June Lake Public Utility District

Special District Annex

Date | Draft One

MONO COUNTY CALIFORNIA

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June Lake Public Utility District

The June Lake Public Utility District (PUD) has demonstrated its commitment to a comprehensive mitigation program by developing a 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 location, 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 exist between the plan participants' hazards and mitigation capabilities. Furthermore, this annex documents the selected mitigation actions for the June Lake PUD.

June Lake Public Utility District Participation

This plan was developed through a collaborative planning process that included Mono County, the town of Mammoth Lakes, the participating special districts, many stakeholders, and the public. An important part of the plan update was documenting the planning process itself, including who represented which plan participant. The June Lake PUD was represented during the plan update process by the individual listed in Table 1.

Table 1: Representatives of the June Lake Public Utility District in the Planning Process

Name	Title	Organization/Department
Todd Kidwell	General Manager	June Lake Public Utility 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 works in or has knowledge of the June Lake PUD. 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
June Lake Fire Protection District	Volunteer Fire Services	Local and regional agencies involved in hazard mitigation activities
US Forest Service	United State Department of Agriculture Forest Service Division	Agencies that have the authority to regulate development
United States Marine Corps Mountain Warfare Training Center	Military Training Center	Neighboring community
Eastern Sierra Avalanche Center (ESAC)	Provides information and education on avalanche conditions for Eastern Sierra Region	Representatives of nonprofit organizations, including community-based organizations
Southern California Edison	Utility Company	Representatives of businesses, academia, and other private organizations

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 June Lake PUD posted a flyer on its website and in public locations in June Lake to advertise opportunities for public engagement in the Hazard Mitigation Plan (see Figure 1). This particularly involved customers of the June Lake PUD, ensuring the people most vulnerable to the impacts of hazards on the district had the opportunity to participate in the plan. Public feedback was incorporated into the risk assessment and mitigation strategy sections, including specific vulnerabilities identified and mitigation action recommendations.

Figure 1: June Lake Public Utility District Website Post of Survey

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.

District Risk Differences

Each plan participant was asked to consider how their risks and vulnerabilities compared to the overall planning area. To calculate these differences, participants ranked their unique vulnerabilities using the Calculated Priority Risk Index in Table 3 and the equation below it.

Table 3: 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.	
	3	Critical	Greater than 25%, but less than 50% of property in the affected area was damaged or destroyed. Complete	

Risk Index Factor	Degree of Risk Level		Criteria	Factor Weight for Degree of Risk Level
			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 with an RF value greater than or equal to 2.5 are considered high risk. Those with RF values of 2.0 to 2.4 are considered moderate risk hazards, and those with an RF value less than 2.0 are considered low risk. The highest possible RF value is 4. The calculated priority risk index for June Lake PUD is presented in Table 4.

Table 4: Calculated Priority Risk Index for the June Lake Public Utility District

Type of Hazard Event	Probability of Future Events	Spatial Event	Severity of Life/Property Impact	Warning Time	Duration	Risk Factor Value
Avalanche	2	2	3	2	4	2.7
Dam Failure	4	2	2	2	4	2.8
Disease and Pest Management	3	2	2	1	3	2.3
Drought	2	2	2	2	4	2.2
Earthquake and Seismic Hazards	2	2	2	3	4	2.3
Energy Shortages and Energy Resiliency	3	3	2	3	1	2.5
Epidemic/Pandemic	2	2	2	1	2	1.9
Extreme Heat	1	1	1	1	1	1.1
Flood	2	2	2	2	3	2.1
Landslide	2	2	2	1	3	2
Hazardous Materials	2	2	2	1	1	1.8
Severe Wind	3	3	2	3	3	2.7
Severe Winter Weather and Snow	4	4	4	2	3	3.7
Volcanoes	1	1	1	1	4	1.4
Wildfire	4	4	4	4	3	3.9
Wildlife Collisions	1	1	1	1	4	1.4

Past Hazard Events

The plan must present the history of hazard events. Although 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 descriptions of general hazard occurrences identified by the state and/or the Federal Emergency Management Agency (FEMA). The plan participants were asked to provide additional information on hazards that have impacted them, if any. Table 5 lists these hazard events of local significance.

