



This Annex of the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) details the hazard mitigation planning elements specific to the La Puente Valley County Water District. This Annex is not intended to be a standalone document but appends to and supplements the information contained in the MJHMP. The MJHMP consists of two parts: 1) Rowland Water District 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 La Puente Valley County Water District with a focus on providing additional details on the planning process, risk assessment, and mitigation strategy.

Planing Process

In coordination with the MJHMP Planning Team discussed in Part 1: Planning Process of the MJHMP Base Plan, the agency representative followed the planning process. 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 representatives involved.

Table: District Pla	nnir	ng To	eam	Par	ticip	atio	n									
Name	Research and Writing of Plan					Planning Team Meeting 3: 1/19/2023	One-on-One Mentoring Session: 2-5/2023	Planning Team Meeting 4: June 28, 2023	Planning Team Comment on First Draft Plan	Distribute Second Draft Plan to General Public and External Agencies	Submit Third Draft Plan to Cal OES/FEMA for Approvable Pending Adoption	Post Final Draft Plan in Advance of City Council Meeting	Present Base Plan - Final Draft to RWD Board of Directors for Adoption	Submit Proof of Adoption to FEMA for Final Approval	Incorporate FEMA Approval into Final Plan	Present Annexes to Boards of Directors for Adoption
La Puente Valley	Cou	nty V	Vate	r Dis	strict											
Paul Zampiello	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ	Χ							
Roy Frausto									Χ							

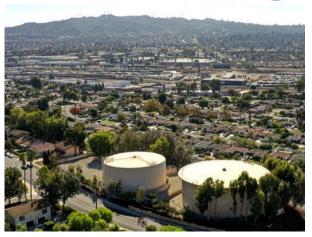
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The profile includes an overview of the district, population, geography, and climate.

The La Puente Valley County Water District has been providing water service to the community for nearly 100 years. The District was formed in August 1924 by popular vote, in accordance with

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the County Water District Act of 1913. On April 28, 1925, voters approved a general obligation bond issue for \$135,000. Proceeds of the Bond were used to purchase the Puente City Water Company for \$35,000 and to pay for the construction of almost five miles of sixteen- and twenty-inch water mains. The mains extend from the District's Wellfield, located near Puente Avenue and Francisquito Avenue, to the Hudson Street Booster Plant and from there to the reservoirs located on Main Street in what was then the township of Puente. The last of the bonds were retired in 1964.



In its infancy, the District consisted of approximately 1,300 acres and 200 customers. The area was vastly different from what it is today. At that time, most of the water produced from the District's Wellfield was delivered to meet agricultural irrigation needs of the valley. Over the years, the District has grown to approximately 1,600 acres and 2,500 customers. To this day the District's Wellfield continues to be the main source of supply to meet the needs of the District's customers.

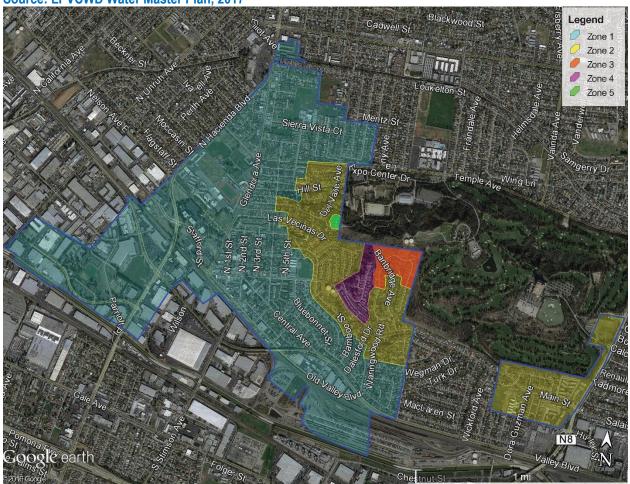
The District has three active wells that produce water from the basin to meet the needs of the District's customers. The District's water system serves a population of approximately 9,500. The annual water demand of the system is approximately 1,600 acre-feet, which equates to 521 million gallons. The annual per capita consumption is approximately 55,000 gallons, which equates to about 150 gallons a day per capita.

Since 1924, the District has relied on its well field located within the Main San Gabriel Groundwater Basin. The Main San Gabriel Basin is an adjudicated basin, meaning that there is a court decision which established rights to the water and the responsibility for efficient management of the quantity and quality of the Basin's groundwater.





Map: La Puente Valley County Water District Boundary Source: LPVCWD Water Master Plan, 2017



Overview

The La Puente Valley County Water District office is located at 112 N 1st Street, La Puente, CA 91744. La Puente Valley County Water District serves residents and businesses in the City of Industry and the City of La Puente. The District's system includes approximately 2,500 service connections, 34.2 miles of distribution and transmission mains, 3 active Wells, 6 booster pump stations, and 3 reservoirs. Most of District's infrastructure was constructed in the 1950's and 60's.

In addition, the District manages and operates the City of Industry Waterworks System, which includes 1,860 residential service connections, 34.4 miles of distribution and transmission mains, 1 active Well, 5 booster pump stations, and 3 reservoirs.

According to the 2017 Water Master Plan, the land use within LPVCWD's service area in the City of La Puente is primarily residential with some commercial, institutional, and open space areas. In the City of Industry, demand is primarily commercial and industrial. Within the unincorporated areas of Los Angeles County, land use is primarily residential.

