# Mammoth Lakes Fire Protection District

*Special District Annex*

Date | Draft One

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# Mammoth Lakes Fire Protection District

The Mammoth Lakes Fire Protection District (MLFPD) 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 location, can be found. This is the first time the special district is participating in a hazard mitigation plan, so 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 MLFPD.

# Mammoth Lakes Fire Protection District Participation

This plan was developed through a collaborative planning process that included Mono County, the Town of Mammoth Lakes (TOML), 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. Table 1 lists the individuals who represented the MLFPD during the plan update process.

**Table 1: Representatives of the Mammoth Lakes Fire Protection District in the Planning Process**

| Name | Title | Organization/Department |
|---|---|---|
| Ales Tomaier | Fire Chief | Mammoth Lakes Fire Protection District (MLFPD) |
| Mike McCarthy | Division Chief | MLFPD |
| Janet Hatfield | Forest Health Program Director | Whitebark Institute |
| Laura Beardsley | Executive Director | Whitebark Institute |

# 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 MLFPD. 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

| Organization | Description | Stakeholder Type |
|---|---|---|
| Mammoth Community Water District | Local water district | Local and regional agencies involved in hazard mitigation activities |
| Mammoth Hospital | Regional hospital | Local and regional agencies involved in hazard mitigation activities |
| US Forest Service | US Department of Agriculture Forest Service Division | Agencies that have the authority to regulate development |
| Mono County | County where the Town of Mammoth Lakes is located | Neighboring community |
| Southern Californian Edison | Utility Company | Representatives of businesses, academia, and other private organizations |
| Whitebark Institute | Nonprofit organization dedicated to reducing wildfire risk and enhancing sustainability in Eastern Sierra Forests | Representatives of nonprofit organizations, including community-based 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. On May 8, 2025, the MLFPD posted a social media spotlight on Facebook and Instagram with resources on how to engage in the hazard mitigation planning process. The post was specifically to involve those with access and functional needs, the elderly, low-income individuals, non-English-speaking people, and youth. It also posted flyers around town on May 8, 2025. On June 24, 2025, the MLFPD announced avenues to participate in the hazard mitigation planning process at its public board meeting. Public feedback has been incorporated into the risk assessment and mitigation strategy sections.

# District-Specific Hazards and Vulnerabilities

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 utilizing the Calculated Priority Risk Index in Table 3 and the equation below it. The results are shown in Table 4.

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 | |

| Risk Index Factor | Degree of Risk Level | | Criteria | Factor Weight for Degree of Risk Level |
|---|---|---|---|---|
| | | | 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 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 the MLFPD is presented in Table 4.

Table 4: Calculated Priority Risk Index for Mammoth Lakes Fire Protection District

| Type of Hazard Event | Probability of Future Events | Spatial Event | Severity of Life/Property Impact | Warning Time | Duration | Risk Factor Value |
|---|---|---|---|---|---|---|
| Avalanche | 4 | 2 | 2 | 4 | 3 | 2.9 |
| Dam Failure | 1 | 2 | 2 | 1 | 4 | 1.8 |
| Disease and Pest Management | 2 | 2 | 1 | 1 | 4 | 1.8 |
| Drought | 2 | 2 | 1 | 1 | 4 | 1.8 |
| Earthquake and Seismic Hazards | 2 | 4 | 3 | 4 | 4 | 3.1 |
| Energy Shortages and Energy Resiliency | 3 | 3 | 3 | 3 | 3 | 3 |
| Epidemic/Pandemic | 2 | 3 | 4 | 1 | 4 | 2.9 |
| Extreme Heat | 1 | 3 | 1 | 2 | 3 | 1.7 |
| Flood | 1 | 2 | 2 | 1 | 3 | 1.7 |
| Landslide | 2 | 1 | 1 | 4 | 3 | 1.8 |
| Hazardous Materials | 2 | 2 | 2 | 3 | 3 | 2.2 |
| Severe Wind | 3 | 4 | 2 | 2 | 2 | 2.7 |
| Severe Winter Weather and Snow | 4 | 4 | 4 | 3 | 4 | 3.6 |
| Volcanoes | 1 | 4 | 4 | 4 | 4 | 3.1 |
| Wildfire | 4 | 4 | 4 | 4 | 4 | 4 |
| Wildlife Collisions | 1 | 1 | 1 | 4 | 2 | 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 discusses hazards that have been recognized by the state and 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 for Mammoth Lakes Fire Protection District[1]

| Type of Hazard Event | FEMA Disaster # (If Applicable) | Date(s) | Damage or Impacts | Description |
|---|---|---|---|---|
| **Avalanche** | N/A | Numerous | Multiple Fatalities and injuries | Avalanches at MMSA and the Sherwins and in town, often "roof avalanches." |
| **Dam Failure** | N/A | N/A | N/A | Not in this district, but in MLFPD's immediate response area |
| **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** | | | | Mammoth Lakes has a significant earthquake history, particularly the 1980 sequence and subsequent activity. In May 1980, a series of earthquakes, including a magnitude 6.0, caused extensive damage. Additional moderate quakes occurred in 1983 in the same general area. Recent activity, like the 2014 swarm in Long Valley Caldera, 7 miles east of Mammoth Lakes, demonstrated continued seismic activity in the region. |
| **Energy Shortages and Energy Resiliency** | N/A | N/A | PSPS can have impacts on populations with access and functional needs. There have also been periods of severe winter storms when fuel essential for heating (propane) and automotive fuels (gas & diesel) could not | In Mammoth Lakes, the history of PSPS outages is tied to the broader context of wildfire prevention efforts by Southern California Edison and other utilities. PSPS are implemented to proactively de-energize electrical infrastructure in areas experiencing high-risk weather conditions, such as strong winds and low humidity. |

[1] MLFPD = Mammoth Lakes Fire Protection District, MMSA = Mammoth Mountain Ski Area, PSPS = Public Safety Power Shutoffs,

| Type of Hazard Event | FEMA Disaster # (If Applicable) | Date(s) | Damage or Impacts | Description |
|---|---|---|---|---|
| | | | be brought into the community, putting the general population at risk. | |
| **Epidemic/ Pandemic** | DR-4482-CA | | Influx of individuals from southern California overwhelmed local resources | COVID 19 Pandemic |
| **Extreme Heat** | N/A | N/A | N/A | N/A |
| **Flood** | N/A | N/A | N/A | Have had minor flooding in portions of the community, especially in spring runoff following large winter snows |
| **Landslide** | N/A | N/A | N/A | N/A |
| **Hazardous Materials** | N/A | N/A | N/A | Mammoth Lakes has some hazardous materials risks, particularly related to its volcanic environment and geothermal activities. Specifically, the risks are associated with pyroclastic flows and carbon dioxide emissions from Mammoth Mountain, a young and active volcano. In addition, geothermal facilities in the area, such as those owned by Mammoth Pacific, L.P., are subject to regulations for the storage of hazardous substances. In addition, the Water District works with chlorine, for which there is little response capacity. |
| **Severe Wind** | N/A | N/A | Severe winds have damaged trees, some of which fell on structures. In addition, severe winds impact travel, and they are a risk for spreading fires. | Mammoth Lakes can experience severe winds, particularly at higher elevations like the peak of Mammoth Mountain where winds can exceed 100 mph. Winds at the base of the mountain are often 25–30 mph, with stronger gusts. During winter storms, strong winds can |

| Type of Hazard Event | FEMA Disaster # (If Applicable) | Date(s) | Damage or Impacts | Description |
|---|---|---|---|---|
| | | | | produce blizzard conditions, making travel difficult. |
| **Severe Winter Weather and Snow** | EM-3591-CA, EM-3592-CA | Winter 2022/2023 | Structure collapse/ compromise (yellow/red tag), propane infrastructure damage including multiple dwellings destroyed by explosions of undetected propane leaks, 100+ other propane leaks or fires causing life safety hazards. Fatigue of first responders to continue to respond, avalanche road closure north of town splitting the county in two with inability to move resources from one side to the other. | Record sustained snowfall overwhelmed the resources of the Town and the MLFPD. Extreme snow load on structures and infrastructure caused many collapses, compromised structural integrity, and caused many fires, explosions, propane leaks, etc. |
| **Volcanoes** | N/A | Mammoth Mountain is a geologically young volcano with a history of eruptions from approximately 100,000–50,000 years ago. Basalts have erupted in the area for at least 235,000 years, with at least one eruption every 10,000 years or so during the past 250,000 years. The | A volcanic eruption near Mammoth Lakes could lead to ashfall, potentially impacting the town and surrounding areas, and could also damage infrastructure and vegetation. Depending on the type and size of the eruption, other hazards, such as lava flows and volcanic gases, could also be present. | Mammoth Mountain is a volcano near Mammoth Lakes. It is considered a dormant volcano, but it has a history of eruptions. The area also includes the Long Valley Caldera, a supervolcano that is considered to be a very high threat. Mammoth Mountain is located on the southwest rim of the Long Valley Caldera. |

| Type of Hazard Event | FEMA Disaster # (If Applicable) | Date(s) | Damage or Impacts | Description |
|---|---|---|---|---|
| | | last eruption was 8,000 years ago. Mammoth Mountain is surrounded by many mafic vents, including Red Cones, which were radiocarbon dated about 8,000 years ago. Recent volcanic unrest includes seismicity, gas emissions, and tree kill, possibly related to a dike intrusion beneath the mountain in 1989. | | |
| **Wildfire** | N/A | Mammoth Lakes is in the Eastern Sierra, which—like other parts of the Sierra Nevada—has experienced a rise in wildfire frequency and intensity in recent decades. Several large wildfires have occurred in the Eastern Sierra in recent years, including the Dixie Fire in 2021 and the Creek Fire in 2020. | Wildfires in the Eastern Sierra can cause widespread damage and impacts, including loss of life, damage to structures, and significant environmental consequences. These fires can lead to poor air quality, reduced tourism, and economic losses.<br>The last two fires in the county with significant structure loss are the Round Fire and Mountainview Fire. Links to information are in the section below. | There are 10,216 properties in Mammoth Lakes that have some risk of being affected by wildfire over the next 30 years. This represents 99% of all properties in Mammoth Lakes.<br>Besides damaging properties, wildfire can also cut off access to utilities and emergency services, impact evacuation routes, and may impact the overall economic well-being of an area. Overall, Mammoth Lakes has a major risk of wildfire over the next 30 years. |
| **Wildlife Collisions** | 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 such as 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.)**
- Critical facilities and infrastructure (hospitals, law enforcement, water, power, transportation systems, etc.)
- Community activities (major local events, such as festivals, or economic events, such as farming or fishing)

