Mammoth Community Water District Annex

Date | Draft One

MONO COUNTY CALIFORNIA

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Table of Contents

List of Tables

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Mammoth Community Water District

The Mammoth Community Water District has demonstrated its commitment to a comprehensive mitigation program by developing a separate district-specific annex for inclusion in this plan. This annex is intended to be read in conjunction with the base plan, where more general information, such as hazard descriptions, extent, and locations, can be found. This is the first time the special district is participating in a hazard mitigation plan, therefore there are no changes in priority since the prior plan update. The following is intended to clarify what, if any, unique considerations and differences there are between the plan participants hazards and mitigation capabilities. Further, this annex documents the selected mitigation actions for Mammoth Community Water District.

Mammoth Community Water District Participation

This plan was developed through a collaborative planning process including Mono County, the Town of Mammoth Lakes, the participating special districts, many stakeholders, and the public. An important part of the plan update is documenting the planning process itself, including who represented which plan participant. The Mammoth Community Water District was represented during the plan update process by the individuals listed in Table 1.

Table 1: Mammoth Community Water District Representatives in the Planning Process

Name	Title	Organization/Department
Michael Draper	Principal Administrative Analyst	Mammoth Community Water District
Nick Holt	Associate Engineer	Mammoth Community Water District
David Carlson	Senior Engineer	Mammoth Community Water District

Local Stakeholder Involvement

Stakeholders, including local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development, neighboring communities, representatives of businesses, academia, other private organizations, nonprofit organizations, and community-based organizations, were invited to participate in the plan update. A full list of stakeholders is included in the base plan. Table 2 lists

at least one stakeholder per required stakeholder type that work in or have knowledge of the Mammoth Community Water District. Stakeholders were invited to participate by attending two meetings on the Risk Assessment and Mitigation Strategy, attending focused stakeholder meetings, completing the draft stakeholder survey, and reviewing the draft plan.

Table 2: Local Stakeholders

Name	Description	Stakeholder Type
Lahontan Regional Water Quality Control Board (SWRCB)	Preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use, for the benefit of present and future generations.	Regulatory agency
California Broadband Cooperative	California Broadband Cooperative (CBC) : • Is a middle-mile provider of broadband service • Is facilities-based; it serves locations where it has fiber connectivity • Provides only "last mile" access services to government, educational, medical institutions and points of interconnection (service providers) • A cooperative that only government, educational, medical and carriers can join	Private Organization
Hilton Creek Community Services District	The Hilton Creek Community Services District (HCCSD) is a local government agency that provides essential public services to the residents of the Hilton Creek area, located in Mono County, California. The District is primarily focused on providing water and sewer services, maintaining infrastructure, and ensuring the health and safety of its community.	Neighboring Community
Blue Forest	Non-profit bringing communities, financing, and science together to restore and protect forests and watersheds.	Non-profit
U.S. Forest Service	Agency responsible for managing the nation’s forests, including collaborating with MCWD to reduce risks to Lake Mary, the District’s water supply.	Regional agency involved in hazard mitigation.

Name	Description	Stakeholder Type
Inyo National Forest	Inyo National Forest is a United States National Forest covering parts of the eastern Sierra Nevada Mountains of California and the White Mountains of California and Nevada.	Local agency involved in hazard mitigation.
Southern California Edison	Primary electric utility company for Southern California.	Private Organization

Public Engagement

The public was also encouraged to participate in the plan update process. Members of the public were provided the opportunity to participate in the planning process through a digital survey, flyers, and public meetings. The public was invited to participate in the plan update through bilingual flyers which were posted in public areas around the Town of Mammoth Lakes (MCWD's service area) in public spaces. Public feedback is incorporated into the risk assessment and mitigation strategy sections.

District-Specific Hazards and Vulnerabilities

The risk assessment identifies and analyzes the hazards of concern in the planning area. The full risk assessment is included in the base plan. Where differences exist, they are noted in this annex.

Table 3: Hazard Omissions

Hazard	Statement of Omission
Avalanche	Not applicable, infrastructure is not located in avalanche terrain.
Landslides	Not applicable, facilities have minimal risk to landslides.
Extreme Heat	Not applicable, no impact/risk to water systems or operations.
Severe Wind	Not applicable, severe wind does not affect operations, and the majority of infrastructure is located underground.

District Risk Differences

Each plan participant was asked to consider how their risks and vulnerabilities compare to the overall planning area. To calculate these differences, participants ranked their unique vulnerabilities utilizing the following Calculated Priority Risk Index (see Table 4).

Table 4: Calculated Priority Risk Index

Risk Index Factor	Degree of Risk Level		Criteria	Factor Weight for Degree of Risk Level
Probability of Future Events	1	Unlikely	Less than 1% probability of occurrence in the next year or a recurrence interval of greater than every 100 years	30%
	2	Occasional	1%–10% probability of occurrence in the next year or a recurrence interval of 11–100 years	
	3	Likely	11%–90% probability of occurrence in the next year or a recurrence interval of 1–10 years	
	4	Highly Likely	91%–100% probability of occurrence in the next year or a recurrence interval of less than 1 year	
Spatial Extent (Geographic coverage) ***How large of an area could be affected by the specific hazard?***	1	Limited	Less than 10% of the planning area could be impacted.	20%
	2	Small	10%–25% of the planning area could be impacted.	
	3	Significant	25%–50% of the planning area could be impacted.	
	4	Extensive	50%–100% of the planning area could be impacted.	
Severity of Life/Property Impact	1	Negligible	Less than 5% of the affected area's critical and non-critical facilities and structures are damaged or destroyed. Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	30%
	2	Limited	Greater than 5% and less than 25% percent of property in the affected area is damaged or destroyed. Complete shutdown of critical facilities for more than one day but less than one week.	

