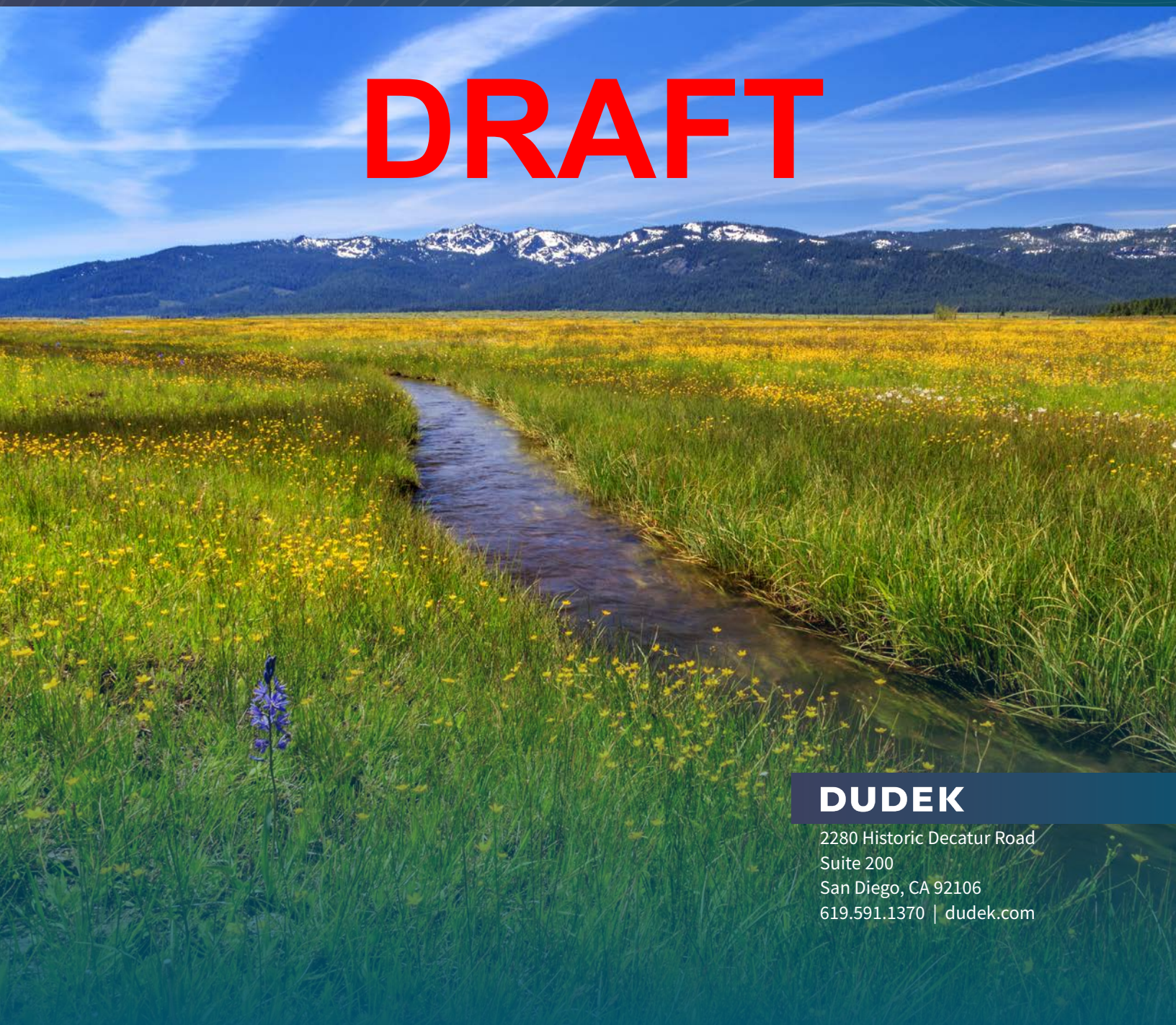
COUNTY OF LASSEN

Safety Element

NOVEMBER 2022



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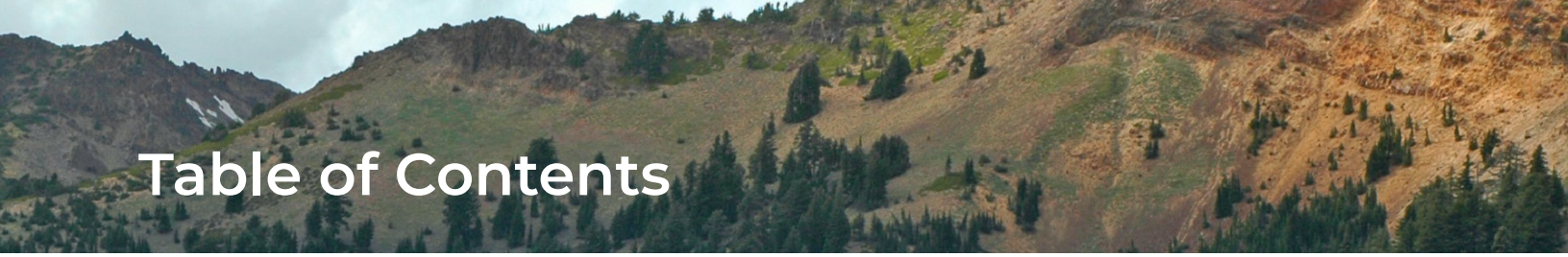