The District's preferred non-emergency source of supply is from three groundwater Wells that produce water from the adjudicated Main San Gabriel Basin. The Basin is bounded by the San



Gabriel Mountains to the north, San Jose Hills to the east, Puente Hills to the south, and by a series of hills and the Raymond Fault to the west. The watershed is drained by the San Gabriel River and Rio Hondo, a tributary of the Los Angeles River. Surface area of the groundwater basin is approximately 167 square miles. The freshwater storage capacity of the basin is estimated to be about 8.6 million acre-feet.

The District's assets are as follows:

Table: La Puente Valley County Water District Assets

Source: Planning Team

Source: Planning Team					
Facility Name and Type	# Occupants	# Buildings	\$ Structure Value	\$ Contents Value	\$ Total Value
District Main Office, 112 N 1st Street, La Puente	10	1	\$750,000	\$442,000	\$1,192,000
La Puente Treatment Plant and Wellfield (Well #2, 3, &5), 1695 Puente Avenue, Baldwin Park	0	5	\$1,900,000	\$8,900,000	\$10,800,000
Hudson Booster Station & Yard,15629 Hudson Avenue, La Puente	10	3	\$2,000,000	\$1,680,000	\$3,680,000
Banbridge Booster Pump Station, 122 N. Banbridge Avenue, La Puente	0	1	\$25,000	\$65,000	\$90,000
Main St Reservoirs & Booster Pump Stations, 16220 Main Street, La Puente	0	3	\$2,000,000	\$6,100,000	\$8,100,000
Pleasanthome Booster Pump Station, 16200 Temple Avenue, City of Industry	0	1	\$0	\$28,000	\$28,000
Recycled Water Pump Station, 632 Parriott Place, City of Industry	0	1	\$0	\$215,000	\$215,000
Totals			\$6,675,000	\$17,430,000	\$24,105,000

Geography and Climate

According to the 2019 County of Los Angeles All-Hazards Mitigation Plan, the 2018 Our County: Landscapes and Ecosystems, the City of La Puente General Plan, and the City of Industry General the following information identifies the geography and climate of the project area.



Geography

City of La Puente

The City of La Puente is located 20 miles east of downtown Los Angeles in the San Gabriel Valley. This city is predominately residential and is home to more than 42,000 people. On of the City's strongest assets is location. Freeway access is readily available from Interstate 10 and State Route 60. La Puente is centrally located relative to the regions' large employment centers.

City of Industry

The City of Industry is in the southeastern corner of Los Angeles County, near the junction of Orange and Riverside Counties. The City of Industry encompasses approximately 7,706.6 acres or 12.04 square miles, in East San Gabriel Valley between the Puente Hills on the south and the San Jose Hills to the north.

The City of Industry is bordered on the north primarily by the incorporated cities of La Puente and Walnut and to a lesser extent by Baldwin Park, West Covina, and Pomona. On the southern border lies the incorporated City of Dimond Bar and on the western board is Pio Rivera and El Monte. The City is also bordered by several unincorporated Los Angeles County communities including Bassett, Avocado Heights, West Puente Valley, Valinda, South San Jose Hills, South Walnut, Rowland Heights, Hacienda Heights, and North Whittier. With the exception of Diamond Bar on the east, the entire southern boundary of the City is bordered by unincorporated areas of Los Angeles County.

The City is approximately 14 miles long, generally stretching from interstate 605 on the west to State Route 57 on the east, and approximately one-half mile wide. Interstate 10 touches a portion of the northwestern boundary of the City, I-605 borders much of the western boundary, and Valley Boulevard forms most of the northern boundary. State Route 60 traverses the Sothern edge of the City of Industry.

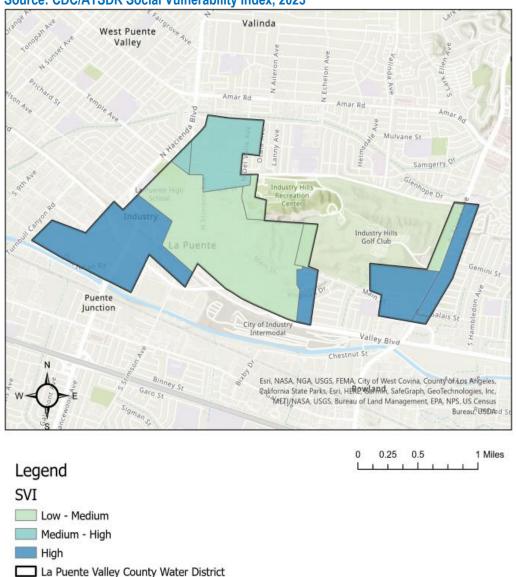
Social Vulnerability

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.

The map below depicts the SVI map for the La Puente Valley County Water District. There are 4 census tracts within the City boundary that have a high SVI, 2 census tracts that have a medium-high SVI, and 2 census tracts that have a low-medium SVI. The high SVI rated census tracts area depicted in the darker blue areas on the map. The medium light blue represents the medium-high SVI census tracts and the lightest blue/green represents the low-medium SVI census tracts.



