



Annex C Feather River Resource Conservation District

C.1 Introduction

This Annex details the hazard mitigation planning elements specific to the Feather River Resource Conservation District (FRRCD or District), a new participating jurisdiction to the 2026 Plumas County Local Hazard Mitigation Plan (LHMP) Update. This Annex is not intended to be a standalone document but appends to and supplements the information contained in the Base Plan document. As such, all sections of the Base Plan, including the planning process and other procedural requirements apply to and were met by the District. This Annex provides information specific to the FRRCD, with a focus on providing additional details on the planning process, risk assessment, and mitigation strategy for this jurisdiction.

C.2 Planning Process

As described above, the FRRCD followed the planning process detailed in Chapter 3 of the Base Plan. In addition to providing representation on the Plumas County Hazard Mitigation Planning Committee (HMPC), the District formulated their own internal planning team to support the broader planning process requirements. Internal planning participants, their positions, and how they participated in the planning process are shown in Table C-1. Additional details on Plan participation and District representatives are included in Appendix A. **FILL OUT TABLE WITH WHO PARTICIPATED AND HOW.**

Table C-1 FRRCD – Planning Team

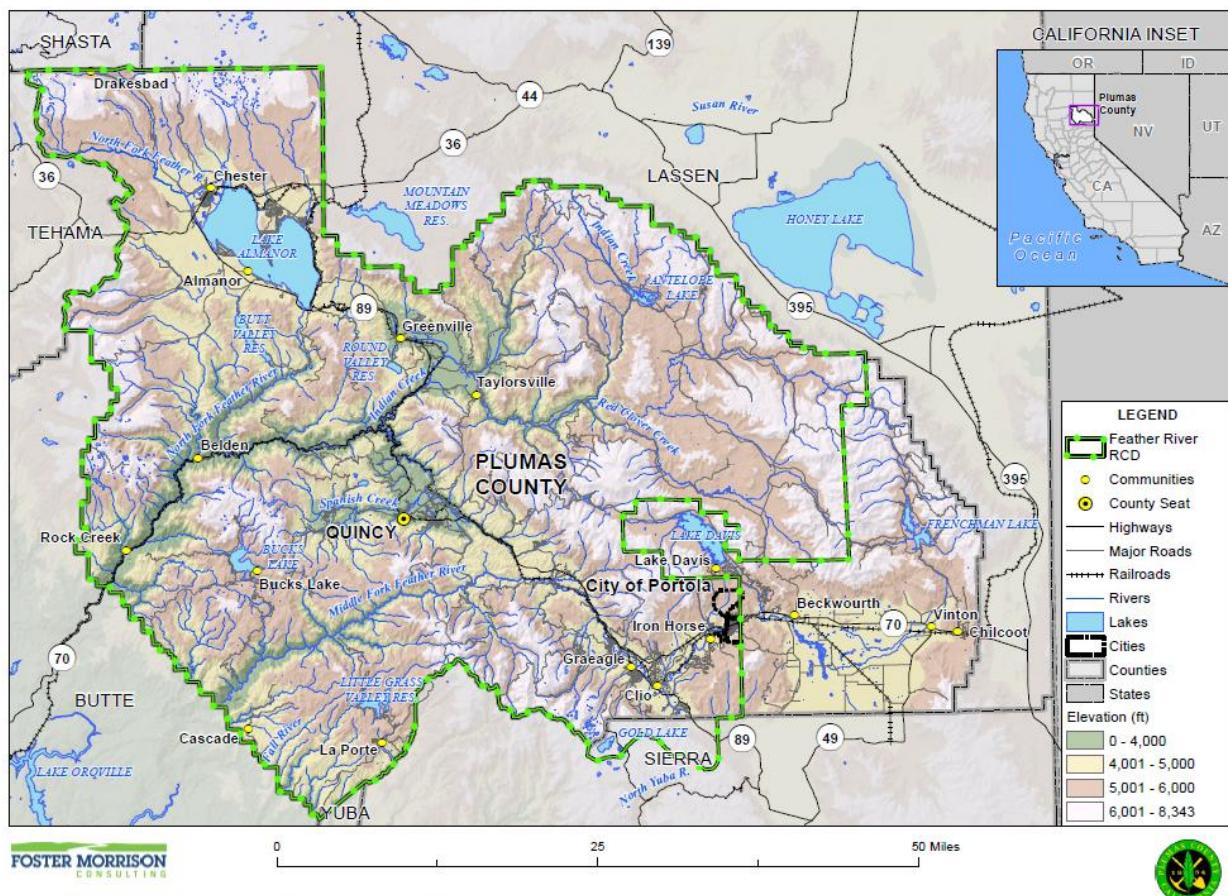
Name	Position/Title	How Participated

Source: FRRCD

C.3 District Profile

The community profile for the FRRCD is detailed in the following sections. Figure C-1 displays a District map and the location of FRRCD within Plumas County.

Figure C-1 FRRCD



Data Source: Plumas County GIS, Cal-Atlas; Map Date: 4/18/2025.



C.3.1. Overview and Background

In response to the national “Dust Bowl” crisis of the 1930s, the federal government passed legislation in 1937 establishing the Soil Conservation Service (SCS). Local Conservation Districts were set up under state law to be controlled by board of directors in order to provide local input and direction to the SCS. In California, Conservation Districts have been formed in nearly all parts of the state beginning in the 1940s. Many have been consolidated over time and of the hundreds of districts that once existed in California, 102 remain. Soil Conservation Districts were originally empowered to manage soil and water resources for conservation, but these powers were expanded in the early 1970s to include “related resources,” including fish and wildlife habitat. This expansion is responsible for the name change to “Resource” Conservation Districts in 1971.

Once called the Indian-American Valleys Resource Conservation District, the Feather River RCD was instated in 1954. In 1993, the District boundaries were expanded to coincide closer to the boundaries of Plumas County. It was during this boundary expansion that the District’s name was changed to the Feather River RCD. The Feather River RCD is located in the Sacramento Valley Region of California RCDs.

The District's mission is to advocate resource conservation through education and collaborative efforts with willing landowners and organizations that promote economic and ecological sustainability.

The District Boundary encompasses a service area of approximately 2,259 square miles (1,445,907 acres) including a variety of landowners and land uses. The District Boundary falls in and around many communities including Quincy, Portola, Genesee, Taylorsville, Greenville, Crescent Mills, Lake Almanor, Canyon Dam, and Chester. The District's boundary extends to the Lassen, Shasta, Tehama, Butte, Yuba, and Sierra County lines.

C.4 Risk Assessment

As defined by FEMA, risk is a combination of hazard, vulnerability, and exposure. "It is the impact that a hazard would have on people, services, facilities, and structures in a community and refers to the likelihood of a hazard event resulting in an adverse condition that causes injury or damage."

The FRRCD risk assessment identifies and profiles relevant hazards and assesses the exposure of lives, property, infrastructure, and the environment to these hazards. The process allows for a better understanding of the District's potential risk and vulnerability to hazards and provides a framework for developing and prioritizing mitigation actions to reduce risk from future hazard events.

Building on the District Profile above, a risk assessment was performed for the District. This includes the following sections:

- C.4.1 Assets Inventory and Growth and Development Trends
- 0 Hazard Identification
- C.4.3 Hazard Profiles and Vulnerability to Specific Hazards

C.4.1. Assets Inventory and Growth and Development Trends

This section provides an inventory of the FRRCD's total assets potentially at risk to hazards and an overview of growth and development trends. This section is broken into two parts:

- **Asset Inventory** – The assets inventory identifies the FRRCD's total assets, including the people and populations; structures; critical facilities and infrastructure; community lifelines; natural, historic, and cultural resources; and economic assets and community activities of value. This data is not hazard specific, but is representative of total assets within the District, potentially at risk to identified hazards as discussed in Section C.4.3 Hazard Profiles and Vulnerability to Specific Hazards.
- **Growth and Development Trends** – A discussion of growth and development trends in the District, both current and future, is presented.

Assets Inventory

The District's asset inventory is detailed in the following sections:

- People and Populations
- Structures

- Critical Facilities and Infrastructure
- Community Lifelines
- Natural, Historic, and Cultural Resources
- Economic Assets and Community Activities of Value

A discussion of each of these assets follows and serves as the template for the asset discussion for each hazard in Section C.4.3.

People and Populations

The most important asset within any community are the people and populations that reside in the community. People and populations in the District include both District staff and workers as well as those populations located within District boundaries and are served by the District. This section includes an inventory of past and current populations of the District and also discusses vulnerable populations and underserved communities as a subsection of people and populations located within the District and potentially at risk to hazards. Information from the District and other sources as detailed below form the basis of this discussion.

Historic Population Trends and Current Population

The most important asset within any community are the people and populations that reside in the District. The District has 7 staff. In addition to District staff, the District provides services to the entire Plumas County Planning Area, which was discussed in greater detail in Chapter 4 (including discussion on vulnerable populations).

Structures and Critical Facilities

This section considers the FRRCD's assets at risk, with a focus on key District assets such as critical facilities and infrastructure, and other District assets and their values. With respect to District assets, the majority of these assets are considered critical facilities as defined for this Plan. Critical facilities are defined for this Plan as:

Any facility, including without limitation, a structure, infrastructure, property, equipment or service, that if adversely affected during a hazard event may result in severe consequences to public health and safety or interrupt essential services and operations for the community at any time before, during and after the hazard event.

A critical facility is classified by the following categories: (1) Essential Services Facilities; (2) At-Risk Populations Facilities, and (3) Hazardous Materials Facilities.

FRRCD owns no facilities or properties.

Community Lifelines

Assessing the vulnerability of the FRRCD to natural hazards and disasters also involves reviewing and inventorying the community lifelines in place that could be affected. It is important to include these items in hazard discussions as the continuous operation of critical government and business functions is essential

to human health and safety, property protection, and economic security. The importance of community lifelines is discussed below:

- Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function.
- FEMA has developed a method for objectives-based response that prioritizes the rapid stabilization of Community Lifelines after a disaster.
- The integrated network of assets, services, and capabilities that provide lifeline services are used day-to-day to support the recurring needs of the community and enable all other aspects of society to function.
- When disrupted, decisive intervention (e.g., rapid re-establishment or employment of contingency response solutions) is required to stabilize the incident.

Community lifelines, as defined by FEMA, include the following:

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

It should be noted that these community lifelines are all in place and functional as part of regular government operations in the Plumas County Planning Area serving as a partnership between the city, local special districts and agencies, and Plumas County. Due to its more rural nature, there is an interplay in community lifelines between all jurisdictions in the County. Most all of the District's community lifelines overlap with the Planning Area's. It should also be noted that these lifelines collectively include many of the critical facilities and infrastructure assets inventoried for this LHMP, including those assets owned by the District. As such, specific information on these community lifelines in the District and how they may be affected by a hazard event or disaster are discussed in the Base Plan.

Natural, Historic, and Cultural Resources

Assessing the vulnerability of the FRRCD to natural hazards and disasters also involves inventorying the natural, historic, and cultural assets of the area. This step is important for the following reasons:

- Environmental and natural resources add to a community's identity and quality of life. They also help the local economy through agriculture, tourism, and recreation. They support ecosystem services, such as clean air and water.
- Conserving the environment may help people mitigate risk. It can also protect sensitive habitats, develop parks and trails, and build the economy.