Risk Index Factor	Degree of Risk Level		Criteria	Factor Weight for Degree of Risk Level
	3	Critical	Greater than 25%, but less than 50% of property in the affected area was damaged or destroyed. Complete shutdown of critical facilities for over a week but less than one month.	
	4	Catastrophic	Over 50% of critical and non-critical facilities and infrastructures in the affected area are damaged or destroyed. Complete shutdown of critical facilities for more than one month.	
Warning Time ***(Warning time refers to the duration between the moment a warning is issued for an impending threat or disaster and when the threat or disaster occurs. Having more warning time allows for better emergency preparations and public information dissemination.)***	1	Self-defined	More than 24 hours	10%
	2	Self-defined	12–24 hours	
	3	Self-defined	6–12 hours	
	4	Self-defined	Less than 6 hours	
Duration ***(The span of time local, state, and/or federal assistance will be necessary to prepare for, respond to, and recover from a potential disaster event.)***	1	Brief	Up to 6 hours	10%
	2	Intermediate	Up to one day	
	3	Extended	Up to one week	
	4	Prolonged	More than one week	

Risk Factor Equation

RF Value = [(Probability x .30) + (Spatial Extent x .20) + (Severity of Life/Property Impact x .30) + (Warning Time x .10) + (Duration x .10)]

Hazards identified as having as risk factor value greater than or equal to 2.5 are considered high risk. Risk factors ranging from 2.0 to 2.4 are considered moderate risk hazards. Hazards with a risk factor value less than 2.0 are considered low risk. The highest possible risk factor value is 4. The calculated priority risk index for Mammoth Community Water District is presented in Table 5.

Table 5: Calculated Priority Risk Index for Mammoth Community Water District

Type of Hazard Event	Probability of Future Events	Spatial Event	Severity of Life/Property Impact	Warning Time	Duration	Risk Factor Value
Dam Failure	1	2	4	4	4	2.7
Disease and Pest Management	1	1	1	1	1	1
Drought	3	4	1	1	4	2.5
Earthquake and Seismic Hazards	2	4	4	4	4	3.4
Energy Shortages and Energy Resiliency	2	4	2	2	4	2.6
Epidemic/Pandemic	1	4	4	1	4	2.8
Flood	1	2	1	1	1	1.2
Hazardous Materials	1	1	1	4	1	1.3
Severe Winter Weather and Snow	4	4	2	1	1	2.8
Volcanoes	1	4	4	4	4	3.1
Wildfire	3	3	4	4	4	3.5

Past Hazard Events

The plan must present the history of hazards events. While the past cannot predict the future, especially as climate change is causing more frequent and intense events, it can give an idea of what might happen and what is at risk. The base plan provides a description of general state and Federal Emergency Management Agency (FEMA) previous hazard occurrences. The plan participants were asked to provide additional information on hazards that have impacted them, if any. Table 6 lists these hazard events of local significance.

Table 6: Previous Disaster Impacts for Mammoth Community Water District

Type of Hazard Event	FEMA Disaster # (If Applicable)	Date(s)	Damage or Impacts	Description
Dam Failure	N/A	N/A	N/A	N/A
Disease and Pest Management	N/A	N/A	N/A	N/A
Drought	N/A	April 2012 – April 2017	Drought conditions required limitations of potable water use due to limited	Due to drought conditions, the MCWD Board set the Water Conservation

Type of Hazard Event	FEMA Disaster # (If Applicable)	Date(s)	Damage or Impacts	Description
		April 2020 – April 2023	surface water availability.	Level to level 3 (of 5). In Conservation Level 3, the use of potable water for purposes other than domestic, in-home usage (drinking, washing, toilets), is significantly lowered. Uses primarily impacted include landscape irrigation.
Earthquake and Seismic Hazards	N/A	May 1980 – January 1983	Short term loss of water service to some residences and neighborhoods.	M5-M6 earthquakes along the Hilton Creek fault system caused breaks of steel water mains and plumbing separations at some residences.
Energy Shortages and Energy Resiliency	N/A	Annually	Energy outages have the impact to significantly disrupt water production.	MCWD constructed a solar facility on its property for on-site energy production. Ability to operate the wastewater treatment plan. Diesel generators are used for backup energy at select locations.
Epidemic/Pandemic	DR-4482	April 2020 – May 2022	Limited staff availability to provide services, and productivity was limited based on staff availability.	COVID pandemic.
Flood	N/A	January 1997	Increase runoff into the sewage collection system caused temporary high flows, forcing utilization emergency storage facility.	Rain on snow event generated significant runoff.

Type of Hazard Event	FEMA Disaster # (If Applicable)	Date(s)	Damage or Impacts	Description
Hazardous Materials	N/A	N/A	N/A	N/A
Severe Winter Weather and Snow	N/A	March 2023 – December 2023	Potable water storage tank collapse and partial roof collapse at wastewater treatment plant.	A potable water storage tank collapsed under severe snow accumulation. The roof of an essential process building at the wastewater treatment plant partially collapsed and had to be replaced.
Volcanoes	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A

District-Specific Vulnerabilities

The plan participants also evaluated their specific vulnerabilities to each of the hazards affecting the overall planning area. Assets were determined by the community. Asset types may differ between plan participants, including the following:

- People (residents, workers, visiting populations, and socially vulnerable populations like seniors, individuals with disabilities, lower-income individuals, etc.)
- Structures (residential, commercial, industrial, government-owned, planned capital improvement, etc.)
- Economic assets (major employers, primary economic sectors, key infrastructure like telecommunications networks, etc.)
- Natural, historic, and cultural resources (areas of conservation, parks, critical habitats, community centers, historic places, etc.)
  - Lake Mary – Surface water supply
  - Groundwater Basin (Mammoth) - Groundwater supply
  - Laurel Pond – Surface wastewater discharge site
- Critical facilities and infrastructure (hospitals, law enforcement, water, power, transportation systems, etc.)
  - Water and Wastewater Treatment Plant Campus (1315 Meridian Blvd.)
  - Water treatment plants (3)

  - Water storage tanks (8)
  - Water distribution system (80 miles) and pump stations (4)
  - Wastewater collection system (75 miles) and lift stations (12)
- Community activities (major local events, such as festivals, or economic events, like farming or fishing)
  - Tourism causes major increases in visitor population.

The following problem statements describe the unique district-specific vulnerabilities of Mammoth Community Water District. Where no unique considerations are noted, it can be assumed the information included in the base plan also applies to Mammoth Community Water District.

Dam Failure

- **Location:** Mammoth Creek, which drains the Mammoth Lakes Basin containing over a dozen lakes, including the three dammed lakes, collects water from the Sierra crest and flows downstream through Lake Mary, Lake Mamie, and into Twin Lakes. The creek exits the Mammoth Lakes Basin at the outlet of Twin Lakes and continues along the southern edge of the Town of Mammoth Lakes.
- **Extent:** None of the dammed lakes in Mammoth Lakes Basin are considered high or significant risk dams, however urbanized flooding from any level of dam failure could occur.
- **Impacts**: A failure of any of these dams could lead to flood inundation within the urban area of Mammoth Lakes, potentially impacting numerous structures along the creek.
- **District-Specific Vulnerabilities**:
  - MCWD distribution and collection infrastructure could be damaged by the flooding following a dam failure.
  - Water distribution and collection operations could be impacted by the drastic changes in water levels and flow due to a dam failure.
  - Data limitations exist as to the magnitude of a realistic flood event that would overload MWCD capacities. Additional studies could help clarify this vulnerability.

