slight property damage (greater than 5% and less than 25% of agency-owned 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. Shutdown of 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 agency-owned critical and non-critical facilities and infrastructure). Injuries or illnesses result in permanent disability and at least 1 death. Shutdown of critical public facilities for more than 1 week and less than 1 month.	3	
	Catastrophic	Severe property damage (greater than 50% of agency-owned critical and non-critical facilities and infrastructure). Injuries and illnesses result in permanent disability and multiple deaths. Shutdown of 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	



**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 **Table 7** below.

Table 7 includes hazards identified as “medium” or “high” in the CPRI - Hazard Priority Rankings.

Table 7: Hazard Profile of Location, Extent, Probability, and Recent Significant Occurrence for the District  
Source: District Planning Team, Emergency Planning Consultants

Hazard	Location (Where)	Extent (How Big an Event)	Probability (How Often) *	Recent Significant Occurrence
Earthquake	Entire District	The Southern California Earthquake Center (SCEC) in 2007 concluded that there is a 99.7 % probability that an earthquake of M6.7 or greater will hit California within 30 years. <sup>1</sup>	Likely	The most recent damaging earthquake was the M6.7 Northridge Earthquake in 1994.
Drought	Entire District	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	Water providers following <b>Governor Newsom's</b> Executive Order N-7-22 on March 22, 2022, calling on urban water suppliers to implement actions to reduce water usage by 20-30 percent, depending on local conditions.
Wildfire	Eastern Portion of the District is near a Wildland-Urban Interface	State/Local Responsibility Area designated as Very High Fire Hazard Severity Zone.	Likely	PWD was indirectly impacted by the January 2025 wildfire in Los Angeles County. The notable wildfires include the Palisades Fire, Eaton Fire, and Hurst Fire.

\* 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

<sup>1</sup> Uniform California Earthquake Rupture Forecast

**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 **Table 8** below.

Table 8 outlines the hazards that were reviewed for the Pico Water District and their status of omission and inclusion.

Rowland Water District Multi-Jurisdictional Hazard Mitigation Plan  
Annex: Pico Water District



Table 8: PWD Hazard Source Review and Status of Omission/Inclusion by District Planning Team  
Source: District Planning Team (PT); California State Hazard Mitigation Plan (SHMP); Los Angeles County All-Hazards Mitigation Plan, (AHMP); National Risk Index (NRI)

Hazard	Source				Profiled in Annex	Status of Omission/Inclusion
Drought	NRI	SHMP	AHMP		Y	The Planning Team ranked drought as a <b>“medium” threat and was one of the profiled hazards.</b>
Earthquake	NRI	SHMP	AHMP		Y	The Planning Team ranked earthquake as a <b>“high” threat and was one of the profiled hazards.</b>
Wildfire	NRI	SHMP	AHMP		Y	The Planning Team ranked wildfire as a <b>“high” threat and was one of the profiled hazards.</b>
Avalanche	NRI	SHMP			N	The Planning Team determined that this hazard poses no significant threat to the service area.
Climate Change			AHMP		N	The Planning Team determined that this hazard does pose a threat to the service area. As per FEMA guidance, impacts of climate change have been integrated into each of the profiled hazards.
Coastal Flooding	NRI				N	The Planning Team determined that this hazard poses no threat to the service area.
Cold Wave	NRI	SHMP			N	The Planning Team determined that this hazard poses no threat to the service area.
Dam Failure		SHMP	AHMP		N	The Planning Team ranked dam failure as a <b>“low” that and was not included in the profiled hazards.</b>
Hail	NRI				N	The Planning Team determined that this hazard poses no threat to the service area.
Heat Wave	NRI	SHMP			N	The Planning Team determined that this hazard poses no threat to the service area.
Hurricane	NRI				N	The Planning Team determined that this hazard poses no threat to the service area.
Ice Storm	NRI				N	The Planning Team determined that this hazard poses no threat to the service area.
Landslide	NRI	SHMP	AHMP		N	The Planning Team determined that this hazard poses no threat to the service area.
Levee Failure		SHMP			N	The Planning Team determined that this hazard poses no threat to the service area.
Lighting	NRI				N	The Planning Team determined that this hazard poses no threat to the service area.
Power Outage				PT	N	The Planning Team ranked power outage as a <b>“low” that and was not included as a profiled hazard.</b>
Riverine Flooding	NRI	SHMP	AHMP		N	<b>The Planning Team ranked flooding as a “low” that and was not included as a profiled hazard.</b>



Strong Wind	NRI	SHMP			N	The Planning Team ranked strong wind as a “low” that and was not included as a profiled hazard.
Subsidence		SHMP			N	The Planning Team determined that this hazard poses no threat to the service area.
Tornado	NRI				N	The Planning Team determined that this hazard poses no threat to the service area.
Tsunami	NRI	SHMP	AHMP		N	The Planning Team determined that this hazard poses no threat to the service area.
Volcanic Activity	NRI	SHMP			N	The Planning Team determined that this hazard poses no threat to the service area.
Winter Weather	NRI				N	The Planning Team determined that this hazard poses no threat to the service area.

## Earthquake

### Description

For a detailed description of earthquakes please see the RWD Base Plan.

#### 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 **Local Conditions** below.

### Local Conditions

According to the UWMP, the California Geological Survey has published the locations of numerous faults which have been mapped in the Southern California region. Although the San Andreas Fault is the most recognized and is capable of producing an earthquake with a magnitude greater than 8 on the Richter Scale, some of the lesser-known faults have the potential to cause significant damage. The locations of these earthquake faults in the vicinity of the District’s water service area are provided in the figure below. The faults that are located in close proximity to and could potentially cause significant shaking in the District’s water service area include the Puente Hills Fault.

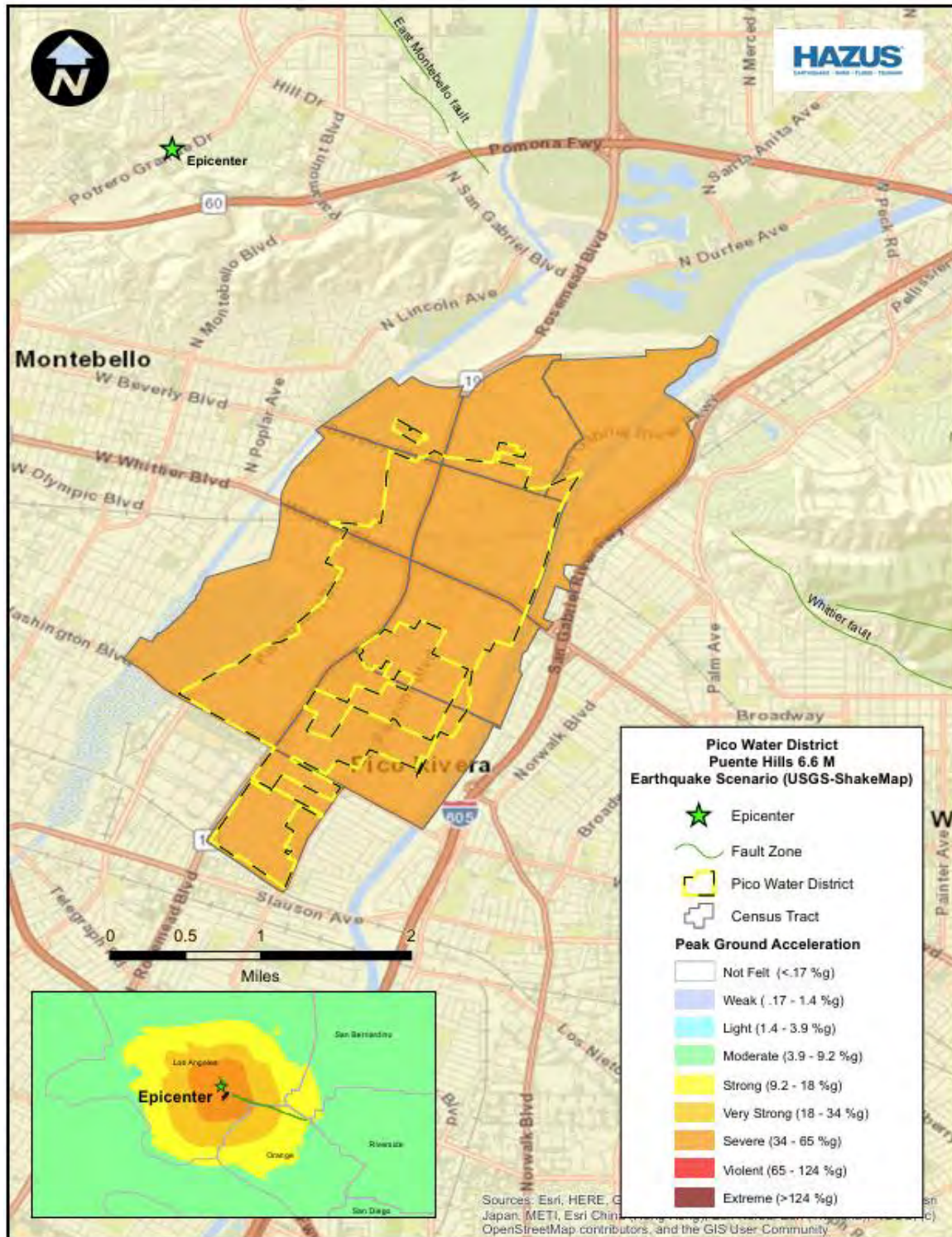
#### Puente Hills Fault

The Puente Hills Fault is a buried thrust fault running beneath the Los Angeles Basin, extending from northern Orange County through Los Angeles County and the San Gabriel Valley. As a blind thrust fault, it does not rupture at the surface, making it difficult to detect. However, it has the potential to produce major earthquakes (M7.0+), causing severe damage due to its location beneath densely populated urban areas. A rupture could lead to strong shaking, infrastructure failures, and building collapses, affecting high-rises, freeways, and underground utilities. The last major rupture occurred around 10,000 years ago, but scientists warn that another large earthquake could be devastating, similar to the 1994 Northridge Earthquake. Given its high-risk nature, ongoing research and earthquake preparedness efforts are crucial for minimizing potential impacts.