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

## Avalanche

- **Location:** Mammoth Mountain Ski Area, the Sherwins, and in TOML, particularly the southwestern part of the town.
- **Extent:** The worst-case scenario for avalanches is D2 avalanche slides.
- **Impacts**: Avalanches can block or damage critical access routes, isolate communities, and pose direct threats to homes and people in high-risk zones.
- **District-Specific Vulnerabilities**:
  - Roof avalanches could damage structures.
  - Services might be disrupted by blocked facilities or vehicles.
  - Communities or visitors, particularly on ski slopes, could be isolated, preventing emergency services from reaching them.

## Dam Failure

- **Location:** There are no dams in the district, but they are in the immediate response area. Street flooding could occur in TOML.
- **Extent:** Several dams in the immediate response area are rated high hazard potential dams.
- **Impacts**: Catastrophic flooding could isolate communities and disrupt emergency services. Vehicles and other critical infrastructure could incur damage.
- **District-Specific Vulnerabilities**:
  - Inundation of major highways, such as U.S. 395, could impede response from the MLFPD. These service interruptions could impact people's life and safety in Mammoth Lakes.
  - First responders could be overcome by flood waters during rescue operations, placing their lives in danger.
  - Data limitations exist regarding the potential extent of flooding due to dam failure in the TOML itself, so there may be an unknown level of risk.

## Disease and Pest Management

- **Location:** The entire planning area is vulnerable to diseases and pests.
- **Extent:** The Disease Severity Scale indicates a moderately susceptible/disease score of five as the worst-case scenario. Pine mortality caused by the mountain pine beetle (*Dendroctonus ponderosae*) has remained high.
- **Impacts**: Diseases and pests can impact local water systems and natural resources like forests.
- **District-Specific Vulnerabilities**:
  - Staff can be impacted by various pest diseases, such as the Hantavirus, which can affect their continuity of operations.
  - Infestations can kill vast amounts of forested land, exacerbating fire risk in the community and putting more people in harm's way.
  - MLFPD facilities themselves are not vulnerable to disease and pests.

## Drought

- **Location:** The entire planning area is vulnerable to drought.
- **Extent:** The worst-case scenario for the district is exceptional drought (D4).
- **Impacts**: Drought can have environmental impacts, including reduced snowpack and groundwater supply. Water systems can also be impacted by increased strain on the system.

- **District-Specific Vulnerabilities**:
  - Drought increases the number or intensity of fires to which MLFPD must respond.
  - Water resources and infrastructure may be affected, impacting the availability of water to MLFPD to fight fires.
  - Vulnerability to cascading hazards, such as flooding and landslide, that require response from MLFPD reduces the capacity to respond to other disasters and jeopardizes the life and safety of residents.

## Earthquake and Seismic Hazards

- **Location:** The entire planning area is susceptible to earthquakes and seismic hazards.
- **Extent:** Depending on the scenario, according to the Modified Mercalli Intensity Scale, the town can expect to experience shaking levels ranging from IV – Light to VII – Very Strong.
- **Impacts**: Key roadways can be damaged, isolating communities from essential services. Infrastructure can fail or collapse due to intense shaking.
- **District-Specific Vulnerabilities**:
  - Damage could occur to the special district's facilities or equipment.
  - Service disruptions could occur due to impacts on road systems, limiting transportation and isolating communities.
  - Staff can be in danger when responding to areas with damaged infrastructure.
  - A large-scale event could put a strain on local housing and medical capacities. The time of the year may influence the vulnerability of the community. For instance, during peak tourism season, many visitors who might have intended to stay only for the day could be trapped without adequate food, water, and shelter.

## Energy Shortages and Energy Resiliency

- **Location:** The entire planning area is susceptible to energy emergencies.
- **Extent:** The planning area can expect to experience regular intervals of power outages.
- **Impacts**: Energy shortages can disrupt the operation of critical infrastructure that relies on power. Prolonged power outages could lead to loss of life and deterioration of health conditions for individuals who depend on life-sustaining medical equipment that uses electrical power.
- **District-Specific Vulnerabilities**:
  - Electricity, fuel, and propane could be inaccessible if power outages impact the continuity of operations.

  - Vulnerability increases depending on the weather. As a worst-case scenario, if a significant winter storm closed evacuation routes and caused power outages, people could be trapped in their homes without sufficient heating.
  - Propane can cause explosions and spark fires. Data limitations exist, as some lines are unmapped across town.

## Epidemic/Pandemic

- **Location:** The entire planning area is susceptible to pandemics and epidemics. More densely populated areas such as TOML would foster the spread of diseases such as the flu, COVID-19, and RSV, faster than less densely populated areas of the county.
- **Extent:** The planning area can expect global pandemics as the worst-case scenario.
- **Impacts**: Epidemic/pandemic can impact human health, causing everything from days off work to death. Widespread pandemics can impact worker productivity, potentially disrupting critical services such as medical care. The local tourism sector, a crucial economic pillar, may experience declines as potential visitors are dissuaded by health risks.
- **District-Specific Vulnerabilities**:
  - Policies designed to reduce the spread of illness could limit fire services' ability to work with the community on fuels mitigation.
  - High infection rates among staff could impede the continuity of operations. These service interruptions could impact people's life and safety in Mammoth Lakes.
  - MLFPD facilities themselves are not vulnerable to epidemic and pandemic.

## Extreme Heat

- **Location:** The entire planning area is susceptible to extreme heat.
- **Extent:** The worst-case scenario for extreme heat is the category of danger, with temperatures ranging from 103°F to 124°F.
- **Impacts**: Prolonged exposure to extreme heat can lead to heat exhaustion, heat stroke, and even death. Extreme heat can degrade road infrastructure, reduce water availability, stress local power grids, and increase wildfire risk.
- **District-Specific Vulnerabilities**:
  - For MLFPD staff and people in the district that work outside, there is an increased risk of heat exhaustion or stroke.
  - MLFPD facilities can withstand extreme heat, but it adds more strain on the electrical system, potentially causing power outages that incapacitate fire stations.

## Flood

- **Location:** Areas adjacent to Mammoth Creek are located in the 100-year floodplain. Over 444 acres of the town are in the 100-year flood hazard zone. Rain, including rain-on-snow events, can impact the entire town.
- **Extent:** Minor flooding in portions of the community has occurred, especially in the spring when runoff occurs after large winter snows.
- **Impacts**: Flooding can isolate entire communities by cutting off primary access roads, delay emergency response, damage public infrastructure, and displace residents.
  - **District-Specific Vulnerabilities**:
  - Flooding of major waterways can impede emergency response by cutting off transportation routes. These service interruptions could impact people's life and safety in Mammoth Lakes.
  - Flood operations and rescues place staff at risk of injury and/or death.
  - Although MLFPD structures are not at high risk, District staff live outside TOML in communities which have a greater likelihood of flooding. Flooding in these areas could impact staff's ability to come to work.

## Landslide

- **Location:** The entire planning area is susceptible to landslide hazards.
- **Extent:** All landslide susceptibility classes are found in various locations throughout the special district.
- **Impacts**: Landslides block critical roadways, disrupt emergency access, damage utilities and structures, and trigger cascading hazards.
- **District-Specific Vulnerabilities**:
  - Damage can occur to the MLFPD infrastructure, interrupting the continuity of operations.
  - Roadways can become blocked, isolating communities and preventing responses. These service interruptions could impact the life and safety of people in Mammoth Lakes.

## Hazardous Materials

- **Location:** The entire planning area is susceptible to hazardous materials.
- **Extent:** The worst-case scenario for a HAZMAT incident is Level 5 (Catastrophic).
- **Impacts**: HAZMAT events can post immediate health threats to the public, including toxic exposure and respiratory issues. They may also contaminate water sources. Geothermal activities, such as volcanoes, can also release toxic gases into the atmosphere.

- **District-Specific Vulnerabilities**:
  - Limited access roads and a lack of alternative routes may impede response to those affected. These service interruptions could impact people's life and safety in Mammoth Lakes.
  - HAZMAT releases can pose significant health risks for responders and those in the immediate area.
  - HAZMAT spills on Highway 203 could directly impact MLFPD facilities.

## Severe Wind

- **Location:** The entire planning area is susceptible to severe wind hazards, especially high elevations like the peak of Mammoth Mountain.
- **Extent:** The extent of severe wind can be classified using the Beaufort Wind Scale. The worst-case scenario for severe winds involves speeds more than 100 mph.
- **Impacts**: Severe winds can cause trees to fall onto structures, impact travel, and increase the spread of wildfires.
- **District-Specific Vulnerabilities**:
  - MLFPD vehicles are at risk of being overturned by severe winds, placing assets and staff at risk of injury and/or death.
  - Severe wind can cause trees to fall on roads or power lines, impeding travel and increasing the risk of fire. Service interruptions could impact the life and safety of people in Mammoth Lakes.
  - Individuals with pre-existing medical conditions dependent on electricity to power life-sustaining medical equipment can be put at risk when severe winds cause prolonged power shortages from downed power lines.

