



Introduction

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

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 Valencia Heights Water Company with a focus on providing additional details on the planning process, risk assessment, and mitigation strategy.

Planning Process

In coordination with the MJHMP Planning Team discussed in Part 1: Planning Process of the MJHMP Base Plan, agency representatives 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 representative's involvement.

Table: Company's Planning Team Participation

Name	Research and Writing of Plan	Planning Team Meeting 1: 9/14/2022	Planning Team Meeting 2: 9/28/2022	One-on-One Mentoring Session: 11/2-12/2022	Collaborative Meeting: 12/6/2023	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 Base Plan and Annex in Advance of Board of Directors Meeting	Present Final Draft Base Plan and Annex to Board of Directors for Adoption	Submit Proof of Adoption to FEMA for Final Approval
Dave Michalko	X	X		X	X	X	X	X	X					
Gloria Galindo	X			X			X	X	X					

Company Profile

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

According to the Company's website, VHWC was formed in November of 1912 as a not-for-profit California Corporation in Los Angeles. Its original purpose was for irrigating citrus groves and to



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provide domestic water to large estates. As the San Gabriel Valley developed, the Company evolved into a domestic water purveyor. VHWC serves a population of approximately 8,000 customers through 1,700 service connections in the cities of Covina and West Covina and the unincorporated areas of Los Angeles County. The Company's service area is generally bounded by the San Bernardino Freeway on the north, by Forest Lawn Cemetery on the east, by the boundary of the City of Walnut on the south, and by Citrus Street on the west. The Company primarily serves a residential community with little commercial and industrial areas.

VHWC also serves 17 single-family homes and one irrigation meter in the Paradise View area of Malibu, California. As a mutual water company, landowners are allowed to join the Company, given they cover all the costs to do so, and buy shares of stock in the Company. In the mid-eighties, a developer had interest in being part of VHWC, and therefore bought into the Company and built a new water system for the 18 meters. By 2000, the development was completely built out.

The VHWC water system is connected to Los Angeles County Water Works System 29 as a source of water supply. The Company buys the water from the County and distributes it to the 18 meters. The Company is responsible for billing the 18 meters which generates revenue to maintain the water system.

VHWC is governed by a seven (7) member Board of Directors. The General Manager serves to manage, make decisions, and control the water costs of the Company on behalf and in the best interest for the stockholders and Company. Every property owner in the service area is a stockholder in the company including the Board of Directors, a requirement expressed in the By-laws of the Company.

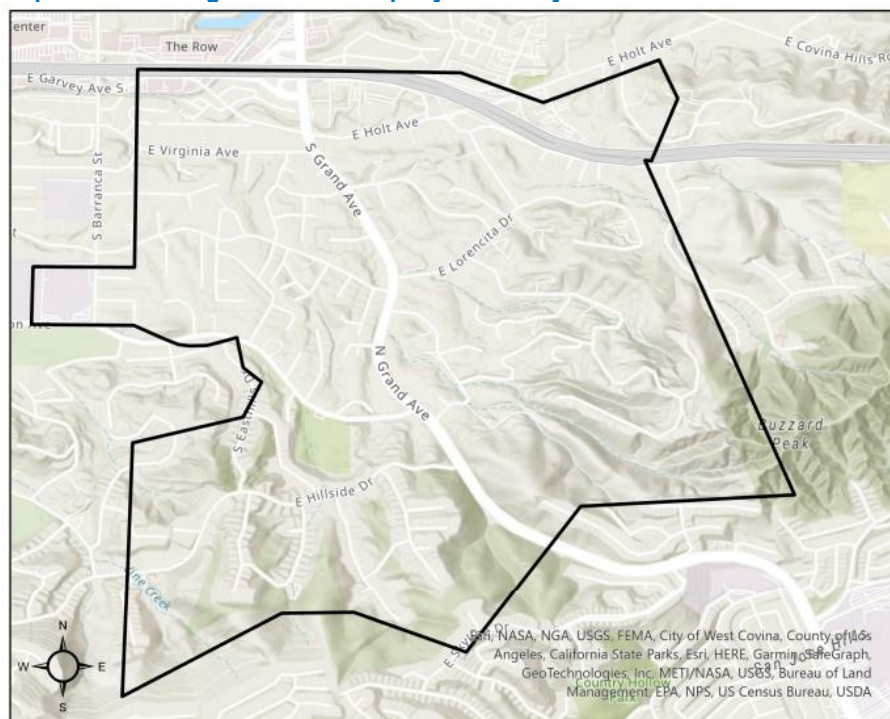
On November 8, 2012, VHWC celebrated the Company's formation and 100 years of service to our community. We celebrate the vision, dedication and accomplishments of all Board Members and Staff whose hard work contributed to the ability to provide quality service at the best possible value to the community.

Valencia Heights Water Company's water supply comes from three major sources: (1) groundwater from the Main San Gabriel Basin, (2) surface water from the San Gabriel River treated by Covina Irrigating Company (CIC), and (3) treated surface water from the Metropolitan Water District of Southern California (MWD). The water is tested and disinfected using chloramines before it is sent through a distribution of underground pipes to your home.

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Map: Valencia Heights Water Company Boundary



Overview

Valencia Heights Water Company's office is located at 3009 East Virginia Ave West Covina, CA 91791.