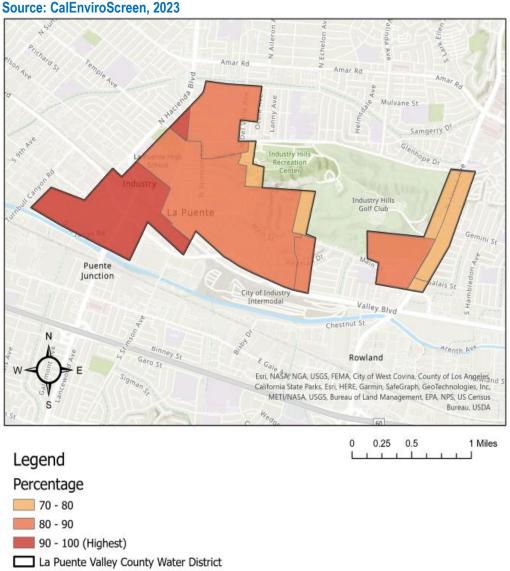
Map: District Social Vulnerability Index Source: CDC/ATSDR Social Vulnerability Index, 2023



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. The 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: District CalEnviroScreen 4.0 Results



Identification of Disadvantaged Communities

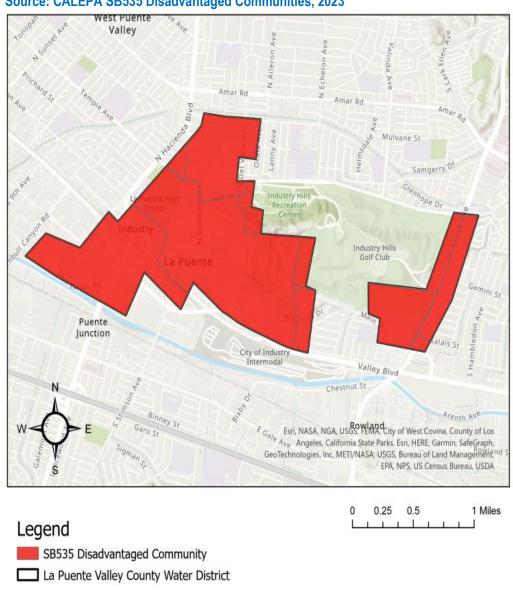
SB 1000 defines "disadvantaged communities" as areas identified by the California Environmental Protection Agency pursuant to Section 39711 of the Health and Safety Code or as an area that is low-income that is disproportionately affected by environmental pollution and other hazards that can lead to 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 less well on a range of health and socioeconomic indicators than areas with low scores.

The entire service area for the District is considered a SB 535 Disadvantaged Community.

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





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 the 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 Bellflower-Somerset Mutual Water Company, the Cal-Adapt tool was used to analyze data. Cal-Adapt provides a way to explore peer-revied data that portrays how climate change might affect California at the state and local level" (cal-adapt.com). Cal-Adapt can provide a climate snapshot for an address, county, city, census tract, or watershed. The majority of the District is within the City of La Puente. Below is a summary of the data reviewed for the City of La Puente.

Increased Temperature: Annual maximum temperatures in the City of La Puente 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 78.5°F. Under the medium emissions scenario, the average annual maximum temperature is projected to increase to 82.8°F. Between 2070 and 2099. The annual average maximum temperature under the high-emission scenario is projected to increase to 87°F. between 2070 and 2099.



More Extreme Heat Days: Extreme Heat Days occur when the maximum temperature is above 100.5°F. Historically the City has experienced an average of 4 extreme heat days per year. By mid-century, 2025-2064, the annual number of extreme heat days is expected to rise to 14 under medium emission scenarios and 18 under high emission scenarios. By the end of the centuries, 2070 and 2099, the number of extreme heat days is expected to rise to 19 under medium emission scenarios and 37 under high emission scenarios.

Static Annual Precipitation: Historically the City of La Puente has experienced an annual average of 15.8 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 15.5 inches. Under the high emission scenario, it is expected that the annual precipitation will be 15.7 inches. By the end of the century annual precipitation is expected to increase to 16.1 inches under the medium emission scenario and 15.7 inches under the high emission scenario.

Longer and More Extreme Droughts: The City of La Puente can expect to see a 11.9% Increase in average temperature and a 26.4% 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 La Puente 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 a 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.

Hazard Map

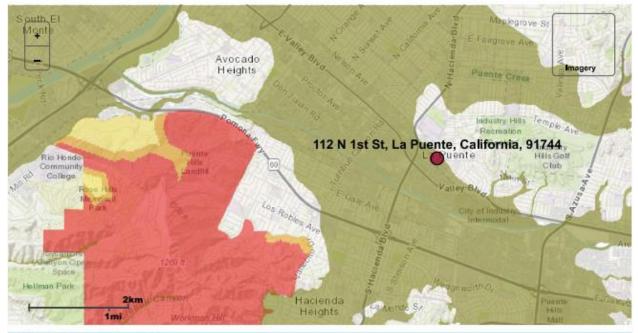
Utilizing California's "MyHazards" online hazard mapping resource, the following map identifies earthquake, flooding, liquefaction, and wildfire threats. MyHazards was designed by the State of California as a tool for the general public to discover hazards in their area (earthquake, flood, fire, and 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. MyHazards website performs best when using Internet Explorer. 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/).

Below is the MyHazards map prepared for the La Puente Valley County Water District.



Map: MyHazards for La Puente Valley County Water District

Source: Cal OES, 2022



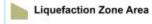
California_Tsunami_Hazard_Areas



Earthquake Fault Zone of Required Investigation



Liquefaction Zone of Required Investigation



State Responsibility Areas (2007), Severity







100-Year Floodplains



The State Responsibility Area (SRA) is the area of the state where the State of California is financially responsible for the prevention and suppression of wildfires. SRA does not include lands within city boundaries or in federal ownership. FEMA's Flood Map Service Center (https://msc.fema.gov/portal/)



Hazard Identification and Profile

The MJHMP Planning Team identified hazards posing a significant threat to the entire project area (Public Water Agencies Group Footprint). That determination was based on reviewing the State Hazard Mitigation Plan and the 2019 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, landslides, wildfire, tsunami, dam failure, climate change, and drought.

Following that analysis, the MJHMP Planning Team chose to integrate climate change into all of the hazards. Also, a new hazard category was developed for "utility related" which includes Public Safety Power Shutoff (PSPS) and natural gas related events.