- The community may decide that these types of resources warrant a greater degree of protection due to their unique and irreplaceable nature and contribution to the overall economy.
- If these resources are impacted by a disaster, knowing so ahead of time allows for more prudent care in the immediate aftermath, when the potential for additional impacts are higher.
- The rules for reconstruction, restoration, rehabilitation, and/or replacement are often different for these types of designated resources.
- Natural resources can have beneficial functions that reduce the impacts of natural hazards, such as wetlands and riparian habitat, which help absorb and attenuate floodwaters.

Natural Resources

FRRCD has a variety of natural resources of value to the District. These natural resources parallel that of Plumas County as a whole. Information can be found in Section 4.2.1 of the Base Plan.

Historic and Cultural Resources

FRRCD has a variety of historic and cultural resources of value to the District. These historic and cultural resources parallel that of Plumas County as a whole. Information can be found in Section 4.2.1 of the Base Plan.

Economic Assets and Community Activities of Value

Assessing the vulnerability of the FRRCD to natural hazards and disasters also involves inventorying the economic assets and community activities of value in the District.

Economic Assets

After a disaster, economic resiliency is one of the major drivers of a speedy recovery. Each community has specific economic drivers. Economic assets for the County were discussed in Section 4.2.1 of the Base Plan and are assumed to be the same or similar for the District.

Community Activities of Value

Inventorying economic assets in the District and their vulnerability to natural hazards and disasters also involves inventorying activities that have value to the community. This includes activities that are important to a community, like long-standing traditions such as a festival or fair or other activities that bring money into the communities such as sports tournaments and other recreational activities. Community Activities of Value for the County were discussed in Section 4.2.1 of the Base Plan and are assumed to be the same or similar for the District.

Growth and Development Trends

As part of the planning process, the District looked at changes in growth and development, both current and future, and examined these changes in the context of hazard-prone areas, and how the changes in growth and development affect loss estimates and vulnerability over time. This inventory section details future

development/redevelopment projects that are likely to occur over the next five years covered by this 2025 LHMP. For Districts, this generally includes the following:

- Construction/development projects related to adding new District facilities, infrastructure, land acquisition, etc.
- Plans for expansion or build out of the District's service area, including new service hookups, and other District functions related to where the District will be expanding services.

Population Trends and Projections

General growth in the District parallels that of the Plumas County Planning Area as a whole. Information can be found in Section 4.2.1 of the Base Plan.

Future Development Areas

It is important to review future development plans for the District. Future development should be sited in areas that are away from known hazard risks. If this is not possible, mitigation should be done to ensure that future development is protected against future hazards. The District has no control over future development in areas the District provides services in.

C.4.2. Hazard Identification

The FRRCD identified the hazards that affect the District and summarized their location, extent, likelihood of future occurrence, potential magnitude, and significance (or priority of a hazard) specific to the District.

Those hazards identified as a high or medium significance in Table C-2 are considered priority hazards for mitigation planning. Those hazards that occur infrequently or have little or no impact in the District were determined to be of low significance and not considered a priority hazard to the District. Significance was determined based on the hazard profile, focusing on key criteria such as frequency, extent, and resulting damage, including deaths/injuries and property, natural and cultural resources, and economic damage. The ability of a jurisdiction to reduce losses through implementation of existing and new mitigation measures was also considered as to the significance of a hazard. This assessment was used to prioritize those hazards of greatest significance, enabling the District to focus resources where they are most needed.

Table C-2 FRRCD—Hazard Identification Assessment

Hazard	Geographic Extent	Likelihood of Future Occurrences	Magnitude/Severity	Significance	Climate Change Influence
Agricultural Hazards (severe weather/pests/invasive species)	—	—	—	—	Medium
Avalanche					Medium
Climate Change	Extensive	Highly Likely	Limited	High	—
Dam Failure	—	—	—	—	Medium
Drought & Water shortage (w/ tree mortality)	—	—	—	—	High
Earthquake (w/subhazards)	—	—	—	—	Low
Floods: 1%/0.2% annual chance (w/ levee failure)	—	—	—	—	Medium
Floods: Localized Stormwater	Limited	Likely	Limited	Medium	Medium
Hazardous Materials Transport	—	—	—	—	—
Landslide, Mudslide, Debris Flow	Limited	Likely	Limited	Medium	Medium
Severe Weather: Extreme Cold, Freeze, and Snow	—	—	—	—	Medium
Severe Weather: Extreme Heat	—	—	—	—	High
Severe Weather: Heavy Rains and Storms (Hail, Lightning)	—	—	—	—	Medium
Severe Weather: High Winds and Tornadoes	—	—	—	—	Medium
Wildfire (w/smoke and air quality)	Extensive	Highly Likely	Catastrophic	High	High
Geographic Extent	Magnitude/Severity				
Limited: Less than 10% of planning area	Catastrophic: More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths				
Significant: 10-50% of planning area	Critical: 25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability				
Extensive: 50-100% of planning area	Limited: 10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability				
Likelihood of Future Occurrences	Negligible: Less than 10 percent of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid				
Highly Likely: Near 100% chance of occurrence in next year, or happens every year.	Significance				
Likely: Between 10 and 100% chance of occurrence in next year, or has a recurrence interval of 10 years or less.	Low: Minimal potential impact				
Occasional: Between 1 and 10% chance of occurrence in the next year, or has a recurrence interval of 11 to 100 years.	Medium: Moderate potential impact				
Unlikely: Less than 1% chance of occurrence in next 100 years, or has a recurrence interval of greater than every 100 years.	High: Widespread potential impact				
	Climate Change Influence				
	Low: Minimal potential impact				
	Medium: Moderate potential impact				
	High: Widespread potential impact				

C.4.3. Hazard Profiles and Vulnerability to Specific Hazards

This section includes the hazard profiles and vulnerability assessment for hazards ranked of medium or high significance specific to the FRRCD (as identified in the Significance column of Table C-2). This section focuses on where and how the District is affected by their priority hazards. Chapter 4 of the Base Plan provides more detailed information about these hazards and their impacts on the Plumas County Planning Area. Methodologies for evaluating vulnerabilities and calculating loss estimates are the same as those described in Section 4.2 of the Base Plan.

Hazard Profiles and Vulnerability Assessment

Each hazard is profiled in the following format:

- **Hazard Profile** – A hazard profile is included for each hazard. This includes information on:
 - ✓ **Hazard Overview** – A general discussion of the hazard and related issues is detailed here.
 - ✓ **Location and Extent** – Location is the geographic area within the District that is affected by the hazard. Extent is the expected range of intensity for each hazard. These are discussed in specific detail for mapped hazards, and in more general detail for those hazards that do not have discrete mapped hazard areas.
 - ✓ **Past Occurrences** – Past occurrences are discussed for each hazard. A discussion of disaster declarations is included in each hazard section. NCDC events are also discussed. Other past occurrences data specific to the District follow the disaster declarations and NCDC events for each hazard.
 - ✓ **Climate Change** – This section contains the effects of climate change (as applicable). The possible influence of climate change on the hazard is discussed.

After the hazard profile, a vulnerability assessment is presented. As part of the vulnerability assessment, an estimate of the vulnerability of the District to each identified hazard, in addition to the estimate of risk of future occurrence, is provided in each of the hazard-specific sections. Vulnerability is measured in general, qualitative terms and is a summary of the potential impact based on past occurrences, spatial extent, and damage and casualty potential. It is categorized into the following classifications:

- **Extremely Low**—The occurrence and potential cost of damage to life and property is very minimal to nonexistent.
- **Low**—Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal.
- **Medium**—Moderate potential impact. This ranking carries a moderate threat level to the general population and/or built environment. Here the potential damage is more isolated and less costly than a more widespread disaster.
- **High**—Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past.
- **Extremely High**—Very widespread with catastrophic impact.

After this classification, a general discussion of hazard vulnerabilities occurs. This is done in the following format:

- **Vulnerability Overview** – A general discussion of the hazard vulnerability and related issues is detailed here.
- **Local Concerns** – This includes District provided information on how the District is uniquely affected by or vulnerable to each hazard.
- **Assets at Risk** – A discussion of the assets at risk follows, presented in the same order as in Section C.4.1 above, with a few exceptions. This includes sections on: People and Populations; Structures and Critical Facilities and Infrastructure; and Natural, Historic, and Cultural Resources. These are discussed in specific terms for mapped hazards, and in more general terms for those hazards that are unmapped. Sections on Community Lifelines and Economic Assets and Community Activities of Value are not included in the Sections below, as they are common to all jurisdictions and are fully covered in Section C.4.1 above and Chapter 4 of the Base Plan.
- **Impacts** – A discussion on hazard impacts follows. Impacts describe how each hazard can affect the District, its assets, and the ability to provide continued and reliable services. The type and severity of impacts reflect both the potential magnitude of the hazard and the vulnerability of the asset.
- **Future Conditions/Future Development** – A discussion of how future conditions and future development will affect or influence each hazard over time is also included. This considers both new District assets and improvements as well as any changes in service area.

Power Interruption/Power Failure: A Common Vulnerability of all Hazards

An impact of almost all hazards evaluated as part of this LHMP Update relates to power shortage and/or power failures. The US power grid crisscrosses the country, bringing electricity to homes, offices, factories, warehouses, farms, traffic lights and even campgrounds. According to statistics gathered by the U.S. Department of Energy, major blackouts are on the upswing. Incredibly, over the past two decades, blackouts impacting at least 50,000 customers have increased 124 percent. The electric power industry does not have a universal agreement for classifying disruptions. Nevertheless, it is important to recognize that different types of outages are possible so that plans may be made to handle them effectively. In addition to blackouts, brownouts can occur. A brownout is an intentional or unintentional drop in voltage in an electrical power supply system. Intentional brownouts are used for load reduction in an emergency. Electric power disruptions can be generally grouped into two categories: intentional and unintentional. More information on types of power disruptions can be found in Section 4.3 of the Base Plan.

Public Safety Power Shutoff (PSPS)

An intentional disruption type of power shortage/failure event has been recently implemented in California as a result of wildfires starting as a result of downed power lines or electrical equipment. This was the case for the Camp Fire in 2018. As a result, California's three largest energy companies (including PG&E), at the direction of the California Public Utilities Commission (CPUC), are preparing all Californians for the threat of wildfires and power outages during times of extreme (fire) weather. To help protect customers and communities during extreme fire weather events, electric power may be shut off for public safety in an effort to proactively prevent wildfire. This is called a PSPS. More information on PSPS criteria can be found in Section 4.3 of the Base Plan.

In addition to PSPSs, to help prevent wildfires, electric utilities have begun to evolve safety efforts. This includes installing safety settings on powerlines in and around high fire-risk areas. These are known as Enhanced Powerline Safety Settings (EPSS), and they help prevent falling tree branches, animals and other

hazards from causing a wildfire. By stopping ignitions, it helps prevent wildfires from starting and spreading. According to PG&E, if ignitions occur, the size of fires can be much smaller due to EPSS. In 2022, there was a 99% decrease in acres impacted by ignitions (as measured by fire size from electric distribution equipment (compared to the 2018-2020 average). This decrease occurred despite dry conditions.

Local Concerns

The District has no specific concerns from PSPS events, as it owns no facilities that could be affected. Local concerns of the District are the same as that of Plumas County as a whole. Those are found in Section 4.3 of the Base Plan.