Disease and Pest Management

- **Location:** The entire MCWD jurisdiction is impacted by disease and pests.
- **Extent:** Based on historical occurrences, the Disease Severity Scale for Town of Mammoth Lakes indicates a moderate susceptible/disease score of 5.
- **Impacts**: Pine mortality caused by the mountain pine beetle (*Dendroctonus ponderosae*) remains high and affects the local ecosystem as well as water quality.
- **District-Specific Vulnerabilities**:
  - Continued impacts on local forests from pests can reduce water quality and raise costs for MCWD.

Drought

- **Location:** The entire MCWD jurisdiction is impacted by drought.
- **Extent:** Based on historical data, the Town of Mammoth Lakes can expect to experience Exceptional Drought (D4) as a worst-case scenario.
- **Impacts**: Extended drought can have serious impacts on the operations, costs, and ability of MCWD to provide Mammoth Lakes with clean water.
- **District-Specific Vulnerabilities**:
  - Drought can reduce water supply, including from annual snowpack, and require water restrictions be imposed for the community in order for MCWD to maintain water supply levels.
  - Normally, MCWD obtains 40–60% of its annual water supply from surface water. However, during periods of drought, the District may have to rely more heavily on groundwater supplies.[1]
  - Without aquifer recharge at the District's production wells or increased water storage at Lake Mary, changing hydrologic patterns in the Mammoth Basin puts water supply at risk.[2]
  - Low water levels from drought can increase the concentration of pollutants, increasing water treatment challenges.
  - Drought conservation efforts reduce the availability of potable water for purposes other than domestic, in-home usage (drinking, washing, toilets).
  - Decreased water usage from conservation efforts affects the District's finances as each 10% reduction in water sold results in approximately a 1.2% or $170,000 loss in revenue.[3] Additional economic losses are also incurred by the District due to the additional costs associated with pumping and treating groundwater.

Earthquake and Seismic Hazards

- **Location:** The entire town can experience intense ground shaking from earthquake and seismic activity, as it is within the Hartley Springs and Hilton Creek fault shake scenarios.
- **Extent:** Based on the town's location, it is in the moderate-intensity shaking level zone.
- **Impacts**: Damage to buildings, critical facilities, and transportation infrastructure is possible. The damage can cause significant disruptions throughout the MCWD service area.
- **District-Specific Vulnerabilities**:

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[1] Mammoth Community Water District. (2021, May). *Watershed Sanitary Survey May 2021*. Mammoth Community Water District. Watershed+Sanitary+Survey+2021.pdf
[2] Mammoth Community Water District. (2021, May). *2020 Urban Water Management Plan*. Mammoth Community Water District. Final-2020-UWMP.pdf
[3] Mammoth Community Water District. (2021, May). *2020 Urban Water Management Plan*. Mammoth Community Water District. Final-2020-UWMP.pdf

- MCWD water and wastewater infrastructure can suffer damage from an earthquake, including treatment facilities, water storage tanks, and underground pipes.
- Damage to MCWD facilities can cause a delay in services.
- Disruption to transportation infrastructure, especially Highway 395, can impede MCWD personnel from reporting to work, and delivery of materials necessary for ongoing water treatment operations.

Energy Shortages and Energy Resiliency

- **Location:** Energy emergencies can affect any part of the planning area.
- **Extent:** Based on historical occurrences, the planning area can expect to experience regular intervals of power outages that cause service disruptions in the water distribution system.
- **Impacts**: Energy outages can have widespread impacts on critical services including water systems. Disruption to essential services like water systems can impact daily life including public health.
- **District-Specific Vulnerabilities**:
  - Loss of power can disrupt MCWD's ability to collect and distribute potable water, and maintain water quality in the District's system. Vulnerable facilities include Old Mammoth area assets (GWTP No. 1, GWTP No. 2, 1 sewer lift station).[4] Backup power projects are ongoing at 4 production wells in the Old Mammoth area, but have not been completed.

Epidemic/Pandemic

- **Location:** Densely populated areas like the Town of Mammoth Lakes would foster the spread of diseases faster than less densely populated areas of the county.
- **Extent:** Defined by geographic spread, epidemic disease is spread on the local and community level, while a pandemic is national or global, both of which can occur quickly in isolated communities, such as in the planning area.
- **Impacts**: Epidemics and pandemics can disrupt all aspects of functioning for the local communities as individuals get sick and are forced to stay distant.
- **District-Specific Vulnerabilities**:
  - MCWD personnel can get sick from an epidemic/pandemic, diminishing capacity to run the water utility.
  - It is unlikely that harmful bacteria will contaminate the District's water system because of regular actions the District takes to reduce its vulnerability to this hazard. MCWD tests water multiple

[4] Mammoth Community Water District. (2021, May). *2020 Urban Water Management Plan*. Mammoth Community Water District. Final-2020-UWMP.pdf

times each month—including source water—maintains required chlorine residuals, and operates an ongoing backflow prevention program.

Flood

- **Location:** Generally low flood hazards with the exception of Mammoth Creek, which can carry significant volumes during peak 100-year flood conditions. FEMA flood maps likewise show areas adjacent to Mammoth Creek in the Old Mammoth area as within the 100-year flood zone. Over 444 acres of the town are located in the 100-year flood hazard zone.
- **Extent:** Flooding issues in Mammoth Lakes have been the result of shallow, overbank flooding, within the 100-year flood zone.
- **Impacts**: Moderate impacts from flooding on local infrastructure, private property, transportation systems, and utility systems.
- **District-Specific Vulnerabilities**:
  - Floods can damage wastewater collection infrastructure, allowing runoff and groundwater to infiltrate the system, increasing flows and the quantity of water treated at the MCWD Wastewater Treatment facility.
  - Both surface water supply (Lake Mary) and groundwater supply (Groundwater Basin (Mammoth)) can be flooded, altering water quality and erosion.
  - As floods wash debris downstream, cleanup efforts can be expensive and time consuming for MCWD personnel.