Table 5: Previous Disaster Impacts on the June Lake Public Utility District

Type of Hazard Event	FEMA Disaster # (If Applicable)	Date(s)	Damage or Impacts	Description
Avalanche	N/A	Winter 2023	Melting snow caused an avalanche area runoff. Water flowed under the highway and undermined the water main system.	Winter snow weather event and snow melt that followed weakened the soil, causing an avalanche.
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	N/A	N/A	N/A
Earthquake and Seismic Hazards	N/A	N/A	N/A	N/A
Energy Shortages and Energy Resiliency	N/A	N/A	N/A	N/A
Epidemic/Pandemic	N/A	N/A	N/A	N/A
Extreme Heat	N/A	N/A	N/A	N/A
Flood	N/A	N/A	N/A	N/A
Landslide	N/A	N/A	N/A	N/A
Hazardous Materials	N/A	Summer of 2024 April 2025	Hazardous materials spill from local contractor error into Fern Creek. Sewer spill into Reversed Creek.	N/A
Severe Wind	N/A	N/A	N/A	N/A
Severe Winter Weather and Snow	N/A	December 2023	Water main pipes froze and burst, damaging pipes.	N/A
Volcanoes	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Wildlife Collisions	N/A	N/A	N/A	N/A

Figure 2: Broken Water Main Pipe at a Depth of 21 ft in a Congested Area of June Lake[1]

District-Specific Vulnerabilities

The plan participants also evaluated their specific vulnerabilities to each hazard that affects the overall planning area. Assets were determined by the plan participant. Asset types may differ among plan participants, including the following:

- **People:** Residents, workers, visiting populations, and socially vulnerable populations like seniors, individuals with disabilities, and lower-income individuals
- **Structures:** Residential, commercial, industrial, government-owned, planned capital improvement, etc.
- **Economic Assets:** Major employers, primary economic sectors, key infrastructure like telecommunications networks
- **Natural, Historic, and Cultural Resources:** Areas of conservation, parks, critical habitats, community centers, historic places, etc.
- **Critical Facilities and Infrastructure:** Hospitals; law enforcement; water, power, transportation systems; etc.
- **Community Activities:** Major local events, such as festivals, or economic events, like farming or fishing.

The following problem statements describe the district-specific vulnerabilities of the June Lake PUD. Where no unique considerations are noted, it can be assumed that the information included in the base plan also applies to the June Lake PUD.

[1] June Lake Public Utility District, 2025, "News Board-October 14, 2024 Picture of Water Main Line Damage", https://www.junelakepud.com/welcome-to-our-news-board.

Avalanche

- **Location:** The June Mountain Ski area is located in the June Lake Public Utility District, and surrounding mountain areas where avalanches can and do occur.
- **Extent:** Based on historical occurrences, the planning area can expect to experience D2 avalanche sizes as a worst-case scenario.
- **Impacts**: Four water treatment plants that service a population of up to 2,600 could be impacted by avalanche, as the system's ability to operate would be compromised by power outages. In previous avalanche events in which systems failed, potable water had to be supplied to customers at the cost of the district. A 125-kilowatt portable backup power generation system would be used to support generation of power at one location at a time to operate the system, also requiring diesel fuel to power the generator at the financial expense to the district.
- **District-Specific Vulnerabilities**:
  - Aging water and wastewater treatment facilities operated by the district are vulnerable to avalanche hazard events, causing disruptions in services to customers/people from downed power lines near the avalanche. For example, the original construction of the Village water system was in the 1940's, including the Snow Creek diversion facility.
  - Customers/people could experience service disruptions. In particular, the aging customer population, population with disabilities, and individuals with medical equipment needs could be without water and wastewater services during prolonged power outages.

Dam Failure

- **Location:** The district operates three water collection diversion dams in June Lake, or "The Village," and the diversion dam at Snow Creek.
- **Extent:** Low-hazard dam failure could inundate the district's water and wastewater facilities and areas of June Lake near the dam.
- **Impacts**: Of the three water collection diversion dams operated by the district, two dams are over 50 years old and failing. Failure of the dams would stop the flow of water to the water system, affecting the entire district, and lead to water distribution disruption for several weeks or months, depending on the time of the year, until the system is repaired. In addition, the district's 24 lift stations would be impacted by flood inundation in the event of dam failure, rendered inoperable and requiring extensive repairs.
- **District-Specific Vulnerabilities**:
  - Aging water and wastewater treatment facilities operated by the district are vulnerable to secondary hazards, such as flooding and power outages, causing disruptions in services from flooded facilities and inoperable lift stations in the dam failure inundation area.

- Populations such as seniors, people with disabilities, and people who rely on medical equipment are especially vulnerable to water and wastewater service disruptions due to prolonged power outages.
- Many customers of the district lack the assistance and resources to evacuate or shelter in place during hazard events. Impacts on district services directly impact their ability to shelter in place.