Climate Change

Likelihood of Future Occurrence—Highly Likely

Vulnerability—Medium

Hazard Profile

Climate change adaptation is a key priority of the State of California. The 2023 State of California Multi-Hazard Mitigation Plan noted that climate change is already affecting California. Sea levels have risen by as much as seven inches along the California coast over the last century, increasing erosion and pressure on the State's infrastructure, water supplies, and natural resources. The State has also seen increased average temperatures, more extreme hot days, fewer cold nights, a lengthening of the growing season, shifts in the water cycle with less winter precipitation falling as snow, and earlier runoff of both snowmelt and rainwater in the year. In addition to changes in average temperatures, sea level, and precipitation patterns, the intensity of extreme weather events is also changing.

California's Adaptation Planning Guide: Understanding Regional Characteristics (from 2017) has divided California into 11 different regions based on political boundaries, projected climate impacts, existing environmental setting, socioeconomic factors and regional designations. The District falls in the North Sierra Region. A map and climate projections for this region are shown in Section 4.3.7 of the Base Plan and include an increase in temperatures, moderate changes in rainfall, and increased risk to wildfire.

Location and Extent

Climate change is a global phenomenon. It is expected to affect the whole of the FRRCD, the Plumas County Planning Area, surrounding counties, and State of California. There is no scale to measure the extent of climate change. Climate change exacerbates other hazards, such as drought, extreme heat, flooding, wildfire, and others. The speed of onset of climate change is very slow. The duration of climate change is not yet known but is feared to be tens to hundreds of years.

Past Occurrences

Disaster Declaration History

Climate change has never been directly linked to any declared disasters.

NCDC Events

NCDC does not track climate change events.

FRRCD Events

Climate change is well-understood to be already increasing the likelihood and frequency of many types of adverse events affecting the District. However, because climate change by its nature cannot be conclusively implicated in any single event, it has never been directly linked to a past event affecting the District.

Vulnerability to Climate Change

The whole of the District is at some measure of vulnerability to climate change. The District Planning Team has concerns that the vulnerability of the District to climate change will continue to increase in the future. An assessment of a community's vulnerability to climate change begins with an understanding of local exposure to climate change. This is included in the Local Concerns section below followed by a discussion of the District's assets at risk, and impacts to this hazard.

Local Concerns

The District has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

Climate change is thought to exacerbate other natural hazards, increasing the likelihood of natural disasters. These disasters can have negative impacts on ecosystems, including changing vegetation type, introducing noxious weeds, increasing erosion and sedimentation, and reduced or altered wildlife habitat.

THIS SECTION IS FROM BUTTE COUNTY RCD AND CAN SERVE AS A TEMPLATE FOR FRRCE. USE OR MODIFY AS YOU SEE FIT.

As one tangible impact from climate change, Butte County is seeing more precipitation fall as rain and more rain-on-snow events, which results in shorter but stronger surges of runoff. The area most affected is the mountainous area of Butte County between about 4000 and 7000 feet. Runoff surges can overwhelm culverts, erode hillsides (especially post-wildfire), and increase the amount of sediment that runs into streams, which in turn has a negative impact on fisheries and aquatic life. The District has many projects across the County (on both County-maintained and Forest Service roads) to re-grade, re-align, out slope, decommission, and/or replace culverts/crossings on, various natural-service roads to reduce the amount of sediment they contribute to streams. The District also works on post-fire slope stabilization and meadow restoration projects, again to reduce sediment erosion into streams. These projects may be discussed in

greater detail in discussion under “Extreme Weather- Heavy Rains and Storms” and “Landslides/Mudslides/Debris Flows.”

Another tangible impact from climate change affects reforestation. The precipitation Butte County receives comes in more intense but more isolated bursts. This significantly shortens the tree-planting season and has almost eliminated the spring planting season for mountain conifers in Butte County, impacting the ability to reforest after high-severity wildfire. The District has had, and continues to have, reforestation projects (on both private and Federal lands) that are impacted by climate change. As a response to climate change, the District is changing and adapting its reforestation densities, species mixes, and the technical assistance it provides to forest landowners.

A third tangible impact from climate change is that stream and lake temperatures are warmer on average and there is a higher average number of days per year that the temperatures are warmer than the comfortable range for many native fish species. In 2021, an estimated 91% of the year’s spring-run Chinook salmon run were killed by high stream temperatures before they could spawn. The District works regularly with Friends of Butte Creek, the Mechoopda Indian Tribe, the Lassen National Forest, and other partners on a number of projects to improve conditions for salmon in Butte Creek.

The impacts of climate change on Butte County agriculture will be extremely various and diverse, some predictable and unpredictable, and many will be negative. The District will continue to partner with the USDA-NRCS (Natural Resources Conservation Service) and other funding mechanisms to deliver climate change adaptation and mitigation project funding to local farmers and ranchers.

IF THE ABOVE DOES NOT WORK, ADD VULNERABILITIES/CONCERNS/ISSUES SPECIFIC TO THE DISTRICT. CAN THE DISTRICT PROVIDE DETAILS ON THE CLIMATE CHANGE ISSUES THAT WOULD SUPPORT MITIGATION ACTION DEVELOPMENT?

Assets at Risk

Assets at risk from this hazard include people and populations; structures and critical facilities and infrastructure; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

Climate change affects people and populations within a community, especially those climate change issues related to increases in temperature over time. While all populations (the seven District staff and those served by the District) can be affected by temperature extremes, populations particularly vulnerable include the very old and very young, medically fragile people, people without means of shelter (and air conditioning or heat) or transportation, people who are socially isolated and other vulnerable or underserved populations (as shown in the discussion in Section C.4.1). Acclimatization to extreme temperatures and other weather extremes may help reduce impacts from these extreme events, such as from heat waves, in the healthy general population but may not be sufficient to protect those with underlying medical conditions.

The District noted that the services provided are focused on helping landowners cultivate more climate resistant lands. While some of these landowners are more vulnerable to climate change, there’s no distinction between who is helped.

Structures and Critical Facilities and Infrastructure

The District owns no facilities, so there are no structures or critical facilities at risk to this hazard.

Natural, Historic, and Cultural Resources

The rivers, streams, agricultural areas, and open space areas of the District support rich biodiversity, including many special-status species and habitat areas. These are all at risk from the effects of climate change. In addition, if heat continues to contribute to changes in wildfire patterns, all areas (on land) of the District are at increased risk from fire – including natural, historic, and cultural resources. Furthermore, as climate change exacerbates the extreme heat and drought hazard, areas of wetlands in the District may be reduced or dry up temporarily, which could damage habitat areas for waterfowl and other species that depend on these areas.

Impacts from Climate Change

The California APG: Understanding Regional Characteristics identified the following impacts specific to the North Sierra Region in which the District is part of:

- Increased temperatures
- Reduced precipitation
- Public health – heat and air pollution
- Reduced agricultural productivity (e.g., wine grapes)
- Reduced tourism

In addition to these sources, the 2023 State of California Hazard Mitigation Plan noted that according to California's Fourth Climate Change Assessment, the state will experience the following climate impacts:

- Annual average daily high temperatures are expected to rise by 2.7°F by 2040, 5.8°F by 2070, and 8.8°F by 2100 compared to observed and modeled historical conditions. These changes are statewide averages.
- Heat waves are projected to become longer, more intense, and more frequent.
- Warming temperatures are expected to increase soil moisture loss and lead to drier conditions. Summer dryness may become prolonged, with soil drying beginning earlier in the spring and lasting longer into the fall and winter.
- Droughts are likely to become more frequent and persistent through 2100.
- The strength of the most intense precipitation and storm events affecting California is expected to increase.
- Snowpack levels are projected to decline significantly by 2100 due to reduced snowfall and faster snowmelt.
- Marine layer clouds are projected to decrease.
- Extreme wildfires (i.e., fires larger than 24,710 acres) would occur 50 percent more frequently. The maximum area burned statewide may increase 178 percent by the end of the century.

ANY DISTRICT SPECIFIC IMPACTS?

Impacts to identified assets at risk to this hazard and the overall vulnerability of the District may be affected in the future by climate change (which was discussed in the hazard profile section above), changes in population patterns, and changes in land use and development. The influencing effects of these factors on this hazard are discussed further in the Future Conditions/Future Development discussion below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on this for the District include the following:

- As climate change continues to accelerate over time, climate related impacts to the District will continue to increase.
- Population projections for the area served by the District show shrinking populations, which should reduce the affect of this hazard and associated impacts to the District. The District may add staff, but this number would be small. The District noted it has no control over population changes in its service territory, it merely reacts to them by providing additional (or reduced) services.
- Changes in land use and development in the District are expected to be limited in the near future and thus are not likely to affect climate change impacts to the District. In addition, adherence to protective building codes for new development will also assist in limiting future impacts and associated vulnerabilities of the District to this hazard. With adherence to development standards, future losses to new development should be minimal.

Future Development

The District owns no property and has no plans to build facilities in the future. As such, the District's facilities will not be at future risk to this hazard. Since the District shares the same boundaries as the unincorporated County, future conditions in the District regarding land use, migration, population changes, and climate change are the same as those in Section 4.3.7 of the Base Plan.

Flood: Localized Stormwater Flooding

Likelihood of Future Occurrence—Likely

Vulnerability—Medium

Hazard Profile

Flooding occurs in areas other than the FEMA mapped 1% and 0.2% annual chance floodplains. Flooding may be from drainages not studied by FEMA, lack of or inadequate drainage infrastructure, or inadequate maintenance. Localized, stormwater flooding occurs throughout the District and the Plumas County Planning Area, especially during the rainy season from November through April. Prolonged heavy rainfall

(including that from atmospheric river events) contributes to a large volume of runoff resulting in high peak flows of moderate duration.

Location and Extent

The FRRCD is subject to localized flooding throughout the District. This is discussed below. Flood extents are usually measured in areas affected, velocity of flooding, and depths of flooding. Expected flood depths in the District vary by location. Flood durations in the District tend to be short to medium term, or until either the storm drainage system can catch up or flood waters move downstream. Localized flooding in the District tends to have a shorter speed of onset, especially when antecedent rainfall has soaked the ground and reduced its capacity to absorb additional moisture, or when rain-on-snow events rapidly release snowpack.

Past Occurrences

Disaster Declaration History

There have been no state or federal disaster declarations specific to localized floods. There would most likely have been localized flood events during the 22 state and 19 federal disaster declarations for flood events, including heavy rains and storms, as shown in the previous 1%/0.2% annual chance flood section.

NCDC Events

The NCDC occurrences of localized flooding are included in the 1% and 0.2% annual chance flood hazard profile above where past flood events were noted. These include 15 flood related events for the entire County Planning Area reported since 1993.

FRRCD Events

The localized flooding the District responds to tends to be highly site-specific and occurs in different places each year. Fire, localized rainfall events, and clogged culverts are the drivers of this type of flooding and occur stochastically across the District. The District could not give specific instances or dates of localized flooding.

Climate Change and Localized Flood

It is likely that climate change will increase the chance of future occurrence as well as future impacts from localized floods. Atmospheric river events, occurring in recent years, is thought to be attributed to climate change and reflect storms of greater volume and intensity. More information on future impacts to the District can be found in the Future Conditions/Future Development section of the Vulnerability Assessment below.

Even if average annual rainfall may decrease slightly, the intensity of individual rainfall events is likely to increase during the 21st century, increasing the likelihood of overwhelming stormwater systems built to historical rainfall and storm averages. This makes localized flooding more likely.

Vulnerability to Localized Flood

Flood vulnerability and their impacts vary by location and severity of any given flood event and will likely only affect certain areas of the District during specific times. Based on the risk assessment, it is evident that floods will continue to have potentially significant impacts to certain areas of the District. However, while flooding can cause significant impacts, depending on the duration and volume of precipitation and the drainage in any given area, many of the floods in the District are minor, localized flood events that are more of a nuisance than a disaster.