Hazardous Materials

- **Location:** The Town is not located in close proximity to the interstate highway corridor where the likelihood of a Hazmat incident occurring is higher. However, a Hazmat release along US Highway 395 could affect the Town if the wind carried gases or odors; if the release triggered other hazards, such as fire; or if it blocked key access into the Town. Propane is also a concern.
- **Extent:** According to the Hazmat Warning System, level 1 minor – level 5 catastrophic possible.
- **Impacts**: Transportation in and out of Mammoth Lakes can be restricted due to a hazardous materials spill. Air and water quality may be impacted. Long-term environmental impacts may be experienced. Transportation routes may be disrupted.
- **District-Specific Vulnerabilities**:
  - MCWD personnel's access to critical facilities could be restricted due to a hazardous material spill, particularly along highway 395 as some MCWD employees reside in surrounding communities.
  - Water treatment or wastewater plant could experience chlorine gas leak which would require an immediate risk assessment and emergency repairs or evacuation.

- Chemicals used for snowmaking or salting the snowpack for skiing can enter the groundwater, potentially contaminating it.[5]
- If hazardous material enters the local water system, it can put significant stress on MCWD's infrastructure.

Severe Winter Weather and Snow

- **Location:** The entire MCWD jurisdiction is impacted by severe winter weather and snow.
- **Extent:** The National Weather Service Winter Storm Severity Index (WSSI) and the Wind Chill Temperature Index are both used to indicate severity levels for winter weather and snow.
- **Impacts**: Disruption of transportation and damage to the structural integrity of facilities. Impacts to transportation can restrict personnel from accessing critical facilities.
- **District-Specific Vulnerabilities**:
  - MCWD must clear snow from facilities which can cause delays in service for customers.
  - Some MCWD employees reside in communities out of town and are vulnerable to road closures, particularly highway 395.

Volcanoes

- **Location:** The Town of Mammoth Lakes is near the southwest edge of the Long Valley Caldera. Mammoth Mountain and basaltic volcanic vents have been historically active within the town boundaries. In addition, an area of potential future volcanic vents, inferred based on seismic activity, extends into the town's east side. The entire town is within hazard areas for pyroclastic flows and tephra falls.
- **Extent:** The Long Valley Volcanic Center, which is considered in the impact proximity to the planning area, is one of 18 "very high threat" volcanoes listed in a 2005 ranking developed as part of the National Volcano Early Warning System (NVEWS).
- **Impacts**: Volcanic eruptions can destroy property and injure or kill people. Ash accumulations from volcanic eruption can collapse building roofs, close roads, and seriously disrupt utilities and communications.
- **District-Specific Vulnerabilities**:
  - Volcanic impacts, including pyroclastic flow and vent eruptions, can directly damage MCWD facilities and infrastructure, including treatment facilities, water storage tanks, and underground pipes.

[5] Mammoth Community Water District. (2005, July). *Groundwater Management Plan for the Mammoth Basin Watershed*. Mammoth Community Water District. Mammoth Community Water District

- Ash accumulation can worsen water quality, putting increased stress on water treatment facilities.
- Power outages can occur due to volcanoes, disrupting electricity-dependent facilities or straining generator capacities over prolonged outages.
- Impact on transportation can restrict personnel from accessing critical facilities. Vehicles and other motorized equipment may be disabled by volcanic ash.

Wildfire

- **Location:** Wildfire is a concern for the entire Town of Mammoth Lakes; historically, wildfires have occurred on all sides of the town. However, certain portions of Mammoth Lakes have higher hazard exposure, including areas close to the Valentine Reserve Ecological Study Area and neighborhoods south of Old Mammoth Road (typically referred to as Old Mammoth and Lake Mary). Additional assets are located in the Inyo National Forest.
- **Extent:** CAL FIRE has mapped the entire Town of Mammoth Lakes and it is considered to be in the Wildland Urban Interface, and in the high and very high wildfire severity zone.
- **Impacts**: Wildfire can damage or destroy structures, including homes, businesses, critical facilities, and other community assets within the Town. A very high fire hazard severity level has been mapped by CAL FIRE for most of the privately owned lands.
- **District-Specific Vulnerabilities**:
  - Wildfire can add ash and debris to the water system, increasing cost of water treatment and potential for damage to sewer infrastructure.
  - MCWD facilities can be impacted by wildfire, impairing the ability to provide water service to customers. Critical potable water and wastewater collection infrastructure including piping, pumps, storage tanks, and wells are located throughout Town and in the Inyo National Forest.
  - Damaged water mains, from any source including other natural hazards, could limit crucial fire-fighting water supply (up to 2,000 gallons/minute).[6]

District-Specific Changes in Development and Impacts

The plan must describe changes in development that have occurred in hazard-prone areas and how they have increased or decreased the vulnerability of each participant since the previous plan was approved.

Changes in development means recent development (e.g., construction completed since the last plan was approved), potential development (e.g., development planned or under consideration by the District), conditions that may affect the risks and vulnerabilities of the District's (e.g., climate change, declining populations or projected increases in population, or foreclosures), shifts in the needs of underserved

[6] Mammoth Community Water District. (2021, May). *2020 Urban Water Management Plan*. Mammoth Community Water District. Final-2020-UWMP.pdf

communities, or gaps in social equity. This can also include changes in local policies, standards, codes, regulations, land use regulations, and other conditions. Table 7 lists the changes in development for the Mammoth Community Water District.

Table 7: Mammoth Community Water District Changes in Development

Type of Hazard Event	Changes in Land Use	Changes in Population	Changes in Conditions (e.g., Climate Change)	Overall Vulnerability (Increased, Decreased, Stayed the Same)
Dam Failure	Hotel expansions, residential developments, infrastructure improvements	No changes	Climate Change	Increased
Disease and Pest Management	Hotel expansions, residential developments, infrastructure improvements	No changes	Climate Change	Increased
Drought	More landscape irrigation, new development including proposed 580-unit, low-income housing project	No changes	Climate Change	Increased
Earthquake and Seismic Hazards	Hotel expansions, residential developments, infrastructure improvements	No changes	None	Stayed the Same
Energy Shortages and Energy Resiliency	Hotel expansions, residential developments, infrastructure improvements	No changes	Climate Change	Increased
Epidemic/Pandemic	Hotel expansions, residential developments, infrastructure improvements	No changes	None	Stayed the Same