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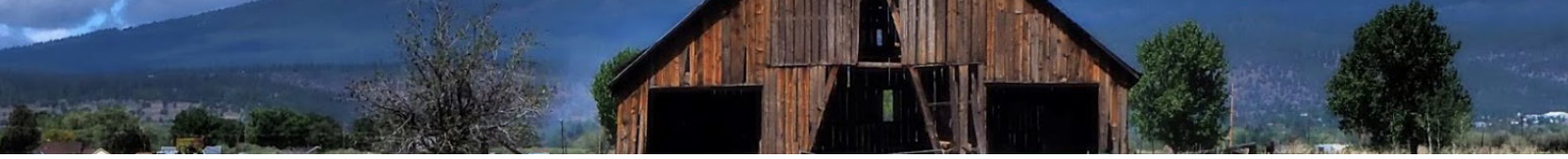
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1. Introduction

This Safety Element addresses natural and human-caused hazards in Lassen County, and the potential short- and long-term risk to human life, property damage, and economic and social dislocation resulting from hazard events, including earthquakes, energy shortages and outages, extreme heat, flooding, and wildfire. This is one of seven General Plan Elements required by State law (Government Code 65302). Because climate change affects and potentially exacerbates the impact of hazards, this Safety Element also addresses climate change within each hazard section, in accordance with Senate Bill 379 and as applicable.

CRITICAL ASSETS

Critical assets are pieces of infrastructure that are important to the regular functioning and emergency responses services for a community. These can include roads, first responder facilities, and other community buildings.

VULNERABLE POPULATIONS

Vulnerable populations are groups of people likely to be affected by hazards because they need assistance evacuating, have special medical needs, or may have a more difficult time rebuilding or otherwise recovering from a hazard.

This Safety Element is organized to first describe each hazard impacting Lassen County followed by a section describing the hazards impacting each of the County of Lassen's (County) unincorporated communities.[1] For each community, this Safety Element describes each hazard, and identifies **critical assets**, **vulnerable populations**, evacuation routes, and key issues. Finally, a Goals, Policies, and Actions section provides the County's safety roadmap to 2040, including a comprehensive hazard mitigation and emergency response strategy. Goals, policies, and actions are organized by four planning phases to comprehensively enhance the County's resilience: mitigate, prepare, respond, and adapt.

While there are multiple hazards this Safety Element does not analyze, ***this Safety Element incorporates and augments the analysis and policies contained in the Lassen Hazard Mitigation Plan (LHMP).*** The LHMP for the County of Lassen was developed in accordance with the Disaster Mitigation Act of 2000 (DMA 2000) and followed FEMA's Local Hazard Mitigation Plan guidance. The LHMP incorporates a process where hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions are developed to reduce or eliminate hazard risk. The implementation of these mitigation actions, which include both short and long-term strategies, involve planning, policy changes, programs, projects, and other activities. LHMP's are consistently updated, but the most recent LHMP as of January 2019 can be found here:
http://www.lassencounty.org/sites/default/files/departments/office_of_emergency_services/Lassen%20County%20LHMP%20approved_1%2015%202019.pdf

This Safety Element directly relates to topics in the Land Use, Circulation, Natural Resources, and Open Space Elements of the General Plan. The Safety Element identifies hazards and hazard abatement provisions to guide land use decisions related to zoning, subdivisions, and entitlement permits. The Safety Element also addresses emergency response and evacuation routes, which informs the Circulation Element to ensure that streets are sized adequately for fire truck access and other needs of first responders. The Safety Element also addresses how to manage resource use, including community forests to mitigate hazard events, which correlate with the Natural Resources and Open Space Elements.

1 Communities were identified by the U.S. Census Bureau and County staff to represent established communities that plan and respond to hazard events through volunteer community fire departments, community service districts, or other resident organization.

HAZARDS IN LASSEN COUNTY

Earthquakes and Geologic Hazards

ALQUIST-PRIOLO EARTHQUAKE FAULT ZONES

The Alquist-Priolo Special Studies Zone Act (1994) defines an active fault as one that has ruptured in the last 11,000 years, and the act provides mapping resources for the public to strengthen awareness and prevent unsafe construction in these areas.