## Severe Winter Weather and Snow

- **Location:** The entire planning area is susceptible to 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. The worst-case scenario for winter storms based on the winter severity index is extreme.
- **Impacts**: Winter storms can isolate communities, prevent emergency access, and disrupt utility services. The structural integrity of homes and historic sites may be compromised as snow and ice cause damage, necessitating costly repairs and preservation efforts.[2] These events stress emergency services.

[2] Town of Mammoth Lakes. "22/23 Winter Storms After-Action Reports," April 2024. https://www.townofmammothlakes.ca.gov/DocumentCenter/View/14208/MammothLakes_WinterStorms-AAR_FinalDraft_052624.

- **District-Specific Vulnerabilities**:
  - Severe storms can impede travel along roadways or block access to travel lanes, preventing emergency response.
  - Propane can leak when severe snow loads damage the propane system of a structure. These leaks can lead to inhalation and fire or explosions if ignited, placing residents and staff at risk of injury or death. There were 138 propane related incidents during the 2022–2023 winter storms in the Town of Mammoth Lakes.[3]
  - Snow loads can overwhelm the capacity of structures, causing damage and collapse.
  - Impacts on communication infrastructure can prevent residents from contacting staff about emergency issues.
  - Individuals with limited access to alternative heating methods during prolonged power outages can experience health impacts.

**Figure 1: Snow on Houses during a Winter Storm, 2023**

[3] Town of Mammoth Lakes. "22/23 Winter Storms After-Action Reports," April 2024. https://www.townofmammothlakes.ca.gov/DocumentCenter/View/14208/MammothLakes_WinterStorms-AAR_FinalDraft_052624.

Figure 2: Collapsed Structure during a Winter Storm, 2023

# Volcanoes

- **Location:** Long Valley Caldera region with elevated exposure in Mammoth Lakes.
- **Extent:** The Long Valley Volcanic Center 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:** Ashfall can contaminate air and water supplies and pose respiratory health risks; pyroclastic flows can devastate infrastructure and threaten lives; and lahars, or volcanic mudflows, can occur when volcanic debris mixes with water, posing a severe threat to communities located near rivers and streams. In addition, the potential for secondary hazards, such as landslides, wildfires ignited by lava, and disruptions to transportation and communication systems, must be considered. An eruption during winter could melt heavy snowpacks, generating mudflows and cause local destructive flooding.
- **District-Specific Vulnerabilities**:
  - All assets—including people, structures, and infrastructure—are at-risk of disruption, damage, or destruction from this hazard.
  - Ash can pose a threat to air and water quality.

# Wildfire

- **Location:** The entire planning area is susceptible to wildfires.
- **Extent:** Most of the planning area is in the High and Very High wildfire severity zone
- **Impacts**: Wildfires can lead to widespread evacuations, structural losses, health impacts due to smoke and ash, utility outages, road closures, and economic disruptions.
- **District-Specific Vulnerabilities**:
  - Wildfire can damage structures and community lifelines and cut off power, communications, and internet infrastructure in Mammoth Lakes.
  - Wildfires can block access to transportation routes, isolating communities and preventing emergency services. These service interruptions could impact the life and safety of people in Mammoth Lakes.
  - Residential portions of the Lakes Basin, which sits southwest of Mammoth Lakes, are particularly vulnerable to wildfire. Most homes are old and constructed with heavy timber, flammable siding, and a mix of roofs. Some structures have flammable decks or projections, and most have native vegetation too close to the structure. There is little or no defensible space around the structures in this zone. Natural fuel loads are heavy throughout this zone. Power lines and propane tanks are above ground. There are no hydrants, and the nearest fire station is almost five miles away.[4]

# Wildlife Collisions

- **Location:** Transportation corridors, such as U.S. 395.
- **Extent:** Although there is no universal scale for wildlife collisions, a hot spot analysis of vehicle collisions with mule deer ranked very high along the southern portions of U.S. 395.
- **Impacts**: Impacts include injury or loss of human life, damage to vehicles and infrastructure, disruption of traffic flow on key routes, and harm to local wildlife populations.
- **District-Specific Vulnerabilities**:
  - MLFPD vehicles are at risk of wildlife collisions, damaging MLFPD assets and potentially injuring staff.
  - These collisions can also delay service to areas in Mammoth Lakes by blocking roads. Service interruptions could impact the life and safety of people.

[4] Mammoth Lake Fire Protection District. "Community Wildfire Protection Plan Update," 2019. https://mlfd.ca.gov/wildland-urban-interface/community-wildfire-protection-plan/.

# 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 also include changes in local policies, standards, codes, regulations, land use regulations, and other conditions. Table 6 lists the changes in development for the MLFPD.

**Table 6: Changes in Development at the Mammoth Lakes Fire Protection District**

| Type of Hazard Event | Changes in Land Use | Changes in Population | Changes in Conditions (e.g., Climate Change) | Overall Vulnerability |
|---|---|---|---|---|
| **Avalanche** | Increased development has led to more incidents. | Increased development has led to more incidents. | Winter weather variability impacting snow layering, increasing avalanche risk | Increased |
| **Dam Failure** | None | None | Increased winter snow loading has placed pressure on dams with increased runoff. | Increased |
| **Disease and Pest Management** | None | None | Bark beetle impact is increasing. The cause is unknown, but rising temperatures could impact it. | Increased |
| **Drought** | None | None | None | Stayed the same |
| **Earthquake and Seismic Hazards** | None | Increase in tourism puts more population in the area if a seismic event did occur. Most concerned in the winter when additional snow | None | Increased |

| Type of Hazard Event | Changes in Land Use | Changes in Population | Changes in Conditions (e.g., Climate Change) | Overall Vulnerability |
|---|---|---|---|---|
| | | loading can create unbalanced loads on structures. | | |
| **Energy Shortages and Energy Resiliency** | None | Increases in Public Safety Power Shutoffs raise the probability of periods without energy. Avalanches have blocked portions of town for multiple weeks, compromising energy grids. | None | Increased |
| **Epidemic/ Pandemic** | None | The risk of pandemics appears to be increasing because of several factors, including increased globalization and travel and urbanization.<br>The tourist nature of the area exaggerates these movements of people and increases the risk for the area. | None | Increased |
| **Extreme Heat** | None | None | None | Stayed the Same |
| **Flood** | None | None | None | Stayed the Same |
| **Landslide** | None | None | None | Stayed the Same |
| **Hazardous Materials** | None | None | None | Stayed the Same |
| **Severe Wind** | None | None | None | Stayed the Same |
| **Severe Winter Weather and Snow** | Recent development has included taller, multi-story super-sized complexes. New and existing buildings are leading to the expansion of the underground | Increased use of dwellings as short-term rentals leads to less upkeep/maintenance by homeowners and or long-term tenants (e.g., shoveling out the propane service connection on the side of the dwelling, | Trend in more extremes for winter weather causing bigger big years and smaller small years, increasing the frequency and risk of severe winter weather storms. | Vulnerability has increased because of higher risk of severe winters; more homes connected to underground piping system. |

| Type of Hazard Event | Changes in Land Use | Changes in Population | Changes in Conditions (e.g., Climate Change) | Overall Vulnerability |
|---|---|---|---|---|
| | propane distribution system. | shoveling the tank to keep fill/shut-off valves accessible). | | |
| **Volcano** | None | None | None | Stayed the Same |
| **Wildfire** | Portions of the ski area were changed from federal land to local, developable land. The Mammoth Mountain Main Lodge Redevelopment, also known as "Evolving Main," is a comprehensive project to redevelop the Main Lodge area of the Mammoth Mountain Ski Area. It involves improvements on both privately owned land and land managed by the Inyo National Forest. This significant project is in a remote portion of the district, which will create service challenges. | Snowcreek Phase VIII is an approved large-scale real estate development in Mammoth Lakes, on a 222-acre site. The project is governed by the Snowcreek Master Plan Update of 2007 and allows for the development of residential units, a resort hotel, private residential club units, and nonresidential uses. This project will bring up to 1000 new structures to town, adding to service needs. | None | Increase |
| **Wildlife Collisions** | None | None | None | 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 MLFPD 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 Mammoth Lakes Fire Protection District[5]**

| 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** | MLFPD participates in TOML's general plan adoption process. | It can be used by incorporating mitigation measures into its goals, policies, and implementation programs. The plan can then utilize various implementation tools, such as zoning ordinances, impact fees, and development regulations, to achieve the mitigation goals. | TOML's General Plan was last updated in 2007. Since then, various General Plan Amendments have been adopted, including the Housing Element in 2019 and the Mobility Element in 2016. Do not know the next planned update. |
| **Capital Improvement Plan** | MLFPD does not have a capital improvement plan. | A plan would be a significant tool to help MLFPD efficiently plan and finance major infrastructure projects like building new stations, upgrading existing ones, or acquiring essential equipment. The plan would allow the district to prioritize needs, identify funding sources, and align capital expenditures with long-term goals. | MLFPD does not have a capital improvement plan. |
| **Climate Change Adaptation Plan** | MLFPD does not have a climate change adaption plan. | N/A | TOML conducted a Climate Change Vulnerability Assessment. |

[5] CEDD = Community and Economic Development Department, CWPP = Community Wildfire Protection Plan, EOP = Emergency Operations Plan, MLFPD = Mammoth Lakes Fire Protection District, TOML = Town of Mammoth Lakes.