Type of Hazard Event	Changes in Land Use	Changes in Population	Changes in Conditions (e.g., Climate Change)	Overall Vulnerability (Increased, Decreased, Stayed the Same)
Flood	Hotel expansions, residential developments, infrastructure improvements	No changes	Climate Change	Increased
Hazardous Materials	Hotel expansions, residential developments, infrastructure improvements	No changes	None	Stayed the Same
Severe Winter Weather and Snow	Hotel expansions, residential developments, infrastructure improvements	No changes	Climate Change	Increased
Volcanoes	Hotel expansions, residential developments, infrastructure improvements	No changes	None	Stayed the Same
Wildfire	Hotel expansions, residential developments, infrastructure improvements	No changes	Climate Change	Increased

Mitigation Capabilities

Local mitigation capabilities are existing authorities, policies, programs, and resources that reduce hazard impacts or could help to carry out hazard mitigation activities. Analyzing local mitigation capabilities and opportunities to expand or improve mitigation capabilities can help decision-makers determine feasible mitigation actions. The Mammoth Community Water District assessed the following mitigation capabilities.

Planning and Regulatory

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards.

Table 8: Mammoth Community Water District Plans

Plans	Does the plan address hazards? (Y/N)	How can the plan be used to implement mitigation actions?	When was it last updated? When will it next be updated?
General Plan	N/A	N/A	N/A
Capital Improvement Plan	Y	The Plan identifies capital improvements necessary to prevent impacts and improve resilience of facilities and the distribution and collection systems.	Annually
Climate Change Adaptation Plan	N/A	N/A	N/A
Community Wildfire Protection Plan	N/A	N/A	N/A
Economic Development Plan	N/A	N/A	N/A
Land Use Plan	N/A	N/A	N/A
MCWD Emergency Response Plan	Yes	The Plan provides guidance for response to incidents.	2024, updated annually.
Stormwater Management Plan	N/A	N/A	N/A
Transportation Plan	N/A	N/A	N/A
Substantial Damage Plan	N/A	N/A	N/A
Other? (Describe.)	No	N/A	N/A

Table 9: Mammoth Community Water District Regulations and Ordinances

Plans	Does this regulation/ordinance effectively reduce hazard impacts?	Is it adequately administered and enforced?	When was it last updated? When will it next be updated?
Building Code	Yes	Yes	TOML - 2025

Plans	Does this regulation/ordinance effectively reduce hazard impacts?	Is it adequately administered and enforced?	When was it last updated? When will it next be updated?
Flood Insurance Rate Maps	N/A	N/A	N/A
Floodplain Ordinance	N/A	N/A	N/A
Subdivision Ordinance	N/A	N/A	N/A
Zoning Ordinance	N/A	N/A	N/A
Natural Hazard Specific Ordinance (Stormwater, Steep Slope, Wildfire)	N/A	N/A	N/A
Acquisition of Land for Open Space and Public Recreation Use	N/A	N/A	N/A
Prohibition of Building in At-Risk Areas	N/A	N/A	N/A
Other? (Describe.)	N/A	N/A	N/A

Administrative and Technical

Administrative and technical capabilities include staff and their skills. They also include tools that can help you carry out mitigation actions.

Table 10: Mammoth Community Water District Administrative Capabilities

Administrative Capability	In place? (Y/N)	Is staffing adequate?	Is staff trained on hazards and mitigation?	Is coordination between agencies and staff effective?
Chief Building Official	Yes	Yes	No	Yes
Civil Engineer	Yes	Yes	Yes	Yes
Community Planner	Yes	Yes	Yes	Yes
Emergency Manager	No	N/A	N/A	N/A
Floodplain Administrator	Unsure	N/A	N/A	N/A

Administrative Capability	In place? (Y/N)	Is staffing adequate?	Is staff trained on hazards and mitigation?	Is coordination between agencies and staff effective?
Geographic Information System (GIS) Coordinator	Yes	Yes	Yes	Yes
Planning Commission	Yes	Yes	Yes	Yes
Fire Safe Council	Yes	Yes	Yes	Yes
CERT (Community Emergency Response Team)	Unsure	N/A	N/A	N/A
Active VOADs (Voluntary Organizations Active in Disasters)	Unsure	N/A	N/A	N/A
Other? (Please describe.)	No	N/A	N/A	N/A

Table 11: Mammoth Community Water District Technical Capabilities

Technical Capability	In place? (Y/N)	How has the capability been used to assess/mitigate risk in the past? (Answer or N/A)	How can the capability be used to assess/mitigate risk in the future?
Mitigation Grant Writing	No	N/A	N/A
Hazard Data and Information	Yes	Recently an assessment was completed by the District identifying risk of severe winter weather and seismic risk to guide structural retrofits.	Hazard data will continue to inform hazard mitigation projects going forward.
GIS	Yes	Identify risk areas for the purpose of locating facilities	Identify risk areas for the purpose of locating facilities.
Mutual Aid Agreements	Yes	MCWD assists adjacent community water suppliers to mitigate risk when there are	By identifying the instances when mutual aid is needed, other community water suppliers can work

Technical Capability	In place? (Y/N)	How has the capability been used to assess/mitigate risk in the past? (Answer or N/A)	How can the capability be used to assess/mitigate risk in the future?
		equipment failures/needs.	towards improvements specific to their needs to mutual aid.
Other? (Please describe.)	No	N/A	N/A

Financial

Financial capabilities are the resources to fund mitigation actions.

Table 12: Mammoth Community Water District Financial Capabilities

Funding Resource	In place? (Y/N)	Has this funding resource been used in the past and for what types of activities?	Could this resource be used to fund future mitigation actions?	Can this be used as the local cost match for a federal grant?
Capital Improvement Project Funding	Yes	No	Unsure	Unsure
General Funds	Yes	Yes, system improvements	Unsure	Unsure
Hazard Mitigation Grant Program (HMGP/404)	Unsure	N/A	N/A	N/A
Building Resilient Infrastructure & Communities (BRIC)	Unsure	N/A	N/A	N/A
Flood Mitigation Assistance (FMA)	Unsure	N/A	N/A	N/A
Public Assistance Mitigation (PA Mitigation/406)	No	N/A	N/A	N/A
Community Development Block Grant (CDBG)	No	N/A	N/A	N/A
Natural Resources Conservation Services (NRCS) Programs	Unsure	No	Yes	Unsure