Photo: Valencia Heights Water Company Administrative Office Source: VHWC Planning Team





The Company's assets are as follows:

Table: Company Assets

Note: Values are based on estimated existing value

Facility Name, Type, Address	# Occupants	# Buildings	\$ Structure Value (millions)	\$ Contents Value (millions)	\$ Total Value (millions)
Admin Office , 3009 E Virginia Avenue, West Covina	4	1	0.34	0.06	0.4
Reservoir 1 site , 3009 E Virginia Avenue, West Covina	0	1	2.0	0.9	2.9
Reservoir 2 site , 3201 Cameron Avenue, West Covina	0	1	0.8	0.7	1.5
Reservoir 3 site , 3540 Cameron Avenue, West Covina	0	1	2.3	0.57	2.87
Reservoir 4 site , 1042 Hooper Drive, West Covina	0	0	1.9	0	1.9
Reservoir 5 site , 2096 Buenos Aires Drive, Covina	0	0	0.75	0	0.75
Reservoir 6 site , Inspiration Point, Tuze Peak, West Covina	0	0	2.2	0.1	2.3
Reservoir 9 site , 2500 Palomino Drive, Covina	0	0	1.1	0	1.1
Booster Station 7 , 2682 Buenos Aires Drive, Covina	0	0	0.2	0	0.2
Well 5 , 110 S. Barranca Avenue., West Covina	0	0	0.7	0	0.7
Well 6 , 370 S. Citrus Street, West Covina	0	0	1.3	0	1.3
Well 7 , 3010 E. Garvey Avenue, S., West Covina	0	0	1.2	0	1.2
Shop/Operations , 390 S. Citrus Street, West Covina	3	1	0.3	0.42	0.72
30 miles of Distribution Watermains, Covina/West Covina	0	0	31.2	0	31.2
Totals	7	5	\$ 46.29 million	\$ 2.75 million	\$ 49.04 million

Geography and Climate

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

Geography

West Covina is a great place for business, shopping, recreation, culture, and raising a family. Strategically located in the eastern portion of the San Gabriel Valley between the major metropolitan areas of Los Angeles and the Inland Empire, the City is highly accessible from Interstate 10, which carries over half million vehicles daily.

In the past few decades, West Covina has become increasingly diverse. In 2012, the City was home to 55.5% Hispanics, 13.6% Non-Hispanic Whites, and 25.5% Non-Hispanic Asians.



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Several struggling shopping centers throughout the City have been revived as ethnic shopping areas.

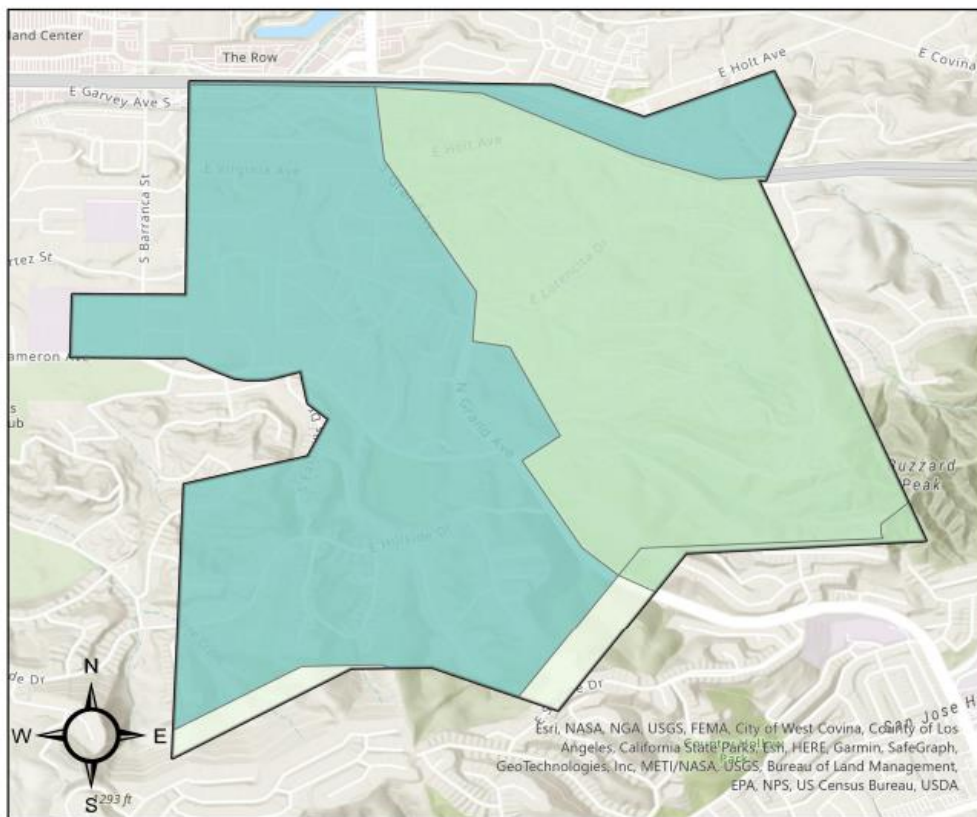
Social Vulnerability

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 Valencia Heights Water Company. There are 2 census tracts within the water company service area that have a medium-high SVI, 2 census tracts that have a low-medium SVI and 2 census tracts that have a low SVI. The high SVI rated census tracts area depicted in the darker blue areas on the map and the lightest blue represents the low-medium SVI census tracts.