Next, the MJHMP Planning Team utilized a hazard ranking tool known as the Calculated Priority Risk Index. As a whole, the MJHMP Planning Team completed a CPRI for the project area. The CPRI instructions, key, and results are located in the MJHMP Base Plan – Risk Assessment. The Base Plan also includes a hazard assessment for each of the identified 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). Following is the La Puente Valley County Water District CPRI and the CPRI Index Key which explains the rating system:

Table: La Puente Valley County Water District CPRI

Source: District Planning Team, Emergency Planning Consultants

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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	1	0.45	1	0.30	1	0.15	1	0.10	1.10	N/A
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	2	0.20	3.35	Н
Flood	2	0.90	2	0.60	4	0.60	2	0.20	2.30	L
Utility Related	3	1.35	2	0.60	4	0.60	3	0.30	2.85	M
Wildfire	2	.90	2	0.60	1	0.15	2	0.20	1.85	L
Windstorm	2	0.90	1	0.30	1	0.15	3	0.30	1.65	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



Table: Calculated Priority Risk Index Key Source: FEMA Emergency Management Institute

CPRI	Degree of Risk	Management Institute C		Assigned
Category	Level ID	Description	Index Value	Weighting Factor
	Unlikely	Extremely rare with no documented history of occurrences or events. Annual probability of less than 1 in 1,000 years.	1	
	Possibly	Rare occurrences. Annual probability of between 1 in 100 years and 1 in 1,000 years.	2	
Probability	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	45%
	Highly Likely	Frequent events with a well-documented history of occurrence. Annual probability of greater than 1 every year.	4	
	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. Shut down of critical public facilities for less than 24 hours.	1	
Magnitude/ Severity	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. Shut down of critical public facilities for more than 1 day and less than 1 week.	2	30%
,	Critical	3		
	Catastrophic	4		
	> 24 hours	Population will receive greater than 24 hours of warning.	1	
Warning	12-24 hours	Population will receive between 12-24 hours of warning.	2	15%
Time	6-12 hours	3	1370	
	< 6 hours	Population will receive less than 6 hours of warning.	4	
	< 6 hours	Disaster event will last less than 6 hours	1	
Duration	< 24 hours	Disaster event will last less than 6-24 hours	2	100/
Duration	< 1 week	Disaster event will last between 24 hours and 1 week.	3	10%
	> 1 week	Disaster event will last more than 1 week	4	



Hazard Profile

The **Base Plan – Risk Assessment** described hazards by location, extent, probability, and recent occurrence. Table: Hazard Profile from the Base Plan was customized below for the La Puente Valley County Water District hazards identified as "medium" and "high" in the Priority Rankings.

Table: Hazard Profile of Location, Extent, Probability, and Most Recent Significant Occurrence for the La

Puente Valley County Water District

Hazard	Location (Where)	Extent	Probability	Most Recent Significant								
		(How Big an Event)	(How Often) *	Occurrence								
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 Governor Newsom's 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.								
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.1	Likely	The most recent damaging earthquake was the M6.7 Northridge Earthquake in 1994.								
Utility Related	Entire District	Public Safety Power Shutoff poses significant threat to water providers and customers.	Likely	None								
•	* Probability is defined as: Unlikely = 1:1,000 years, Possibly = 1:100-1:1,000 years, Likely = 1:10-1:100 years, Highly Likely = 1:1 year											
¹ Uniform California E	arthquake Rupture Fore	cast										

^{*} See Base Plan for information regarding NFIP regulations.

Critical and Essential Facilities List

The Critical and Essential Facilities List was prepared for each of the water district offices and facilities within the project area. Hazard maps from the 2019 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.



Table: Hazard Proximity to Critical and Essential Facilities (Source: District Planning Team, Emergency Planning Consultants)

Y – Yes, area is within hazard zone N – No, area is not within hazard zone

Facility Name and Address	Drought	Earthquake	Utility Related
District Main Office, 112 N 1st Street, La Puente		Х	Х
La Puente Treatment Plant and Wellfield (Well #2, 3, &5), 1695 Puente Ave, Baldwin Park	Х	Х	X
Hudson Booster Station & Yard,15629 Hudson Avenue, La Puente	Х	Х	Х
Banbridge Booster Pump Station, 122 N. Banbridge Avenue, La Puente	Х	Х	Х
Main St Reservoirs & Booster Pump Stations, 16220 Main Street, La Puente	Х	Х	Χ
Pleasanthome Booster Pump Station, 16200 Temple Avenue, City of Industry	Х	Х	Х

Summary of Vulnerability

The MJHMP Base Plan – Risk Assessment provides a complete risk and vulnerability assessment for each of the project area hazards.

The following is a summary of vulnerability to the identified hazards. All of the District's staff could be impacted by an earthquake, drought, or utility related event. In addition, all of the District's 15 buildings including District Main Office, La Puente Treatment Plan and Wellfield, Hudson Booster Station & Yard, Banbridge Booster Pump Station, Main Street Reservoirs and Booster Pump Stations, Pleasanthome Booster Pump Station, and Recycles Water Pump Station with structures/contents valued at approximately \$24,105,000. These estimates are based on 2023.