**Map 3** depicts the shaking intensity for a 6.6M Earthquake scenario along the Puente Hills Fault. The entire District could experience severe shaking intensities ranging from 34%g to 65%g.

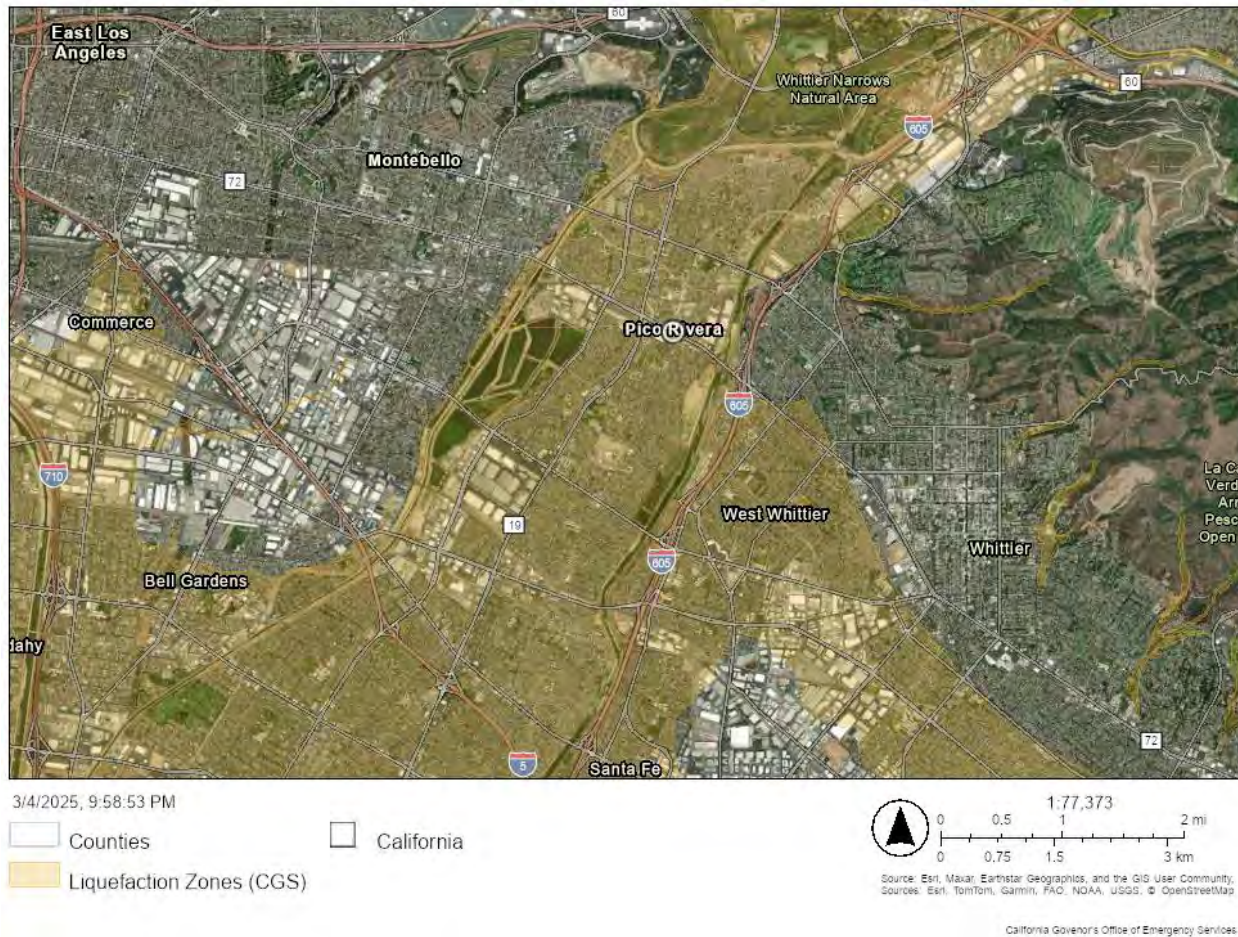
Map 3: HAZUS – Puente Hills Fault 6.6M  
 Source: Emergency Planning Consultants, 2023





## Liquefaction

Map 4: District Liquefaction Areas  
Source: MyPlan - Cal OES, 2025



**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 **Climate Change Considerations, Population Change Considerations, and Land Use Development Considerations** below.

### Climate Change Considerations

To learn more about the impact climate change has on earthquakes, please see the RWD Base Plan.

There is no clear relationship between climate change and earthquakes. Given this, Pico Water District's impacts from earthquakes remain unchanged.

### Population Change Considerations

The area is largely built-out, meaning there is limited space for new development. As a result, any population growth is expected to come from infill projects and increased housing density, such as



converting single-family homes into multi-family units. According to the Pico Water District 2023 Water Rate Study, water usage in the district is expected to remain relatively constant. Given these constraints, significant population changes within the district are not anticipated in the near future. Given this, the impacts of earthquakes on the District remain unchanged.

### *Land Use Development Considerations*

As discussed earlier, the area is largely built-out, meaning there is limited space for new development. Changes in land use development are projected to be minimal. As such, the district can expect to see no significant increase in vulnerability in the service area.

With no significant alterations to the development pattern for the Pico Water District, the vulnerability and impact of earthquakes is unchanged.

## Drought

### *Description*

For a detailed description of drought please see the RWD Base Plan.

#### **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 **Local Conditions** below.

### *Local Conditions*

According to the County of Los Angeles All-Hazard Mitigation Plan (2020), the Pico Water District service area, like the entire greater Los Angeles Basin, is semi-arid, with relatively limited annual rainfall. Early settlers drew local groundwater resources for agricultural and domestic water needs. As the region grew, increasingly more wells tapped into groundwater basins. In many areas, groundwater levels have declined as water use continues to exceed natural recharge through rainfall and stream flow. Much of Southern California now relies upon imported water to greatly supplement local resources, both to meet volume demands and to ensure water quality meets state and federal drinking water standards.

The service area's location in arid Southern California underscores the importance of continued education regarding wise water use and water conservation technologies. The area remains committed to water conservation strategies that ensure a healthy, clean, and reliable supply of water remains available for residents. The District actively encourages the use of simple water conservation measures in homes and in the workplace.

Water resources are limited to the groundwater basins that provide a local source of water to the region. The San Gabriel Basin is the groundwater basin drained by the San Gabriel River and the Rio Hondo. The groundwater basin is bounded by the San Gabriel Mountains to the north, San Jose Hills to the east, Puente Hills to the south, and Raymond Fault to the west. Local groundwater accounts for a major portion of the area's water supply.



Due to past San Gabriel Valley industrial practices, the basin has been contaminated with a variety of pollutants ranging from pesticides to industrial chemicals and solvents. According to the Environmental Protection Agency (EPA), over 30 square miles of San Gabriel Valley groundwater may be contaminated. The contaminated sites underlie several San Gabriel Valley communities. The District participates in Los Angeles County's NPDES program to reduce the amount of water polluted by pesticides, engine oil, and household chemicals that run into the storm drain system and pollute groundwater. As part of this effort, the District must comply with the County's Stormwater Quality Management Program and implement Best Management Practices (BMPs) in several areas including public outreach, planning and construction, public agency activities, business inspections, and illicit connection and flow.

**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 **Climate Change Considerations**, **Population Change Considerations**, and **Land Use Development Considerations** below.

### *Climate Change Considerations*

Please see Base Plan to learn more about the impact climate change has on droughts.

Since climate change can increase the severity and duration of droughts, Pico Water District can expect to see more severe impacts from droughts in the region.

### *Population Change Considerations*

The area is largely built-out, meaning there is limited space for new development. As a result, any population growth is expected to come from infill projects and increased housing density, such as converting single-family homes into multi-family units. According to the Pico Water District 2023 Water Rate Study, water usage in the district is expected to remain relatively constant. Given these constraints, significant population changes within the district are not anticipated in the near future. Given this, the impacts of drought on the water district will remain unchanged.

### *Land Use Development Considerations*

As discussed earlier, the area is largely built-out, meaning there is limited space for new development. Changes in land use development are projected to be minimal. As such, the district can expect to see no significant increase in vulnerability in the service area.

With no significant alterations to the development pattern for the Pico Water District, the vulnerability and impact of drought is unchanged.



## Wildfire

### *Description*

For a detailed description of wildfire hazards please see the RWD Base Plan.