Map: Valencia Heights Water Company Social Vulnerability Index
Source: CDC/ATSDR Social Vulnerability Index, 2023



Legend

SVI

Low

Low - Medium

Medium - High

High

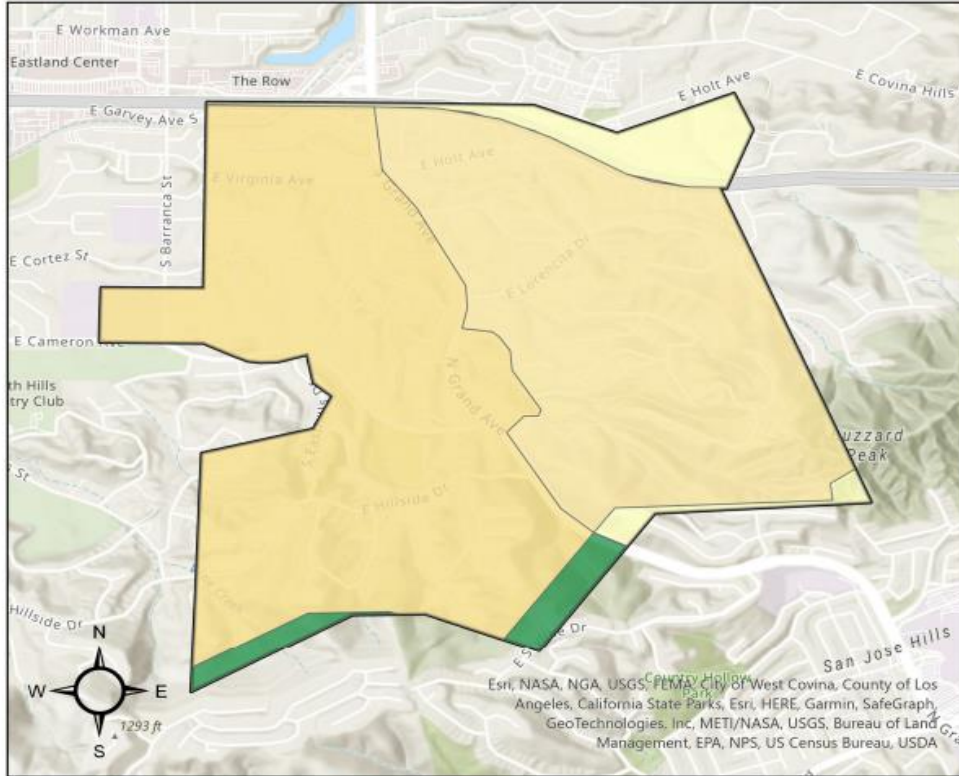
Valencia Heights Water Company

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 sensitivities. 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 water company service area is between the 60 and 80 overall percentile range.

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Map: Valencia Heights Company CalEnviroScreen 4.0 Results
Source: CalEnviroScreen, 2023



Legend

Percentage

- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 60
- 60 - 70
- 70 - 80

Valencia Heights Water Company

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.

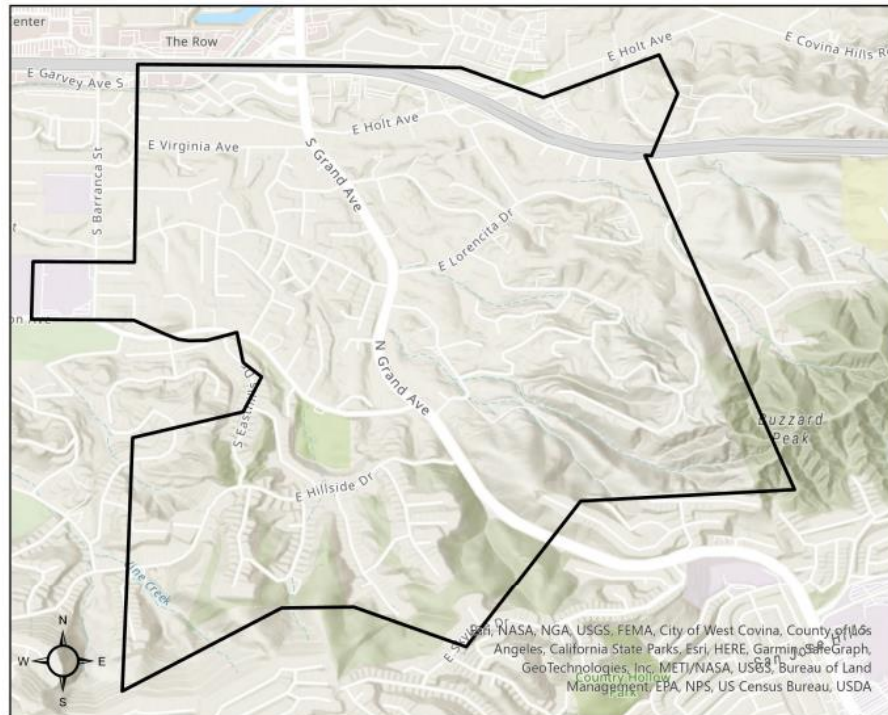
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CalEnviroScreen provides an overall percentile score determined by combining weighted individual scores for all the individual indicators analyzed. SB 1000 considers a 75 percent or higher score in this category to be a qualifier for consideration 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. Census tracts in Valencia Heights Water Company service area score below 75 percent. The service area is not considered a disadvantaged community.