Many areas of the District are at some measure of vulnerability to localized flooding. An assessment of a community's vulnerability to localized flooding begins with an understanding of local exposure to localized flooding. This is included in the Local Concerns section below followed by a discussion of the District's Assets at Risk to this hazard.

Local Concerns

The District has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

Historically, the District has been affected by flooding of streams and creeks occurring during heavy rain and storm (including atmospheric river) events. Additional development in the District and in the watersheds of these streams affects both the frequency and duration of damaging floods through an increase in stormwater runoff and contributes to localized flooding occurring in areas throughout the District. The lack of or inadequate drainage infrastructure in the District contributes to localized flooding issues. The District is also concerned with rain on snow events, which can cause greater flooding in the District.

OTHER VULNERABILITIES/CONCERNS/ISSUES SPECIFIC TO THE DISTRICT? WHAT DISTRICT ASSETS ARE ADVERSELY AFFECTED BY FLOOD EVENTS? DO FLOOD EVENTS RESULT IN LOSS OF SERVICE, EVEN TEMPORARILY? CAN THE DISTRICT PROVIDE DETAILS ON THE ROOT CAUSE OF LOCALIZED FLOOD ISSUES THAT WOULD SUPPORT MITIGATION ACTION DEVELOPMENT?

Assets at Risk

Assets at risk from this hazard include people and populations; structures and critical facilities; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

All seven District staff and populations served (including vulnerable populations) are traditionally not highly vulnerable to localized flooding, but their structures and contents can be at risk. Localized flooding may also cause transportation issues as roads and lanes are impacted or closed and affect the ability for District staff and District residents to travel throughout the District.

Farmers and landowners are specifically vulnerable to this hazard. The District noted that, although the services provided are not human specific, that they provide help to make lands more flood resilient. These services are provided to both well-resourced as well as less prosperous landowners.

Structures and Critical Facilities and Infrastructure

The District owns no facilities, so there are no structures or critical facilities at risk to this hazard.

Natural, Historic, and Cultural Resources

Natural resource assets may have some vulnerabilities to localized flood during major storm events, but can benefit from floodwaters, often by design. Many open spaces take overflow water and release it into the underlying soils and natural areas. Wetlands areas in the District actually help reduce the risk of flooding, as they can absorb excess rainfall that would have to be drained away from impervious surfaces. Flooding can provide many benefits to the natural environment, including recharging wetlands and groundwater, increasing fish production, creating wildlife habitat, and rejuvenating soil fertility. These smaller localized flooding events often provide more benefits to the environment in comparison to negative impacts associated with large flood events. Historic and cultural resources may be at some measure of vulnerability if they are located in areas subject to repeated localized flooding.

Impacts from Localized Flood

Primary concerns associated with stormwater flooding include impacts to infrastructure that provide a means of ingress and egress throughout the community. Ground saturation can result in instability, collapse, or other damage to trees, structures, roadways and other critical District infrastructure. Objects can also be buried or destroyed through sediment deposition. Floodwaters can break utility lines and interrupt services to District facilities. Standing water can cause damage to crops, roads, and foundations of District facilities. Other problems connected with flooding and stormwater runoff include erosion, sedimentation, degradation of water quality, losses of environmental resources, and certain health hazards.

Life safety issues from localized flooding would be more limited. The amount and type of damage or flooding that occurs varies from year to year and from storm to storm, depending on the quantity of precipitation and runoff.

Impacts to identified assets at risk to this hazard and the overall vulnerability of the District may be affected in the future by climate change (which was discussed in the Likelihood of Future Occurrence discussion above), changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. These are discussed below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on this for the FRRCD include the following:

- As discussed in the hazard profile section, climate change is anticipated to exacerbate this hazard over time.
- Population projections for the area served by the District show the population to be shrinking, which limits additional impacts to the District. The District may add staff, but this number would be small. The District noted it has no control over population changes in its service territory, it merely reacts to them by providing additional (or reduced) services.
- Changes in land use and development in the District are expected to be limited in the near future and thus are not likely to affect flooding and associated impacts to the District. Additional development traditionally leads to additional flooding. In addition, adherence to protective building codes for new development will also assist in limiting future impacts and associated vulnerabilities of the District to this hazard. With adherence to development standards, future losses to new development should be minimal.

Future Development

The District owns no property and has no plans to build facilities in the future. As such, the District's facilities will not be at future risk to this hazard. Since the District shares the same boundaries as the unincorporated County, future conditions in the District regarding land use, migration, population changes, and climate change are the same as those in Section 4.3.12 of the Base Plan.

Landslide, Mudslide, and Debris Flow

Likelihood of Future Occurrence—Likely

Vulnerability—Medium

Hazard Profile

Like its earthquake-generating faults, California's mountainous terrain is a consequence of dynamic geologic processes in operation as the North American Plate grinds past the Pacific Plate. According to the CGS, a landslide is a general term for a variety of mass-movement processes that generate a down-slope movement of mud, soil, rock, and/or vegetation. Landslides are classified into many different types based on form and type of movement. They range from slow-moving rotational slumps and earth flows, which can slowly distress structures but are less threatening to personal safety, to fast-moving rock avalanches and debris flows that are a serious threat to structures and have been responsible for most fatalities during landslide events. For the purposes of this LHMP Update, the term landslide includes mudslides, debris flows, and rockfalls that tend to occur suddenly; as well as hillside erosion, which is a similar process that tends to occur on smaller scales and more gradually but can exacerbate landslide events.

Landslides, debris flows and mudslides are closely related to flooding, as both processes are related to precipitation, runoff, and the saturation of ground by water. In addition, landslides, mud flows, and debris

flows can occur on small, steep stream channels and are often mistaken for floods. However, landslide events may be much more destructive than floods because of their higher densities, high debris loads, and high velocities.

Natural conditions that contribute to landslide, mudslides, debris flows, hillside and streambank erosion, include the following:

- Degree of slope
- Water (heavy rain, river flows, or wave action)
- Unconsolidated soil or soft rock and sediments
- Lack of vegetation (no stabilizing root structure)
- Previous wildfires and other forest disturbances (discussed in the Wildfire section below)
- Road building, excavation, and grading
- Earthquake

The 2023 California State Hazard Mitigation Plan noted that more than one third of California is mountainous terrain that generally trends parallel to the coast, forming a barrier that captures moisture from offshore storms originating in the Gulf of Alaska and Mexico. Steep topography, weak rocks, heavy winter rains, and occasional earthquakes all lead to slope failures more frequently than would otherwise occur under gravity alone. This is true in the sloped areas in the County where the topography is characterized by rolling hills and ridges.

Location and Extent

Landslides can occur in areas with steep slopes and weak soils. It can also occur in areas where erosion has previously occurred. Both winter storms (precipitation-induced) and earthquake triggered landslides tend to occur in or near places that have experienced previous landslides. However, landslides may also occur in other locations over time. Landslides and debris flows may also occur in fire burn scar areas.

Figure C-2 shows the CGS areas at susceptible to deep-seated landslides. The legend on Figure C-2 shows the susceptibility scale (from 0-X with 0 being the least and X being the most susceptible) that the CGS uses to show the susceptibility of landslides. It is a primarily a combination of slope class and rock strength. Geographic extents of these classes are shown on Table C-3. According to the 2023 State Hazard Mitigation Plan, the susceptibility classes were further categorized into Very High (susceptibility class X) and High (susceptibility classes VII, VIII, & IX) for exposure analysis. The rest of the classes were not categorized. CGS mapping indicates that portions of the District and surrounding area are at high to very high susceptibility areas for landslides. This can be seen in the darker orange and red colors. The speed of onset of landslide is often short, especially in past landslide areas as well as in post-wildfire burn scar areas, but it can also take years for a slope to fail. Landslide duration is usually short, though digging out and repairing landslide areas can take some time.

Figure C-2 FRRCD – Susceptibility to Deep-Seated Landslides

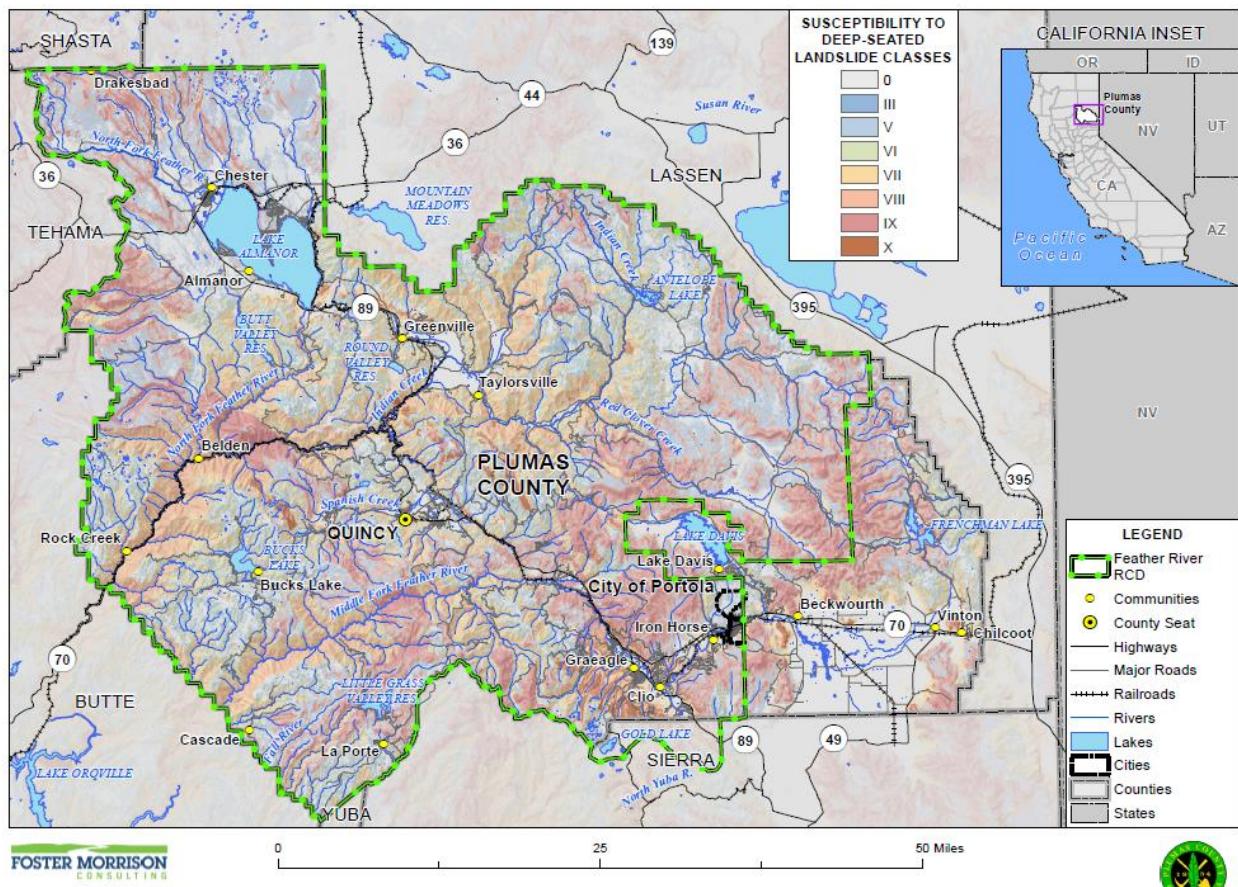


Table C-3 FRRCD – Susceptibility to Deep-Seated Landslide Geographical Extents by Class

Susceptibility to Deep-Seated Landslide Class	Total Acres	% of Total Acres	Improved Acres	% of Total Improved Acres	Unimproved Acres	% of Total Unimproved Acres
0	292,016	20%	23,927	52%	268,089	19%
III	120,829	8%	2,198	5%	118,631	9%
V	193,532	13%	3,819	8%	189,712	14%
VI	121,890	8%	1,791	4%	120,099	9%
VII	249,182	17%	8,938	19%	240,245	17%
VIII	237,866	17%	1,858	4%	236,008	17%
IX	196,247	14%	2,499	5%	193,748	14%
X	24,605	2%	1,353	3%	23,252	2%
Grand Total	1,436,167	100%	46,384	100%	1,389,783	100%

Source: CGS

Past Occurrences

Disaster Declarations

There have been no disaster declarations associated with just landslides in Plumas County; however, as shown in Table C-4, there have been 9 state and 10 federal disaster declarations for flood (including heavy rains and storms) which included landslides as a component.