| 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? |
|---|---|---|---|
| **Community Wildfire Protection Plan** | MLFPD adopted a CWPP in 2019. The county adopted a separate CWPP in 2019 as well. | CWPPs are valuable for reducing wildfire risk to communities, enhancing safety, and mobilizing community action. They provide a framework for identifying hazards, prioritizing fuel reduction efforts, and implementing mitigation strategies. CWPPs also facilitate grant access for wildfire risk-reduction projects and foster community capacity building. MLFPD adopted its own CWPP beyond the county one to look more deeply at specific hazards in the district. | The CWPP needs to be updated. There have been discussions with stakeholders to conduct a dynamic CWPP that is a living document that uses current fire risk modeling and capturing mitigations. This is an immediate need that is being discussed by parties, and MLFPD is in those conversations. The update is to ensure that the CWPP remains effective and up to date in addressing the evolving wildfire risks and community needs. |
| **Economic Development Plan** | MLFPD participates in TOML's economic development planning process. | The process is managed by CEDD and works with residents and other town departments to guide development and conservation. | N/A |
| **Land Use Plan** | No | N/A | N/A |
| **Local Emergency Operations Plan** | MLFPD participates in TOML's EOP. | TOML's EOP was adopted in 2017 and is available on the TOML website. The EOP outlines how TOML will organize to protect lives and property and ensure continuity of government during an emergency | 2017 last update |
| **Stormwater Management Plan** | MLFPD does not have a Stormwater Management Plan. | N/A | N/A |
| **Transportation Plan** | MLFPD does not have a Transportation Plan | 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** | MLFPD does not have a Substantial Damage Plan | N/A | N/A |
| **Other? (Describe.)** | Eastern Sierra Climate & Communities Resilience Project – Needs Assessment[6] | A plan to overhaul forest operations, community partnerships, and wildfire education around TOML to prevent large-scale wildfire events. | Written in 2022, plan update timeline unknown |

[6] Hatfield, Janet, Rick Kattelmann Ph.D., Kelsey Glastetter, Taro Pusina, and Holly Alpert Ph.D. "Eastern Sierra Climate & Communities Resilience Project – Needs Assessment," October 2022. https://www.fs.usda.gov/r05/inyo/projects/61827.

Table 8: Regulations and Ordinances of the Mammoth Lakes Fire Protection District[7]

| 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** | Yes – Town of Mammoth Lakes has adopted the 2022 California Building Code. | Yes – Town of Mammoth Lakes administers. | Last updated: 12/7/2022<br>Next updated: 01/01/2026 |
| **Flood Insurance Rate Maps** | MLFPD does not have a Flood Insurance Rate Map | N/A | N/A |
| **Floodplain Ordinance** | MLFPD does not have a Floodplain Ordinance | N/A | N/A |
| **Subdivision Ordinance** | MLFPD does not have any Subdivision Specific Ordinances | N/A | N/A |
| **Zoning Ordinance** | TOML has specific zoning ordinances and plans and MLFPD adheres to those and provides input on them. | N/A | N/A |
| **Natural Hazard Specific Ordinance (Stormwater, Steep Slope, Wildfire)** | MLFPD regularly adopts the California Fire Code as adopted by the California State Fire Marshal. In addition, MLFPD enforces a more stringent local code to tailor regulations to specific geographic and demographic circumstances, ensuring that these laws are effective and relevant to the community.[8] | MLFPD has limited staff to administer and enforce the codes. | Last updated 2022 and updated every three years, with additional updates occurring as needed to address specific issues. |
| **Acquisition of Land for Open Space and Public Recreation Use** | MLFPD does not have an acquisition of land for open space plan | N/A | N/A |
| **Prohibition of Building in At-Risk Areas** | MLFPD does not have an expressed prohibition of building in at-risk areas, but building code is adjusted for addressing risk increases | N/A | N/A |
| **Other? (Describe.)** | None | N/A | N/A |

[7] MLFPD = Mammoth Lakes Fire Protection District, TOML = Town of Mammoth Lakes.

[8] Mammoth Lake Fire Department. 2022. "An Ordinance Adopting The 2022 California Fire Code." MLFPD-Ordinance-2022-01-Adopting-the-CA-Fire-Code-Building-Code-and-Residential-Code.pdf

# 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 9: Administrative Capabilities of the Mammoth Lakes Fire Protection District[9]

| 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** | TOML has a Building Official; MLFPD does not, but it has a Prevention Program managed by a Chief Officer and hey work in conjunction with the Building Department. | Staffing is relatively adequate compared with other district challenges but is stretched during periods of community growth. | Yes | Generally, yes, has been a strategic priority with a discussion on process & data sharing and potentially shared platforms. |
| **Civil Engineer** | TOML has a Civil Engineer; MLFPD does not, | N/A | N/A | MLFPD works well with Public Works and the Civil Engineering Team |
| **Community Planner** | TOML has a planning team; MLFPD does not. | N/A | N/A | MLFPD works well with the Planning and Economic Development Team |
| **Emergency Manager** | The County has an Emergency Manager; MLFPD does not. | No | Yes | Coordination with the County Emergency Manager is adequate, but the position has limited capacity due to staff and budget limitations. |
| **Floodplain Administrator** | Unknown, MLFPD does not have a Floodplain Administrator. | N/A | N/A | N/A |

[9] CEDD = Community and Economic Development Department, MLFPD = Mammoth Lakes Fire Protection District, PEDC =Planning and Economic Development Commission, TOML = Town of Mammoth Lakes.

| 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** | No. MLFPD works with County GIS, but that department is stretched on capacity. MLFPD has a strategic priority to increase internal GIS capability. | No. | N/A | No, there is not enough external capacity to support MLFPD, which must increase internal capacity. |
| **Planning Commission** | As noted above, TOML has a PEDC in which MLFPD participates. | N/A | Unknown | Yes |
| **Fire Safe Council** | No, the Fire Safe Council disbanded several years ago due to capacity issues. | No | Not currently functioning | A new Fire Safe Council needs to be stood up in the local community. |
| **CERT (Community Emergency Response Team)** | No, the CERT team disbanded several years ago due to capacity issues. | No | Not currently functioning | Does not currently exist |
| **Active VOAD (Voluntary Organizations Active in Disasters)** | The Mono County American Red Cross offers a range of services, including disaster relief, emergency preparedness, and community adaptation programs. It also provides home fire safety education. | Unknown | Yes | Yes, regular attendance and updates at Unified Command Meetings. |
| **Other? (Please describe.)** | None | N/A | N/A | N/A |

Table 10: Technical Capabilities of the Mammoth Lakes Fire Protection District[10]

| 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** | MLFPD applies for mitigation/prevention grants but has a small staff with limited capacity. | MLFPD has been awarded many federal, state, and local grants, but has limited capacity due to other job responsibilities. One successful implementation is the standing up of the Wildland Program for Fuels Mitigation. It was initiated with a grant from CAL FIRE and turned over to long-term financial funding through a ballot measure. | Grants can be used to assess and mitigate future risks by funding projects that address vulnerabilities and enhance resilience. This includes funding risk assessments, developing mitigation plans, and implementing preventative measures. |
| **Hazard Data and Information** | Limited. MLFPD recently had to move from a long-standing records management database that incorporated all services in the district. A well-functioning replacement has not been identified, and this has had a negative impact on MLFPD operations and planning. | In the past the database aligned incidents, inspections, preplans, etc. for better situational awareness and decision-making. | MLFPD needs a new records management system to replace the prior one. |
| **GIS** | MLFPD does not have sufficient GIS capabilities. | GIS can be highly beneficial for fire districts as it provides tools for mapping, analysis, and situational awareness, ultimately enhancing response times, safety, and decision-making during emergencies. | MLFPD is actively pursuing opportunities to increase GIS capability. By integrating various datasets and utilizing spatial analysis, GIS would allow MLFPD to identify hazards, optimize resource deployment, and improve communication. |

[10] CAL FIRE = California Department of Forestry and Fire Protection, MLFPD = Mammoth Lakes Fire Protection 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? |
|---|---|---|---|
| **Mutual Aid Agreements** | MLFPD has multiple Mutual Aid Agreements with Federal, State, and Local cooperators. | Mutual aid agreements increase MLFPD's capability by enabling it to share resources, like personnel, equipment, and expertise, that it does not have readily available. This sharing expands response capabilities during emergencies and prevents duplication of effort across different areas. | Mutual aid agreements build stronger networks of support, making communities more resilient and better prepared to face future challenges. This proactive approach can help mitigate the impact of future emergencies. |
| **Other? (Please describe.)** | None | N/A | N/A |

# Financial

Financial capabilities are the resources to fund mitigation actions.