Earthquake

The combination of plate tectonics and associated geology generates earthquakes as a result of the periodic release of tectonic stresses. Los Angeles County's terrain lies in the center of the North American and Pacific tectonic plate activity. There have been earthquakes as a result of this activity in the historic past, and there will continue to be earthquakes in the future of California. Fault ruptures themselves contribute very little to damage unless the structure or system element crosses the active fault; however, liquefaction can occur further from the source of the earthquake. In general, newer construction is more earthquake resistant than older construction due to enforcement of improved building codes. Manufactured buildings are very susceptible to damage because their foundation systems are rarely braced for earthquake motions. Locally generated earthquake motions and associated liquefaction, even from very moderate events, tend to be more damaging to smaller buildings, especially those constructed of unreinforced masonry (URM) and soft story buildings.

Impacts from earthquakes in the service area will vary depending on the fault that the earthquake occurs on, the depth of the earthquake strike, and the intensity of shaking. Should ground shaking be intense, District facilities and critical infrastructure could be damaged or destroyed. Of greater risk than the building is the students and staff who occupy those buildings; injury or loss of life could occur during a significant event. In addition to earthquakes causing structural damage, the District has multiple non-structural components that may be damaged during earthquake shaking.



Nonstructural components include furnishings and equipment, electrical and mechanical fixtures, and architectural features such as suspended ceilings, partitions, cabinets, and shelves. In general, nonstructural components and building contents become hazards when they slide, break, fall, or tip over during an earthquake. Securing the nonstructural components and building contents will improve safety and security of the facility.

Drought

Drought is a slow moving hazard. Severe reductions and shutoffs can take place following a broken water main or during major repairs. It is possible that water agencies could resort to restrictions rather than just fines.

Utility Related

Public Safety Power Shutoff (PSPS) can be initiated by SCE for a range of reasons including wildfire, high wind, severe weather, flooding, and earthquake. The power shutoffs are initiated in large areas within the county so property may not even be impacted by the initial event but still impacted by the power shutoff.

Capability Assessment

The agency 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 and positions involved in integrating mitigation strategies into their planning documents and operational guidelines. FEMA identifies four types of capabilities (see MJHMP Base Plan for definitions of the four capabilities):

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

The table below includes a broad range of capabilities within the agency to successfully accomplish mitigation.



Table: Capability Assessment for La Puente Valley County Water District Source: District Planning Team, 2023

	of Ca			Name of Capability	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
X	Х			Executive Administration	The General Manager is the liaison to the Board of Directors and oversees the day-to-day operations of the District. The General Manager provides leadership and initiates strategic planning to implement the goals and the vision of the Board of Directors. The Foundational Principles provide guidance in establishing long-term organizational goals, and the General Manager utilizes the talent and skills of the entire staff to fulfill the organizational objectives. The General Manager has been appointed by the Board to oversee the daily operations of the District. The General Manager will be instrumental in supporting the development, maintenance, and implementation of the Hazard Mitigation Plan, including the mitigation actions. Support will include providing funding and staff.
X	Х		Х	Administration – Human Resources & Risk Management	Human Resources (HR) is responsible for the mandate of formulating and executing strategies to cultivate a workforce aligning with and fortifying organizational objectives and values. In addition to workforce development, the division assumes responsibility for overseeing employee benefits, classification and compensation, policies and procedures, employee relations, administrative support, and employee development. Risk Management is dedicated to fostering a secure work environment. The comprehensive risk management program encompasses employee safety and training initiatives, workers' compensation, emergency management, disaster preparedness, loss prevention, and overall auto and property liability insurance coverage for the District. The Human Resources & Risk Management serves as the coordinating agency for various mitigation actions pertaining to staff training, ensuring their effective implementation within the organizational framework.
X	X			Administration – Information Technology (IT)	Information Technology provides comprehensive technology planning, development, integration, operation, maintenance, and support to all areas of the District to maximize efficiency. The Division's primary responsibilities include day-to-day network center operation and the provision of a safe and secure network environment for centralized data libraries and equipment. Extended responsibilities include access control systems, audiovisual systems, data storage, database systems, disaster recovery, mobile devices, network intrusion prevention, printers, scanners, multifunction copiers, servers, workstations, software development, software implementation, telecommunications, telephone system, video surveillance security systems, WI-FI, and Internet. Administration - Information Technology is identified as a coordinating agency for several mitigation action items.



Type	of Ca	pabilit	v	Name of Capability	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
X	X		X	Administration – Communications, Education & Outreach	The Communications, Education & Outreach manages strategic communications, community outreach, water conservation initiatives, special events, school education programs, and media relations for the District. Employing a diverse range of communication methods, the team disseminates information to both internal and external stakeholders, strengthening the LPVCWD brand within the community and the broader water industry. These methods encompass the customer newsletter (the Bridge Press), website administration, social media engagement, guided tours, community marketing, video production, and vehicular signage. Each facet assumes a pivotal role in advancing the District's strategic vision, mission, and values. Mitigation actions tied to private construction of new structures or retrofits and enhancements to existing structures may find support through public education and other initiatives orchestrated by the Communications & Outreach. Acknowledged as the coordinating agency for multiple mitigation action items, the department plays a central role in ensuring their effective implementation.
	X	X	X	Administration – Customer Service	Administration – Customer Service are the first responders to customer inquiries. They provide information and assist customers with their bill statement, new service applications, customer account issues, payment processing and bill pay assistance, leak detection, backflow and recycled system compliance, and water quality calls for over 4,000 accounts. Administration – Customer Service is identified as supporting several mitigation action items.
X	X			Engineering - Design, and Project Management	Under the guidance of the General Manager and Superintendents, this role entails supervising capital improvement projects, water resource management, the District's Master Plans for water and water supplies, along with all engineering and planning endeavors. Civiltec Engineering and Stetson Engineers will actively contribute to various mitigation action items and serve as the coordinating agency, providing both financial support and staffing resources. The General Manager is responsible for prioritizing and establishing schedules and methodologies for the design and construction of District capital improvement projects. The General Manager oversees engineering design activities, including consultant-prepared designs, reviews engineering plans, cost estimates, labor proposals, agreements, public works contracts, and project specifications. Meanwhile, the Superintendents implement construction management methods to supervise contractors involved in the field construction of the District's capital improvement projects. The Engineering Department is designated as the coordinating agency for numerous mitigation action items.