#### **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))

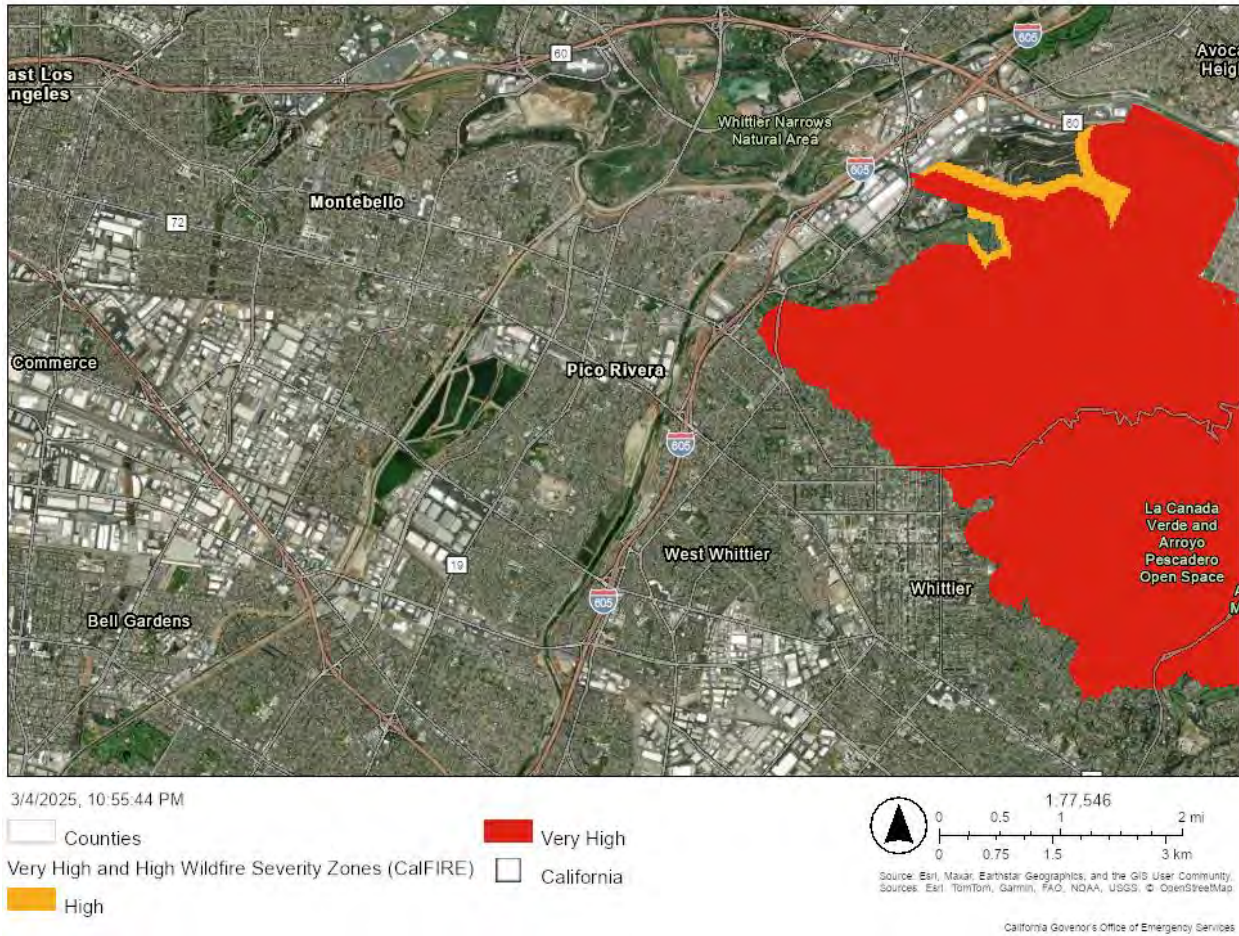
**A:** See **Local Conditions** below.

### *Local Conditions*

The Pico Water District serves the City of Pico Rivera. According to the Pico Rivera Climate Action and Adaptation Plan, the city is not located in or near a State or Local Responsibility Area nor is it designated as a very high fire hazard severity zone. However, Los Angeles County has a high wildfire risk. There is open space just outside of the PWD service area that has a higher risk of wildfires. These areas include Whittier Narrows Natural Area, Sycamore Canyon Open Space and Hellman Park. The indirect impacts from nearby wildfires can negatively impact water service in the PWD.



Map 5: Fire Hazard Severity Zone  
Source: Cal OES website, 2025



**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 **Climate Change Considerations, Population Change Considerations, and Land Use Development Considerations** below.

### *Climate Change Considerations*

Please see the RWD Base Plan to learn more about climate change and its impact on wildfire hazards.

Since climate change is increasing the frequency and severity of wildfires, PWD should be prepared for more frequent events.

### *Population Change Considerations*

The area is largely built-out, meaning there is limited space for new development. As a result, any population growth is expected to come from infill projects and increased housing density, such as converting single-family homes into multi-family units. According to the Pico Water District 2023



Water Rate Study, water usage in the district is expected to remain relatively constant. Given these constraints, significant population changes within the district are not anticipated in the near future. Given this, the impacts of wildfire on the water district will remain unchanged.

### *Land Use Development Considerations*

As discussed earlier, the area is largely built-out, meaning there is limited space for new development. Changes in land use development are projected to be minimal. As such, the district can expect to see no significant increase in vulnerability in the service area.

With no significant alterations to the development pattern for the Pico Water District, the vulnerability and impact of wildfire is unchanged.

## **Vulnerability and Impacts**

The RWD Base Plan goes into more detail on the specifics of the vulnerability and impacts assessment process. This annex focuses specifically on the vulnerability and impacts for Pico Water District.

### People

#### **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, Graphics 1 & 2** below.

### *Vulnerability of People*

People are the service area's most important asset. People include individuals who live and/or work within the Pico Water District service area. The following graphics from Esri Business Analyst provide a population overview of the Pico Water District.



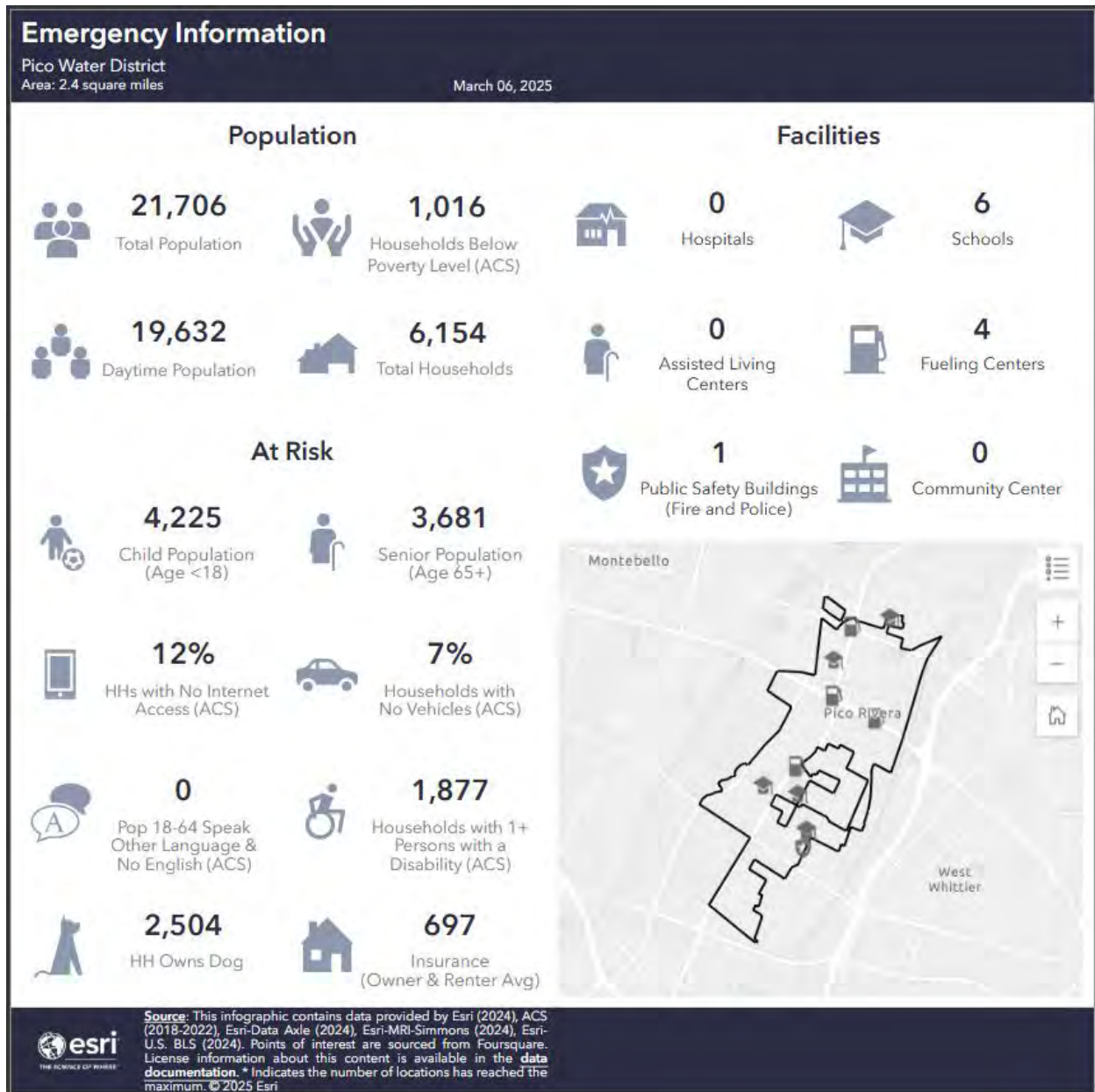
# Rowland Water District Multi-Jurisdictional Hazard Mitigation Plan Annex: Pico Water District

Graphic 1: At Risk Population Profile – Pico Water District  
Source: Esri Business Analyst, 2025





Graphic 2: Emergency Information – Pico Water District  
 Source: Esri Business Analyst, 2025



The Emergency Information and At-Risk Population infographics provide a demographic and infrastructure profile of PWD, highlighting key statistics relevant to emergency planning and community vulnerability.

The Emergency Information infographic details that the PWD area covers 2.4 square miles and serves a population of 21,706 people with 6,154 total households. Notably, 1,016 households are below the poverty level, and 12% lack internet access, which could hinder emergency communication efforts. Additionally, 7% of households do not have vehicles, and 1,877 households include a person with a disability, indicating a significant portion of the population may



require assistance during emergencies. The district has no hospitals or assisted living centers, but there are six schools, four fueling centers, and one public safety building (fire and police), all of which are critical for emergency response.

The At-Risk Population infographic provides additional details on the economic and social vulnerability of the community. The median household income is \$84,855, and 16% of households live below the poverty level. The senior population (65+) is 3,681, with 318 seniors speaking only Spanish, potentially limiting their access to emergency information. Additionally, 684 households lack a vehicle, which may present challenges in evacuation scenarios. The district has a daytime population of 19,632, indicating a high number of individuals who commute into the area for work. There are 633 businesses employing 7,672 people, highlighting economic activity that could be disrupted during disasters.

The old and young are particularly vulnerable during disasters. Age can contribute to cognitive development, physical ability and mobility, socioeconomic status, and access to resources that can help the individual prepare for, respond to and recover from disasters and other hazard events. For example, individuals 65 and older can have mobility challenges and other ailments that can prevent them from properly preparing for a disaster. At the same time, children are reliant on their parents or guardians to provide for them. Their ability to withstand a disaster is highly dependent on their parents or guardians. Children are more vulnerable to disasters when they are separated from their parents while at school or daycare.