Map: Valencia Heights Water Company SB 535 Disadvantaged Communities
Source: CALEPA SB535 Disadvantaged Communities, 2023



Legend

Valencia Heights Water Company

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 of climate change hazards.

To understand how climate change might affect the Company, 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). Cal-Adapt can provide a climate snapshot for an address, county, city, census tract, or watershed. Since the majority of the Valencia Heights Water Company service area is within the City of West Covina, data for West Covina was used in the Cal-Adapt assessment.

Increased Temperature: Annual maximum temperatures in the City of West Covina 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 78.8°F. Under the medium emissions scenario, the average annual maximum temperature is projected to increase to 83.1°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 87.4°F.

More Extreme Heat Days: Extreme Heat Days occur when the maximum temperature is above 100.5°F. Historically the City of West Covina 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 16 under medium emission scenarios and 20 under high emission scenarios. By the end of the century, 2070 and 2099, the number of extreme heat days is expected to rise to 21 under medium emission scenarios and 41 under high emission scenarios.

Static Annual Precipitation: Historically the City of West Covina has experienced an annual average of 16.5 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 16.2 inches. Under the high emission scenario, it is expected that the annual precipitation will be 16.4 inches. By the end of the century annual precipitation is expected to



increase to 16.7 inches under the medium emission scenario and 16.3 inches under the high emission scenario.

Longer and More Extreme Droughts: The City of West Covina can expect to see a 12% Increase in average temperature and a 26.6% 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 West Covina 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 Valencia Heights Water Company.

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Map: MyHazards for Valencia Heights Water Company
Source: Cal OES, 2023



Liquefaction Zone of Required Investigation

 Liquefaction Zone Area

California_Tsunami_Hazard_Areas



State Responsibility Areas (2007), Severity

-  SRA, Very High
-  SRA, High
-  SRA, Moderate

100-Year Floodplains

 FEMA/DWR Awareness/Regional Studies /USACE Comprehensive Study

Earthquake Fault Zone of Required Investigation



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, landslide, wildfire, tsunami, dam failure, climate change, and drought.

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) an Annex for each of the other agencies participating in the MJHMP planning process.

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).

Table: Valencia Heights Water Company CPRI

Source: VHWC Planning Team, Emergency Planning Consultants

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	1	0.10	1.75	L
Drought	2	0.90	3	0.90	1	0.15	4	0.40	2.35	M
Earthquake	3	1.35	4	1.20	4	0.60	1	0.10	3.25	H
Flood	1	0.45	1	0.30	1	0.60	2	0.20	1.10	N/A
Utility Related	2	0.90	3	0.90	4	0.60	3	0.30	2.70	M
Wildfire	2	0.90	3	0.90	4	0.60	1	0.10	2.50	M
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 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. Shut down 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. Shut down 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. Shut down 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. Shut down 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	



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 Valencia Heights Water Company’s hazards identified as “medium” or “high” in the Priority Rankings.

Table: Hazard Profile of Location, Extent, Probability, and Most Recent Significant Occurrence for the Valencia Heights Water Company

Hazard	Location (Where)	Extent (How Big an Event)	Probability (How Often) *	Most 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. ¹	Likely	The most recent damaging earthquake to impact the Company’s facilities was the Whittier M5.9 Earthquake in 1987.
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.	Possibly	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.
Utility Related	Entire District	Public Safety Power Shutoff poses significant threat to water providers and customers.	Possibly	No recent significant occurrences.
Wildfire	Southeast Portion of the District	The southeast portion includes areas designated as State/Local Responsibility Area - Very High Fire Hazard Severity Zone.	Possibly	The Bobcat Fire in 2020 burned from Monrovia to Juniper Hills destroying 170 structures including 87 residences.
* Probability is defined as: Unlikely = 1:1,000 years, Possibly = 1:100-1:1,000 years, Likely = 1:10-1:100 years, Highly Likely = 1:1 year				
¹ Uniform California Earthquake Rupture Forecast				



Critical and Essential Facilities List

The Critical and Essential Facilities List was prepared for the Company's 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: Company Planning Team, Emergency Planning Consultants

Y – Yes, area is within hazard zone (Wildfire hazard defined as in or in close proximity to a Very High Fire Hazard Severity Zone)

Company Facilities	Earthquake	Drought	Utility Related	Wildfire
Admin Office, 3009 E Virginia Avenue, West Covina	Y	Y	Y	Y
Reservoir 1 site, 3009 E Virginia Avenue, West Covina	Y	Y	Y	Y
Reservoir 2 site, 3201 Cameron Avenue, West Covina	Y	Y	Y	Y
Reservoir 3 site, 3540 Cameron Avenue, West Covina	Y	Y	Y	Y
Reservoir 4 site, 1042 Hooper Drive, West Covina	Y	Y	Y	Y
Reservoir 5 site, 2096 Buenos Aires Drive, Covina	Y	Y	Y	Y
Reservoir 6 site, Inspiration Point, Tuze Peak, West Covina	Y	Y	Y	Y
Reservoir 9 site, 2500 Palomino Drive, Covina	Y	Y	Y	Y
Booster Station 7, 2682 Buenos Aires Drive, Covina	Y	Y	Y	Y
Well 5, 110 S. Barranca Avenue, West Covina	Y	Y	Y	Y
Well 6, 370 S. Citrus Street, West Covina	Y	Y	Y	Y
Well 7, 3010 E. Garvey Avenue, S., West Covina	Y	Y	Y	Y
Shop/Operations, 390 S. Citrus Street, West Covina	Y	Y	Y	Y

* See Base Plan for information regarding NFIP regulations.