Table C-4 Plumas County – Federal and State Disaster Declarations Summary 1950-2025

Disaster Type	State Declarations		Federal Declarations	
	Count	Years	Count	Years
Flood (events that included landslide)	9	1995 (twice), 2006 (twice), 2017 (twice), 2019, 2023 (twice)	10	1995 (twice), 2006 (twice), 2017 (twice), 2019, 2023 (three)

Source: Cal OES, FEMA. Retrieved March 2025.

NCDC Events

The NCDC contains 21 records for landslides or debris flows in Plumas County since 1993.

FRRCD Past Occurrences

The District noted that its past occurrences are the same as the County's, which were discussed in Section 4.3.13 of the Base Plan.

Climate Change and Landslide and Debris Flows

According to the 2021 CAS (as well as the 2024 Draft CAS), climate change may result in precipitation extremes (i.e., wetter wet periods and drier dry periods). More information on precipitation increases can be found in Section 4.3.4 of the Base Plan. While total average annual rainfall may decrease only slightly, rainfall is predicted to occur in fewer, more intense precipitation events. The combination of a generally drier climate in the future, which will increase the chance of drought and wildfires, and the occasional extreme downpour is likely to cause more mudslides, landslides, and debris flows.

Vulnerability from Landslide

Portions of the District are at some measure of vulnerability to landslide. This is true when atmospheric rivers or heavy rain and storm events occur. Post wildfire areas are also more prone to landslide events. An assessment of a community's vulnerability to landslide begins with an understanding of local exposure to landslide. This is included in the Local Concerns section below followed by a discussion of the District's Assets at Risk to this hazard.

Local Concerns

The District has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

The District noted a concern that landslides can have negative impacts on ecosystems, including changing vegetation type, introducing noxious weeds, increasing sedimentation, and reduced or altered wildlife habitat.

OTHER VULNERABILITIES/CONCERNS/ISSUES SPECIFIC TO THE DISTRICT? CAN THE DISTRICT PROVIDE DETAILS ON THE ROOT CAUSE OF LANDSLIDE ISSUES THAT WOULD SUPPORT MITIGATION ACTION DEVELOPMENT?

Assets at Risk

Assets at risk from this hazard include people and populations; structures and critical facilities; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

All populations (both District staff and District residents) located within areas of landslide susceptibility, especially in the High to Very High hazard areas (i.e., Classes VII to X) are at some vulnerability to landslide. Most vulnerable are those people working or residing in these landslide potential areas as well as those that might reside or work within the landslide run out areas. People residing in the District service areas as well as District staff may also be cut off from transportation routes if roads and streets providing a means of ingress and egress are impacted. Certain vulnerable populations may be at greater risk due to the often sudden onset of a landslide event and include: the unsheltered, those with limited mobility, and those that lack the resources to leave the area.

Structures and Critical Facilities and Infrastructure

The District owns no facilities, so there are no structures or critical facilities at risk to this hazard.

Natural, Historic, and Cultural Resources

Landslides can affect natural, historic, and cultural resources that lie in the landslide area, or the landslide run out area. Landslides can destroy large tracts of forest and open space areas, destroy wildlife habitat, and remove productive soils and vegetation from slopes. It can also fill in waterways, impact water quality, and potentially affect flooding potential. Natural resources that fall in the High or Very High susceptibility areas shown on Figure C-2 would be most vulnerable, as well as those in the run-out areas.

Impacts from Landslide

Any type of landslide may result in damages or complete destruction of buildings in their path, as well as deaths and injuries. Landslides can cause road blockages by depositing debris on road surfaces or road damage if the road surface itself slides downhill. Utility lines and pipes are also prone to breakage in slide areas. Large landslides can collapse into water bodies, causing seiches. Landslides can relocate river channels. Landslides and debris flows can also impact water quality and the storage capacity of surface water reservoirs used to store potable water.

Landslides, debris flows, and mud flows impacts vary by location and severity of any given event and will likely only affect certain areas of the District susceptible to landslide. Based on the risk assessment, there is potential for significant landslides to occur in the District. Most, but not all, of the historic landslides in the District have been minor, localized events that are more of a nuisance than a disaster. Impacts that are not quantified, but can be anticipated in large future events, include:

- Injury and loss of life;
- Disruption of and damage to public infrastructure, utilities, and services;
- Damage to roads/bridges resulting in loss of mobility; and
- Significant economic impact (jobs, sales, tax revenue) to the community.

Impacts to identified assets at risk to this hazard and the overall vulnerability of the District may be affected in the future by climate change (which was discussed in the hazard profile above), changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. These are discussed in the Future Conditions/Future Development discussion below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on this for the District include the following:

- Climate change is likely to exacerbate future landslide, mudslide, and debris flow conditions and associated impacts and vulnerability of the District to landslide.
- Population projections for the area served by the District show the population to be shrinking, which limits additional impacts to the District. The District noted it has no control over population changes, it merely reacts to them by providing additional (or reduced) services.
- It is unknown how changes in land use and development will affect landslide in the District. Building that occurs in the VI or higher deep seated landslide classes may increase risk to additional lands. County building codes are in effect to reduce this risk and should be updated as necessary to continue to address future landslide or erosion conditions.

Future Development

The District owns no property and has no plans to build facilities in the future. As such, the District's facilities will not be at future risk to this hazard. Since the District shares the same boundaries as the unincorporated County, future conditions in the District regarding land use, migration, population changes, and climate change are the same as those in Section 4.3.14 of the Base Plan.

Wildfire (with smoke and air quality)

Likelihood of Future Occurrence—Highly Likely

Vulnerability—Extremely High

Hazard Profile

Wildland fire and the risk of a conflagration is an ongoing concern for the FRRCD. Throughout California, communities are increasingly concerned about wildfire safety as increased development in the foothills and mountainous areas and subsequent fire control practices have affected the natural cycle of fire regimes. Wildland fires affect grass, forest, and brushlands, as well as structures. Where there is human access to wildland areas, the risk of fire increases due to a greater chance for human carelessness and historical fire management practices. Historically, the fire season extends from early spring through late fall of each year during the hotter, dryer months; however, in recent years, the risk of wildfire has become a year around concern.

Fire conditions arise from a combination of high temperatures, low moisture content in the air and fuel, accumulation of vegetation, and high winds. These weather conditions can result in red flag (e.g., fire weather) days, and can result in PSPS events in the District. While wildfire risk has predominantly been associated with more remote forested areas and wildland urban interface (WUI) areas, significant wildfires also occur in more populated developed areas. There is also the concern of wildfires occurring in these more remote, forested areas, that under certain weather conditions, can extend into areas not generally considered at a high risk to wildfire. Smoke and air quality also become an issue, both from fires occurring inside and outside of the Plumas County Planning Area and the District.

Wildfire Smoke and Air Quality

Smoke from wildfires is made up of gas and particulate matter, which can be easily observed in the air. Air quality standards have been established to protect human health with the pollutant referred to as PM2.5 which consists of particles 2.5 microns or less in diameter. These smaller sizes of particles are responsible for adverse health effects because of their ability to reach the lower regions of the respiratory tract.

Wildfire smoke can have negative effects to those who live in or near a fire burn area. Smoke and air pollution from wildfires can be a severe health hazard. Significant wildfires occurring in both Plumas County, nearby northern California communities, and elsewhere have created significant air pollution affecting area residents. This was the case during the 2021 Caldor Fire, as well as others that affected the Plumas County Planning Area.

Location and Extent

Wildfire can affect all areas of the District. CAL FIRE has estimated that the risk varies across the District and has created maps showing risk variance. Following the methodology described in Section 4.3.16 of the Base Plan, wildfire maps for the FRRCD were created. Figure C-3 shows the CAL FIRE State Responsibility Areas (SRA) and Federal Responsibility Areas (FRA) and their associated Fire Hazard Severity Zones (FHSZ) in the District. Figure C-4 shows the CAL FIRE Local Responsibility Areas (LRA)

and their associated Fire Hazard Severity Zones (FHSZ) in the District. As shown on the maps, FHSZs within the District range from Non-Wildland to Very High.