Table 11: Financial Capabilities of the Mammoth Lakes Fire Protection District[11]

| 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 | MLFPD has two Capital Expenditure funds for purchases of apparatus and facilities. | The funds can be used for purchase of capital expenditure items. An example is the fuels chipper. | Yes |
| **General Fund** | Yes | MLFPD utilizes this fund for operations related to activities in its service areas. | Yes, all service areas utilize this fund. | Yes |
| **Hazard Mitigation** | No | No | Yes, if successfully awarded. | Unknown. |

[11] CAL OES = California Governor's Office of Emergency Services, MLFPD = Mammoth Lakes Fire Protection District, NGO = nongovernmental organization, TOML = Town of Mammoth Lakes.

| 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? |
|---|---|---|---|---|
| **Grant Program (HMGP/404)** | | | | |
| **Building Resilient Infrastructure & Communities (BRIC)** | No | No | Yes, if successfully awarded, but not sure if a fire district is eligible. | Unknown. |
| **Flood Mitigation Assistance (FMA)** | No | No | Yes, if successfully awarded, but not sure if a fire district is eligible. | Unknown. |
| **Public Assistance Mitigation (PA Mitigation/406)** | No | No | Yes, if successfully awarded. | Unknown. |
| **Community Development Block Grant (CDBG)** | No | No | Yes, if successfully awarded, but not sure if a fire district is eligible. | Unknown. |
| **Natural Resources Conservation Services (NRCS) Programs** | No | No | Yes, if successfully awarded, but not sure if a fire district is eligible. | Unknown. |
| **U.S. Army Corps (USACE) Programs** | No | No | Yes, if successfully awarded, but not sure if a fire district is eligible. | Unknown. |
| **Property, Sales, Income, or Special Purpose Taxes** | Yes, | MLFPD passed a parcel tax in 2024 to fund emergency fire and medical services. | Yes | Yes |
| **Stormwater Utility Fee** | No | No | Yes, if successfully awarded, but not sure if a fire district is eligible. | Unknown. |
| **Fees for Water, Sewer, Gas, or Electric Services** | No | No | Not sure if a fire district is eligible. | Unknown. |

| 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 | Yes, development impact fees are collected and utilized for capital expenditures to offset the impacts of new developments | Yes | Unknown. |
| **General Obligation or Special Purpose Bonds** | No | No | Yes, if successfully passed in the community. | Unknown. |
| **Federally Funded Programs (Please describe)** | Various Grants | MLFPD participates in grants such as Assistance to Firefighters Grants to support equipment for operations. | MLFPD has been awarded grants in the operations side but could seek future grants in the prevention side. | No |
| **State-Funded Programs (Please describe)** | CAL OES Type 6 apparatus | MLFPD has an agreement to host a state CAL OES Type 6 Fire Apparatus. Cal OES fire engines, part of the California Fire and Rescue Mutual Aid System, are primarily used to respond to all-risk emergency incidents, including wildfires, earthquakes, and other disasters. They augment local government fire agencies by providing surge capacity and mutual aid support. These engines are also used for training and replacing out-of-service engines. | The program allows for supporting operations both in MLFPD and across the state of California and across state lines as needed and approved by CAL OES. | Unlikely |
| **Private Sector or Nonprofit Programs** | MLFPD has worked with Grants from NGOs | MLFPD works on programs to support risk mitigation in the community. As an example, MLFPD was awarded funds from an | Yes | Potentially |

| 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? |
|---|---|---|---|---|
| | | NGO, the Whitebark Institute, in conjunction with Southern California Edison to support homeowners in wildfire mitigations. | | |
| **Other?** | None | 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 12: Education and Outreach Capabilities of the Mammoth Lakes Fire Protection District[12]

| Education and Outreach Capability | In place? (Y/N) | Does this resource currently incorporate hazard mitigation? | Notes |
|---|---|---|---|
| **Community Newsletter(s)** | MLFPD supports various campaigns including internal social media campaigns, town information outreach campaigns, and press releases. | Yes | N/A |
| **Hazard Awareness Campaigns (such as Firewise, Storm Ready, Severe Weather Awareness Week, School Programs)** | MLFPD works with Firewise groups on various programs, the local school district on fire prevention week, and with local NGOs on outreach campaigns and events. | Yes | N/A |
| **Public Meetings/ Events (Please describe.)** | MLFPD is a member of the Mammoth Lakes Wildfire Taskforce, which helps community members take mitigation | Yes | Recently the Wildfire Taskforce has procured the Fire Aside platform that helps communities and homeowners reduce |

[12] MLFPD = Mammoth Lakes Fire Protection District, NGO = nongovernmental organization.

| Education and Outreach Capability | In place? (Y/N) | Does this resource currently incorporate hazard mitigation? | Notes |
|---|---|---|---|
| | actions on their properties at the parcel level through assistance and grass roots level community events. | | their risk of wildfires by providing tools for inspecting properties, managing wildfire grants, and tracking progress toward wildfire resilience. It allows fire agencies to conduct property inspections and provides homeowners with customized reports and action plans to improve their property's defensible space and home hardening. |
| **Emergency Management Listserv** | Not Utilized | N/A | N/A |
| **Local News** | MLFPD works with the local paper on press releases and letters to the editor on hazard mitigation items. | N/A | N/A |
| **Distributing Hard Copies of Notices (e.g., public libraries, door-to-door outreach)** | The Wildfire Taskforce is considering utilizing door tags with its Fire Aside campaign, and the program is authorized to provide mailers for community outreach. | N/A | N/A |
| **Insurance Disclosures/ Outreach** | Not Utilized | N/A | N/A |
| **Organizations that Represent, Advocate for, or Interact with Underserved and Vulnerable Communities (Please describe.)** | Not Utilized | N/A | N/A |
| **Social Media (Please describe.)** | MLFPD has a Facebook and Instagram social media presence that it utilizes for both | Yes | N/A |

| Education and Outreach Capability | In place? (Y/N) | Does this resource currently incorporate hazard mitigation? | Notes |
|---|---|---|---|
| | emergency outreach and prevention and mitigation messaging. | | |
| **Other? (Please describe.)** | None | N/A | N/A |

**Table 13: Ability to Expand and Improve Existing Capabilities of the Mammoth Lakes Fire Protection District[13]**

| Capability Type | Opportunity to Expand and/or Improve |
|---|---|
| **Planning and Regulations** | The current CWPP is out of date and lacks capacity as a relevant planning document. MLFPD is working toward a regional update of the CWPP that creates collaborative, community-driven frameworks that outline local priorities for wildfire risk mitigation. Up-to-date CWPPs gather the best available data and conduct a risk assessment for the local planning area. Data and inputs from the community identify and prioritize hazardous fuel reduction treatment for communities. They also recommend measures to reduce structural ignitability and address wildfire response, hazard mitigation, community preparedness, and other wildfire issues. |
| **Administrative and Technical** | MLFPD lacks GIS capacity, and partner agencies are low on staff capacity/ability in the area. GIS capability would serve MLFPD by analyzing patterns from past incidents, weather conditions, and building layouts. GIS software can identify risk areas and help fire departments prepare in advance. This predictive capability would allow MLFPD to allocate resources and plan responses proactively. |
| **Financial** | MLFPD is a combination Full Time/Part Time/Volunteer District with limited staff capacity. Various financial instruments that increase staffing will also increase the ability to utilize prevention and mitigation grant opportunities. MLFPD is exploring options to increase staffing or work with partners on administrative needs for grant application and administration to improve operations. If staffing is not financed, MLFPD could benefit from Direct Technical Assistance to be able to apply for additional grants like FEMA's Hazard Mitigation Grant Program. |
| **Education and Outreach** | MLFPD's website is built of an older platform and difficult to keep up to date because it does not follow a prebuilt layout and staff have limited abilities in updating for new needs. An updated website would significantly help MLFPD with education and outreach to the public. A website can significantly aid in resolving communication issues by centralizing information, fostering engagement, and facilitating data collection for improvement. It provides a platform for clear and consistent messaging, allows for interactive elements like chatbots and forums, and enables the collection of user feedback. This comprehensive approach can help bridge communication gaps and enhance overall communication effectiveness. |

[13] CWPP = Community Wildfire Protection Plan, MLFPD = Mammoth Lakes Fire Protection District,

## National Flood Insurance Program Capability Assessment

The MLFPD is not eligible to participate in the National Flood Insurance Program (NFIP). This FEMA program 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 an overview of MLFPD's efforts to support floodplain management for known risks.

Table 14: NFIP Capabilities of the Mammoth Lakes Fire Protection District[14]

| Question | Response |
|---|---|
| **What communities does your special district operate in? Are you aware of any flood concerns in these communities?** | The Mammoth Lakes Fire Protection District, which has boundaries with TOML. Of primary concern is Mammoth Creek as it moves through Old Mammoth. Additional flood zones include areas in the Lakes Basin, along Sherwin Creek, and northwest of the intersection of Route 203 and U.S. 395. Most areas can flood during rain or snow events or in the spring melt-off if culverts are not properly cleared out. |
| **Which of your assets are at-risk from flooding?** | MLFPD does not have resources in direct risk of flooding, but MLFPD does rely on the Water District's resources, and some of its equipment can be impacted by flooding. In addition, MLFPD First Responders live in at-risk zones, which could impact their abilities to respond. |
| **Is your organization involved in floodplain management? If so, how?** | Involved with planning with TOML's Public Works Department to ensure that MLFPD needs are understood. |

# Mammoth Lakes Fire Protection 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 of 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 TOML 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.

[14] MLFPD = Mammoth Lakes Fire Protection District, TOML = Town of Mammoth Lakes.

- 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 MLFPD 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 risks 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:

1. Local Plans and Regulations
2. Structure and Infrastructure Projects
3. Natural Systems Protection
4. 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.

**Table 15: Considered Mitigation Actions of the Mammoth Lakes Fire Protection District**

| Mitigation Action | Type of Action | Selected? (Y/N) | If not selected, why not? |
|---|---|---|---|
| **Retroactively install an extensive number of isolation/ shut-off valves that are accessible and locatable year-round and shut-off a manageable number of** | Structure and infrastructure | Yes (Action #1) | N/A |

| Mitigation Action | Type of Action | Selected? (Y/N) | If not selected, why not? |
|---|---|---|---|
| **dwellings (e.g., ideal of one per structure) to allow upstream shut-off of gas from a safe environment.** | | | |
| **Install an accessible and locatable year-round shut-off valve for any new connections to structures (existing or new) at one valve per structure to allow upstream shut-off of gas from a safe environment.** | Structure and infrastructure | Yes (Action #2) | N/A |
| **Conduct accurate (sub-one meter) GPS mapping of underground lines, shut-off valves, and tanks to expedite ability to locate and mitigate leaks.** | Structure and infrastructure | Yes (Action #3) | N/A |

# 2025 Mitigation Action Plan

The Mitigation Action Plan outlines the mitigation measures the MLFPD 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. 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 MLFPD 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.