Individuals with disabilities are disproportionately affected by disasters. Individuals with disabilities have a higher rate of fatality, and exclusion during disasters. They also have greater challenges during recovery. Understanding the disability demographics of a community gives the community the opportunity to identify and plan for the access and functional needs their communities' members might need during a disaster.

The ability for an individual to prepare for, mitigate against, respond to, and recover from disasters often depends on the availability of key resources. It is logical to assume that individuals with a higher socioeconomic status are in a better position to acquire key resources than individuals with a lower socioeconomic status. Factors that contribute to socioeconomic status include income, education, occupation, and housing. According to **Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Group**, people with lower socioeconomic status more likely lack resources needed to follow emergency preparedness instructions. They might be unable to stockpile food, for example. They might be unwilling or unable to stay home from work and lose a day's pay or evacuate and leave their home during an emergency. By identifying at-risk groups ahead of time, you can plan more efficient evacuations and specifically target people who need transportation or special assistance (e.g., those without a vehicle).

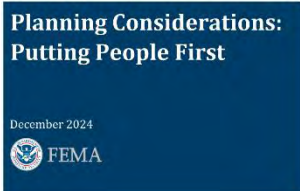
### *Population - Underserved Communities, Disadvantaged Communities, and Socially Vulnerable Populations*

*It's important to note that the mapping tools discussed below conclude the PWD service area includes no "underserved communities" or high indicators of "socially vulnerable populations". However, the reality is that individuals live, work, play, attend school, and worship throughout the entire service area. In that regard, the Community Outreach Strategy was designed to share messaging with people who have access to public forums and internet while also taking messaging to locations frequented by underserved, disadvantaged, and socially vulnerable individuals including social service agencies, schools, and places of worship.*



### Underserved Communities

FEMA's 2024 "Planning Considerations: Putting People First" provides excellent insights into the importance of truly engaging the whole community. It emphasizes that meeting the needs of the whole community requires emergency managers to focus on people by incorporating equity, inclusion, and accessibility in each step of the planning process. Putting people first means taking a whole-community approach to emergency management planning. It means using the lenses of equity, accessibility, and inclusion to identify the needs of populations who may not have had their needs met during previous emergencies due to past policy decisions or gaps in planning assumptions and considerations.



Putting people first also means including underserved populations in the planning process, since they are the experts on their needs, unique risks, and vulnerabilities. Emergency managers can learn about a community by conducting research or speaking directly to members of underserved populations to hear their insights and perspectives and build relationships and trust.

Using the lens of accessibility means not only finding ways to enable people to be part of the planning process but also making information accessible to everyone, including people with disabilities and other access and functional needs. The process of weaving equity, inclusion, and accessibility throughout emergency management plans, policy, and guidance is not a single effort or action.

Being truly inclusive is an ongoing process that involves the following:

- Listening to and empowering people from all parts of the community, particularly those from underserved communities, enables them to participate in the planning process.
- Revising plans, policies, and other guidance to reflect the priorities and needs of the whole community.
- Ensuring ongoing awareness and evaluation as communities' characteristics and needs change over time.

The concepts of accessibility, equity, and inclusion are particularly important in emergency management because the firsthand experience of underserved communities and research about the distribution of disaster impacts have consistently shown that disasters affect those communities disproportionately. Disaster literature provides many examples of how factors such as race, income, age, disability, and gender run in parallel to outcomes in disaster preparedness, mitigation, response, and recovery.

Examples include the following:

**Older adults** are often at higher risk of death or injury during disasters because they are more likely to have health problems, reduced mobility, and a fixed income.

**People living in rural areas** can be at greater risk of poor health outcomes caused by limited access to local doctors and healthcare facilities, among other factors. This, in turn, puts them at greater risk during disasters.

**Low-income populations and communities of color** are more likely to suffer property damage, injury, and death during disasters, in part because they are more likely to live in older, denser, more disaster-prone neighborhoods with lower-quality housing and inadequate services.



**Individuals with disabilities and other access and functional needs, such as literacy challenges and limited English comprehension are also at greater risk.** Access and functional needs can make adapting to extreme circumstances particularly challenging and stressful, especially when preparedness efforts have not accounted for these needs. If information is presented only in English, those with limited English proficiency are at a disadvantage.

Federal Government “Executive Order 13985 On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government” defines underserved communities as “populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.”

*At the time of this plan’s preparation, federal mapping resources relating to underserved communities were not available to the public. As such, it was not possible to determine whether or not the PWD service area included any underserved communities.*

#### Socially Vulnerable Populations

Social vulnerability considerations were included in this plan to identify populations across the service area that might be more vulnerable to hazards. Social Vulnerability refers to a community’s capacity to prepare for and respond to the stress of hazardous events ranging from natural disasters such as tornadoes or disease outbreaks, to human caused threats such as toxic chemical spills (CDC/ATSDR, 2020). To better assist emergency planners, the CDC Agency for Toxic Substances and Disease Registry (CDC/ATSDR) developed the Social Vulnerability Index (SVI) as a way to depict the social vulnerability of communities, as the census tract level within a specified county. Tracts with a higher SVI will likely need support before, during and after a hazardous event. The SVI can help public health officials and local planners better prepare for and respond to emergency events by displaying what areas of the jurisdiction have a high vulnerability ranking to low vulnerability ranking.

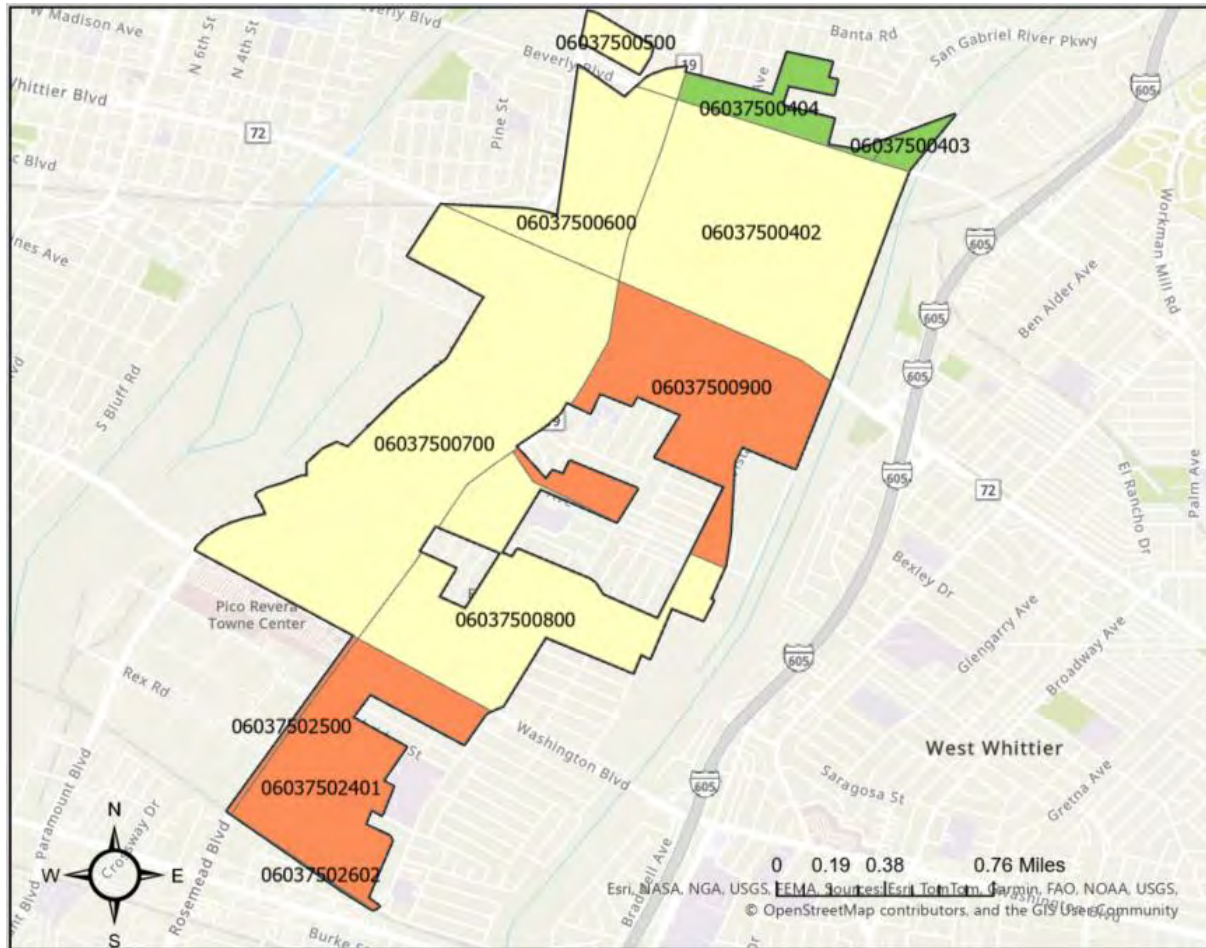
For information on the Social Vulnerability Index, please see the RWD Base Plan.

The map below depicts the overall social vulnerability for Pico Water District. The areas in orange represent the census tracts that are in the 75th percentile or above for overall SVI rating. This means that these census tracts are more vulnerable than at least 75% of the other census tracts in California. The following census tracts have a high SVI rating: 06037502602, 06037502401, 06037502500, and 06037500900.