Figure C-3 FRRCD – CAL FIRE SRA/FRA Fire Hazard Severity Zones

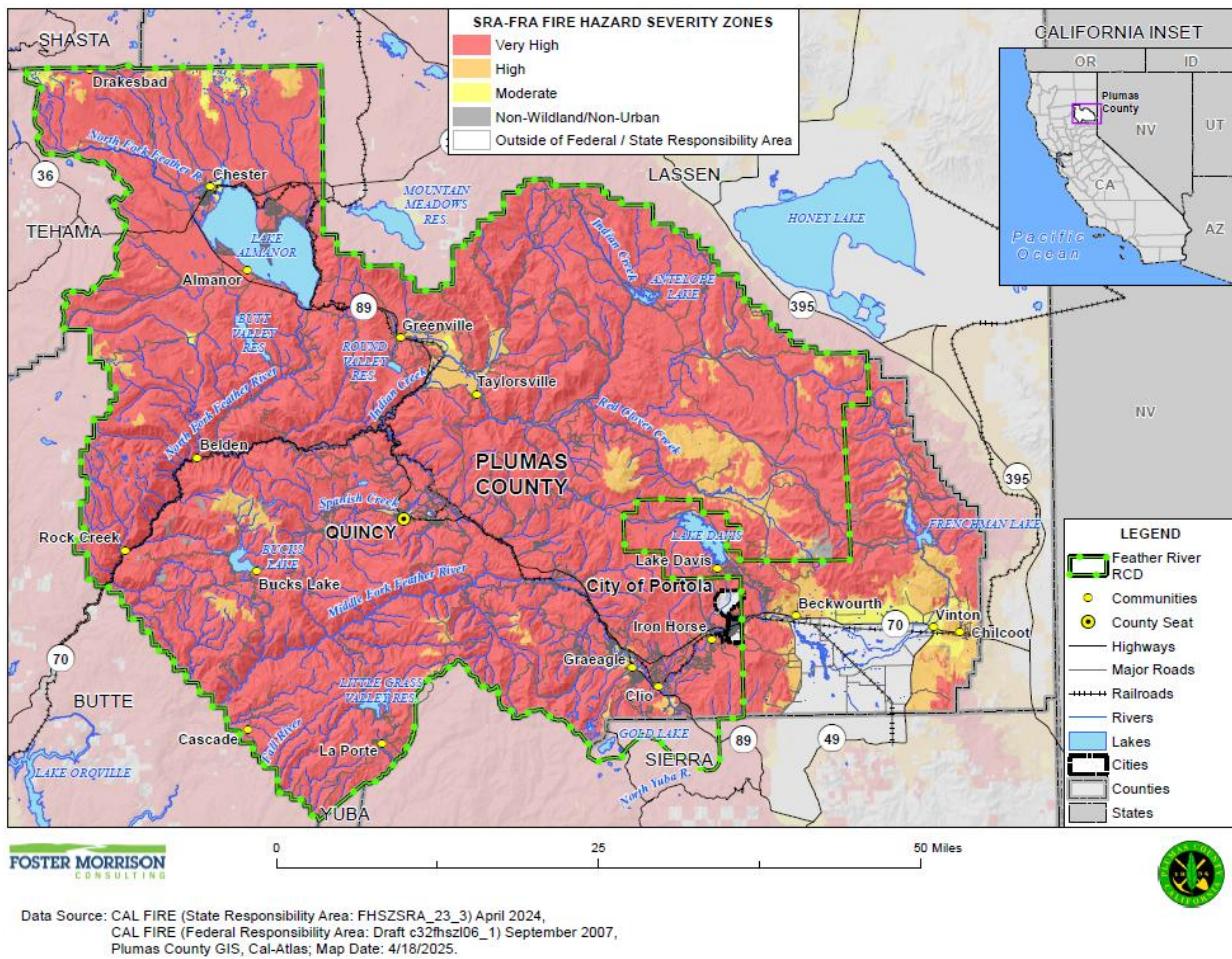
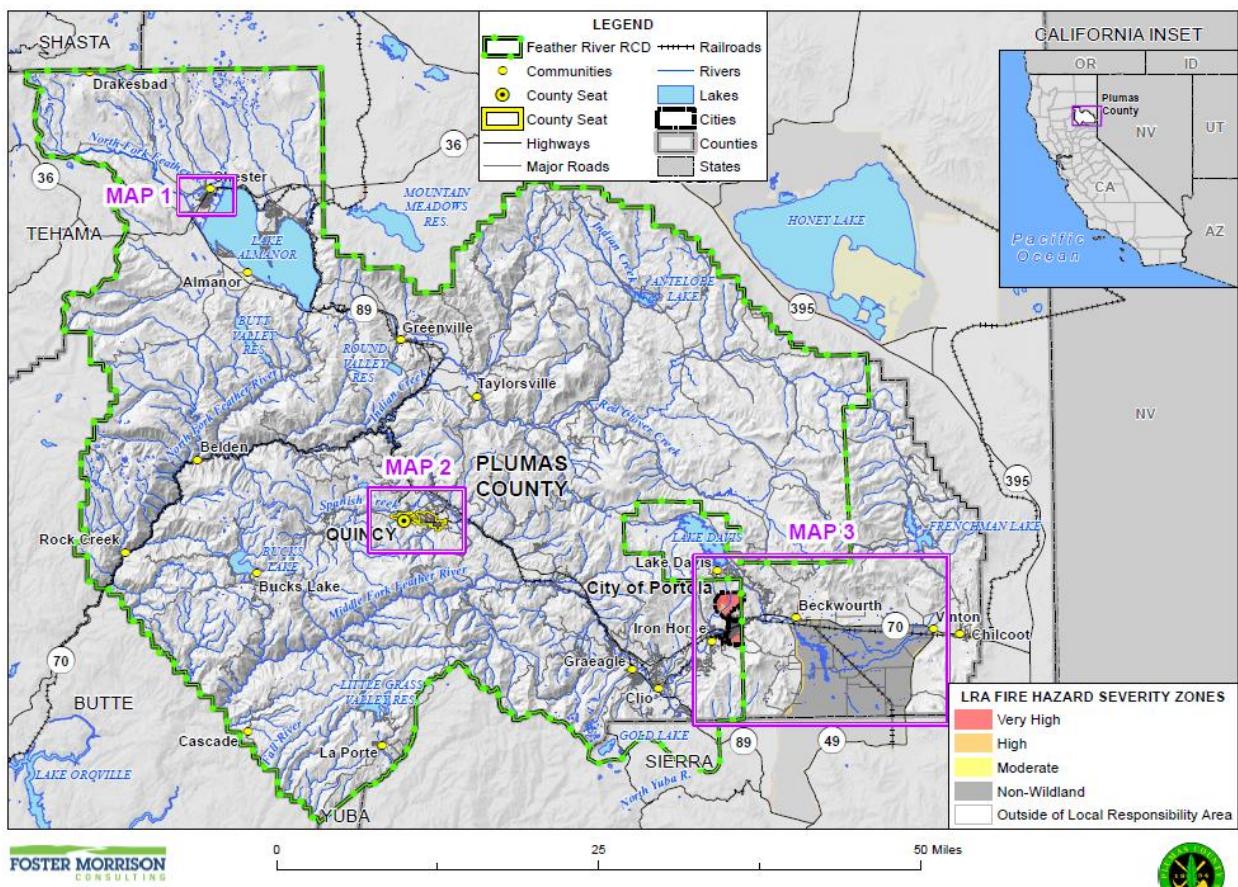


Figure C-4 FRRCD – CAL FIRE LRA Fire Hazard Severity Zones



Wildfires tend to be measured in structure damages, injuries, and loss of life as well as on acres burned. Fires can have a quick speed of onset, especially during periods of drought or during hot dry summer months. Fires can burn for a short period of time or may have durations lasting for a week or more. Geographical FHSZ extents in the SRA/FRA are shown in Table C-5, while extents in the LRA are shown on Table C-6.

Table C-5 FRRCD – CAL FIRE SRA/FRA Fire Hazard Severity Zone Geographical Extents

Fire Hazard Severity Zones	Total Acres	% of Total Acres	Improved Acres	% of Total Improved Acres	Unimproved Acres	% of Total Unimproved Acres
Very High	1,344,176	92.3%	35,015	75.5%	1,309,161	92.8%
High	72,737	5.0%	8,079	17.4%	64,658	4.6%
Moderate	27,825	1.9%	145	0.3%	27,680	2.0%
Non-Wildland/Non-Urban	6,838	0.5%	0.01	0.00003%	6,838	0.5%

Fire Hazard Severity Zones	Total Acres	% of Total Acres	Improved Acres	% of Total Improved Acres	Unimproved Acres	% of Total Unimproved Acres
Outside of Federal / State Responsibility Area	5,197	0.4%	3,151	6.8%	2,046	0.1%
Grand Total	1,456,773	100.0%	46,390	100.0%	1,410,383	100.0%

Source: CAL FIRE

Table C-6 FRRCD – CAL FIRE LRA Fire Hazard Severity Zone Geographical Extents

Fire Hazard Severity Zones	Total Acres	% of Total Acres	Improved Acres	% of Total Improved Acres	Unimproved Acres	% of Total Unimproved Acres
Very High	4,479	0.3%	2,683	5.8%	1,796	0.1%
High	563	0.04%	389	0.8%	175	0.01%
Moderate	107	0.01%	54	0.1%	53	0.004%
Non-Wildland	51	0.004%	29	0.1%	23	0.002%
Outside of Local Responsibility Area	1,451,047	99.6%	43,235	93.2%	1,407,812	99.9%
Grand Total	1,456,248	100.0%	46,389	100.0%	1,409,859	100.0%

Source: CAL FIRE

Past Occurrences

Disaster Declaration History

There has been eight state and six federal disaster declarations due to fire, as shown in Table C-7.

Table C-7 Plumas County – State and Federal Wildfire Disaster Declarations 1950-2025

Disaster Type	State Declarations			Federal Declarations	
	Count	Years		Count	Years
Fire	8	1960 (unnamed), 1987(Clarks Fire), 1999 (Bucks Fire), 2020 (twice – Bear Fire, North Complex Fire), 2021 (three – Dixie Fire, Monument Fire, Lava Fire/Beckwourth Complex)		6	1999 (Bucks Fire), 2008 (BTU Lightning Complex), 2020 (twice – Bear Fire, North Complex Fire), 2021 (twice – Dixie Fire, Lava Fire/Beckwourth Complex)

Source: Cal OES, FEMA

NCDC Events

The NCDC has tracked 15 wildfire events in the County dating back to 1993. Many more fires have occurred, but were not reported to the NCDC database.

FRRCD Events

The wildfire events affecting the District are the same as those affecting the planning area as a whole. These were discussed in Section 4.3.15 of the Base Plan.

Climate Change and Wildfire

It is likely that climate change will increase the chance of future occurrence as well as future impacts from wildfire. More information on future impacts to the District can be found in the Future Conditions/Future Development section of the Vulnerability Assessment below.

Warmer temperatures can exacerbate drought conditions. Drought often kills plants and trees, which serve as fuel for wildfires. Warmer temperatures could increase the number of wildfires and pest outbreaks, such as the western pine beetle. Cal-Adapt's wildfire tool predicts the potential increase in the amount of burned areas for the year 2090-2099, as compared to recent (2010) conditions. This is shown in Section 4.3.16 of the Base Plan. Based on this model, Cal-Adapt predicts that wildfire risk in Plumas County will increase moderately at the end of the century. However, wildfire models can vary depending on the parameters used. Cal-Adapt does not take landscape and fuel sources into account in their model. In all likelihood, in the Plumas County Planning Area, precipitation patterns, high levels of heat, topography, and fuel load will determine the frequency and intensity of future wildfire.

Vulnerability to Wildfire

Risk and vulnerability to the District from wildfire is of significant concern. Wildfires that occur in the District occur from a variety of both natural and manmade causes. The District can be affected both by fires that start on or near District lands as well as those that start elsewhere and move into the District. In addition to burning large areas of land, air quality can be affected in the District by smoke from fires occurring inside the District as well as those from many miles away.

The whole of the District is at some measure of vulnerability to wildfire. An assessment of a community's vulnerability to wildfire begins with an understanding of local exposure to wildfire. This is included in the Local Concerns section below followed by a discussion of the District's Assets at Risk to this hazard.

Local Concerns

The District has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

The District noted that wildfire has affected approximately 60% of Plumas County since 2019. It has caused catastrophic loss of property, loss of tourism, and agricultural damage. Wildfire has resulted in mandatory evacuations, loss of property, loss of infrastructure, displaced communities.

The 2023 Plumas County Fuels Treatment Project Report noted that 150+ years of fire suppression, overstocking timber stands, and fire suppression have resulted in forest conditions across California with high levels of surface and ladder fuels. In Plumas County, the consequences of these conditions are readily

apparent in recent fire history. Wildfires since 2000 have burned 76% of Plumas county (1,284,129.9 acres). Since 2017, about 60% (1,010,340 acres) of Plumas County have burned in wildfires. The three most recent fires (2021 Dixie Fire, 2021 Beckwourth Complex, and the 2020 North Complex fire) burned 55% of Plumas County (932,362 acres). Plumas County is a mosaic of high severity-burn areas, shrub dominant regeneration areas, unburned areas with high fuel loads, private industrial timberland, and Plumas National Forest fuels reduction projects. Many unburned areas are still vulnerable, and planning efforts struggle to keep pace with environmental conditions. Further, the FRRCD planning team noted that wildfire has caused catastrophic loss of property, loss of tourism, and agricultural damage. Wildfire has resulted in mandatory evacuations, loss of property, loss of infrastructure, and displaced communities.