Summary of Vulnerability

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

Following is a summary of vulnerability to the hazards identified as impacting the Valencia Heights Water Company's office, 7 reservoirs, 1 booster station, 3 wells, 1 shop/operations, and 30 miles of distribution water mains with property/content valued at \$49.04 million. Note: these estimates are based on 2023.

Mitigation actions are located at the end of this Annex that directly address these vulnerabilities.



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, Company 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 Company 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 the district would need to resort to restrictions rather than just fines (e.g., discontinuing service, etc.).

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.

Wildfire

The wildfire hazard is one of the highest priority hazards in Los Angeles County and is the hazard with the greatest potential for catastrophic loss. High fuel loads throughout the County, along with geographical and topographical features, create the potential for both natural and human-caused fires that can result in loss of life and property. These factors, combined with natural weather conditions common to the area, including periods of drought, high temperatures, low relative humidity, and periodic winds, can result in frequent and sometimes catastrophic fires. The more urbanized areas within the County are not immune from fire. The dry vegetation and hot and sometimes windy weather, combined with continued growth in the Wildland Urban Interface (WUI) areas, results in an increase in the number of ignitions. Any fire, once ignited, has the potential to quickly become a large, out-of-control fire. As development continues throughout the County, especially in these interface areas, the risk and vulnerability to wildfires will likely increase. Potential impacts from wildfire include loss of life and injuries; damage to structures and other improvements, natural and cultural resources, croplands, and timber; and loss of recreational



Multi-Jurisdictional Hazard Mitigation Plan Annex: Valencia Heights Water Company

opportunities. Wildfires can cause short-term and long-term disruption to the service area. Fires can have devastating effects on watersheds through loss of vegetation and soil erosion, which may impact the District by changing runoff patterns, increasing sedimentation, reducing natural and reservoir water storage capacity, and degrading water quality. Fires can also affect air quality in the area; smoke and air pollution from wildfires can be a severe health hazard.

Although the physical damage and casualties arising from wildland-urban interface fires may be severe, it is important to recognize that they also cause significant economic impacts by resulting in a loss of function of buildings and infrastructure. Economic impacts of loss of transportation and utility services may include traffic delays/detours from road and bridge closures and loss of electric power, potable water, and wastewater services. Schools and businesses can be forced to close for extended periods of time. Recently, the threat of wildfire, combined with the potential for high winds, heat, and low humidity, has caused Southern California Edison to initiate a Public Safety Power Shutoff (PSPS) which can also significantly impact a community through loss of services, business closures, and other impacts associated with loss of power for an extended period. In addition, catastrophic wildfire can create favorable conditions for other hazards such as flooding, landslides, and erosion during the rainy season.

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 Valencia Heights Water Company
Source: VHWC Planning Team

Type of Capability				Name of Capability	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
X	X	X		General Manager / COO	The General Manager/COO (GM) is the liaison to the Board of Directors and oversees the day to day operations of the Company. The GM 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 GM utilizes the talent and skills of the entire staff to fulfill the organizational objectives. The GM is appointed by the Board to oversee the daily operations of the Company. The GM 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. The GM oversees risk management that includes emergency management and disaster preparedness, loss prevention, and general auto and property liability insurance for the Company.
	X		X	Office Manager	Office Manager is responsible for all Company administrative services. The Office Manager is responsible for overseeing employee benefits, classification and compensation, policies and procedures, employee relations, administrative support, and employee development. Office Manager promotes and provides a safe and secure work environment for employees including employee safety and training programs, workers compensation, emergency management and disaster preparedness. The Office Manager also provides communication outreach to customers/shareholders.
	X		X	Billing Clerk	The Billing Clerk is responsible for processing the monthly billing, including reviewing all the meter reads. Is responsible for ensuring that the Company's meter reading software and equipment is in good working condition. Maintains all the accounts receivable records in the billing system. Maintains the Backflow Prevention Program, ensuring all backflows are tested within the required timeframe. Responds to customer inquiries and concerns, research billing discrepancies and processes work orders for the field staff if necessary. Follows all safety training programs implemented by the Company. Monitors water consumption usage and contacts customers when abnormal consumption is detected. The Billing Clerk also provides communication outreach to customers/shareholders.
			X	Customer Service Support	The Customer Service Support is responsible for processing all accounts receivable. Processes all work orders and follows up on all customer inquiries Analyzes customer accounts, and answers billing questions. Processes all water stock transfers, final water bills, and sets up new water accounts. Follows all safety training programs

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Annex: Valencia Heights Water Company