Type	of Ca	nabilit	v _	Name of Capability	Capability Description and Ability to Support Mitigation
туре		pabilit	y	Name of Capability	Capability Description and Ability to Support Willigation
Planning and Regulatory	Administrative and Technica	Financial	Education and Outreach		
X	X			Engineering - Geographical Information System (GIS)	Engineering assumes responsibility for coordinating and actively participating in the management of databases within the Geographic Information System (GIS) application. Additionally, it oversees the timely updates and maintenance of GIS databases for potable water, managing the transition from construction drawings to as-built information. This entails executing data capturing and conversion, data entry, and graphic editing activities, while also developing user-friendly file management systems and conducting geographic data analyses. Utilizing professional-grade Global Positioning System (GPS) equipment, this division collects geographical information in the field, precisely locating District assets and addressing accuracy issues through GPS resolution. The collected GPS data is seamlessly integrated into the GIS database. The GIS viewing application ensures the provision of accurate, accessible, and functional data on both desktop and mobile devices throughout the District.
Х	Х			Operations – Construction Inspection Division	Operations – Construction Inspection Division conducts construction inspections of water and recycled water systems for a variety of District or developer-built projects.
X	X			Operations – Water Treatment & Production	Water Treatment responsibilities include District-wide water quality monitoring, state and federal drinking water regulatory compliance, and the operation and maintenance of the District's ground water treatment facilities. Production's responsibilities include water supply and operations. In addition, the division is responsible for daily monitoring, maintenance, and repair of the District's booster pump stations, and reservoirs groundwater wells. SCADA's responsibilities include industrial electrical, communications, and controls for the District's Water Treatment and Water Production. Such responsibilities consist of electrical design, implementation, and maintenance of electrical equipment ranging from marginal voltage direct current to 480 volts alternating current. Communications include Ethernet and serial networks utilizing wire, fiber optics, and wireless media. Controls focuses on the design, integration, development and implementation of controls systems which leverage technology to facilitate more effective and efficient operational strategies. The Operations – Water Treatment & Production Division is identified as the coordinating agency for several mitigation action items.
X	X			Operations – Water Distribution & Maintenance	Operations – Water Distribution & Maintenance is responsible for the maintenance and repair of the District's water system infrastructure, which includes mains, hydrants, valves, services, and implementation of preventative maintenance programs. The Division strives to provide timely service on all customer requests, exceptional customer service and responds 24 hours a day, 365 days a year, to all water emergencies. The Operations – Water Distribution & Maintenance is



Туре	of Ca	pabilit	у	Name of Capability	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
X	X	X		Finance – Accounts Payable and Procurement	identified as the coordinating agency for several mitigation action items. Finance — Account Payable and Procurement is responsible for the maintenance, repair, and general upkeep of the District's buildings, and coordinates the maintenance and repair of the District's vehicles and heavy equipment. General Services is also responsible for logistical setup for all District events, including the District's Board of Director's and committee meetings. This Division also serves as central purchasing for the District and assists in the research and procurement of District materials and supplies. They issue Requests for Bids/Proposals, evaluate proposals for compliance, and coordinate orders and deliveries. The Account Payable and Procurement Division is identified as the coordinating agency for several mitigation action items.
X	Х		Х	Emergency Response Plan	The District's Emergency Response Plan is reviewed and updated yearly or as needed and is a reference and guidebook to operations during a major emergency impacting the District. The Plan includes a discussion on a wide range of hazards, organization and staffing of the Emergency Operations Center, and connectivity with field responders and external agencies.

Expanding and Improving Capabilities

<u>Planning and Regulatory Capabilities</u> – La Puente Valley Water District oversees the management of capital improvement projects, water resource management, the District's Master Plan (2017) for water, and water supplies as well as all engineering and planning work.

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.

<u>Finance</u> - The District recently completed a 5-year rate study in August of 2023. This study identifies key infrastructure upgrades and allocated budgets. Additionally, the Water Master Plan outlines water infrastructure needs. Other funding sources should be kept in mind for future mitigation activities.



<u>Education and Outreach</u> – The District has a team that oversees strategic community outreach, water conservation outreach, special events, and other education programs. The team utilizes a number of different communication methods to disseminate information. 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.

Plan Implementation

As identified in the MJHMP 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 agency representative will gather a District Planning Team together on a quarterly basis to discuss the District's Mitigation Actions Matrix. The members of the District Planning Team will represent the departments or positions with responsibilities identified in the Mitigation Actions Matrix. See MJHMP 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 Local Mitigation Officers. Upon the bi-annual review, the District's Local Mitigation Officer will work with the agency's departments or positions to identify areas that 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 (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