Rowland Water District Multi-Jurisdictional Hazard Mitigation Plan  
Annex: Pico Water District



Map 6: Pico Water District Social Vulnerability Index  
Source: CDC/ATSDR Social Vulnerability Index, 2023



**Legend**

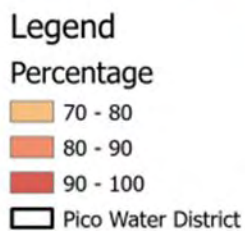
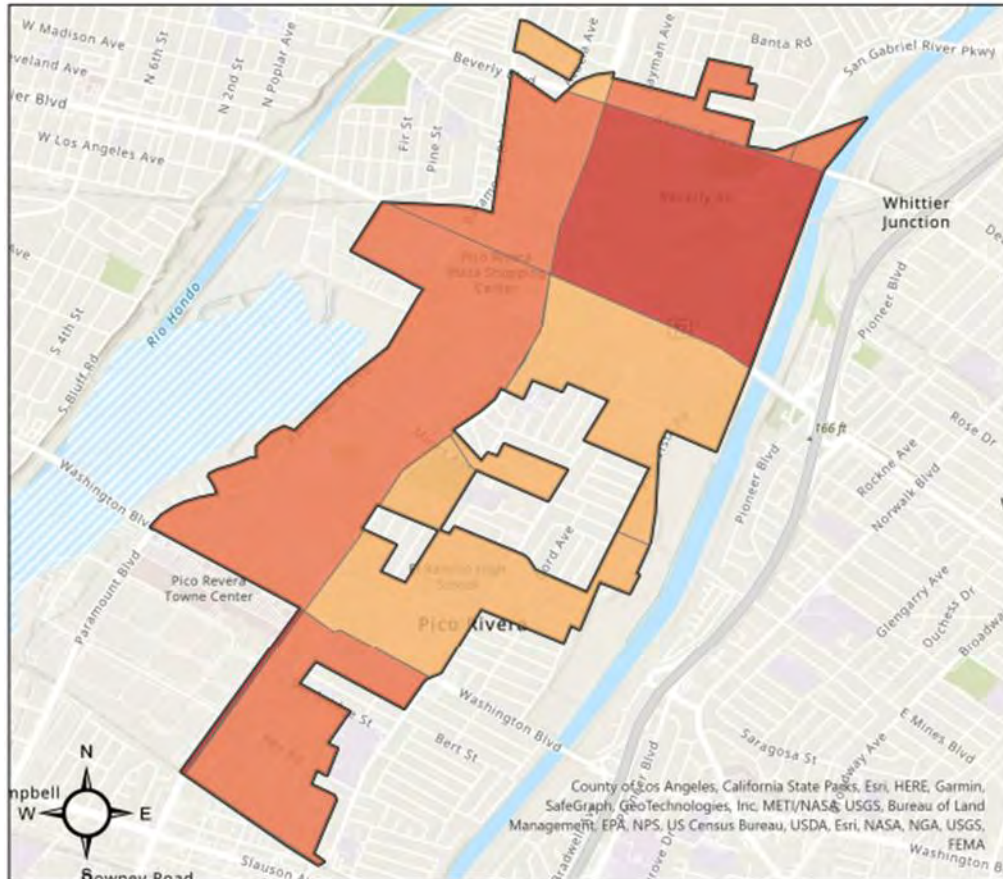
- Low-Medium (50th Percentile)
- Medium-High (75th Percentile)
- High (Above 75th Percentile)
- Pico Water District

The census tracts depicted in the SVI maps correspond to the California Office of Environmental Health Hazard Assessment (OEHHA) CalEnviroScreen 4.0 mapping tool and census tract datasets. CalEnviroScreen 4.0 is a mapping tool that helps identify California communities that are most affected by many sources of pollution, where people are often especially vulnerable to pollution's effects. CalEnviroScreen ranks census tracts in California based on potential exposures to pollutants, adverse environmental conditions, socioeconomic factors and the prevalence of certain health conditions. Those census tracts with a higher overall percentile score have a higher pollution burdens and population sensitives. These tracts are depicted in the darker red colors on the map. Census tracts with lower overall percentile scores have a lower pollution



burdens and population sensitivities. These tracts are depicted in a darker green color on the map. The majority of the District is between the 80 and 90 overall percentile range

Map 7: Pico Water District CalEnviroScreen 4.0 Results  
 Source: CalEnviroScreen, 2023



Disadvantaged Communities

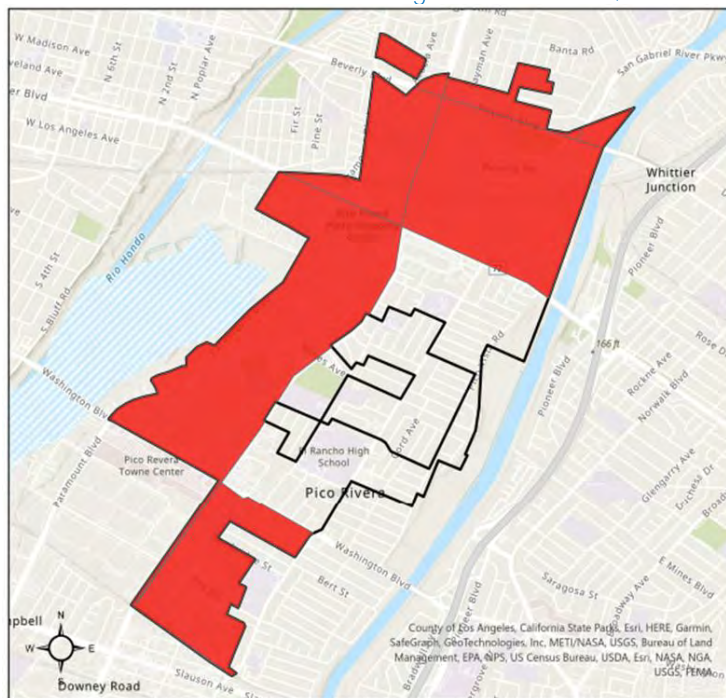
SB 1000 defines “disadvantaged communities” as areas identified by the California Environmental Protection Agency pursuant to Section 39711 of the Health and Safety Code or as an area that is low-income that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation. To assist in identifying disadvantaged communities, the State has provided a mapping tool called “CalEnviroScreen.” CalEnviroScreen uses several factors, called “indicators” that have been shown to determine whether a community is disadvantaged and disproportionately affected by pollution. Pollution burden indicators measure different types of pollution that residents may be exposed to, and the proximity of environmental hazards to a community. Population



characteristics represent characteristics of the community that can make them more susceptible to environmental hazards.

CalEnviroScreen provides an overall percentile score determined by combining weighted individual scores for all the individual indicators analyzed. SB 1000 considers a 75 percent or higher score in this category to be a qualifier for consideration as a disadvantaged community. The overall scores are represented in a statewide map, with red representing the highest percentile range and green representing the lowest. Areas with higher scores generally experience higher pollution burdens and fare poorer on a range of health and socioeconomic indicators than areas with low scores. The census tracts in the northern, southern, and western portions of Pico Water District service area are considered disadvantaged communities.

Map 8: Pico Water District SB 535 Disadvantaged Communities  
Source: CALEPA SB535 Disadvantaged Communities, 2023



- Legend
- SB535 Disadvantaged Community
  - Pico Water District

**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** below.

*Impact Profile of People*

**Earthquake**

Pico Water District has a diverse population that includes several vulnerable groups, such as elderly residents, low-income families, non-English speakers, and disabled individuals. The elderly population in the water district, are particularly vulnerable during emergencies due to



mobility issues and potential isolation. Low-income families in the district 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, primarily immigrants of Asian descent, 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 in Pico Water District would 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.

### Drought

Drought significantly impacts Pico Water District 's vulnerable populations, including the elderly, low-income families, non-English speakers, and individuals with disabilities. Elderly individuals are particularly susceptible to the effects of drought. Limited mobility and health issues make them more vulnerable to heat-related illnesses, which can be exacerbated by water shortages and reduced availability of cooling options. Additionally, the elderly may have fixed incomes, making it difficult to cope with increased utility bills and the cost of purchasing bottled water. Low-income families are disproportionately affected by drought due to their limited financial resources. These families may struggle to afford higher water bills, and the cost of purchasing additional water or implementing water-saving measures can be prohibitive. Drought can also lead to increased food prices, as agricultural production declines, further straining household budgets. Reduced availability of water for hygiene and sanitation can lead to health issues, compounding the challenges faced by these families. Non-English speakers may face difficulties accessing information and resources related to drought.

Language barriers can impede their understanding of water conservation measures, drought warnings, and available assistance programs. This population might also have limited access to services that provide drought relief, such as financial assistance for increased utility costs or resources for securing alternative water supplies. People with disabilities often require additional water for medical and personal care needs. Drought conditions can make it more difficult for them to access sufficient water, affecting their health and well-being. Mobility issues can also hinder their ability to access relief services and emergency supplies. Drought can lead to increased utility costs and maintenance expenses for households. Vulnerable populations may face difficult choices between paying for water and other essential expenses, potentially leading to housing instability or displacement if they are unable to keep up with costs. Furthermore, those with cognitive disabilities may find it challenging to understand and implement necessary water conservation practices. Drought can lead to poor water quality, as reduced water levels can concentrate contaminants. Vulnerable populations are at higher risk of waterborne illnesses due to weakened immune systems and limited access to healthcare. Heatwaves associated with drought can exacerbate chronic health conditions and increase the incidence of heatstroke and dehydration.



### Wildfire

A wildfire in or near the District could have severe consequences for residents, particularly vulnerable groups. Water supply disruptions from infrastructure damage and contamination could lead to boil water advisories or shortages, disproportionately affecting low-income households and those with limited access to bottled water. Children (4,225 residents), seniors (3,681 residents), and individuals with disabilities (1,877 households) would face heightened health risks due to poor air quality and limited healthcare facilities. Additionally, language barriers for 318 seniors who only speak Spanish and lack of internet access (12% of households) could make it harder for some residents to receive emergency alerts.

Evacuation challenges would also arise, as 684 households do not have a vehicle, making it difficult to leave the area without assistance. Economic disruptions could impact the 7,672 workers and 633 businesses in the district, leading to financial strain for families. With no hospitals or assisted living centers in the district, residents may have to seek emergency medical care elsewhere, further complicating response efforts.

### **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 **Climate Change, Changes in Population, and Land Use Development** below.

### Climate Change

Climate change impacts people in the District in various ways, including through extreme heat events, changes in air quality, increased risk of wildfires, and potential impacts on water supply and infrastructure. These effects can lead to health issues, such as heat-related illnesses and respiratory problems, as well as challenges related to water availability and infrastructure resilience, highlighting the importance of adaptation and mitigation strategies to protect the well-being of the community.