Disease and Pest Management

- **Location:** Disease and pest management hazards are anticipated to affect all of unincorporated Mono County, which includes the June Lake Public Utility District.
- **Extent:** The district measures extent using the Disease Severity Scale, which indicates a moderate susceptible/disease score of 5, as a worst-case scenario.
- **Impacts**: Any detection of disease or pest infestation in the district's aquifers, four water treatment plants, or wastewater treatment plants could impact the entire system. For example, nearby communities/people have recently detected avian influenza in their water systems. If this were to impact the district's water supply, not only would it raise public health concerns, but it would also require extensive water testing and district resources to remediate.
- **District-Specific Vulnerabilities**:
  - The District's aging water and wastewater treatment facilities were constructed in the 1940s, including the Snow Creek diversion facility. The aging water system is vulnerable to disease and pest infestation, which may result in disruptions to services during remediation measures.
  - People may face public health concerns depending on the severity of the incident.

Drought

- **Location:** Certain areas in the June Lake PUD, such as the Village, West Village, and Down Canyon, may be more severely impacted by drought due to geographic location.
- **Extent:** Based on historical data, the district can expect to experience Exceptional Drought (D4) as a worst-case scenario.
- **Impacts**: Drought impacts on the district are in the area of reduction in the available water supply to service the customers of the district in the service area.
- **District-Specific Vulnerabilities**:
  - June Lake is the only water source for most the district. The district water and wastewater systems are vulnerable to drought events that would reduce the availability of water, greatly reducing the ability to provide water service to customers/people.
  - Financial impacts due to water supply disruption and inability to charge customers/people.
  - People may be impacted by service disruptions as well as voluntary water conservation measures.

Earthquake and Seismic Hazards

- **Location:** Earthquakes and seismic shaking can occur anywhere in the June Lake service area and the district. The community of June Lake, where the district provides services, has 3,477 acres in the Silver Lake fault zone.
- **Extent:** Based on historical occurrences, the planning area can expect to experience moderate intensity shaking levels, and past events suggest that the June Lake area is at an elevated risk of liquefaction, particularly areas around the dry lakebed.
- **Impacts**: Damage to the district water and wastewater treatment plants from earthquake shaking damage would impact water service to customers, and loss of revenue for the district in the case of prolonged service disruptions.
- **District-Specific Vulnerabilities**:
  - Wells and water distribution systems are vulnerable to earthquake shaking, as the aquifer and wells are vulnerable to debris entering the systems, and liquefaction.
  - Disruption to water supply through impacts on the aquifer or water distribution lines being severed during quakes.
  - People may experience disruption of services, including water and wastewater services which could result in public health concerns and delays in recovery efforts.

Energy Shortages and Energy Resiliency

- **Location:** PSPS service outages occur throughout the Swalls Meadow service area and the district.
- **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**: Loss of power to local homes and businesses can impact daily life with persistent service disruptions, as water and wastewater systems depend on electrical power provided by the regional power grid. Utility failures to service areas located on campgrounds and beaches at Oh Ridge Beach, Pine Crest campground, June Lake marina would financially impact the PUD's ability to collect service fees from customers who fund the PUD.
- **District-Specific Vulnerabilities**:
  - The district's water wells and water distribution systems are vulnerable to frequent service disruptions from PSPS service outages on systems requiring electric power to operate.
  - As frequent power outages persist, it can reduce the water available for fire suppression, potentially resulting in cascading impacts from this event if there were a wildfire.
  - All of the district's critical facilities are vulnerable to the effects of frequent and prolonged power outages which could have a direct impact on the local tourism industry if alternative energy sources are not available.

  - People throughout the district could experience service disruptions. Prolonged disruptions may raise public health concerns.

Epidemic/Pandemic

- **Location:** There are no unique areas in the district water and wastewater management system that are adversely exposed to this hazard.
- **Extent:** See the base plan.
- **Impacts**: See the base plan.
- **District-Specific Vulnerabilities**:
  - District staff may become sick or die due to epidemic/pandemic events.
  - Services may be interrupted due to limited staff availability during an extreme epidemic/pandemic event.

Extreme Heat

- **Location:** All areas of June Lake may experience extreme heat events.
- **Extent:** The district may receive extreme heat warnings based on the current heat index, also known as the apparent temperature or how temperature feels to the human body when relative humidity is combined with air temperature. (See the Extreme Heat profile in the base plan.)
- **Impacts**: Extreme heat impacts on the district's critical facilities can result from an increase in use of water and reduction in the water supply during prolonged extreme heat events. Underground utilities may be impacted by extreme heat from overheated asphalt surfaces, which can lead to softening or buckling of road pavement and deterioration of concrete structures, compromising roadway integrity during heat waves.
- **District-Specific Vulnerabilities**:
  - The district's vulnerable aging water systems and critical facilities, including pavement, asphalt, and the water supply, are vulnerable to extreme heat events and may require financial resources to improve structures and increase maintenance.
  - Individuals exposed to extreme heat may suffer from heat exhaustion, and other heat-related medical conditions.
  - People could require additional water resources during heat extreme heat events.