Type of Capability				Name of Capability	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
					implemented by the Company and provides communication outreach to customers/shareholders.
X			X	Water System Supervisor	The Water System Supervisor's (WSS) responsibilities include water supply and operations, daily monitoring, maintenance, and repair of the Company's groundwater wells, boosters, reservoirs, and chlorination stations. In addition, the WSS is responsible for communications, and controls for the Company's water treatment and water production. Such responsibilities consist of maintenance of electrical equipment ranging from marginal voltage direct current to 480 volts alternating current. Communications include serial networks utilizing wire. WSS makes recommendations on the design, integration, development, and implementation of controls systems which leverage technology to facilitate more effective and efficient operational strategies. The WSS monitors and oversees engineering design activities, including those prepared by consultants. The WSS oversees construction management to manage contractors that are building the Company's capital improvements projects in the field. The WSS is identified as the coordinating individual for several mitigation action items. The WSS responsibilities include the maintenance, repair, and general upkeep of the Company's buildings and equipment and other facilities.
X				Water Technician II	The Water Technician II responsibilities include maintaining and repairing the Company's water system infrastructure, including mains, hydrants, valves, services, and implementing preventative maintenance programs. In addition, The Water Technician II strives to provide prompt turnaround times on all customer requests, exceptional customer service and responds 24 hours a day, 365 days a year to all water emergencies. The Water Technician will work closely with the WSS on mitigation actions.
X				Water Technician I	Under the direction of the Water Technician II, the Water Technician I responsibilities include maintaining and repairing the Company's water system infrastructure, including mains, hydrants, valves, services, and implementing preventative maintenance programs. The Water Technician II strives to provide prompt turnaround times on all customer requests, exceptional customer service and responds 24 hours a day, 365 days a year to all water emergencies. The Water Technician will work closely with the WSS on mitigation actions.
X	X	X		Information Technology Contract Services	The Information Technology (IT) Contractor provides comprehensive technology planning, development, integration, operation, maintenance, and support to all areas of the Company to maximize efficiency. The services provided 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



Type of Capability				Name of Capability	Capability Description and Ability to Support Mitigation
Planning and Regulatory	Administrative and Technical	Financial	Education and Outreach		
					control 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
X		X		Engineering – Contract Services	Under the direction of the GM and Water System Supervisor, the contracted Engineering Services support the design and management of capital improvement projects, mitigation actions, and all engineering and planning work.
X	X			Geographic Information Systems Division Contract Services	The Geographic Information Systems (GIS) contractor is responsible for the coordination and participation in database management for GIS. This Contractor updates and maintains GIS databases including the facilities from construction drawings to as-built information; performs data capturing and conversion, data entry, and graphic editing activities; develops user friendly file management systems. GIS viewing application provides accurate, accessible, and functional data to both the desktop and mobile devices within the Company. GIS also functions as a helpful reporting tool and has asset management capabilities.
X	X	X	X	Hazard Mitigation Planning Team	The Hazard Mitigation Planning Team is made up of The General Manager, Office Manager Water System Supervisor, and the Board of Directors and are assigned mitigation action items in the Hazard Mitigation Plan. In addition to responsibility to prepare each of the 5-year plan updates as required by FEMA, the Planning Team is responsible for implementing, monitoring, and evaluating the plan. plays a pivotal role in implementing and funding the overall Hazard Mitigation Plan.
				Emergency Response Plan	Emergency Response Plan is a reference and guidebook to operations during a major emergency impacting the Company. 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

Planning and Regulatory Capabilities – The Valencia Heights Water Company oversees the management of capital improvement projects, water resource management, and water supplies as well as all engineering and planning work.

Administrative and Technical - The Company has existing capabilities that are typical for water companies. The Company has a General Manager who leads strategic planning and overall management of day-to-day activities. Third party consultants manage the information technology,



Multi-Jurisdictional Hazard Mitigation Plan Annex: Valencia Heights Water Company

engineering, engineering design, and Geographic Information Systems. The Company also has a mix of in house and third-party consultants to manage inspections, water treatment operations, facilities operations, and fleet maintenance. Additionally, the company has an Emergency Response Plan to reference and guide operations during a major emergency impacting the company.

Finance - The Company has an outside financial advisor to manage the reserve funds. During the annual budget setting process, the 5 year capital improvement plan is updated. Other funding sources should be kept in mind for future mitigation activities.

Education and Outreach – The Company has a team that oversees strategic community outreach, water conservation outreach, newsletter 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 team.