### Changes in Population

Changes in population in the District can significantly impact residents by influencing the demand for services, housing affordability, cultural diversity, traffic congestion, economic opportunities, and community services. A growing population may strain existing infrastructure and services, leading to longer wait times and crowded facilities. Additionally, population changes can affect the availability of affordable housing and create challenges related to cultural integration and inclusivity. However, population growth can also bring new job opportunities and enrich the cultural fabric of the community. Effective urban planning and community development strategies are crucial to address these impacts and ensure the well-being of residents serviced by the District.

### Land Use Development

Land use development in the District can impact residents by affecting housing availability and affordability, access to services such as healthcare and education, quality of life factors like access to green spaces and community amenities, economic opportunities through job creation and local business growth, and environmental considerations such as traffic congestion and pollution. Thoughtful planning and community engagement are crucial to ensure that development meets the needs of residents and enhances the overall quality of life in the district.



## Structures

### *Critical and Essential Facilities List*

The Critical and Essential Facilities List was prepared for each of the water district offices and facilities within the service area. Hazard maps from the 2020 County of Los Angeles All-Hazards Mitigation Plan were used as a basis for determining whether or not a facility was located in or near a hazard. See additional language below on vulnerability to the identified hazards.

#### **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 **Table 9** below.

Table 9: Hazard Proximity to Critical and Essential Facilities

Source: Emergency Planning Consultants, 2023

**Y** – Yes, area is within hazard zone

District Facilities	Earthquake	Drought	Wildfire
District Office & Yard 4843 Church Street, Pico Rivera	Y	Y	
Well #2	Y	Y	
Well #4A	Y	Y	
Well #5A	Y	Y	
Well #6	Y	Y	
Well #7	Y	Y	
Well #8	Y	Y	
Well #9A / Cate Reservoir	Y	Y	
Well #10	Y	Y	
Well #11	Y	Y	

\* See RWD Base Plan for information regarding NFIP regulations.

Based on available data provided by the water district, there is a minimum of \$12,242,017 worth of district owned property.

The possibility that all facilities will be completely damaged simultaneously is extremely rare. Most of the impacts of the hazards that were analyzed are anticipated to be isolated to certain locations. To better understand the magnitude of impacts, this plan identifies representative percentages of potential impact based on the total valuation of district assets. For planning purposes, we identified different tiers of impact that could occur. It is reasonable to assume that impacts would not exceed 50% of the total asset value district-wide during a single event. The following are



parameters to help in understanding how much a proposed investment/improvement compares to the existing assets within the district:

- 1% Impact – \$122,420.17
- 5% Impact – \$612,100.85
- 10% Impact – \$1,224,201.70
- 20% Impact – \$2,448,403.40
- 50% Impact – \$6,121,008.50

**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 Structures** below.

### *Impact Profile of Structures*

#### Earthquake

Structures include physical buildings, lifelines, and critical infrastructure in a community. All properties and occupants in the District can be either directly impacted or affected by earthquakes. Building stock that 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.

All of the district-owned critical facilities are vulnerable to earthquakes. Property and contents valued at \$12,242,017 based on estimates in 2023. The severe ground shaking and soil liquefaction will result in significant damage or total destruction of these facilities and can be catastrophic for the District.

#### Drought

The most immediate impact of a drought is on the water supply. Pico Water District 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 the district 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 city's water resources. Public parks and recreational areas may face restrictions on water use for irrigation, leading to degraded landscapes and reduced green spaces.

All of the district-owned critical facilities are vulnerable to drought. Property and contents valued at \$12,242,017 based on estimates in 2023.

#### Wildfire

Although the District is not directly at a high risk for wildfires, it can experience significant indirect impacts. Wildfires can degrade water quality by introducing ash, debris, and toxic chemicals into groundwater and imported water sources, increasing treatment costs and operational challenges. Additionally, supply chain disruptions may occur if fires damage infrastructure managed by regional water agencies like the Metropolitan Water District (MWD), potentially limiting water availability.

Wildfires can also cause power outages, disrupting PWD's ability to pump groundwater. Post-fire flooding and erosion from burned areas can further strain water infrastructure. Economically, increased treatment and emergency response costs may lead to higher water rates, while affected customers may struggle with payments, impacting revenue stability. These risks highlight the need for proactive wildfire resilience planning, even in areas with lower direct fire hazards.

All of the district-owned critical facilities are vulnerable to power outages. Property and contents valued at \$12,242,017 based on estimates in 2023. Any utility related hazard can result in significant challenges to operations; specifically, being able to provide customers with clean water.

#### **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 **Climate Change, Changes in Population, and Land Use Development** below.

#### Climate Change

Climate change impacts critical facilities and structures in the Pico Water District by increasing the frequency and severity of heatwaves, flooding, wildfires, and poor air quality. These events strain energy and water resources, damage infrastructure, and heighten health risks, particularly for hospitals, emergency services, and community centers. To mitigate these effects, the water district needs to upgrade infrastructure, improve energy efficiency, and enhance emergency response plans. These measures will help ensure that critical facilities remain operational and continue to serve the community effectively amidst the challenges posed by climate change. See *Mitigation Actions Matrix in Chapter 5 (Table 5.1) for actions relating to climate change.*

#### Changes in Population

Changes in population in the Pico Water District, can significantly impact critical facilities and structures by influencing demand for services, infrastructure, and resources. Population growth leads to increased pressure on existing facilities, such as schools and healthcare services, requiring upgrades and expansions. Demographic shifts, such as an aging population or increased cultural diversity, can also impact the types of services needed. Urban development driven by population changes requires careful planning to ensure infrastructure can support the growing community. Effective planning and management are crucial to adapting critical facilities



to meet the evolving needs of the population and ensure the continued resilience of the community.

### Land Use Development

Changes in land use development in the Pico Water District can impact structures and critical facilities by influencing accessibility, infrastructure needs, environmental considerations, community services, economic development, and require effective planning and management to ensure the continued functionality and resilience of critical facilities.

## Economy

### 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 to Economy** and **Table 10** below.

### *Vulnerability to Economy*

Pico Water District services residential and commercial customers. This section will focus on the vulnerability to and impact of hazards on the economic assets of the District. The economic assets included in the analysis are the El Rancho Unified School District, Pico Rivera Plaza Shopping Center, and the City of Pico Rivera.

Table 10: Hazard Vulnerability to Economic Assets

Source: District Planning Team, Emergency Planning Consultants

(Note: “X” indicates affirmative)

	Earthquake	Drought	Wildfire
Economic Assets			
El Rancho Unified School District	X	X	
Pico Rivera Plaza Shopping Center	X	X	
City of Pico Rivera	X	X	

### 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 Economy** 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 **Climate Change, Changes in Population, Land Use Development** below.



## *Impact Profile of Economy*

### **El Rancho Unified School District**

**Earthquake:** Schools are particularly vulnerable to earthquakes due to the potential for structural damage, injuries to students and staff, and disruption of educational activities. If the academy's buildings are not up to seismic codes, classrooms, hallways, and administrative offices could suffer ceiling collapses, wall cracks, and broken windows, posing serious risks to occupants. The school may need to suspend operations for weeks or months if significant repairs are required. Additionally, blocked evacuation routes, gas leaks, and power outages could make emergency response difficult, requiring external aid for rescue and recovery efforts.

**Drought:** A drought could create challenges for the school by reducing water availability for restrooms, drinking fountains, and outdoor spaces. If local water restrictions limit irrigation, school fields, playgrounds, and landscaping may dry out, impacting outdoor activities and student comfort. Higher water costs may also put pressure on the school's budget, potentially affecting other resources. Additionally, heat waves associated with droughts could make classrooms uncomfortably hot, particularly if cooling systems are affected or restricted due to energy conservation measures.

**Wildfire:** A wildfire near the school could threaten student safety and disrupt operations, with key concerns including evacuation challenges, structural damage, poor air quality, and utility losses. Rapidly spreading flames may complicate evacuation efforts, while direct fire damage could destroy classrooms, offices, and playgrounds, leading to long-term closures and costly rebuilding. Even if the fire does not reach the school, smoke and poor air quality could make the environment unsafe, forcing temporary shutdowns. Additionally, power outages and water infrastructure damage could render the school unusable until repairs are completed, further delaying its reopening.

**Climate Change:** Climate change poses risks to student safety and learning environments due to rising temperatures, poor air quality from wildfires, and extreme weather. Prolonged heatwaves could make classrooms unbearably hot, especially if cooling systems are inefficient, impacting students' ability to focus. Increased wildfire activity could lead to smoke-related school closures, while flooding or severe storms could damage infrastructure and disrupt education. Additionally, climate-driven water shortages may limit landscaping and outdoor activities, reducing students' access to recreational spaces.

**Population Changes:** If the local population increases, student enrollment may rise, necessitating more classrooms, teachers, and resources. This could put strain on existing facilities and staff, potentially requiring infrastructure expansion. On the other hand, if the population declines, lower enrollment numbers could lead to reduced funding, staff cuts, or even program reductions, impacting the quality of education and extracurricular activities.

**Land Use Development:** A power outage at the golf course could affect operations, customer service, and facility maintenance. The clubhouse, pro shop, and restaurant may be unable to process payments, operate refrigeration systems, or provide lighting, forcing the facility to close temporarily. If the irrigation system relies on electricity, prolonged outages could affect course maintenance, leading to dry and damaged greens. Additionally, security systems and electronic golf carts may be impacted, potentially leading to safety and operational concerns.



### **Pico Rivera Plaza Shopping Center**

Earthquake: The Pico Rivera Plaza Shopping Center will likely experience damage to buildings and facilities, disrupting the education of thousands of students. The impact of an earthquake will be amplified if the water district is impacted and clean water is not able to be supplied to the shopping centers. Stores might need to close temporarily for inspections and repairs, affecting shoppers and employees. Closure of stores could lead to reduced or no pay for staff which will cause financial hardship. This financial hardship is not limited to the employees but will also spread to district area as these employees may need to move out of the town for employment.

Drought: A drought could significantly impact the Pico Rivera Plaza Shopping Center by increasing water costs for businesses due to conservation measures or tiered pricing by the Pico Water District (PWD). Restrictions on irrigation may lead to declining landscaping and curb appeal, reducing foot traffic. Water-intensive businesses like restaurants, laundromats, and car washes may face operational challenges, higher costs, or service reductions. Prolonged drought conditions could even lead to business closures or relocations, affecting the shopping center's economic vitality. Additionally, consumer behavior may shift toward reduced spending on water-dependent services, further impacting local businesses. Proactive water conservation strategies, such as drought-resistant landscaping and efficient water management, could help mitigate some of these effects.