Flood

- **Location:** The community areas most likely to be impacted by a 100-year flood include properties along the June Lake Loop, Grant Lake, and June Lake and the creeks that connect them.
- **Extent:** 2,039 properties around the June Lake Loop are in the 100-year flood zone.

- **Impacts**: District water and wastewater treatment facilities in the 100-year flood zone will be at least moderately damaged by flooding.
- **District-Specific Vulnerabilities**:
  - Flooding of the water and wastewater system can make the system vulnerable to service disruptions. Also, the District is vulnerable to a loss of revenue during prolonged service disruptions.
  - Customers/people of the District water and wastewater services are vulnerable to service disruptions during flood events that could impact daily life.

Landslide

- **Location:** All deep-seated landslide susceptibly classes are in various sections of the district.
- **Extent:** All mass-wasting movement types can be found in the district, predominantly linked to seismic activity and heavy rainfall that can produce landslide events. Steep and hilly terrains in the district are susceptible to landslides triggered by ground shaking, intense rainfall, and human activities, such as road construction and vegetation removal, in a worst-case scenario.
- **Impacts**: The district's diverse climate, location, and susceptibility to ground shaking from fault lines which can trigger landslides expose its water systems and critical infrastructure to landslide damage.
- **Jurisdiction-Specific Vulnerabilities**:
  - Critical facilities and infrastructure and the water treatment and wastewater treatment plants are vulnerable to landslide damage from proximity to susceptibility zones.
  - Landslide-prone areas can cause substantial financial losses to the district due to service disruptions and revenue loss.
  - People can be impacted directly by landslides as well as through disruption of services caused by landslides.

Hazardous Materials

- **Location:** District aquifers and water treatment plants could experience hazardous materials exposure.
- **Extent:** Based on historical occurrences, the district would utilize the HazMat Warning System to identify specific HazMat incident levels.
- **Impacts**: The district's only source of water supply is drawn from the lake, which is used for a major part of the PUD service area. A hazardous material spill in or around any water tributaries to June Lake would impact the district's water supply, and water distribution system, which would lead to water testing, remediation measures, service disruption, and loss of revenue.
- **District-Specific Vulnerabilities**:

- Exposure of June Lake and all of its tributaries to hazardous materials events create vulnerable conditions for this critical district asset.
- Depending upon the extent of the incident, there could be risks to public health.
- People may experience service disruptions or be exposed to hazardous materials.

Severe Wind

- **Location:** Severe wind events can impact any part of the June Lake PUD service area or the District.
- **Extent:** Based on historical occurrences, the planning area can expect to experience levels 6 and 7 strong breeze and gale winds as classified using the Beaufort Wind Scale.
- **Impacts**: Prolonged power outages from downed power lines due to severe winds, or from wildfire ignition caused by downed power lines can impact customers serviced by the district watery systems dependent on electricity to power water and wastewater systems. In addition, aquifers may be impacted by windborne debris during severe wind events.
- **District-Specific Vulnerabilities**:
  - Residents/people and businesses dependent on electricity to power water wells are vulnerable to service disruption when severe winds cause prolonged power shortages from downed power lines.
  - Critical infrastructure quality significantly influences vulnerability to severe wind damage. Structures built before the adoption of modern building codes may not be designed to withstand severe wind conditions, increasing the potential for service disruption. This wastewater treatment system was constructed in 1970. The June Lake treatment facilities, including a filtration plant, lake intake, and storage tank, were constructed in 1972.

Severe Winter Weather and Snow

- **Location:** All critical facilities in the June Lake PUD can be impacted by severe winter weather and snow.
- **Extent:** Based on historical occurrences, the planning area can expect to experience multiple winter storm warnings and winter advisories issued annually by the National Weather Service that meet the Winter Storm Severity Index (WSSI) and the Wind Chill Temperature Index, both used to indicate severity levels for winter weather and snow.
- **Impacts**: Prolonged service disruption of water and wastewater systems caused by infrastructure integrity failures due to compromised structures from snow and ice damage, necessitating costly repairs and preservation efforts. Services disruptions will impact the district in lost revenues as service shut-offs persist while the water system is repaired or replaced.

- **Jurisdiction-Specific Vulnerabilities**:
  - Significant disruptions due to power outages caused by severe winter weather can increase vulnerability to the water and wastewater system lifeline.
  - People may be impacted by service disruptions. Individuals with preexisting health conditions or who lack the ability to shelter in place temporarily relocate during periods of prolonged service disruptions are particularly vulnerable to this hazard.

Volcanoes

- **Location:** There are no unique areas in the district water and wastewater management system that are adversely exposed to this hazard.
- **Extent:** See the base plan.
- **Impacts**: See the base plan.
- **District-Specific Vulnerabilities**:
  - See the base plan.