Insects, drought, and disease can affect trees in isolated stands or in residential areas. Early identification of these can improve safely removing these trees before they cause a hazard. Often trees in residential areas are costly to remove. Early identification and financial support would improve community response and reduce the risk of limbs or entire trees falling naturally and causing damage.

Finally, the realities of climate change have exacerbated the wildfire season in both duration and severity. Increasing average temperatures and an abundance of fuels have rendered California extremely vulnerable to wildfire threat.

Assets at Risk

Assets at risk from this hazard include people and populations served; structures and critical facilities; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

All populations (both District staff and Service Area populations) are at some vulnerability to wildfire. Certain vulnerable populations are at greater risk to the effects of wildfire as well as smoke and air quality issues that wildfires bring. Vulnerable populations include the unhoused , infants and children under age five and their caregivers, the elderly (65 and older), individuals with disabilities, individuals' dependent on medical equipment, individuals who exercise, recreate, or work (like District staff) outdoors, and individuals with impaired mobility.

Structures and Critical Facilities and Infrastructure

The District owns no facilities, so there are no structures or critical facilities at risk to this hazard.

Natural, Historic, and Cultural Resources

Natural, historic, and cultural resources located within areas at risk to wildfire would be vulnerable. Should a wildfire occur in the District, the impacts to natural, historic and cultural resources could be extensive and include air pollution, contamination from water runoff containing toxic products, other environmental discharges or releases from burned materials affecting soils, habitat areas, wildlife, and aquatic resources, and total destruction of natural resources. Debris and runoff from burned areas can affect reservoirs and rivers in the District. Historic and cultural resources can be damaged or destroyed and are often more

vulnerable due to their older age, construction type, and lack of fire prevention infrastructure such as sprinklers.

Impacts from Wildfire

Potential impacts from wildfire include loss of life and injuries; damage to structures, critical facilities and infrastructure, and other improvements, natural and cultural resources, croplands, and timber; and loss of recreational opportunities. Out of control wildfires can have catastrophic impacts. Wildfires can cause short-term and long-term disruption to the District. Fires can have devastating effects on watersheds through loss of vegetation and soil erosion, which may impact the District by changing runoff patterns, increasing sedimentation, reducing natural and reservoir water storage capacity, and degrading water quality. Fires can also affect air quality in the District; smoke and air pollution from wildfires can be a severe health hazard. Smoke impacts may come from wildfires outside the District, as well as from within.

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

The impacts of a fire are felt long after the fire is extinguished. In addition to the loss of property in fires, the loss in vegetation and changes in surface soils alters the environment. When supporting vegetation is burned, hillsides become destabilized and prone to erosion. The burnt surface soils are harder and absorb less water. When winter rains come, this leads to increased runoff, erosion, and landslides in hilly areas.

Wildfire smoke can also have negative effects to those who live in or near a fire burn area. Smoke and air pollution from wildfires can be a severe health hazard. Significant wildfires occurring in nearby northern California communities since the previous LHMP have created significant air pollution affecting area residents. District residents have been affected by wildfire smoke and poor air quality, from fires both within the County and from those much further away.

Impacts to identified assets at risk to this hazard and the overall vulnerability of the District may be affected in the future by climate change (which was discussed in the hazard profile above), changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. These are discussed in the Future Conditions/Future Development discussion below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on this for the FRRCD include the following:

- Climate change is likely to exacerbate future wildfire conditions and associated impacts and vulnerability of the District to wildfire.
- Population projections for the area served by the District show the population to be shrinking, which limits additional impacts to the District. The District noted it has no control over population changes, it merely reacts to them by providing additional (or reduced) services.
- Changes in land use and development in the District are expected to be limited in the near future and thus would have possible associated wildfire impacts to the District. Additional development traditionally leads to additional fires. In addition, adherence to protective building codes for new development will also assist in limiting future impacts and associated vulnerabilities of the District to this hazard. With adherence to development standards, future losses to new development should be minimal.

The District will take wildfire into account when siting new facilities. Fire hydrants, defensible space, well production, water storage, and distribution should all be considered when assessing future development. New facilities will be built to the most current California Building standards for wildfire.

Future Development

The District owns no property and has no plans to build facilities in the future. As such, the District's facilities will not be at future risk to this hazard. Since the District shares the same boundaries as the unincorporated County, future conditions in the District regarding land use, migration, population changes, and climate change are the same as those in Section 4.3.15 of the Base Plan.

C.5 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation education, outreach, and partnerships, and other mitigation efforts.

C.5.1 Regulatory Mitigation Capabilities

Table C-8 lists regulatory mitigation capabilities, including planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place in the FRRCD. ***Fill out relevant portions table and make sure to address the notes (third) column and the last cell of the table. The final table cell needs to be filled out as well.***

Note: The District does not have the authority to regulate land use and development within its jurisdiction. Authority for promulgating and enforcing zoning, land use, and development requirements falls to counties and incorporated communities. As such development within the District's jurisdictional boundaries will

conform to the zoning and land use development ordinances and building codes of the county or incorporated community in which the District is located.

Table C-8 FRRCD's Regulatory Mitigation Capabilities

Plans	In Place Y/N	Does the plan address hazards? Can the plan be used to carry out mitigation actions? When was it last updated??
Capital Improvements Plan		
Climate Change Adaptation Plan		
Community Wildfire Protection Plan		
Comprehensive/Master Plan		
Continuity of Operations Plan		
Economic Development Plan		
Land Use Plan		
Local Emergency Operations Plan		
Stormwater Management Plan		
Transportation Plan		
Other		
Land Use Planning and Ordinances	Y/N	Is the ordinance an effective way to reduce hazard impacts? Is the ordinance adequately administered and enforced?
Acquisition of land for open space and public recreation use		
Building code		
Flood insurance rate maps		
Floodplain ordinance		
Natural hazard-specific ordinance (stormwater, steep slope, wildfire)		
Subdivision ordinance		
Zoning ordinance		
Other		
How can these capabilities be expanded and improved to reduce risk?		
FILL OUT HOW CAPABILITIES CAN BE EXPANDED.		

Source: FRRCD

C.5.2. Administrative/Technical Mitigation Capabilities

Table C-9 identifies the District department(s) responsible for activities related to mitigation and loss prevention in the FRRCD. ***Fill out relevant portions table and make sure to address the notes (third column and the last cell of the table. Much of this will not apply to you as the District. Fill out the areas that do apply to you. The final table cell needs to be filled out as well.***

Table C-9 FRRCD's Administrative and Technical Mitigation Capabilities

Administration	In Place Y/N	Describe capability Is coordination effective?
Staff		Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?
Chief Building Official		
Civil Engineer, including dam and levee safety		
Community Planner		
Emergency Manager		
Floodplain Administrator		
GIS Coordinator		
Planning Commission		
Other		
Technical	Y/N	Has capability been used to assess/mitigate risk in the past?
Grant writing		
Hazard data and information		
GIS analysis		
Mutual aid agreements		
Other		
How can these capabilities be expanded and improved to reduce risk?		
FILL OUT HOW CAPABILITIES CAN BE EXPANDED.		

Source: FRRCD

C.5.3. Fiscal Mitigation Capabilities

Table C-10 identifies financial tools or resources that the District could potentially use to help fund mitigation activities. **Fill out relevant portions table and make sure to address the notes (third) column and the last cell of the table. The final table cell needs to be filled out as well.**

Table C-10 FRRCD's Fiscal Mitigation Capabilities

Funding Resource	In Place Y/N	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital improvements project funding		
Community Development Block Grant		

Funding Resource	In Place Y/N	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Federal funding programs (non-FEMA)		
Fees for water, sewer		
Capacity fees for new development		
State funding programs		
Stormwater utility fee		
Other		
How can these capabilities be expanded and improved to reduce risk?		
FILL OUT HOW CAPABILITIES CAN BE EXPANDED.		

Source: FRRCD

C.5.4. Mitigation Education, Outreach, and Partnerships

Table C-11 identifies education and outreach programs and methods already in place that could be/or are used to implement mitigation activities and communicate hazard-related information. **Fill out relevant portions of the table and make sure to address the notes (third) column and the last cell of the table. The final table cell needs to be filled out as well.**

Table C-11 FRRCD's Mitigation Education, Outreach, and Partnerships

Program/Organization	In Place Y/N	How widespread are each of these in your community?
Community newsletters		
Hazard awareness campaigns (such as Firewise, Storm Ready, Severe Weather Awareness Week, school programs, public events)		
Local news		
Organizations that interact with underserved and vulnerable communities		
Social media		
How can these capabilities be expanded and improved to reduce risk?		
FILL OUT HOW CAPABILITIES CAN BE EXPANDED.		

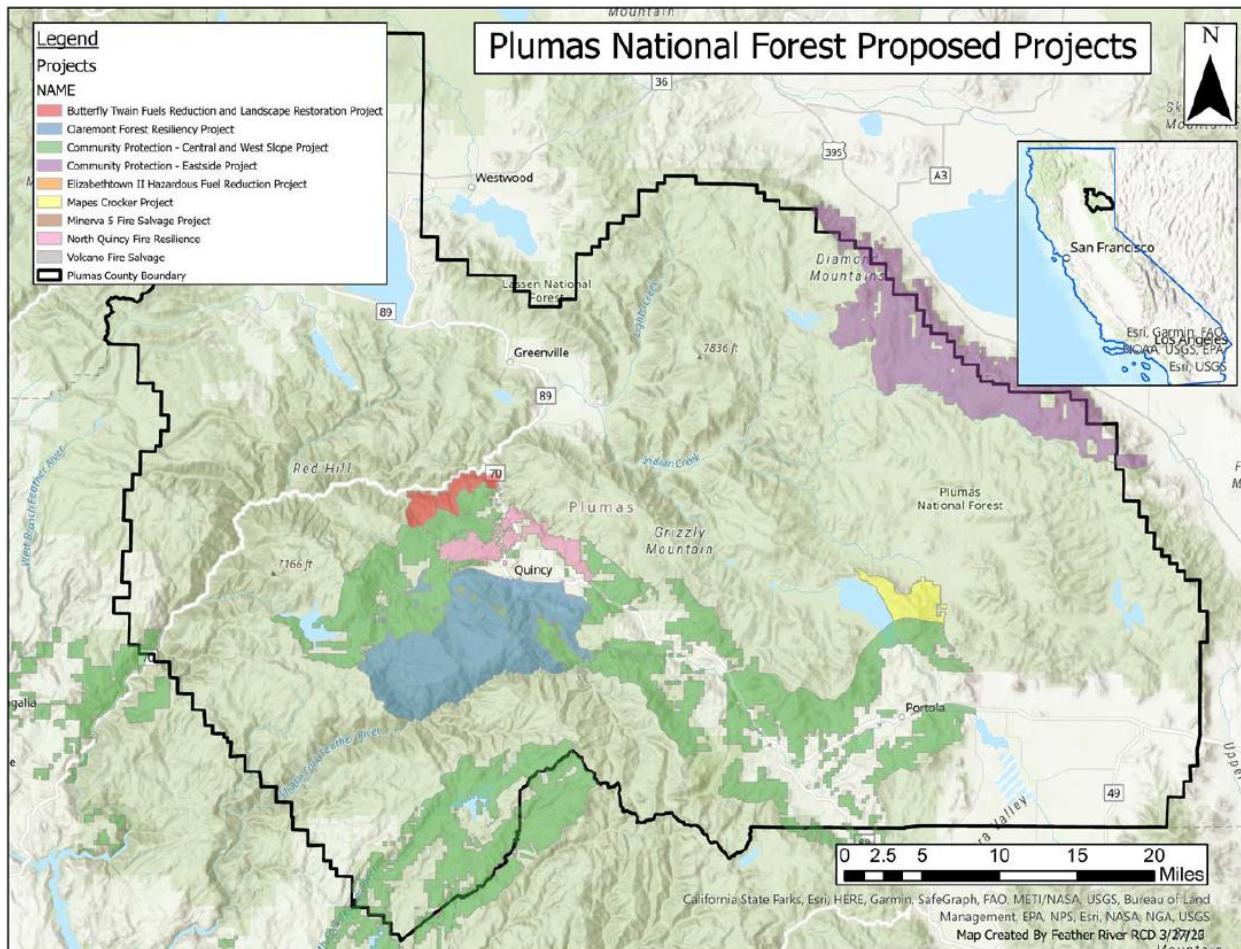
Source: FRRCD

C.5.5. Other Mitigation Efforts

The District has many other completed or ongoing mitigation projects/efforts that include the following:

The 2023 Plumas County Fuels Treatment Project Report noted multiple fuels treatment projects in the County. This can be seen on Figure C-5. It also details fuels reduction projects by community. More detail can be found in the Project Report, but a list of communities seeing projects can be found on Figure C-6.