The 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

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:[15]

- **Safety and Security**: Law Enforcement/Security, Fire Service, Search and Rescue, Government Service, Community Safety
- **Food, Hydration, Shelter**: Food, Hydration, Shelter, Agriculture

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

- **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**

## Priorities

Priorities are defined by the district. After considering the following evaluation criteria and 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) are included in Table 17.

- **Low:** Based on one to two STAPLEE criteria, the action is feasible and important for MLFPD 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 MLFPD, 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 MLFPD, with minimal to no concerns. It is essential for MLFPD to implement and may be prioritized in the short term.

Table 16 shows the mitigation actions that the MLFPD has selected for this planning cycle.

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Table 16: Mammoth Lakes Fire Protection District 2025–2030 Mitigation Actions[16]

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Shut-off valves for all new Liquefied Petroleum Gas (LPG) connections | Hazardous Materials, Severe Winter Weather, Energy Shortages and Energy Resilience | Require all new LPG connections to structures to install underground shut-off valve in street | MLFPD Fire Chief or Designee, TOML Public Works Director or Designee | Amerigas and other LPG providers | LPG providers through rate-based fee structure | ~$2,000 per new connection | Short term | Safety and Security, Food Hydration Shelter, Energy | High |
| 2 | Retrofit existing LPG underground lines with shut-off valves | Hazardous Materials, Severe Winter Weather, Energy Shortages and Energy Resilience | Require all existing LPG underground distribution systems to install underground shut-off valve in street to allow shut-off of to up to approximately 5–40 structures at a time. | MLFPD Fire Chief or Designee, TOML Public Works Director or Designee | Amerigas and other LPG providers | LPG providers through rate-based fee structure | ~$2,000 per valve, approximately 200–400 valves needed | Medium term | Safety and Security, Food Hydration Shelter, Energy | High |
| 3 | LPG Infrastructure Mapping | Hazardous Materials, Severe Winter Weather, Energy Shortages | Require all existing LPG underground distribution lines, shut-off valves, and above-ground | MLFPD Fire Chief or Designee, TOML Public Works Director or Designee | Amerigas and other LPG providers | LPG providers through rate-based fee structure | ~30 miles of underground line to be mapped; ~4,000 tanks | Short term | Safety and Security, Food Hydration Shelter, Energy | High |

[16] CALDEER = California Deer Association, CAL FIRE = California Department of Forestry and Fire Protection, CALTRANS = California Department of Transportation, CERT = Community Emergency Response Team, CWPP = Community Wildfire Protection Plan, DOE = Department of Energy, ESCOG = Eastern Sierra Council of Governments, FD = Fire Department, GIS = geographic information system, HOA = homeowners association, IIJA = Infrastructure Investment and Jobs Act, LADWP = Los Angeles Department of Water and Power, LPG = Liquified Petroleum Gas, MLFPD = Mammoth Lakes Fire Protection District, MMSA = Mammoth Mountain Ski Area, MCWD = Mammoth Community Water District, NFWF = National Fish and Wildlife Foundation, NGO = nongovernmental organization, OEM = Office of Emergency Management, PEDC = Planning and Economic Development Commission, SAR = Search and Rescue, SCE = Southern California Edison, SNARL = Sierra Nevada Aquatic Research Laboratory, STR = Short-Term Rentals, TOML = Town of Mammoth Lakes, USDA = United States Department of Agriculture, USFS = United States Forest Service.