Wildfire

- **Location:** Wildfire is a concern for the entire district and all of the June Lake PUD service area.
- **Extent:** CAL FIRE has mapped all of Mono County, including 12,613 acres in June Lake and the district in the Wildland Urban Interface, and in the high and very high wildfire severity zone.
- **Impacts**: Wildfire can damage or destroy power lines, critical facilities, and other district assets, as the very high fire hazard severity level Fire hazard severity has been mapped by CAL FIRE to impact all June Lake PUD assets.
- **Jurisdiction-Specific Vulnerabilities**:
  - The district's critical facilities are vulnerable, including treatment facilities, such as a filtration plant, lake intake and storage tank, and a water distribution system that supports the lots in the distribution system and serves as a water source for the June Lake Fire Protection District, which services all of June Lake.
  - The district's vulnerability to wildfire from prolonged power outages caused by downed power line or infrastructure could disrupt customer access to water distribution systems. Service disruptions may be a concern to public health depending on the extent of the damages.
  - A reduction in water levels from increased water use for fire suppression measures increases the district's vulnerability to wildfire.

Wildlife Collisions

- **Location:** There are no unique areas in the district water and wastewater management system that are adversely exposed to this hazard.
- **Extent:** See the base plan.
- **Impacts**: See the base plan.
- **District-Specific Vulnerabilities**:
  - Staff members may be affected by wildlife collisions while on the way to work or during work hours, impacting staffing.
  - Critical facilities are unlikely to be impacted by wildlife collisions beyond functionality due to staffing.

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 include 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 districts (e.g., climate change, declining populations or projected increases in population, or foreclosures), shifts in the needs of underserved communities, or gaps in social equity. This can include changes in local policies, standards, codes, regulations, land use regulations, and other conditions. Table 6 lists the changes in development for the June Lake PUD.

Table 6: Changes in Development for the June Lake Public Utility District

Type of Hazard Event	Changes in Land Use	Changes in Population	Changes in Conditions (e.g., Climate Change)	Overall Vulnerability
Avalanche	N/A	Aging population with limited mitigation resources	N/A	Stayed the same
Dam Failure	N/A	Aging population with limited mitigation resources	Aging conditions of dam diversions and entire water system that was built in 1940 and is in need of upgrade and replacement.	Increased
Disease and Pest Management	N/A	Aging population with limited mitigation resources	N/A	Stayed the same

Type of Hazard Event	Changes in Land Use	Changes in Population	Changes in Conditions (e.g., Climate Change)	Overall Vulnerability
Drought	N/A	Aging population with limited mitigation resources	Aging conditions of water treatment systems	Increased
Earthquake and Seismic Hazards	N/A	Aging population with limited mitigation resources	N/A	Stayed the same
Energy Shortages and Energy Resiliency	N/A	Aging population with limited mitigation resources	Increase in power outages	Increased
Epidemic/Pandemic	N/A	Aging population, with preexisting health conditions that increase vulnerability to exposure.	Increase in cases of hantavirus	Increased
Extreme Heat	N/A	N/A	N/A	Stayed the same
Flood	N/A	Aging population with limited mitigation resources	N/A	Stayed the same
Landslide	N/A	Aging population with limited mitigation resources	N/A	Stayed the same
Hazardous Materials	N/A	N/A	N/A	Stayed the same
Severe Wind	N/A	Aging population with limited mitigation resources	N/A	Stayed the same
Severe Winter Weather and Snow	N/A	Aging population with limited mitigation resources	N/A	Stayed the same
Volcanoes	N/A	N/A	N/A	Stayed the same
Wildfire	N/A	Aging population with limited mitigation resources	Impacts from Wildfire risk reduction on water supply	Increased
Wildlife Collisions	N/A	N/A	N/A	Stayed the same

Mitigation Capabilities

Local mitigation capabilities are existing authorities, policies, programs, and resources that reduce hazard impacts or could help 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 June Lake PUD 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 7: Plans of the June Lake Public Utility District

Plan	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	Yes	The plan can help identify and develop mitigation actions and projects for the PUD	Last Updated: Unknown Next Update: March 2026
Capital Improvement Plan	Yes	The plan can help identify and develop funding options for mitigation actions and projects for the PUD	Last Updated: March 2025 Next Update: March 2026
Climate Change Adaptation Plan	No	N/A	N/A
Community Wildfire Protection Plan	No	N/A	N/A
Economic Development Plan	No	N/A	N/A
Land Use Plan	No	N/A	N/A
Local Emergency Operations Plan	Yes	The plan can help identify and develop mitigation actions and projects for the PUD	Last Updated: March 2025 Next Update: March 2026
Stormwater Management Plan	No	N/A	N/A
Transportation Plan	No	N/A	N/A