Figure C-5 Plumas National Forest Proposed Fuel Treatment Projects



Source: 2023 Plumas County Fuels Treatment Project Report

Figure C-6 Fuels Reduction Efforts in Communities

Beckwourth	11
Bucks Lake	13
Butterfly Valley	15
Canyondam	17
Chester	19
Chilcoot & Vinton	21
Clarks Creek	23
Crescent Mills	25
C-Road	27
Cromberg & Sloat	30
Dixie Valley	32
Genesee Valley	34
Gold Mountain & Iron Horse	36
Graeagle	39
Greenhorn & Spring Garden	42
Greenville	45
Grizzly Ranch	47
Indian Falls	49
Johnsville & Red Dirt Road	51
Keddie	53
Lake Almanor	55
East Shore & Hamilton Branch	55
Lake Almanor Peninsula	57
Lake Almanor West Shore	59
Lake Davis	61
La Porte & Little Grass Valley	64
Layman Bar	66
Mabie	68
Massack	70
Meadow Valley	72
Mohawk & Plumas Eureka	74
Mohawk Vista	76
Nelson Point	78
North Arm Indian Valley	80
Portola & Delleker	82
Quincy	84
Seneca	86
Taylorsville	88
Twain	90
Valley Ranch	92
Warner Valley & North Fork Feather River headwaters	94
Whitehawk	96

CAN THE DISTRICT PROVIDE A LIST OF PAST HAZARD MITIGATION TYPE PROJECTS AND ACTIVITIES THAT HAVE BEEN IMPLEMENTED BY HAZARD. INCLUDE ANY NOTABLE HAZARD RISK REDUCTION MEASURES.

C.6 Mitigation Strategy

C.6.1. Mitigation Goals and Objectives

The FRRCD adopts the hazard mitigation goals and objectives developed by the HMPC and described in Chapter 5 Mitigation Strategy.

C.6.2. NFIP Mitigation Strategy

The District does not participate in the NFIP, as it is not an eligible participant. Many of the District's projects work to reduce impacts from flooding thus furthering the objectives of the NFIP.

C.6.3. Mitigation Actions

The Planning Team for the FRRCD identified and prioritized the following mitigation actions based on the risk assessment. Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, potential funding, , and timeline are also included. The following hazards were considered a priority for purposes of mitigation action planning based on criteria detailed in Chapter 5:

- Climate Change
- Floods: Localized Stormwater
- Landslide, Mudslide, and Debris Flow
- Wildfire (w/smoke and air quality)

Non-priority hazards for mitigation planning include:

- Agricultural Hazards (Severe Weather/Pests/Invasive Species)
- Dam Failure
- Drought & Water shortage
- Earthquake
- Floods: 1%/0.2% annual chance
- Hazardous Materials Transport
- Severe Weather: Extreme Cold, Freeze, and Snow (w/avalanche)
- Severe Weather: Extreme Heat
- Severe Weather: Heavy Rain and Storms (Wind, Hail, Lightning)
- Severe Weather: High Winds and Tornado
- Volcano

It should be noted that many of the projects submitted by each jurisdiction in Table 5-4 in the Base Plan benefit all jurisdictions whether or not they are the lead agency. Further, many of these mitigation efforts are collaborative efforts among multiple local, state, and federal agencies. In addition, the countywide public outreach action, as well as many of the emergency services actions, apply to all hazards regardless of hazard priority. Collectively, this LHMP's multi-jurisdictional mitigation strategy includes only those actions and projects which reflect the actual priorities and capacity of each jurisdiction to implement over the next 5-years covered by this plan. It should further be noted, that although a jurisdiction may not have specific projects identified for each priority hazard for the five year coverage of this planning process, each jurisdiction has focused on identifying those projects which are realistic and reasonable for them to implement and would like to preserve their hazard priorities should future projects be identified where the implementing jurisdiction has the future capacity to implement.

Mitigation Actions

Action 1. Ecological Restoration

Hazards Addressed: Multi Hazard – Climate Change, Floods: Localized Stormwater, Landslide, Mudslide, and Debris Flow, and Wildfire (w/smoke and air quality)

Goals Addressed: 1, 2, 3,4, 5, 6, 7, 8, 9

Issue/Background (Problem Statement): Disaster can have negative impacts on ecosystems, including changing vegetation type, introducing noxious weeds, increasing erosion and sedimentation, and reduced or altered wildlife habitat.

Project Description: This project would make efforts to restore ecosystems to pre-disaster conditions or similar attainable conditions. Actions could include reforestation, revegetation, streambank stabilization, noxious weed removal, herbicide applications, or dead tree removal.

Other Alternatives: None

Existing Planning Mechanism(s) through which Action Will Be Implemented: Plumas CWPP, Plumas Hazardous Fuels Assessment (2025), Plumas National Forest, Lassen National Forest

Responsible Office/Partners: County, City, Feather River RCD, Plumas Firesafe Council, Plumas National Forest, Lassen National Forest, Plumas Underburn Cooperative

Benefits (Losses Avoided): Restores habitat and ecological functions following disasters or extreme weather events

Potential Funding (Local Budgets, Grant Funds, etc.): Grants, local budgets, volunteerism

Timeline: 2026-2031

Project Priority (High, Medium, Low): High

Action 2. Plumas Public Emergency Outreach Program

Hazards Addressed: Multi Hazard – Climate Change, Floods: Localized Stormwater, Landslide, Mudslide, and Debris Flow, and Wildfire (w/smoke and air quality)

Goals Addressed: 1, 2, 3,4, 5, 6, 7, 8, 9

Issue/Background (Problem Statement): A lack of public awareness of disaster preparation. Plumas county residents should be informed about preparations to make in advance of a disaster. Educational programs will encourage self sufficiency and reliance allowing responders more bandwidth to assist in an emergency.

Project Description: This project will offer workshops, training, and educational materials targeted towards citizens on topics that would help reduce damages caused by disasters.

Other Alternatives: Online resources. Educational videos

Existing Planning Mechanism(s) through which Action Will Be Implemented: Plumas VOAD, stakeholder groups, county agencies

Responsible Office/Partners: County, City, Feather River RCD, Plumas Firesafe Council, volunteer fire departments, University of California Cooperative Extension

Benefits (Losses Avoided): Increases public self reliance, reduces burden on first responders

Potential Funding (Local Budgets, Grant Funds, etc.): Grants, local budgets, donations

Timeline: 2026-2031

Project Priority (High, Medium, Low): High

Action 3. Fuels and Vegetation Management

Hazards Addressed: Wildfire (w/smoke and air quality)

Goals Addressed: 1, 2, 3, 4, 5, 6, 7, 8, 9

Issue/Background (Problem Statement): Plumas County is a high wildfire risk area. Management of flammable materials reduces the intensity of fires and therefore the potential damage.

Project Description: This project would implement actions to manage and reduce fuel (primarily vegetation) buildup in communities and surrounding ecosystems. Actions could include thinning with machinery or hand tools, prescribed fire, grazing, chipping or other fuel rearrangement, defensible space programs, and home hardening (replacing flammable materials with fire resistant ones).

Other Alternatives: None

Existing Planning Mechanism(s) through which Action Will Be Implemented: Plumas CWPP, Plumas Hazardous Fuels Assessment (2025), Plumas National Forest, Lassen National Forest

Responsible Office/Partners: County, City, Feather River RCD, Plumas Firesafe Council, volunteer fire departments, Plumas National Forest, Lassen National Forest, Plumas Under burn Cooperative

Benefits (Losses Avoided): Reduced damages from fire

Potential Funding (Local Budgets, Grant Funds, etc.): Grants, local budgets, volunteerism

Timeline: 2026-2031

Project Priority (High, Medium, Low): High

Action 4. Plumas Backup Generator and Air Purifier Loan Program

Hazards Addressed: Multi Hazard – Climate Change, Floods: Localized Stormwater, Landslide, Mudslide, and Debris Flow, and Wildfire (w/smoke and air quality)

Goals Addressed: 1, 2, 3, 4, 5, 6, 7, 8, 9

Issue/Background (Problem Statement): Disasters causing loss of power. Wildfire smoke causing health impacts. Lack of tools to address this problem for vulnerable populations.

Project Description: This project would purchase generators and air purifiers that could be loaned to citizens or businesses during emergencies.

Other Alternatives: Outside agency resources

Existing Planning Mechanism(s) through which Action Will Be Implemented: Plumas VOAD, stakeholder groups, county agencies

Responsible Office/Partners: County, City, Feather River RCD, Plumas Firesafe Council, volunteer fire departments,

Benefits (Losses Avoided): Continuous electricity, reduced harm from smoke inhalation,

Potential Funding (Local Budgets, Grant Funds, etc.): Grants, local budgets, donations

Timeline: 2026-2031

Project Priority (High, Medium, Low): High

Action 5. *Tree Mortality Tracking and Removal*

Hazards Addressed: Multi Hazard

Goals Addressed: 1, 2, 3, 4, 5, 6, 7, 8, 9

Issue/Background (Problem Statement): Insects, drought, and disease can affect trees in isolated stands or in residential areas. Early identification of these can improve safely removing these trees before they cause a hazard. Often trees in residential areas are costly to remove. Early identification and financial support would improve community response and reduce the risk of limbs or entire trees falling naturally and causing damage.

Project Description: This project would establish a tree mortality tracker, it would provide waivers or cost share to landowners to remove trees showing signs of disease or insect infestation. It would provide technical assistance in the form of consultations with ISA certified arborists and would provide services to remove trees.

Other Alternatives: Private insurance

Existing Planning Mechanism(s) through which Action Will Be Implemented: Plumas CWPP, Plumas Hazardous Fuels Assessment (2025), Plumas National Forest, Lassen National Forest

Responsible Office/Partners: County, City, Feather River RCD, Plumas Firesafe Council, volunteer fire departments, Plumas National Forest, Lassen National Forest, Plumas Underburn Cooperative

Benefits (Losses Avoided): Unexpected or unplanned tree/ limb falling and causing damage, particularly during storm or wind events.

Potential Funding (Local Budgets, Grant Funds, etc.): Grants, local budgets, volunteerism

Timeline: 2026-2031

Project Priority (High, Medium, Low): High