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| | | and Energy Resilience | tanks to be GIS mapped with sub-one meter accuracy and made available to first responders. | | | | to be mapped; ~$50,000 estimated | | | |
| **4** | Landscape-scale forest management and fuel reduction treatments | Wildfire | Coordinate multi-jurisdictional and collaborative interagency forest management and fuels treatments on lands managed by local, state, federal, and NGOs using outputs from this CWPP to inform decision-making and priorities. Work to increase collaboration with partner agencies on grant proposals to accomplish this work. | USFS District Ranger or Designee, MLFPD Fire Chief or Designee, TOML Town Manager or Designee | Whitebark | USFS, TOML General Fund, CALDEER, CALTRANS | $50M | Long term | Safety and Security, Food Hydration Shelter | High |
| **5** | Implement community fuel breaks and fuel | Wildfire | Use CWPP consensus scenario fuel treatment map to prioritize | USFS District Ranger or Designee, MLFPD Fire Chief or Designee, TOML | Private landowners/ HOAs around perimeter of town | CAL FIRE, USFS, TOML General Fund, MLFPD General Fund | $600k/year | Short term | Safety and Security, Food Hydration Shelter | High |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| | reduction projects | | community fuel breaks and fuel reduction efforts. Work with partners and the community to gain increased support and capacity to implement these strategic and high-priority projects. Ensure that landowners understand forestry and their requirement/need to maintain desired forest conditions. | Town Manager or Designee | | | | | | |
| 6 | Develop Community Wildfire Prevention Grants | Wildfire | Provide a local community grant program that makes funding available to private landowners, agencies, NGOs, and other land managers for various project types that | MLFPD Fire Chief or Designee, TOML Town Manager or Designee | Whitebark | CAL FIRE, TOML General Fund, MLFPD General Fund | $200k/year | Short term | Safety and Security, Food Hydration Shelter | Medium |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | promote wildfire resilience | | | | | | | |
| 7 | Provide assistance for residential dead tree removal | Wildfire | Develop and implement a dead tree removal assistance program for elderly, disabled, and low-income residents to achieve defensible space compliance and to mitigate public safety hazards. | MLFPD Fire Chief or Designee, TOML Outdoor Recreation Director or Designee | Local tree service contractors | CAL FIRE, TOML General Fund, MLFPD General Fund | $200k/year | Short term | Safety and Security, Food Hydration Shelter | Medium |
| 8 | Prescribed burn associations | Wildfire | Establish community- or HOA-level prescribed burn associations to promote fuels reduction and provide education on conducting prescribed burning treatments by private property owners. | MLFPD Fire Chief or Designee, TOML Outdoor Recreation Director or Designee | Resource Conservation Districts/ Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund | $25k/year | Long term | Safety and Security, Food Hydration Shelter | Low |
| 9 | Fuels treatments | Wildfire | Provide technical information, guidance, and | MLFPD Fire Chief or Designee, TOML Outdoor | Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund | $25k/year | Long term | Safety and Security, Food Hydration Shelter | Low |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| | technical support | | answers to questions on technical forest and fuels treatment topics to better support property owners conducting work on private lands. | Recreation Director or Designee | | | | | | |
| 10 | Educational programs on fire as an ecosystem process | Wildfire | Information on the threat of fire, forest management, and the use of prescribed fire to educate the public and gain support for this type of work. | MLFPD Fire Chief or Designee, TOML Outdoor Recreation Director or Designee | Whitebark, Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund | $25k/year | Short term | Safety and Security, Food Hydration Shelter | Low |
| 11 | Establish and maintain a Greenwaste Disposal program | Wildfire | Support residential green waste removal efforts. Allow all residents access to curbside pickup of defensible space-generated waste of small woody material. Consider more solutions for pine needles. | MLFPD Fire Chief or Designee, TOML Town Manager or Designee | Mammoth Disposal, Whitebark | TOML General Fund, MLFPD General Fund, Mammoth disposal fee-based service | $400k initial year w/equip; $100k/year ongoing in subsequent years | Short term | Safety and Security, Food Hydration Shelter | High |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Expand/continue chipping program. | | | | | | | |
| 12 | Property owner defensible space | Wildfire | Educate public on importance of defensible space and local ordinances. Encourage compliance through enforcement of Short-Term Rentals, new development, property transfer, insurance requirements, and properties with egregious fire hazards. | MLFPD Fire Chief or Designee, TOML Town Manager or Designee | Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund | $75k/year | Short term | Safety and Security, Food Hydration Shelter | Medium |
| 13 | Firewise and home hardening measures | Wildfire | Educate property owners and renters to get involved in home hardening and Firewise activities. | MLFPD Fire Chief or Designee, TOML Town Manager or Designee | Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund | $25k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Medium |
| 14 | Rebate program for home hardening upgrades | Wildfire | Eligible residents may apply for home hardening rebate/assistance. Eligible residents | MLFPD Division Chief of Prevention or Designee, TOML PEDC Director or Designee | Whitebark, Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund | $200k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | High |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | can schedule a defensible space inspection, complete the upgrades, schedule a reinspection or submit photos. Then they can request a rebate. | | | | | | | |
| 15 | Homeowners association (HOA)/ neighbor-hood communicati on | Wildfire | Increased communication to HOAs and Firewise neighborhoods to explain available resources and ensure that the community stays informed. | MLFPD Division Chief of Prevention or Designee, TOML PEDC Director or Designee | Whitebark, Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund | $25k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Medium |
| 16 | Defensible space assistance for elderly, disabled, and low-income residents | Wildfire | Develop and implement an assistance program for elderly, disabled, and low-income residents to achieve defensible space compliance. | MLFPD Division Chief of Prevention or Designee, TOML PEDC Director or Designee | Whitebark, Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund | $100k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Medium |
| 17 | Community technical assistance | Wildfire | Create a factsheet and flowchart that provide residents | MLFPD Division Chief of Prevention or Designee, TOML | Whitebark, Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund, | $5k | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Medium |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | with resources for project development and maintenance and tell them what assistance they qualify for and how to apply. | PEDC Director or Designee, Mono County OEM Director | | Mono County General Fund | | | | |
| 18 | Seasonal workforce capacity | Wildfire | Increase seasonal workforce to facilitate increased education, inspections, and accountability to property owners. | MLFPD Fire Chief or Designee, TOML Town Manager or Designee | Whitebark, Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund | $200k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | High |
| 19 | Create organiza-tional chart | Wildfire | Develop an organizational chart for associations, local government, and other entities to reduce duplication of effort on engagement. | MLFPD Fire Chief or Designee, TOML Town Manager or Designee | Whitebark, Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund, Mono County General Fund | $5k | Short, medium, and long term | Safety and Security, Food Hydration Shelter | High |
| 20 | Wildfire preparedness media campaigns | Wildfire | More easily accessible resources to help the public learn how to harden homes and | TOML Outdoor Recreation Director or Designee, Mono County OEM Director | Whitebark, Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund, Mono County General Fund | $45k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Medium |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | prepare for wildfire.<br>Emergency preparedness, evacuation readiness, and go-bags. | | | | | | | |
| 21 | Multi-language resources | Wildfire | Produce material in both English and Spanish that can be shared at community events and sent directly to homeowners. | TOML Outdoor Recreation Director or Designee, Mono County OEM Director | Whitebark, Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund, Mono County General Fund | $10k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Medium |
| 22 | Enforcement and support | Wildfire | More stringent code regulations for defensible space in HOAs<br>More funding sources for property owners<br>More funding resources for low-income areas<br>Mechanism for maintenance/ upkeep for storage, defensible space, etc. | MLFPD Division Chief of Prevention or Designee, TOML PEDC Director or Designee | Whitebark, Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund, Mono County General Fund | $25k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Medium |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| 23 | Communica-tion and Outreach | Wildfire | Identify evacuation routes; Cohesive digital app that provides information and status update on emergencies, wildfires, evacuations, and prescribed burns; Financial support for Community Organizations Active in Disasters; Determine alternative outlet besides cell service; Identify evacuation plans ahead of time; Wireless Emergency Alert support; Improve awareness of grants, rebates, and insurance discounts both for property owners and HOAs | MLFPD Division Chief of Prevention or Designee, TOML Outdoor Recreation Director or Designee, Mono County OEM Director | Whitebark, Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund, Mono County General Fund | $50k | Short, medium, and long term | Safety and Security, Food Hydration Shelter | High |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| **24** | CWPP team or charter | Wildfire | Establish a working collaborative group that meets semi-regularly to champion this CWPP and maintain coordinated working efforts and grant applications | MLFPD Division Chief of Prevention or Designee, TOML PEDC Director or Designee, Mono County OEM Director | Whitebark, Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund, Mono County General Fund | $25k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | High |
| **25** | Improve address visibility for emergency response | Wildfire | Make street signs and house numbers highly visible to ensure that first responders can arrive at the proper address. HOAs, TOML, and MLFPD can require this in code/HOA bylaws. | MLFPD Division Chief of Prevention or Designee, TOML PEDC Director or designer | Firewise/Fire Safe Councils, HOAs | TOML General Fund, MLFPD General Fund, Mono County General Fund | $5k | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Medium |
| **26** | Increase communications and public relations capacity | Wildfire | Expand capacities through positions or consultants for public outreach, communications, public alerts, and collaboration. | TOML Outdoor Recreation Director or Designee, Mono County OEM Director | Whitebark, Firewise/Fire Safe Councils | HMGP, TOML General Fund, MLFPD General Fund, Mono County General Fund | $100k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Low |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| 27 | Critical infrastructure defensible space | Wildfire | Using the CWPP consensus scenario map, work with owners of critical infrastructure to prioritize fuels reduction adjacent to critical infrastructure and emergency service areas. | USFS District Ranger or Designee, MLFPD Fire Chief or Designee, TOML Town Manager or Designee, Mono County OEM Director | MCWD, SCE, LPG providers, MMSA, Ormat, Verizon, AT&T | TOML General Fund, MLFPD General Fund, Mono County General Fund | $25k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Medium |
| 28 | Fuel treatments along evacuation routes | Wildfire | Design and implement projects that address ingress and egress issues. Remove brush, dead trees, and ladder fuels along critical evacuation routes to keep fire intensity low during an evacuation. | MLFPD Fire Chief or Designee, TOML Town Manager or Designee, Mono County OEM Director, USFS District Ranger or Designee, CALTRANS District 9 Director | MMSA, SCE | CAL FIRE, TOML General Fund, MLFPD General Fund, Mono County General Fund | $150k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | High |
| 29 | Communications tools | Wildfire | Create a cohesive digital app where agencies can put updates of emergencies, wildfires, and | MLFPD Division Chief of Prevention or Designee, TOML Outdoor Recreation Director or Designee, Mono | Whitebark, Firewise/Fire Safe Councils | HMGP, TOML General Fund, MLFPD General Fund, Mono County General Fund | $25k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Medium |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | evacuations and prescribed burns nearby. Create focused communication for out-of-town residents, visitors, and Spanish-speaking individuals. Implement and routinely test notification systems to alert residents and visitors in case of emergency. | County OEM Director | | | | | | |
| **30** | Expand early fire detection systems | Wildfire | Consider developing and implementing early fire detection systems in TOML and communities (e.g., cameras). | MLFPD Fire Chief or Designee, TOML Town Manager or Designee, Mono County OEM Director, USFS District Ranger or Designee, CALTRANS District 9 Director | MMSA, SCE, MCWD | TOML General Fund, MLFPD General Fund, Mono County General Fund | $500k | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Medium |
| **31** | Non-resident education | Wildfire | Improve awareness and notification of developing | USFS District Ranger or Designee, MLFPD Fire Chief or | Whitebark, Firewise/Fire Safe Councils | TOML General Fund, MLFPD General Fund, | $25k | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Medium |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | emergency situations to area visitors (non-residents). | Designee, TOML Town Manager or Designee, Mono County OEM Director | | Mono County General Fund | | | | |
| 32 | Educate citizens about disaster preparedness for hazards that could impact the community. Train citizens in basic disaster response skills. | Wildfire | Citizens are trained in fire safety, light search and rescue, team organizations, and disaster medical operations. This builds a more educated community through outreach and education. | TOML Outdoor Recreation Director or Designee, Mono County OEM Director | Firewise/Fire Safe Councils, Mammoth Hospital, CERT, Mono SAR | TOML General Fund, MLFPD General Fund, Mono County General Fund | $15k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Low |
| 33 | Reduce fuel continuity in key geographical areas. | Wildfire | Target fuel reduction, thinning, breaks in ladder fuels in corridors that are most likely to carry fire due to topography and weather (e.g., natural draws like Valentine Reserve through | USFS District Ranger or Designee, MLFPD Fire Chief or Designee, TOML Town Manager or Designee, Mono County OEM Director | SNARL, HOAs, Firewise/Fire Safe Councils, | CAL FIRE, TOML General Fund, MLFPD General Fund, Mono County General Fund | $200k/year | Short, medium, and long term | Safety and Security, Food Hydration Shelter | Medium |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Snowcreek Meadow Preserve) | | | | | | | |
| **34** | Eastern Sierra Climate & Communities Resilience Project | Wildfire | 58,000 acre forest health addressing both landscape and community resilience at scale. Designed to wholistically address increasingly challenging wildfires that continue to incinerate large-scale landscapes across the Sierra. | USFS District Ranger or Designee, MLFPD Fire Chief or Designee, TOML Town Manager or Designee, Mono County OEM Director | Whitebark Institute, CALDEER | $1,500,000,000 Prop 4<br>IIJA federal-ESD landscape<br>Already raised $28.1 M (state and federal funds) | $250 M | Long term | ALL | High |
| **35** | Resilient Mono Basin | Wildfire | Large-scale planning effort, size TBD, Assessment at watershed scale | USFS District Ranger or Designee, Mono County OEM Director | INF, BLM, SCE, State Parks, LADWP, Tribes, Whitebark | $1,500,000,000 Prop 4<br>IIJA Fed-ESD landscape<br>NFWF $2M secured for planning | $100 M | Long term | ALL | High |
| **36** | Mammoth Bioenergy | Wildfire, Transportation | Excessive fuels across all jurisdictions are too great for one off solutions, Mammoth | USFS District Ranger or Designee, MLFPD Fire Chief or Designee, TOML Town Manager or | Ormat, ESCOG, Whitebark, Inyo County, all Fire Districts, | DOE, $10 M awarded, but in question due to new Federal Administration, | $30M | Medium term | Safety and Security, Energy, Transportation, Hazardous Materials | High |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Bioenergy would take wood waste and convert it to electricity at 3 MW scale. Most importantly, all of the planned work to mitigate vegetation cannot move forward at the needed pace or scale without a solution like this in place. With Mono County's lack of landfill and transportation costs/distance to the current site at Pumice Valley, the costs are exacerbated, and work ceases as a result. | Designee, Mono County OEM Director | Mammoth Disposal | Wood utilization grants (CAL FIRE/USDA) | | | | |
| **37** | Community hazard alert system | Avalanche, Dam Failure, Earthquake, Energy Shortage, Pandemic, Flood, HazMat, Severe Wind, Severe | Audible sirens or alternative method for notifying residents of imminent threat from various | MLFPD Division Chief of Prevention or Designee, TOML PEDC Director or Designer | Fire districts, MCWD, state and federal agencies | TOML General Fund, MLFPD General Fund, Mono County General Fund | $200K | Medium term | Safety and Security, Communications | High |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Winter, Volcanoes, Wildfire | hazards including dam failure, fire, | | | | | | | |
| 38 | GIS Program | Avalanche, Dam Failure, Earthquake, Energy Shortage, Pandemic, Flood, HazMat, Severe Wind, Severe Winter, Volcanoes, Wildfire | MLFPD would build out an in house GIS capacity. A dedicated GIS department offers significant value by providing a centralized platform for managing and analyzing spatial data, leading to improved efficiency, better decision-making, and enhanced collaboration across various organizational functions. | MLFPD Fire Chief or Designee | Whitebark Institute , TOML, Mono County | Staff time | 150K per year | Long term | Safety and Security, Food Hydration Shelter, Energy | High |
| 39 | Neighborhood Cleanup Wildfire Outreach | | Visitor & resident outreach programs including neighborhood cleanup and work days | MLFPD Division Chief of Prevention or Designee | Whitebark Institute , TOML, Mono County | TOML General Fund, MLFPD General Fund, Mono County General Fund, Staff Time | $200K | Medium term | Safety and Security, Food Hydration Shelter, Energy | High |