Plan	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?
Substantial Damage Plan	No	N/A	N/A

Table 8: Regulations and Ordinances of the June Lake Public Utility District

Regulation/Ordinance	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	No	N/A	N/A
Flood Insurance Rate Maps	No	N/A	N/A
Floodplain Ordinance	No	N/A	N/A
Subdivision Ordinance	No	N/A	N/A
Zoning Ordinance	No	N/A	N/A
Natural Hazard Specific Ordinance (Stormwater, Steep Slope, Wildfire)	No	N/A	N/A
Acquisition of Land for Open Space and Public Recreation Use	No	N/A	N/A
Prohibition of Building in At-Risk Areas	No	N/A	N/A

Administrative and Technical

Administrative and technical capabilities include staff and their skills. They include tools that can help you carry out mitigation actions. Table 9 provides a list of the district's administrative capabilities, while lists the district's technical capabilities.

Table 9: Administrative Capabilities of the June Lake Public Utility District

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	No	N/A	N/A	N/A
Civil Engineer	No	N/A	N/A	N/A
Community Planner	No	N/A	N/A	N/A
Emergency Manager	Yes	Yes	Yes	Yes

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

Table 10: Technical Capabilities of the June Lake Public Utility District

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	No	N/A	N/A
GIS	Yes	GIS is used in mapping and establishing boundaries for the district service area	GIS is used in mapping hazard areas impacting the district service areas.
Mutual Aid Agreements	No	N/A	N/A

Financial

Financial capabilities are the resources available to fund mitigation actions. Table 11 outlines the district's financial capabilities.

Table 11: Financial Capabilities of the June Lake Public Utility District

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	Providing financial resources to fund capital improvement projects for water system upgrades and repairs	Yes	Yes
General Funds	Yes	Providing financial resources to fund capital improvement projects for water system upgrades and repairs	Yes	Yes
Hazard Mitigation Grant Program (HMGP/404)	No	N/A	N/A	N/A
Flood Mitigation Assistance (FMA)	No	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	No	N/A	N/A	N/A
U.S. Army Corps (USACE) Programs	No	N/A	N/A	N/A
Property, Sales, Income, or Special Purpose Taxes	Yes	Funds have been used towards funding the annual Mosquito Abatement program	Yes	Yes
Stormwater Utility Fee	No	N/A	N/A	N/A
Fees for Water, Sewer, Gas, or Electric Services	Yes	No. Fees are used for operational purposes only.	Unlikely, only for operational needs	No

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?
Impact Fees from New Development and Redevelopment	Yes	Fees have been used for capital improvement projects.	Yes	Yes
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)	Yes	State funds have been used to upgrade they PUDs water treatment plant.	A system upgrade project is currently in the planning stages, awaiting final funding approval	No
Private Sector or Nonprofit Programs	No	N/A	N/A	N/A
General Property Tax	Yes	Property tax revenue have been used for capital improvement projects.	Yes	Yes

Education and Outreach

Education and outreach capabilities are programs and methods that could communicate about and encourage risk reduction. Table 12 summarizes the district's education and outreach capabilities.

Table 12: Education and Outreach Capabilities of the June Lake Public Utility District

Education and Outreach Capability	In place? (Y/N)	Does this resource currently incorporate hazard mitigation?	Notes
Community Newsletter(s)	Yes	Yes	ENews on PUD website
Hazard Awareness Campaigns (such as Firewise, Storm Ready, Severe Weather Awareness Week, School Programs)	Yes	Yes	Post on website, water conservation, severe winter weather preparedness information
Public Meetings/Events (Please describe.)	No	N/A	N/A
Emergency Management Listserv	No	N/A	N/A
Local News	No	N/A	N/A
Distributing Hard Copies of Notices (e.g., public libraries, door-to-door outreach)	Yes	Yes	Annual severe winter weather preparedness, and door hangers of for prolonged outages
Insurance Disclosures/Outreach	No	N/A	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.)	No	N/A	N/A

Ability to Expand and Improve Existing Capabilities

The capability assessment findings were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. These opportunities are included in Table 13.

Table 13: Opportunities to Expand or Improve Capabilities of the June Lake Public Utility District

Capability Type	Opportunity to Expand and/or Improve
Planning and Regulations	The June Lake Public Utility District can develop planning and regulatory mechanisms to better utilize hazard mitigation planning and implement mitigation actions to improve capabilities to sustain water and wastewater system lifelines in all hazards events. Specifically, June Lake PUD can integrate the mitigation actions from this plan update into their yearly Capital Improvement Planning process.