Wildfire: Although the Pico Rivera Plaza Shopping Center is not directly at risk from wildfires, it can experience indirect impacts related to the District. Wildfires can degrade water quality by introducing ash and contaminants into groundwater, increasing treatment costs that may be passed on to businesses. PWD may also impose water restrictions to conserve supply for firefighting, limiting irrigation and affecting the shopping center's appearance. Additionally, power outages caused by fires could disrupt water supply operations, impacting businesses that rely on consistent water access, such as restaurants and laundromats. Wildfires can also disrupt supply chains and customer traffic, leading to lower sales. The ability of PWD to maintain water resilience and infrastructure reliability will be key in minimizing these economic disruptions.

Climate Change: Pico Rivera Plaza Shopping Center could experience significant impacts from climate change. Rising temperatures and prolonged droughts linked to climate change may increase water demand for cooling systems, landscaping, and daily business operations. At the same time, reduced groundwater recharge and more frequent water shortages could lead PWD to impose water restrictions or rate increases, raising operational costs for businesses. Additionally, extreme heat and worsening air quality may discourage outdoor shopping and foot traffic, affecting retail sales.

Population Changes: Pico Rivera Plaza Shopping Center could experience significant impacts from population change. As population increases, overall water consumption rises, putting greater pressure on PWD's groundwater supply and infrastructure. Higher demand could trigger higher water rates or stricter conservation measures, impacting businesses that rely on consistent water access. Increased population may also change shopping patterns, shifting demand for certain services and businesses within the shopping center.

Land Use Development: Pico Rivera Plaza Shopping Center could experience significant impacts from land use development. New residential or commercial developments near the shopping center can increase water demand, requiring PWD to expand or upgrade infrastructure. If PWD



prioritizes water distribution to new developments, businesses at Pico Rivera Plaza may face reduced water allocations or increased costs. Additionally, urban expansion may lead to reduced green spaces and increased heat retention, further exacerbating cooling and irrigation needs.

### **City of Pico Rivera**

**Earthquake:** An earthquake can cause structural damage to restaurant buildings, making them unsafe for employees. Potential impacts include structural harm to facilities, equipment damage, and inventory loss. Disruptions in transportation infrastructure could hinder the delivery of raw materials and distribution of finished products, leading to operational delays and financial setbacks. Additionally, major earthquake could damage water infrastructure, including pipelines, pumping stations, and groundwater wells, leading to service disruptions, water shortages, and costly repairs. If PWD's facilities are compromised, businesses and residents may experience boil water notices or emergency rationing. Additionally, an earthquake could cause groundwater contamination, requiring increased treatment efforts and straining PWD's ability to meet demand. Power outages caused by seismic activity may also disrupt water distribution and pressure, impacting firefighting capabilities and public health services.

**Drought:** A prolonged drought would further stress water availability to the city, forcing PWD to impose conservation measures, higher rates, or water-use restrictions for residents and businesses. As groundwater levels decline, PWD may struggle to meet demand, particularly if an earthquake simultaneously damages infrastructure. Drought conditions also increase the risk of subsidence (land sinking), which can weaken underground pipelines and exacerbate earthquake-related damage. Additionally, reduced water availability could impact economic activities, such as landscaping businesses, car washes, and industrial operations that rely heavily on water.

**Wildfire:** Although Pico Rivera is not directly at risk from wildfires, the Pico Water District could experience significant indirect impacts. Wildfires could degrade water quality by introducing ash and contaminants into water sources, increasing treatment costs. Power outages caused by fires could disrupt water pumping and delivery, leading to service interruptions. Additionally, increased water demand for firefighting efforts could strain the system, potentially resulting in temporary water restrictions. Wildfires might also lead to economic disruptions in the city, lowering water demand and affecting business revenues. Preparedness plans are crucial to minimize these impacts on water supply and community stability.

**Climate Change:** Climate change is expected to have significant impacts on the city of Pico Rivera, especially as it relates to water supply. Climate change will likely lead to higher temperatures and more frequent and severe droughts, which will increase water demand for irrigation, cooling, and other water-intensive needs. This could strain PWD's water supply, especially if groundwater resources are affected by reduced recharge during droughts. Water restrictions and higher costs may be implemented, impacting residents and businesses. Additionally, increased frequency of extreme weather events (e.g., heatwaves and flooding) could damage infrastructure and lead to water quality issues, requiring costly repairs and maintenance.

**Population Changes:** As the population of Pico Rivera increases, water demand will rise, putting additional pressure on PWD's infrastructure and resources. New residential and commercial developments will require significant water supply, and water rates may increase to accommodate the added demand. The District may also face challenges in ensuring equitable water distribution across a larger population while balancing conservation efforts. Population growth may also result in higher wastewater generation, leading to increased treatment needs and costs for PWD.



**Land Use Development:** Ongoing land use development in and around Pico Rivera will increase urban density and likely shift the demand for water resources. For example, new commercial centers, residential complexes, and industrial facilities will require more water, leading to greater strain on PWD’s infrastructure. Additionally, increased development could result in reduced green space and more impervious surfaces, exacerbating urban heat island effects and increasing water demand for cooling and irrigation. PWD may need to upgrade its distribution networks to handle this increased demand and ensure sustainable water management.

## Natural, Historic, and Cultural Resources

<b>Q&amp;A   ELEMENT B: RISK ASSESSMENT   B2-a.</b>
<b>Q:</b> Does the plan provide an overall summary of each jurisdiction’s vulnerability to the identified hazards? (Requirement 44 CFR § 201.6(c)(2)(ii))
<b>A:</b> See <b>Vulnerability of Natural, Historic, and Cultural Resources</b> below.

### *Vulnerability of Natural, Historic, and Cultural Resources*

Pico Water District features several important green spaces and cultural landmarks that contribute to community well-being and historical preservation. Rio Vista Park, Smith Park, and Pico Park are key recreational spaces in Pico Rivera, offering a variety of amenities for residents. Rivera Park features sports fields and picnic areas, making it a hub for community events and youth sports. Smith Park is home to the Smith Park Aquatic Center, providing swimming facilities, sports fields, and shaded picnic areas, and hosting seasonal events. Pico Park, a smaller neighborhood park, offers a playground, picnic tables, and open green spaces, making it ideal for family outings. Together, these parks enhance community well-being, cultural engagement, and environmental sustainability in the city.

Table 11: Pico Water District Natural, Historic, and Cultural Resources  
Source: Emergency Planning Consultants, 2025

	Earthquake	Drought	Wildfire
Rio Vista Park	X	X	
Smith Park	X	X	
Pico Park	X	X	

<b>Q&amp;A   ELEMENT B: RISK ASSESSMENT   B2-b.</b>
<b>Q:</b> 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))
<b>A:</b> See <b>Impact Profile of Natural, Historic, and Cultural Resources</b> below.

### *Impact Profile of Natural, Historic, and Cultural Resources*

#### Earthquake

An earthquake could cause structural damage, safety hazards, and service disruptions at Rio Vista Park, Smith Park, and Pico Park in Pico Rivera. Facilities like playgrounds, picnic shelters, and sports fields may suffer cracks, fallen structures, or soil instability, posing risks to visitors. Smith Park Aquatic Center could experience pool damage or water leaks, requiring repairs.



Underground water or sewer line ruptures may lead to flooding or sinkholes, further impacting park usability. Additionally, these parks could serve as emergency shelters or relief centers, but damage may limit their immediate availability. Preparedness and infrastructure reinforcement will be crucial to ensuring quick recovery and community support after an earthquake.

### Drought

Drought could significantly impact Rio Vista Park, Smith Park, and Pico Park by reducing water availability for irrigation, leading to dry, deteriorated landscapes with brown lawns, weak trees, and declining aesthetics. Water restrictions imposed by the Pico Water District (PWD) may affect public amenities like restrooms, drinking fountains, and splash pads, while sports fields could become harder and less safe for use. At Smith Park, the Aquatic Center might face operational limitations due to water shortages. Additionally, the need for drought-resistant landscaping and water-efficient systems could increase maintenance costs, challenging the parks' usability and sustainability.

### Wildfire

Although Rio Vista Park, Smith Park, and Pico Park may not be directly affected by wildfires, they can experience indirect impacts such as poor air quality, water supply disruptions, increased maintenance needs, and wildlife displacement. Smoke and ash can make outdoor activities unsafe, leading to reduced park visitation and potential temporary closures. Wildfire debris can contaminate water sources, impacting irrigation and leading to dry, damaged landscapes. Parks may also require extra cleanup due to ash buildup on playgrounds, benches, and sports fields. Additionally, displaced wildlife from burned areas may migrate into urban spaces, affecting local ecosystems. Preparedness and maintenance strategies are essential to mitigate these challenges and keep the parks safe and accessible.

#### **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 **Climate Change, Changes in Population, Land Use Development** below.

### Climate Change

Climate change is likely to bring higher temperatures, more extreme weather events, and drought conditions to the region. This will put stress on the parks' water resources, leading to drier landscapes, diminished tree health, and increased maintenance costs for irrigation systems. Heatwaves could also increase the demand for cooling spaces, with parks potentially becoming more crowded as people seek relief. Increased frequency of extreme weather like storms or wildfires could lead to damage to park infrastructure and reduced public access.

### Changes in Population

As the population of Pico Rivera continues to grow, there will be greater demand for recreational spaces. Rio Vista Park, Smith Park, and Pico Park may face increased use, leading to overcrowding, wear and tear on facilities, and the need for expanded amenities such as more playgrounds, sports fields, or picnic areas. Increased foot traffic and vehicular access could strain parking and traffic flow. As the population becomes more diverse, there may also be greater demand for culturally relevant amenities in these parks, such as spaces for community events and gatherings.