Plan Implementation

As identified in the MJHMP Base Plan, the 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 an Agency Planning Team together on a quarterly basis to discuss the agency's Mitigation Actions Matrix. The members of the Agency Planning Team will represent the staff 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 company's Local Mitigation Officer (General Manager) 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 MJHMP Local Mitigation Officers. Upon the bi-annual review, the company's mitigation team will work with other staff positions to identify areas that the agency 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 company'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	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
MH-1 Prepare and promulgate mutual aid and other cooperative agreements to allow for efficient and effective emergency response.	General Manager, Office Manager, Public Water Agencies Group	Ongoing	X	X		X	X	Y	GF, HMGP, BRIC, CIP	GF	H	M	M	
MH-2 Construct replacement waterline for improved reliability, prevent failure during an earthquake, and add fire hydrants for wildland fire protection in Buenos Aires Drive.	General Manager and Water System Supervisor	Completed	X	X		X		Y	CIP	CIP	H	M	H	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
MH-3 Construct replacement waterline for improved reliability, prevent failure during an earthquake, and add fire hydrants for wildland fire protection in Lorencita Drive.	General Manager and Water System Supervisor	Completed	X	X		X		Y	CIP	CIP	H	M	H	
MH-4 Rebuild and retrofit Reservoir No. 2, the pumpstation and waterline feeding site for enhanced storage and pumping capacity including generator connections for emergency power supply.	General Manager and Water System Supervisor	Completed	X	X		X		Y	HMGP, BRIC	CIP, HMGP, BRIC	H	H	H	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
MH-5 Upgrade SCADA for better control and communication of the water system during emergency conditions.	General Manager and Water System Supervisor	Ongoing	X	X		X		Y	CIP	CIP	H	M	H	
MH-6 Construct replacement waterline for improved reliability, prevent failure during an earthquake, and add fire hydrants for wildland fire protection in Damerl Drive and Limecrest Drive.	General Manager and Water System Supervisor	Completed	X	X		X		Y	CIP	CIP	H	M	H	
MH- 7 Continue to purchase generators for back-up power to	General Manager and	Ongoing	X	X		X	X	Y	CIP	CIP	H	M	H	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
ensure an adequate water supply under emergency conditions.	Water System Supervisor													
MH-8 Design and construct new fuel storage station at the Main Yard. Minimum storage for 5 days with no power. Project includes power generation to allow dispensing of fuel when there is no power.	General Manager and Water System Supervisor	Ongoing	X	X		X		y	CIP	CIP	H	M	H	
MH-9 Construct replacement of cross-country waterline that provides water service	General Manager and Water System Supervisor	Completed	X	X	X	X		Y	CIP	CIP	H	M	H	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
to and from Reservoir No. 5. Project protects the supply during an earthquake or wildland fire. Install fire hydrants along line for wildland fire protection to open space and residential area.														
MH-10 Construct emergency interties with neighboring water systems to ensure an adequate water supply and reliability during an emergency.	General Manager and Water System Supervisor	Ongoing	X	X	X	X	X	Y	CIP	CIP	H	M	M	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
MH-11 Construct replacement waterline for improved reliability, prevent failure during an earthquake, and add fire hydrants for wildland fire protection in Golden Bough Drive, Covina	General Manager and Water System Supervisor	4 years	X	X		X		Y	HMGP, BRIC	HMGP, BRIC	H	H	H	
MH-12 Purchase and store Emergency Shelter, Food, and Water Supplies for 25 Staff and Families members, Emergency responders to facilitate response and	Office Manager, Customer Service Support and Water System Supervisor	Ongoing	X	X		X	X		GF, HMGP, BRIC	GF	M	L	M	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
recovery to long term emergency event.														
MH-13 Retrofit/Replace in ground, concrete Reservoir No. 3 to ensure full use and capacity during an earthquake or other long duration emergency.	General Manager and Water System Supervisor	10 Years	X			X	X	Y	CIP	CIP	H	L	H	
MH-14 Construct replacement line from Reservoir No. 1 to Reservoir No. 2 Via Mannington Place	General Manager and Water System Supervisor	5 years	X	X				Y	HMGP, BRIC	CIP	H	H	H	
MH-15 Consider providing laptops,	General Manager,	Ongoing	X			X	X		CIP	CIP	H	M	M	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
tablets, smartphones, wireless data, SCADA and DMMS to staff to increase communications.	Office Manager and Water System Supervisor													
MH-16 Retrofit or replace in ground, concrete Reservoir No. 1 to ensure full use and capacity during an earthquake or other long duration emergency.	General Manager and Water System Supervisor	10 Years	X	X	X	X		Y	CIP, HMGP, BRIC	CIP, HMP, BRIC	H	M	H	
MH-17 Construct replacement waterline for improved reliability, prevent failure during an earthquake, and	General Manager and Water System Supervisor	10 years	X	X		X	X	Y	CIP, HMGP, BRIC	CIP, HMGP, BRIC	H	M	M	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
add fire hydrants for wildland fire protection in Lorencita Drive.														
M-18 Purchase Vac truck to expedite repairs during emergencies when time is essential.	General Manager and Water System Supervisor	3-5 Years	X	X					HMGP, BRIC	CIP	M	M	M	
MH-19 Expand or upgrade existing mass notification system for Customers to one that incorporates "911" accessible data and information so that communications are up-to-date and not	General Manager, Office Manager and Information Technology (IT)	3-5 Years	X	X		X	X		HMGP, BRIC	HMGP, BRIC	H	M	M	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