Capability Type	Opportunity to Expand and/or Improve
Administrative and Technical	The June Lake Public Utility District can acquire a broad range of administrative and technical resources to assist its Board of Directors to complete its mission by developing hazard mitigation projects to sustain the water and wastewater system in all hazards events. Hiring an additional staff member to support the current four-person team would allow more time for hazard mitigation planning and financial planning to pay for upgrades.
Financial	The June Lake Public Utility District could expand grant writing capabilities to apply for eligible hazard mitigation grant funding such as the Hazard Mitigation Grant Program or other available grant funding to assist the district in meeting its mission .
Education and Outreach	The June Lake Public Utility District can improve on its current public outreach and education programs to increase awareness of hazard mitigation measures that can reduce risk. For example, the district could engage in an annual public awareness campaign focused on its current population's needs and specific hazard mitigation measures to reduce risk by sending out hazard information with regular bills.

National Flood Insurance Program Capability Assessment

The June Lake PUD does not participate and is not eligible to participate in the National Flood Insurance Program (NFIP), 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 request 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: NFIP Capabilities of the June Lake Public Utility District

Question	Response
What communities does your special district operate in? Are you aware of any flood concerns in these communities?	June Lake. Not aware of any flood concerns for the community.
Which of your assets are at-risk from flooding?	The June Lake water and wastewater treatment facilities, including a filtration plant.
Is your organization involved in floodplain management? If so, how?	The June Lake PUD has no involvement in floodplain management.

June Lake Public Utility District 2025–2030 Mitigation Strategy

The mitigation strategy is often seen 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 is an ongoing process to identify, analyze, and address hazards of concern. The strategy comprises goals (included in the base plan), actions, and the mitigation action plan. The goals of this plan are as follows:

- **Goal 1:** Avoid the 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 of 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 floods following wildfires.
- **Goal 8:** Utilize the mitigation planning process as a call to action demonstrating the plan participants' commitment to work together toward implementing the mitigation actions identified in the plan.

Status of Previous Actions

The June Lake PUD did not participate in the last hazard mitigation plan update and therefore has no status updates to report at this time.

Considered Mitigation Actions

The mitigation strategy must include analyzing a comprehensive range of actions or projects the participants considered to address vulnerabilities identified in the risk assessment. The actions considered must emphasize reducing risk to existing buildings, structures, and infrastructure and limiting risk to new development and redevelopment. They must connect specifically to the risk and vulnerabilities identified in the risk assessment, including the specific hazards profiled by each plan participant. Types of actions considered for this plan update included the following:

- Local Plans and Regulations
- Structure and Infrastructure Projects
- Natural Systems Protection
- Education and Awareness Programs

The Mitigation Action Plan may also include additional response, preparedness, or prevention focused actions, but these are not considered mitigation actions during the FEMA plan review process. A full list of actions considered can be found in Appendix C: Sample Mitigation Action Ideas.

2025 Mitigation Action Plan

The Mitigation Action Plan outlines the mitigation measures the June Lake PUD has identified. Actions might not be completed in five years. Including long-term actions and priorities in the mitigation plan reflects a comprehensive approach to managing community resilience and reducing risk. Furthermore, it positions the plan participant to access post-disaster funding in the case of a disaster event. As funding and resources become available, the June Lake PUD 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

- Avalanche
- Dam Failure
- Disease/Pest Management
- Drought
- Earthquake/Seismic Hazards
- Energy Shortages and Energy Resiliency
- Epidemic/Pandemic
- Extreme Heat
- Flood
- Landslides
- Hazardous Materials
- Severe Wind
- 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

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:[2]

- **Safety and Security:** Law Enforcement/Security, Fire Service, Search and Rescue, Government Service, and 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

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

- **Transportation:** Highway/Roadway/Motor Vehicle, Mass Transit, Railway, Aviation, Maritime
- **Hazardous Materials:** Facilities, HazMat, Pollutants, Contaminants
- **Water Systems:** Potable Water Infrastructure, Wastewater Management

Priorities

Priorities are defined by the plan participant. After considering the following evaluation criteria and the definitions, the district assigned a prioritization category of low, medium, or high to each natural hazard action item. The criteria to calculate the following priority categories (STAPLEE: Social, Technical, Administrative, Political, Legal, Economic, and Environmental) are listed 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 the June Lake PUD has selected for this planning cycle.