Mitigation Actions Matrix

Mitigation Action Item	Coordinating Department	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source: GF- General Fund, CIP – Capital Improvement Plan, HMGP – Hazard Mitigation Grant Program, BRIC – Building Resilient Infrastructure & Communities	Planning Mechanism: GF, CIP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments: Completed, Deferred, Deleted, New, Revised, Cost estimates from Engineering, source documents, CP-Capital Project #
MH-1 Bamboo Street and Dalesford Drive pipeline Improvements (335 ft of 8-inch watermain)	Operations	3-5 years	Х					Υ	CIP	CIP	Н	L	М	\$260K
MH-2 Pipeline and Fire Hydrants Improvements on Inyo and Common (1,570 ft of 8-inch watermain)	Operations	3-5 years	x					Υ	CIP	CIP	М	L	М	\$450K
MH-3 Pressure Sustaining Valve and Pipeline Improvements on Ferrero Lane (605 ft of 6-inch watermain)	Operations	3-5 years	x					Υ	CIP	CIP	М	L	M	\$250K
MH-4 Pipeline Improvements on Hacienda (550 ft of 8-inch watermain)	Operations	3-5 years	x					Υ	CIP	CIP	М	L	М	\$220K
MH-5 Pipeline Improvements	Operations	3-5 years	Х					Υ	CIP	CIP	М	М	M	\$200K



Mitigation Action Item	Coordinating Department	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source: GF- General Fund, CIP – Capital Improvement Plan, HMGP – Hazard Mitigation Grant Program, BRIC – Building Resilient Infrastructure & Communities	Planning Mechanism: GF, CIP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments: Completed, Deferred, Deleted, New, Revised, Cost estimates from Engineering, source documents, CP-Capital Project #
in Main (1,000 ft 8-inch watermain)														
MH-6 San Jose Waterline Replacement (1,140 ft of 6- inch watermain)	Operations	3-5 years	Х					Υ	CIP	CIP	М	М	М	\$180K
MH-7 Old Valley Blvd Waterline Replacement (10,450 ft of 8- inch watermain)	Operations	3-5 years	х					Υ	CIP	CIP	М	Н	L	\$1.9M
MH-8 Purchase and install radio repeaters to expand the coverage area for the radio system	Operations	3-5 years	x	х		х	Х	Υ	GR	GR	Н	L	М	\$75K
MH-9 Purchase vehicles and equipment – aggressive, proactive maintenance programs to ensure properly maintained and operational.	Operations – Fleet	Annual					Х	Υ	CIP	CIP	Н	L	Ι	
MH-10 Purchase of Reverse 911 System for Public	IT and Operations	3-5 years	Х				Χ	Υ	GF	GF	Н	М	Н	



Mitigation Action Item	Coordinating Department	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source: GF- General Fund, CIP – Capital Improvement Plan, HMGP – Hazard Mitigation Grant Program, BRIC – Building Resilient Infrastructure & Communities	Planning Mechanism: GF, CIP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments: Completed, Deferred, Deleted, New, Revised, Cost estimates from Engineering, source documents, CP-Capital Project #
Notification and Guidance														
during Emergency Events. MH-11 Purchase a Back-up Computer Information Systems (CIS). Continuity of Operations Plan in Informational Technologies (IT).	ΙΤ	2-3 years	X			Х	X	Υ	GF	GF	M	L	L	
MH-12 Spare Critical Materials and Supplies Inventory. Purchase of critical spare parts and material.	Distribution & Treatment	2-3 years	X			X	X		GF	GF	М	Ш	L	
MH-13 Purchase construction equipment (i.e., shoring plates and excavators) to facilitate response and recovery in emergency events.	All	3-5 years	Х		х	х	X	Υ	CIP	CIP	Н	L	Н	
MH-14 Purchase of specialized equipment and training for confined space rescue.	Operations	Ongoing		X	Х	Х	X		GF	GF	G F	GF	N	



Mitigation Action Item	Coordinating Department	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source: GF- General Fund, CIP – Capital Improvement Plan, HMGP – Hazard Mitigation Grant Program, BRIC – Building Resilient Infrastructure & Communities	Planning Mechanism: GF, CIP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments: Completed, Deferred, Deleted, New, Revised, Cost estimates from Engineering, source documents, CP-Capital Project #
MH-15 Purchase and provide training for personal protective equipment for following natural hazard events.	Risk Management and Emergency	2-3 years	х			X	X		GF	GF	М	L	L	
MH-16 Purchase additional satellite phones for use during heavy storms and other natural events along with other events resulting in utility outages.	Risk Management and Emergency	5 years	X			X	X		GF	GF	М	L	L	
MH-17 Purchase additional 5,000- gallon water trucks for dust control (wind) and fire suppression (fire).	Operations	5 years	Х	Х	Х	Х	Х		CIP	CIP	М	М	L	
MH-18 Purchase two 4-wheel drive utility trucks for use during inclement weather and other emergencies requiring immediate access to otherwise impassable service areas.	Fleet	2-3 years	X			Х	Х	Υ	CIP	CIP	M	М	L	



Mitigation Action Item	Coordinating Department	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source: GF- General Fund, CIP—Capital Improvement Plan, HMGP—Hazard Mitigation Grant Program, BRIC—Building Resilient Infrastructure & Communities	Planning Mechanism: GF, CIP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments: Completed, Deferred, Deleted, New, Revised, Cost estimates from Engineering, source documents, CP-Capital Project #
MH-19 Purchase emergency lighting equipment for use during inclement weather and nighttime emergency repairs and construction.	Operations	2-3 years	Х			Х		Υ	CIP	CIP	М	М	M	
MH-20 Purchase K-Rails for use in retaining and controlling flood waters and other spills during emergencies.	Operations	5 years	Х			х		Υ	CIP	CIP	М	М	L	
MH-21 Purchase a large articulating forklift for placing K-Rails and other heavy equipment during emergency mitigation, response, and recovery.	Operations	5 years	х			х		Υ	CIP	CIP	М	М	L	\$100K
MH-22 Purchase property and build a centralized storage facility for emergency repairs supplies including valves and pumps.	Operations	5 years			X	х	X	Υ	GF	GF	М	Н	L	