reliant on customers to update.														
MH-20 A mobile hydration station or Water Wagon – would be purchased and deployed in the community and used in emergency situations to provide water for the community should water service be interrupted for an extended period of time. The Water Wagon will have spouts as well as	Office Manager, Customer Service Support and Water System Supervisor	5 years	X	X	X	X	X		HMGP, BRIC	HMGP, BRIC	H	L	M	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
larger bottled water refill stations to allow visitors to have a drink or refill their own water bottle with fresh water.														
Earthquake Mitigation Action Items														
EQ-1 Construct new waterline under interstate 10 in Covina	General Manager and Water System Supervisor	Completed	X	X		X	X	Y	CIP	CIP	H	M	H	
EQ- 2 Construct replacement of cross-country waterline from Wrede Way through to Via Caballos Drive adding redundancy to	General Manager and Water System Supervisor	Completed	X	X	X	X		Y	CIP	CIP	H	H	H	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
water supply for fire flow.														
EQ-3 System wide valve replacements and additions for better control of the water system during an emergency.	General Manager and Water System Supervisor	Ongoing	X	X		X	X	Y	CIP, HMGP, BRIC	CIP	H	H	H	
EQ-4 Recoating of Reservoir No. 4B to include the retrofitting of the inlet and outlet, earthquake valve, and flexible connections and improve/increase storage capacity for emergency preparedness.	General Manager and Water System Supervisor	Completed	X	X			X	Y	CIP	CIP	H	H	H	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
EQ-5 Recoating of Reservoir No. 6B to include the retrofiting of the inlet and outlet, earthquake valve, and flexible connections and improve/increase storage capacity for emergency preparedness.	General Manager and Water System Supervisor	2 years	X	X			X	Y	HMGP, BRIC	CIP	H	H	H	
EQ-6 Recoating of Reservoir No. 6A to include the retrofiting of the inlet and outlet, earthquake valve, and flexible connections and improve/increase storage capacity for	General Manager and Water System Supervisor	3 years	X	X			X	Y	HMGP, BRIC	CIP, GF	H	H	H	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
emergency preparedness.														
EQ-7 Install earthquake activated shut-off valves at Reservoir No. 9	General Manager and Water System Supervisor	5 years	X	X		X	X	Y	HMGP, BRIC	CIP	H	H	H	
EQ-8 Fund and conduct Reservoir Seismic Vulnerability Study. Hire a consultant to conduct study on the structural stability of the existing concrete reservoirs and the feasibility of retrofitting reservoir or replacing them.	Engineering / Water Operations	5 Years	X	X		X			HMGP, BRIC	CIP	H	M	M	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
EQ-9 Recoating of Reservoir No. 4A to include the retrofiting of the inlet and outlet, earthquake valve, and flexible connections and improve/increase storage capacity for emergency preparedness.	General Manager and Water System Supervisor	3 years	X	X			X	Y	HMGP, BRIC	CIP	H	H	H	
EQ-10 Install earthquake activated shut-off valves at Reservoir No. 5.	General Manager and Water System Supervisor	6 years	X	X			X	Y	HMGP, BRIC	CIP	H	L	H	
EQ-11 Install earthquake activated shut-off valves at Reservoir No. 3.	General Manager and Water System Supervisor	3 years	X	X			X	Y	HMGP, BRIC	CIP	H	L	H	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
EQ-12 Retrofit or replace in-ground, concrete Reservoir No. 2 to ensure full use and capacity during an earthquake or other long duration emergency.	Engineering Water Operations	6 years	X	X			X	Y	HMGP, BRIC	CIP	H	L	H	
EQ-13 Retrofit main administrative building	Administration	10 years	X			X		Y	HMGP, BRIC	CIP	H	H	M	
EQ-14 Construct replacement waterline for improved reliability, prevent failure during an earthquake, and add fire hydrants for wildland fire protection	General Manager and Water System Supervisor	5 years	X			X		Y	CIP, HMGP, BRIC	CIP, HMGP, BRIC	H	H	H	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
in Holt Avenue through to Joy Street														
EQ-15 Construct Replacement waterline in Holt Avenue through to Barranca Avenue to reduce the chance of failure during an earthquake.	General Manager and Water System Supervisor	5 years	X	X		X		Y	CIP, HMGP, BRIC	CIP, HMGP, BRIC	H	H	H	
EQ-16 Construct replacement waterline in Barranca, including Garvey Avenue, from Garvey Avenue through to Cameron Avenue to prevent a	General Manager and Water System Supervisor	5 years	X	X		X	X	Y	HMGP, BRIC	HMGP, BRIC	H	H	M	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
major failure during an earthquake.														
EQ-17 Construct Replacement waterline in Cortez from Barranca Avenue through to Grand Avenue to prevent a major failure during an earthquake.	General Manager and Water System Supervisor	5-10 years	X	X		X		Y	CIP	HMGP, BRIC	H	M	H	
Wildfire Mitigation Action Items														
WF-1 Vegetation and Brush Removal (weed abatement) to areas surrounding District facilities within wildfire hazard zones.	Water Technician I & II	Ongoing	X	X	X	X	X	Y	GF	GF	H	L	H	



Mitigation Action Item	Lead Department or Position	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), No (N)	Funding Source: GF-General Fund, CIP-Capital Improvement Project, HMGP-Hazard Mitigation Grant Program, BRIC-Building Resilient Infrastructure and Communities	Planning Mechanism: CIP, GF, HMGP, BRIC	Benefit: L-Low, M-Medium, H-High	Cost: L-Low, M-Medium, H-High	Priority: L-Low, M-Medium, H-High	Comments 2023: Cost estimates from Engineering, source documents, CP-Capital Project #
Drought Mitigation Action Items														
DR-1 Install systemwide flow control to control and divert water flows when taking import water at MET connection during drought conditions.	General Manager and Water System Supervisor	4 years	X	X		X		Y	CIP, HMGP, BRIC	CIP	H	H	M	