Funding Resource	In place? (Y/N)	Has this funding resource been used in the past and for what types of activities?	Could this resource be used to fund future mitigation actions?	Can this be used as the local cost match for a federal grant?
U.S. Army Corps (USACE) Programs	No	N/A	N/A	N/A
Property, Sales, Income, or Special Purpose Taxes	Yes	Yes, system improvements	No	No
Stormwater Utility Fee	No	N/A	N/A	N/A
Fees for Water, Sewer, Gas, or Electric Services	Yes	Yes, system improvements	No	No
Impact Fees from New Development and Redevelopment	Yes	Yes, system improvements	No	No
General Obligation or Special Purpose Bonds	No	N/A	N/A	N/A
Federally Funded Programs (Please describe)	No	N/A	N/A	N/A
State-Funded Programs (Please describe)	No	N/A	N/A	N/A
Private Sector or Nonprofit Programs	No	N/A	N/A	N/A
Other?	No	N/A	N/A	N/A

Education and Outreach

Education and outreach capabilities are programs and methods that could communicate about and encourage risk reduction.

Table 13 Mammoth Community Water District Education and Outreach Capabilities

Education and Outreach Capability	In place? (Y/N)	Does this resource currently incorporate hazard mitigation?	Notes
Community Newsletter(s)	No	N/A	N/A
Hazard Awareness Campaigns (such as Firewise, Storm Ready, Severe Weather Awareness Week, School Programs)	Yes	Yes	MCWD does campaigns via the newspaper, radio, and social media to communicate tips to customers for winterizing their water system updating their contact information on file with the District, and utilizing the MCWD Customer Portal to set up alerts.
Public Meetings/Events (Please describe.)	Yes	Yes	MCWD Board meetings are open to the public.
Emergency Management Listserv	No	N/A	N/A
Local News	Yes	Unsure	N/A
Distributing Hard Copies of Notices (e.g., public libraries, door-to-door outreach)	No	N/A	N/A
Insurance Disclosures/Outreach	Yes	No	N/A
Organizations that Represent, Advocate for, or Interact with Underserved and Vulnerable Communities (Please describe.)	No	N/A	N/A
Social Media (Please describe.)	Yes	Yes	N/A
Other? (Please describe.)	No	N/A	N/A

Ability to Expand and Improve Existing Capabilities

Capability Type	Opportunity to Expand and/or Improve
Planning and Regulations	MCWD would like to be able to monitor all landscape irrigation water usage, however many multi-family residential complexes do not have dedicated irrigation meters and the cost to install the meter is prohibiting them from doing so. MCWD will advocate for the inclusion of meters in future regulations in order to be able to monitor and reduce water usage during drought conditions
Administrative and Technical	The District has many staff that are trained and familiar with hazard mitigation principles. The District is pursuing training for staff on hazard mitigation grant writing, including how to apply for HMGP grants. Additionally, training on hazards and mitigation for the Chief Building Official.
Financial	The District could pursue new grants for mitigation activities, such as HMGP or PA Mitigation (406) post-disaster.
Education and Outreach	MCWD has difficulty communicating with second homeowners. Often, second homeowners do not return emails or phone calls, or they do not provide up to date contact information. There are few means to conduct public outreach. There is one newspaper in town and one local radio station. While MCWD does have a social media presence, not all customers utilize social media. The District could work with the Town to publicize hazard mitigation information and obtain contact information for second homeowners. Further, the District could link to the online hazard mitigation plan and ReadyMono to promote understanding of local risks and what to do about them.

National Flood Insurance Program Capability Assessment

Mammoth Community Water District does not participate in, nor is it eligible for, the National Flood Insurance Program (NFIP). The National Flood Insurance Program (NFIP) is a FEMA program that provides flood insurance to millions of policyholders across the country. This program is typically regulated at the local and county levels; however, FEMA mitigation planning guidelines still require information on how each plan participant supports or implements floodplain management regulations. Table 14 includes a high-level overview of what, if anything, the District does to support floodplain management for known risks.

Table 14: Mammoth Community Water District NFIP Capabilities

NFIP Capabilities Assessment	
What communities does your special district operate in? Are you aware of any flood concerns in these communities?	Town of Mammoth Lakes; No
Which of your assets are at-risk from flooding?	Nothing specifically in the Special Flood Hazard Area.
Is your organization involved in floodplain management? If so, how?	No

Mammoth Community Water District 2025–2030 Mitigation Strategy

The mitigation strategy is often known as the heart of the plan or the community's blueprint for disaster risk reduction. Updating the mitigation strategy to reflect current conditions, vulnerabilities, and action priorities reflects an ongoing process to identify, analyze, and address hazards of concern. The strategy is comprised of goals (included in the base plan), actions, and the mitigation action plan. The goals for this plan are as follows:

- GOAL 1. Avoid exposure of people and improvements to unreasonable risks of damage or injury from the hazards identified in this plan.
- GOAL 2. Keep Mono County and the Town of Mammoth Lakes a safe place to live, work, and play by reducing the risks from natural hazards through planning for safe development, increasing public awareness of the natural hazards in Mono County, and providing an integrated multiagency approach to emergency response.
- GOAL 3. Prepare for changing climate conditions in Mono County.
- GOAL 4. Maintain adequate emergency response capabilities.
- GOAL 5. Build partnerships with local, state, federal, tribal, and other stakeholders to promote a whole community approach to response, recovery, and mitigation.
- GOAL 6. Identify, develop, and publicize evacuation routes to reduce risk from hazards like wildfire.
- GOAL 7. Study and implement mitigation actions to address potential impacts of compounding hazards such as flood following wildfire.
- GOAL 8. Utilize the mitigation planning process as a call to action demonstrating plan participants' commitment to work together toward implementing the mitigation actions identified in the plan.

Status of Previous Actions

The Mammoth Community Water District did not participate in the last hazard mitigation plan update and therefore has no status updates to report at this time.

2025 Mitigation Action Plan

The Mitigation Action Plan outlines the mitigation measures Mammoth Community Water District has identified. Actions may not be completed within five years. Including long-term actions and priorities in the mitigation plan reflects a comprehensive approach to managing community resilience and reducing risk. Further, it positions the plan participant to access post-disaster funding in the case of a disaster event. As funding and resources become available, the Mammoth Community Water District will pursue the mitigation actions included in this plan. Implementing mitigation actions like these will help save lives, protect property and livelihoods, and break the cycle of disaster damage and reconstruction.