| # | Project Title | Hazard Addressed | Description | Responsible Agency | Potential Partners | Potential Funding | Cost Estimate | Time-frame | Community Lifelines | Priority |
|---|---|---|---|---|---|---|---|---|---|---|
| **40** | Hazard Education Wildfire Outreach | Wildfire | Outreach campaigns to educate visitors and residents about hazards, including fire, and steps they can take to mitigate risk | MLFPD Division Chief of Prevention or Designee | Whitebark Institute , TOML, Mono County | TOML General Fund, MLFPD General Fund, Mono County General Fund, Staff Time | $200K | Medium term | Safety and Security, Food Hydration Shelter, Energy | High |
| **41** | Home Hardening Outreach | Wildfire | Guidance and incentives for business and property owners to harden structures and replace hazardous, outdated, building components | MLFPD Division Chief of Prevention or Designee | Whitebark Institute , TOML, Mono County | TOML General Fund, MLFPD General Fund, Mono County General Fund, Staff Time | $200K | Medium term | Safety and Security, Food Hydration Shelter, Energy | High |
| **42** | Support Implementation of CWPP Projects | Wildfire | The district will support the implementation of applicable projects as outlined in the updated Community Wildfire Protection Plan. | MLFPD | TOML, Mono County, all Fire Districts, Whitebark Institute, BLM, Inyo National Forest, Mammoth Disposal, | Cal Fire grants, Community Wildfire Defense Grant, California Fire Safe Council grants, BLM | Unknown | Long-Term | Safety and Security, Food, Hydration, Shelter, Energy, Transportation, Hazardous Materials | High |

# Mitigation Action Prioritization

The MLFPD considered the STAPLEE criteria when prioritizing its actions. Table 17 documents how each action was prioritized.

**Table 17: STAPLEE Prioritization for the Mammoth Lakes Fire Protection District**

| Action | Social | Technical | Administrative | Political | Legal | Economic | Environmental | Priority |
|---|---|---|---|---|---|---|---|---|
| 1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |
| 2 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | High |
| 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |
| 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | High |
| 5 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | High |
| 6 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | Medium |
| 7 | 4 | 3 | 4 | 4 | 4 | 2 | 4 | Medium |
| 8 | 4 | 3 | 4 | 4 | 4 | 2 | 4 | Low |
| 9 | 3 | 2 | 3 | 3 | 4 | 3 | 4 | Low |
| 10 | 4 | 4 | 4 | 4 | 4 | 2 | 4 | Low |
| 11 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |
| 12 | 4 | 3 | 4 | 4 | 4 | 2 | 4 | Medium |
| 13 | 4 | 3 | 4 | 4 | 4 | 2 | 4 | Medium |
| 14 | 4 | 3 | 4 | 4 | 4 | 2 | 4 | High |
| 15 | 3 | 2 | 3 | 3 | 4 | 3 | 4 | Medium |
| 16 | 3 | 2 | 3 | 3 | 4 | 3 | 4 | Medium |
| 17 | 3 | 2 | 3 | 3 | 4 | 3 | 4 | Medium |
| 18 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |
| 19 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |
| 20 | 4 | 3 | 4 | 4 | 4 | 2 | 4 | Medium |
| 21 | 4 | 3 | 4 | 4 | 4 | 2 | 4 | Medium |
| 22 | 3 | 3 | 4 | 3 | 4 | 2 | 4 | Medium |
| 23 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | High |
| 24 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |
| 25 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | Medium |

| Action | Social | Technical | Administrative | Political | Legal | Economic | Environmental | Priority |
|---|---|---|---|---|---|---|---|---|
| **26** | 4 | 4 | 4 | 4 | 4 | 2 | 4 | Low |
| **27** | 4 | 3 | 4 | 4 | 4 | 2 | 4 | Medium |
| **28** | 4 | 3 | 4 | 4 | 4 | 2 | 4 | High |
| **29** | 4 | 3 | 3 | 4 | 4 | 2 | 4 | Medium |
| **30** | 4 | 3 | 4 | 4 | 4 | 2 | 4 | Medium |
| **31** | 4 | 3 | 4 | 4 | 4 | 2 | 4 | Medium |
| **32** | 2 | 3 | 4 | 4 | 4 | 2 | 4 | Low |
| **33** | 4 | 3 | 4 | 4 | 4 | 2 | 4 | Medium |
| **34** | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |
| **35** | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |
| **36** | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |
| **37** | 4 | 4 | 4 | 4 | 4 | 3 | 4 | High |
| **38** | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |
| **39** | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |
| **40** | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |
| **41** | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |
| **42** | 4 | 4 | 4 | 4 | 4 | 4 | 4 | High |

# 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 MLFPD reviewed and referenced the prior hazard mitigation plan as a part of the 2023 Severe Winter Storm After Action Review and the Eastern Sierra Climate and Communities Resilience Program (ESCCRP) Needs documents, which are both incorporated into the current Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) efforts. These documents provide a framework that assesses historic hazards and recommends mitigations to lessen their impact during future events.

# Future Integration Opportunities

The MLFPD identified future plan integration opportunities as described in Table 18.

**Table 18: Future Plan Integration by the Mammoth Lakes Fire Protection District[17]**

| Plan Name | Description | Process for Integration |
|---|---|---|
| **Community Wildfire Protection Plan (CWPP)** | The county's CWPP will be updated in the next two years. The local area partners are working to update the CWPP. The long-term strategic intent is that the CWPP is a dynamic plan that takes risk model inputs that incorporate live changes to the environment at both the landscape project and the lot parcel levels. The changing inputs would live on a dashboard that would allow the communities to understand how risk is changing over time. There is a recognition that this will take a longer period, possibly a year or two, with the technical needs and the collaboration requirements. In recognition of this, the stakeholders have decided to take a two-phased approach to the CWPP. The dynamic CWPP would be phase two, and phase one would work on project updates to the existing CWPP, which is housed in the MJHMP. This would allow for a simpler update to project status and not let "perfect be the enemy of good." Minor updates to the MJHMP | There will be a smaller working group of primary partners working on updating the project list for the current CWPP in the previous MJHMP. The goal would be to complete this project update by Fall and possibly integrate it into the new phase of the MJHMP as it is updated this year. This process has had significant outreach by agencies to promote the collaboration of community members. Later, a second round of outreach for participation will focus primarily on the next phase of the CWPP. The primary contacts on the first phase of update are the Mammoth Lakes Fire Chief, the Mono County Emergency Director, the Town of Mammoth Lakes Public Works Director, and the Executive Director of Whitebark. This group will delegate portions of this process to a more operational/technical working group for the project update work. |

[17] CWPP = Community Wildfire Protection Plan, MJHMP = Multi-Jurisdictional Hazard Mitigation Plan, MLFPD = Mammoth Lakes Fire Protection District.

| Plan Name | Description | Process for Integration |
|---|---|---|
| | CWPP will allow the region to keep moving forward with an understanding of project status as we work toward a more elaborate product. | |
| **Fire District Capital Improvement Plan (CIP)** | Currently MLFPD does not have a CIP. MLFPD has some cost estimates for potential facility and apparatus cost estimations, but there is not currently a link to district program needs. Subsequently, MLFPD resources are not ideally aligned with district program needs. As an example, MLFPD Fire Engine and Fuels Mitigation Fleet is limited in its ability to both mitigate and respond to wildfire. Previous Excel sheets did not account for equipment, such as chippers or a grapple truck for green waste disposal. | MLFPD will work toward building a CIP. The CIP will be a cooperative process. A Division Chief will take the lead on the project but will start with an assessment of district program leads based on a review of hazards that MLFPD is tasked to mitigate and respond to. This includes looking at MJHMP, CWPP, and the 2023 Severe Winter Storms after action review. |

# Conclusion

The Mammoth Lakes Fire Protection District has taken a proactive and collaborative approach in its first-time participation in the Mono County MJHMP by preparing a comprehensive annex to address district-specific risks, vulnerabilities, and mitigation strategies. This annex outlines local hazards, such as wildfire, severe winter storms, earthquakes, and hazardous materials, while highlighting unique vulnerabilities stemming from infrastructure limitations, seasonal population fluctuations, and a harsh alpine environment. The MLFPD's planning process involved extensive stakeholder and public engagement, detailed risk assessment, and the identification of targeted mitigation actions, particularly for wildfire resilience and energy infrastructure. The MLFPD also assessed its regulatory, administrative, financial, and outreach capacities, identifying key areas for improvement, such as GIS integration, capital planning, and community education. By participating in this planning process, MLFPD is better positioned to apply for federal hazard mitigation grants. Moving forward, the MLFPD will continue to be a strong partner and advocate for implementing effective mitigation measures, reducing community risk and ultimately saving lives.