Table 15: June Lake Public Utility District 2025–2030 Mitigation Actions[3]

#	Project Title	Hazard Addressed	Description	Responsible Agency	Potential Partners	Potential Funding	Cost Estimate	Timeframe	Community Lifeline	Priority
1	Small Dam Diversion Project	Dam Failure, Drought, Flood	Upgrade aging diversion dams to prevent loss of water source and prevent flooding events	June Lake PUD General Manager		HMGP, FMA	$200,000	1 year	Water Systems	High
2	Lift Stations Project	Hazardous Materials	Upgrade aging lift stations to reduce risk of hazardous sewage spills into the water systems	June Lake PUD General Manager		HMGP, FMA	$1.8 million	1–2 years	Water Systems	High
3	Wastewater Treatment Plant Repair Project	Hazardous Materials, Severe Winter Weather, Disease and Pest Management	Upgrade 50-year-old aeration pool to reduce risk of sewage seepage into ground water, and catastrophic failure of the system	June Lake PUD General Manager		HMGP, FMA	$16 million	3–5 years	Water Systems	High
4	Water Plant Rehabilitation and Upgrade Project	Severe Winter Weather, Wildfire, Volcanoes, Avalanche, Earthquake and Seismic Hazards, Energy Shortage and Energy Resiliency, Landslide, Epidemic and Pandemic, Wildlife Collision	Replace 50-year-old infrastructure and water treatment equipment to provide safe and adequate supply of drinking water during hazard events	June Lake PUD General Manager		HMGP, FMA	$18 million	3–5 years	Water Systems	High
5	Force Main Sewer Line to Treatment Plant Project	Severe Winter Weather, Wildfire, Avalanche, Earthquake and Seismic Hazards, Energy Shortage and Energy Resiliency	Reduce risk of 8 miles of sewer main failure that could impact Rush Creek and other water ways that feed into Grant Lake reservoir to supply water for Los Angeles Department of Water and Power (LADWP). Mitigate the risk to the main sewer line to treatment plant	June Lake PUD General Manager	Los Angeles Department of Water and Power (LADWP)	HMGP, FMA, LADWP	$10 million	3–5 years	Water Systems	High

[3] FMA = Flood Mitigation Assistance, HMGP = Hazard Mitigation Grant Program, PUD = Public Utility District.

#	Project Title	Hazard Addressed	Description	Responsible Agency	Potential Partners	Potential Funding	Cost Estimate	Timeframe	Community Lifeline	Priority
			project including through utilizing upgraded building materials							
6	Solar Energy for Wastewater Treatment Plant	Severe Winter Weather, Severe Wind, Wildfire, Avalanche, Earthquake and Seismic Hazards, Energy Shortage and Energy Resiliency	Install solar panels and battery storage capabilities to provide alternate power sources to reduce the risk from prolonged power outages	June Lake PUD General Manager		HMGP, FMA	$780,000	1–2 years	Water Systems	High
7	Clark Well Project	Drought, Wildfire, Avalanche, Earthquake and Seismic Hazards, Hazardous Materials, Disease and Pest Management	To maintain water supply levels by bringing existing Clark Well into production to connect to existing water plants, to be utilized as an alternate water source in the event of service failures due to diversions collapse or seismic activity, avalanche events, surface water contamination, water borne disease, or wildfire events to maintain water supply levels during emergency events	June Lake PUD General Manager	US Forest Service, June Lake Fire Protection District	HMGP, FMA	$250,000	1–2 years	Water Systems	Medium

Mitigation Action Prioritization

The June Lake PUD considered the STAPLEE criteria when prioritizing their actions. Table 16 documents how each action was prioritized.

Table 16: STAPLEE Prioritization for the June Lake Public Utility District

Action	Social	Technical	Administrative	Political	Legal	Economic	Environmental	Priority
1	4	4	3	4	4	4	4	High
2	4	4	3	4	4	4	4	High
3	4	4	3	4	4	4	4	High
4	4	4	3	4	4	4	4	High
5	4	4	3	4	4	4	4	High
6	4	4	2	4	4	4	4	High
7	4	4	2	4	2	4	1	Medium

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 hazard mitigation that could be integrated into other mitigation plans include the following:

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

Past Integration Efforts

The June Lake PUD did not meaningfully integrate the prior plan anywhere, as the district was not a plan participant in the prior plan.

Future Integration Opportunities

The June Lake PUD identified future plan integration opportunities as described in Table 17.

Table 17: Future Plan Integration by the June Lake Public Utility District

Plan	Description	Process for Integration
General Plan	Provides goals and objects for PUD to accomplish priorities.	The PUD can integrate risk assessment and mitigation actions from the Hazard Mitigation Plan into the 2026 update to support plan priorities and future strategic planning.

Conclusion

The June Lakes Public Utility District is looking forward to utilizing this hazard mitigation plan update to support its implementation of many changes and updates currently underway in the district systems. The district has upcoming projects focused on addressing its aging infrastructure, which has been impacted by multiple hazard events over the years. The district hopes to utilize the hazard risk assessment data to identify additional hazard mitigation actions during this planning cycle and in the future. By implementing hazard mitigation measures, the June Lake PUD will be able to continue to effectively provide services to its service area before, during, and after hazard events.