Key components of the Mitigation Action Plan are defined as follows:

Hazards Addressed

- Dam Failure
- Disease/Pest Management
- Drought
- Earthquake/Seismic Hazards
- Energy Shortages and Energy Resiliency
- Epidemic/Pandemic
- Flood
- Hazardous Materials
- Severe Winter Weather and Snow
- Volcanoes
- Wildfire
- Wildlife Collisions

Responsible Agency

- The position, office, department or agency responsible for implementing/administrating the identified mitigation action.

Potential Funding

- Grants or local funding sources relevant to implementing the associated action.

Cost Estimate

- A rough estimate of the project's cost which may help determine which projects to pursue and when.

Timeframes

- Short-term: 1–2 years
- Medium-term: 2–5 years
- Long-term: 5+ years

Community Lifelines

The link below will provide more information on community lifelines.[7] Community lifelines are essential for the continuous operation of critical government and business functions and are vital for human health, safety, and economic security. They represent the most fundamental services in the community, and when they are stabilized, they enable all other aspects of society to function. The FEMA Community Lifelines are as follows:

- **Safety and Security**: Law Enforcement/Security, Fire Service, Search and Rescue, Government Service, Community Safety
- **Food, Hydration, Shelter**: Food, Hydration, Shelter, Agriculture
- **Health and Medical**: Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management
- **Energy**: Power Grid, Fuel
- **Communications**: Infrastructure, Responder Communications, Alerts, Warnings and Messages, Finance, 911, and Dispatch
- **Transportation**: Highway/Roadway/Motor Vehicle, Mass Transit, Railway, Aviation, Maritime
- **Hazardous Materials**: Facilities, HAZMAT, Pollutants, Contaminants
- **Water Systems**: Potable Water Infrastructure, Wastewater Management

[7] FEMA. "Community Lifelines Implementation Toolkit." https://www.fema.gov/emergency-managers/practitioners/lifelines-toolkit

Priorities

Priorities are defined by the community. After considering the following evaluation criteria and the definitions, assign a prioritization category of low, medium, or high to each natural hazard action item being retained or created. The criteria to calculate the following priority categories (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) is included in Table 16:

- **Low:** Based on one to two STAPLEE criteria, the action is feasible and important for the District but has multiple potential challenges. The action should be implemented as funding becomes available.
- **Medium:** Based on three to four STAPLEE criteria, the action is feasible and important for the District, with some potential challenges. Its implementation is less urgent than a high-priority action item and can be implemented over time.
- **High:** Based on five or more STAPLEE criteria, the action is feasible and important for the District, with minimal to no concerns. It is essential for the District to implement and may be prioritized in the short term.

Table 15 shows the mitigation actions Mammoth Community Water District has selected for this planning cycle.

Table 15: Mammoth Community Water District 2025–2030 Mitigation Actions

#	Project Title	Hazard Addressed	Description	Responsible Agency	Potential Partners	Potential Funding	Cost Estimate	Timeframe	Community Lifelines	Priority
1	Monitoring landscape irrigation with DIMs.	Drought	The lack of dedicated landscape irrigation meters at properties with existing landscaping limits our ability to track irrigation usage during times of restriction. MCWD would like to be able to provide the meters, rebates, or financial-assistance to incentivize installation of dedicated irrigation meters.	MCWD	TOML	MCWD	$252–$1,000/meter. ~$50,000	Long-term	Water Systems	High
2	Acquire potable water trucks	Energy Shortages and Energy Resilience	Provide mobile sources of potable water in the event of an energy shortage impacting the District's ability to	MCWD	TOML	MCWD	$500,000	Medium-term	Water Systems	Low

#	Project Title	Hazard Addressed	Description	Responsible Agency	Potential Partners	Potential Funding	Cost Estimate	Timeframe	Community Lifelines	Priority
			distribute potable water.							
3	Implement structural mitigation measures	Earthquake, Severe Winter Weather	Use structural mitigation measures to reduce damage from future seismic events, such as: Strengthening and retrofitting non-reinforced masonry buildings, non-ductile concrete facilities, and above-ground water storage tanks that are particularly vulnerable to ground shaking. Retrofitting building veneers to prevent failure. Building a safe room to provide protection during an earthquake. Installing window film to prevent injuries from	MCWD		MCWD	$5,000,000	Short-term	Water Systems	Medium

#	Project Title	Hazard Addressed	Description	Responsible Agency	Potential Partners	Potential Funding	Cost Estimate	Timeframe	Community Lifelines	Priority
			shattered glass. ▪ Anchoring rooftop-mounted equipment (HVAC units, satellite dishes, etc.).							
4	Conduct Winter Weather Educational Campaign	Severe Winter Weather and Snow	Educate property owners about freezing pipes and how to protect pipes to prevent bursting.	MCWD	TOML	MCWD	$5,000	Medium-term	Water Systems, Hydration	Low
5	Implement Defensible Space Program Around District Assets	Wildfire, Wildlife Collisions	On a 1–5-year basis, assess and complete defensible space around critical facilities.	MCWD	INF, TOML	MCWD	$50,000	Long-term	Water Systems, hydration	High
6	Source Water Protection	Disease/Pest Management, Wildfire	Support watershed-scale forest management to reduce disaster impacts on source water.	MCWD	INF, TOML, MLFPD	MCWD , Blue Forest Partnership	$100,000	Medium-term	Water Systems	Medium
7	Backup Tesla battery	Energy Shortages and Energy Resiliency	Purchase and install a backup Telsa battery to support existing	MCWD			$2,300,000.	Long-term	Water Systems	Low

#	Project Title	Hazard Addressed	Description	Responsible Agency	Potential Partners	Potential Funding	Cost Estimate	Timeframe	Community Lifelines	Priority
			onsite renewal energy production							
8	Generator/ Power Supply backup	Dam Failure, Drought, Earthquake/Seismic Hazards, Energy Shortages and Energy Resiliency, Flood, Severe Winter Weather and Snow, Volcanoes, Wildfire	Purchase and install backup energy supplies at critical facilities to maintain water service.	MCWD	SCE	MCWD, CA Public Utilities Commission	$25,000/ generator x 10 = $250,000	Short-term	Water Systems	Medium
9	Fire retardance for faculties	Wildfire	Purchase and install fire retardance	MCWD	TOML	MCWD	$10,000	Medium-term	Water Systems	Medium
10	Purchase snow removal equipment	Severe Winter Weather and Snow	Purchase and maintain snow removal equipment used at critical faculties necessary to continue operation of the water and wastewater system	MCWD	TOML		$500,000	Long-term	Water Systems	Low