Mitigation Action Item	Coordinating Department	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source: GF- General Fund, CIP – Capital Improvement Plan, HMGP – Hazard Mitigation Grant Program, BRIC – Building Resilient Infrastructure & Communities	Planning Mechanism: GF, CIP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments: Completed, Deferred, Deleted, New, Revised, Cost estimates from Engineering, source documents, CP-Capital Project #
MH-23 Upgrade server hardware and software to effectively accommodate new business applications and transfer increased amounts of data quickly and reliably.	IT	1-2 years					X	Y	GF	GF	Н	L	Н	
MH-24 Purchase additional laptops, tablets, smartphones, wireless data, SCADA and CMMS to staff to increase communications	IT	Ongoing	X				X	Υ	GF	GF	Н	L	M	\$50K
MH-25 Purchase and Install Security Systems to help mitigate against acts of terrorism and vandalism.	Operations and Facility	2 years	х			Х		Υ	CIP	CIP	Н	M	М	\$120K
MH-26 Purchase and Install Security Systems to help mitigate against acts of terrorism and vandalism.	Operations and Facility	2 years	Х			Х		Υ	CIP	CIP	Н	M	M	\$120K
MH-27 Add card readers and door locking mechanisms that	HR/Risk; IT	3-5 years	Х			Х		Y	CIP	CIP	Н	М	М	\$60K



Mitigation Action Item	Coordinating Department	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source: GF- General Fund, CIP – Capital Improvement Plan, HMGP – Hazard Mitigation Grant Program, BRIC – Building Resilient Infrastructure & Communities	Planning Mechanism: GF, CIP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments: Completed, Deferred, Deleted, New, Revised, Cost estimates from Engineering, source documents, CP-Capital Project #
can be integrated with the existing access control system to automatically lock doors/restrict access to areas that are publicly accessible. Areas include Main office, Operations yard pump stations and Treatment Plant														
MH-28 Website / Public Notification / Outreach to facilitate greater resilience against drought and catastrophic water loss.	Community Research	2 years		X	X	X	X		GF	GF	M		L	
MH-29 Purchase sandbag filling machine or other form of barrier protection equipment for use during emergency mitigation and response.	Operations	1-2 years	X			X		Y	CIP	CIP	М	M	M	
MH 30 Purchase a Vactor Truck or hydro excavation trailer to increase capacity	Operations	5 years	Х		Х	Х		Υ	CIP	CIP	Н	М	Н	\$250K



Mitigation Action Item	Coordinating Department	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source: GF- General Fund, CIP – Capital Improvement Plan, HMGP – Hazard Mitigation Grant Program, BRIC – Building Resilient Infrastructure & Communities	Planning Mechanism: GF, CIP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments: Completed, Deferred, Deleted, New, Revised, Cost estimates from Engineering, source documents, CP-Capital Project #
mitigate damage from flooding														
or major water leaks MH-31 Replace all 4" Distribution watermains (5 miles) to increase fire flow capacity in Residential service area	Operations	1-5 years	X			X		Y	CIP, HMGP, BRIC	CIP, HMGP, BRIC	Н	H	Ι	
		Earthqu	ıake	Mit	igati	ion <i>i</i>	Acti	on Items						
EQ-1 Purchase and Installation of Engineered Seismic Retrofits (e.g., Seismic Valves and Couplings) at Water Storage Facilities (Reservoirs).	Engineering	3 years			X	X	X	Y	CIP, HMGP, BRIC	CIP, HMGP, BRIC	М	Η	L	
EQ-2 Conduct inventory and identify action plan for retrofitting non-structural equipment and furniture, etc. against seismic activity.	Operations	1-2 years	X	X	X	X	X	Н	CIP, HMGP, BRIC	CIP, HMGP, BRIC	М	Н	L	



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Mitigation Action Item	Coordinating Department	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)	Funding Source: GF- General Fund, CIP – Capital Improvement Plan, HMGP – Hazard Mitigation Grant Program, BRIC – Building Resilient Infrastructure & Communities	Planning Mechanism: GF, CIP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments: Completed, Deferred, Deleted, New, Revised, Cost estimates from Engineering, source documents, CP-Capital Project #
Drought Mitigation Action Items														
DR-1 Purchase leak correlating equipment for use during emergency mitigation, response, and recovery.	Operations	3 years	X			X		Y	CIP	CIP	M	М	M	\$30K
		Utility Re	elate	d M	itiga	tion	Ac	tion Item	S					
UT-1 Design and purchase a generator for District office to provide emergency power for the District's EOC and customer service operations	Operations	5 years	Х	х		Х		Y	CIP	CIP	Н	М	Н	
UT-2 Design and purchase additional generators for LP wells and BPOU treatment plant. Ensure 24/7 operation of well sites, treatment facilities.	Operations	5 years	Х		x	Х		Y	CIP	CIP	Н	М	Н	



Mitigation Action Item	Coordinating Department	Timeline	Goal: Protect Life and Property	Goal: Public Awareness	Goal: Natural Systems	Goal: Emergency Services	Goal: Partnerships and Implementation	Buildings & Infrastructure: Does the Action item involve New and/or Existing Buildings and/or Infrastructure? Yes (Y)		Planning Mechanism: GF, CIP, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments: Completed, Deferred, Deleted, New, Revised, Cost estimates from Engineering, source documents, CP-Capital Project #
MH-3 Purchase Emergency Mobile & Fixed Power Generators.	Fleet & Facility	Ongoing			Х	Х	Х	Υ	CIP	CIP	Η	L	Н	