### Land Use Development

Land use development in and around Pico Rivera will lead to increased urbanization, which could impact the parks in multiple ways. New commercial and residential developments will increase the local population, further driving up the demand for recreational spaces and putting pressure on the parks to accommodate more visitors. Development of surrounding areas could lead to reduced green spaces and more impervious surfaces, which would contribute to urban heat island effects and increased runoff, making the parks more vulnerable to flooding and soil erosion. At the same time, increased urbanization may reduce the availability of open land for future park expansion.

## Activities Bringing Value to the Community

### 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 Activities Bringing Value to the Community** below.

### *Vulnerability Of Activities Bringing Value to the Community*

The Pico Water District hosts and supports various community events to engage residents, promote water conservation, and strengthen public awareness about local water resources. These events provide educational opportunities, encourage sustainable practices, and foster community involvement.

#### Current programs include:

- Water Conservation Workshops – Pico Water District regularly holds workshops and seminars to educate residents on efficient water use, drought-resistant landscaping, and rebate programs for water-saving appliances.
- School Outreach Programs – The district collaborates with local schools to provide interactive presentations, field trips, and student contests about water conservation and environmental stewardship.
- Public Meetings & Open Houses – Pico Water District hosts public meetings to discuss water infrastructure projects, conservation policies, and future water plans, ensuring transparency and community engagement.
- Rebate & Conservation Program Sign-Up Events – Encouraging residents to take advantage of water-saving rebates for low-flow toilets, drought-resistant plants, and smart irrigation systems.

Since these events occur throughout the community, identifying a single specific location to assess vulnerability is challenging. Instead, vulnerability was evaluated from a broader community perspective.

	Earthquake	Drought	Wildfire
Water Conservation Workshops	X	X	
School Outreach Programs	X	X	
Public Meetings & Open Houses	X	X	
Rebate & Conservation Program Sign-up Events	X	X	



**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 Activities Bringing Value to the Community** below.

*Impact Profile of Activities Bringing Value to the Community*

Earthquake

In the event of an earthquake, PWD's community programs would likely face significant disruptions. Water conservation workshops may be canceled or delayed due to damaged venues or communication breakdowns. Additionally, the immediate focus on recovery could limit the availability of staff and resources for hosting these events. School outreach programs would also be impacted, with school closures and transportation issues making it difficult to engage students in water conservation education. Public meetings and open houses could be postponed as well, given the potential for damaged infrastructure and a shift in priorities towards immediate earthquake recovery. Similarly, rebate and conservation program sign-up events may experience delays if service infrastructure is compromised, affecting the processing of rebates and participation in water-saving initiatives.

Drought

During drought, the demand for water conservation programs would intensify. Workshops on water-saving practices and drought-resistant landscaping would become even more crucial, though resource constraints may limit the district's ability to conduct these programs. School outreach programs would need to focus on educating students about water scarcity, but budget cuts during drought years might hinder outreach efforts. Public meetings and open houses would likely increase in frequency to address water restrictions and conservation policies, but attendance could decrease as the community faces other challenges, such as economic strain. Finally, rebate and conservation program sign-up events would see a surge in interest as residents seek ways to reduce water usage, but financial constraints might limit the scope of available rebates and resources to support these initiatives.

Wildfire

Wildfires can have indirect impacts on the District's community programs by shifting the community's focus away from water conservation efforts. Water conservation workshops may see reduced attendance or be canceled due to poor air quality and the community's focus on recovery. School outreach programs could be disrupted by school closures or prioritization of fire safety education. Public meetings and open houses might be delayed or poorly attended as residents focus on emergency response and recovery. Additionally, rebate and conservation program sign-up events may experience lower participation, as residents concentrate on rebuilding efforts and fire recovery. Overall, during wildfire events, the district's water conservation initiatives may face challenges as the community deals with more immediate concerns.

**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 **Climate Change, Changes in Population, Land Use Development** below.



### Climate Change

Climate change will likely increase the demand for water conservation workshops, school outreach, and rebate programs as residents face more extreme weather, such as prolonged droughts and rising temperatures. PWD will need to adapt by focusing more on drought-resistant landscaping and efficient water use. However, extreme weather events may also disrupt the scheduling and attendance of these programs. Public meetings could become more frequent as concerns about water scarcity grow, but extreme weather might impact community participation.

### Changes in Population

A growing population will require expanded outreach to ensure that more residents, including newcomers, are educated on water conservation. The need for school programs and public meetings will increase to accommodate a larger, more diverse community. Additionally, the rising number of residents will likely lead to a higher demand for rebate programs, requiring more resources and staff to handle the increased participation.

### Land Use Development

New development areas will present opportunities and challenges for water conservation. PWD may need to provide tailored conservation strategies for these newly developed neighborhoods, addressing both residential and commercial needs. As new developments often introduce larger water consumption, targeted rebates and conservation programs will be essential to maintain sustainable water practices in growing areas. Public meetings and outreach efforts will also need to address the changing needs of these new communities.

#### **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 **Table 12** 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 **Table 12** below.

Rowland Water District Multi-Jurisdictional Hazard Mitigation Plan  
Annex: Pico Water District



Table 12: Pico Water District Mitigation Actions Matrix  
(Source: District Planning Team)

Mitigation Actions Matrix

Action Item	Lead Department	Timeline	Goal: Protect Life and Property	Goal: Enhance Public Awareness	Goal: Protect Natural Environment	Goal: Protect Emergency Services	Goal: Encourage Partnerships	Benefit (L-Low, M-Medium, H-High)	Cost (L-Low, M-Medium, H-High)	Priority (L-Low, M-Medium, H-High)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GF, CIP, HMGP, SP-Strategic Plan	Expanding and Improving Capabilities: P-Planning & Regulatory, A-Administrative & Technical; F-Finance; E-Education & Outreach	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Comments 2024
Multi-Hazard Action Items															
MH-1 Upgrade to Supervisory Control System and Data Acquisition (SCADA) system to allow more efficient management of the 24hour pumping operations.	General Manager & Director of Operations	1 – 5 Years	X		X	X		H	H	H	HMGP, CIP	HMGP, CIP	P, A	Y	
MH-2 Upgrade GIS Map of Facilities as needed.	General Manager & Director of Operations	1 – 5 Years	X		X	X		H	H	H	HMGP	HMGP	P, A	Y	

Rowland Water District Multi-Jurisdictional Hazard Mitigation Plan  
Annex: Pico Water District



Action Item	Lead Department	Timeline	Goal: Protect Life and Property	Goal: Enhance Public Awareness	Goal: Protect Natural Environment	Goal: Protect Emergency Services	Goal: Encourage Partnerships	Benefit (L-Low, M-Medium, H-High)	Cost (L-Low, M-Medium, H-High)	Priority (L-Low, M-Medium, H-High)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GF, CIP, HMGP, SP - Strategic Plan	Expanding and Improving Capabilities: P-Planning & Regulatory, A-Administrative & Technical, F-Finance, E-Education & Outreach	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Comments 2024
MH-3 Install solar panel carports and solar panels Main District Office Building – 6500 square feet.	General Manager & Director of Operations	1 – 5 Years	X		X	X		H	H	H	HMGP	HMGP	P, A, F, E	Y	
Earthquake Action Items															
EQ-1 Fund and conduct Reservoir Seismic Vulnerability Study. Hire a consultant to conduct a study on the structural stability of the existing reservoirs and System Pipelines.	General Manager & Director of Operations	1 – 5 Years	X		X	X		H	H	H	HMGP, CIP	HMGP, CIP	P, A	Y	
EQ-2 Seismic Upgrade to	General Manager &	1 – 5 Years	X		X	X		H	H	H	HMGP	HMGP	P, A	Y	

Rowland Water District Multi-Jurisdictional Hazard Mitigation Plan  
Annex: Pico Water District



Action Item	Lead Department	Timeline	Goal: Protect Life and Property	Goal: Enhance Public Awareness	Goal: Protect Natural Environment	Goal: Protect Emergency Services	Goal: Encourage Partnerships	Benefit (L-Low, M-Medium, H-High)	Cost (L-Low, M-Medium, H-High)	Priority (L-Low, M-Medium, H-High)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GF, CIP, HMGP, SP - Strategic Plan	Expanding and Improving Capabilities: P-Planning & Regulatory, A-Administrative & Technical, F-Finance, E-Education & Outreach	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Comments 2024
Reservoir 1. Construct retrofitting for Reservoir 1	Director of Operations														
EQ-3 Mainline Replacement – AC / CIP Pipe vulnerable to Seismic activity.	General Manager & Director of Operations	1 – 5 Years	X		X	X		H	H	H	HMGP, CIP	HMGP, CIP	P, A	Y	
Drought Action Items															
DR-1 Feasibility Study to expand use of recycled water.	General Manager & Director of Operations	1 – 5 Years	X	X	X	X	X	H	H	H	HMGP	HMGP	P, A	Y	
DR-2 Construct – New Reservoir to serve Pressure Zone 1North at existing site, to	General Manager & Director of Operations	1 – 5 Years	X		X	X		H	H	H	HMGP	HMGP	P, A	Y	

Rowland Water District Multi-Jurisdictional Hazard Mitigation Plan  
Annex: Pico Water District



Action Item	Lead Department	Timeline	Goal: Protect Life and Property	Goal: Enhance Public Awareness	Goal: Protect Natural Environment	Goal: Protect Emergency Services	Goal: Encourage Partnerships	Benefit (L-Low, M-Medium, H-High)	Cost (L-Low, M-Medium, H-High)	Priority (L-Low, M-Medium, H-High)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program	Planning Mechanism: GF, CIP, HMGP, SP - Strategic Plan	Expanding and Improving Capabilities: P-Planning & Regulatory, A-Administrative & Technical, F-Finance, E-Education & Outreach	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y), No (N)	Comments 2024
store more Water to reducing pumping impact during high demand.															
DR – 3 Interconnection with local agency for emergency usage.	General Manager & Director of Operations	1 – 5 Years	X			X	X	H	H	H	HMGP	HMGP	P, A	Y	
Wildfire Action Items															
WLD-1 Upgrade undersized water pipelines to current AWWA standards to better meet Fire Flow demands.	General Manager & Director of Operations	1 – 5 Years	X		X	X		H	H	H	HMGP	HMGP	P, A	Y	