#	Project Title	Hazard Addressed	Description	Responsible Agency	Potential Partners	Potential Funding	Cost Estimate	Timeframe	Community Lifelines	Priority
11	Construction of replacement Administration Building	Earthquake/Seismic Hazard	The existing Administration Building currently does not meet structural seismic standards in the event of catastrophic earthquake. The building needs to be replaced with a new facility that meets current codes.	MCWD	TOML		$6,000,000	Long-term	Water Systems	Medium
12	Facility air purification system	Wildfire, Hazardous Materials, Epidemic/Pandemic, Volcanoes	MCWD Campus facilities lack an air purification system. In order to protect the health and safety of employees, necessary to maintain daily operations of the water and wastewater system, air purification is necessary.	MCWD			$500,000	Long-term	Water Systems	Medium

#	Project Title	Hazard Addressed	Description	Responsible Agency	Potential Partners	Potential Funding	Cost Estimate	Timeframe	Community Lifelines	Priority
13	Seismic/Snow Structural Risk Assessment	Earthquake, Severe Winter Weather and Snow	Analysis and mitigation plan for all water and wastewater infrastructure. Identify at-risk assets to structural collapse or failure in the event of a seismic or snow event.	MCWD	TOML	MCWD	$300,000	Complete in 2025	Water Systems	High
14	Update Groundwater Management Plan	Drought, Wildfire	Update the current Groundwater Management Plan with current data and information. Plan for long-term drought conditions. Identify opportunities to reduce long-term risk through the monitoring, operating, and administering groundwater in a sustainable manner.	MCWD	TOML	MCWD	$25,000	Short-Term	Water Systems, Hydration	Medium

#	Project Title	Hazard Addressed	Description	Responsible Agency	Potential Partners	Potential Funding	Cost Estimate	Timeframe	Community Lifelines	Priority
15	Building Partnerships for Federal Dam Coordination	Dam Failure, Flood	Coordinate with Inyo National Forest and US Bureau of Reclamation on federally owned structures in Mammoth Lakes Basin including mitigation measures as appropriate.	MCWD	Inyo National Forest, US Bureau of Reclamation	MCWD	$10,000	First meeting in 2026, and continue to meet yearly going forward	Water Systems, Safety and Security	Low
16	PPE Planning	Epidemic/Pandemic	Provide and enforce workforce PPE and adaptation planning.	MCWD	Mono County Public Health	MCWD	$10,000	Short-term	Health and Medical	Low

Mitigation Action Prioritization

Mammoth Community Water District considered the STAPLEE criteria when prioritizing their actions. Table 16 documents how each action was prioritized.

Table 16: STAPLEE Prioritization for Mammoth Community Water District

Action #	Social	Technical	Administrative	Political	Legal	Economic	Environmental	Priority (High, Medium, Low)
1	2	4	4	2	2	2	4	High
2	4	4	4	4	4	3	4	Medium
3	2	2	4	3	3	3	4	Medium
4	3	3	3	3	3	3	3	Medium
5	4	4	4	4	4	4	4	High
6	3	3	4	4	2	2	4	Medium
7	3	3	4	4	2	2	4	Medium
8	3	3	4	4	2	2	4	Medium
9	3	3	4	3	2	2	3	Low
10	3	3	3	3	3	2	3	Low
11	2	3	3	2	2	2	3	Medium
12	2	3	3	3	3	3	3	Medium
13	4	3	4	4	4	4	4	High
14	3	4	4	4	4	4	4	Medium
15	4	4	2	2	2	2	3	Low
16	3	4	2	2	4	3	3	Low

Plan Integration

One way to demonstrate progress in local mitigation efforts and increase the likelihood of mitigation action implementation is through plan integration. An updated mitigation plan describes how each plan participant integrated the previous plan or could integrate the prior plan into their respective planning mechanisms. Planning mechanisms refer to the governance structures used to manage local land use development and community decision making, such as budgets, comprehensive plans, capital improvement plans, or other long-range plans, codes, and ordinances. Relevant components of the hazard mitigation that could be integrated into other mitigation plans include the following:

- The integration of the hazards the community is vulnerable to
- The data and analysis presented in the risk assessment
- The goals of the mitigation plan
- Potential projects or actions to carry out in the future

Past Integration Efforts

The Mammoth Community Water District did not meaningfully integrate the prior plan anywhere as the District was not a plan participant in the prior plan.

Future Integration Opportunities

Mammoth Community Water District identified future plan integration opportunities as described in Table 17.

Table 17: Mammoth Community Water District Future Plan Integration

Plan Name	Description	Process for Integration
MCWD Strategic Plan	A yearly planning document that outlines yearly strategic objectives and metrics for measuring progress.	The MJLHMP will be consulted on an annual basis to add mitigation actions into the Strategic Plan.

Conclusion

The Mammoth Community Water District is committed to carefully and effectively managing and maintaining local water resources. This includes planning and implementing hazard mitigation projects

that increase community resilience. Mammoth Community Water District has taken multiple recent measures to reduce hazard risk, including the following:

- **Drought**: MCWD has developed a Water Shortage Contingency Plan with updates and refinement of proposed water conservation measures.
- **Energy Shortages and Energy Resiliency**: MCWD has developed energy system redundancy through the purchase and installation of backup power supplies at multiple facilities.
- **Epidemic/Pandemic**: MCWD updated its human resource operation in response to the COVID-19 pandemic.
- **Wildfire**: MCWD has expanded partnerships for community wildfire protection to protect the surface watershed and surface water treatment facilities.
- **Multi-Hazard**: Cyber security threats are an ongoing hazard which may be increased post-disaster when systems are more vulnerable. The District has increased cyber security posture and network resilience.
- **Earthquake and Severe Winter Weather and Snow:** The District has upgraded equipment to withstand earthquake shaking and improved planning for snow and ice removal during severe winter weather.

The District provides water and wastewater services to meet the health and safety needs of the community. The District's commitment to its customers and the environment is demonstrated through its active participation in this hazard mitigation plan. Participating in the mitigation plan not only provides the opportunity to evaluate risk and build partnerships for mitigation, but positions MCWD to be eligible for additional hazard mitigation grants. Implementing future mitigation measures will help the District continue to provide water and wastewater services to meet the health and safety needs of the community.