Earthquakes are sudden ground-shaking events caused by the release of pressure in the earth. This quick release of pressure poses a safety risk to both people and structures due to the unpredictability of magnitude and timing. Earthquakes can occur without warning. There are no U.S. Geological Survey–approved methods of predicting a major earthquake before the event occurs, and therefore, earthquake events pose a major threat to structures and people. It is currently only possible to calculate the probability that a major earthquake event will occur in an area within a given number of years, making long-term earthquake forecasts unreliable and often incorrect.[2]

Active faults are identified by the U.S. Department of Conservation, and construction of new development is prohibited in areas around them to prevent repetitive loss of structures and threats to the safety of occupants. These unsafe areas around active faults, generally 50 feet, are regulatory zones referred to as **Alquist-Priolo earthquake fault zones**. Three communities (Milford, Herlong, and Doyle) in Lassen County have Alquist-Priolo zones (see **Figure 1-1, Earthquake Hazards in Lassen County**).

In addition to earthquakes, building on steep slopes, expansive soils, and other unstable areas can lead to structures at risk of damage from landslides or liquefaction.

Energy Shortages and Outages

Energy shortages and outages can impact various systems, including electricity, potable water, wastewater, natural gas, communications, and more. These shortages and outages can occur on their own, or be triggered by hazards like wildfires, floods, or severe weather. Shortages and outages can also be human induced. For example, during an extreme heat event, energy companies may conduct planned power outages to reduce wildfire risk, or shortages may occur if the community requires too much energy at any one time and overloads the distribution network.

The Lassen Municipal Utility District (LMUD), Plumas Sierra Rural Electric Cooperative (PSREC), PG&E, and Surprise Valley Electrification Corporation supply power to Lassen County.[3] Pacific Gas & Electric (PG&E) provides LMUD with electricity through two PG&E-owned transmission lines and is also the direct energy provider to a northwestern part of the County. The Caribou line is the primary line and the Hat Creek line is the secondary line. The Hat Creek line is only used as a backup if the Caribou line were to go out; however, the use of the Hat Creek line would cause rolling blackouts across Lassen County. Honey Lake Power is another potential source of backup power for LMUD customers. This biomass electrical generation facility sells its power to San Diego Gas & Electric generally, but also sells power to LMUD when the PG&E transmission line

2 USGS (U.S. Geological Survey). 2020. "Can You Predict Earthquakes?" Accessed July 16, 2020. https://www.usgs.gov/faqs/can-you-predict-earthquakes?.

3 Lassen County, City of Susanville, and Susanville Indian Rancheria. 2019. Hazard Mitigation Plan. January 2019. http://www.lassencounty.org/sites/default/files/departments/office_of_emergency_services/Lassen%20County%20LHMP%20approved_1%2015%202019.pdf.

Figure 1-1. Earthquake Hazards in Lassen County



goes down. In 2018 during the Camp Fire, Honey Lake Power was the only power generator available and supported LMUD customers for 21 days.[4] Furthermore, PSREC has a solar array located in Herlong which is available to provide backup power to PSREC customers.[5]

Climate change will impact energy demand. Energy-intensive equipment, such as air conditioning, could create significant spikes in energy demand at times. Climate change will also increase the frequency and intensity of many hazards, including more intense or frequent severe storms, flooding, and wildfires, which could cause transmission line failures.

Other factors may also pose threats to energy supply. For example, rockslides, snow, or seismic hazards could cause issues and lead to unexpected outages. Public Safety Power Shutoffs (PSPS) are also possible. These are power shutoffs implemented when severe weather occurs. In the event of a potential PSPS, a PSPS outage watch notifies residents up to two days prior, followed by an outage warning one day prior. One area of special concern is the Feather River Canyon, just outside of the County. The transmission lines that serve the County are connected there, but the County has no jurisdiction over this area. County coordination with PG&E is important for the continued operation and maintenance in this key area.

Communications Outages

The County and its community members rely on various data networks and infrastructure to conduct regular activities and emergency response. Hazards like fires or earthquakes can impact this communication infrastructure and create larger cascading impacts related to emergency response, evacuations, and more. Applicable communications infrastructure and their uses are outlined on **Table 1-1.**



4 Greenleaf Power. 2021. “Honey Lake Power.” https://greenleaf-power.com/honey-lake/

5 Plumas-Sierra Rural Electric Co-Op. 2020. “Community Solar.” https://www.psrec.coop/energy/solar/

Table 1-1. Communications Infrastructure

Communications Infrastructure		Uses and Users	Issues or Needs
Sheriff Radio		This is the dispatch, car-to-car, and handheld radios used by County and City of Susanville law enforcement units.	See Mountain Tops for Detailed Information.
Public Safety Radio Network	Shaffer Mountain	Mountain top repeater site used by Sheriff's Office. Primary radio communications for Sheriff Radio.	Supplemental batteries, inverter, solar, and generator power are needed improvements.
	Courthouse Annex	Serves as a direct link between Shaffer Mountain and the Susanville Repeater. Also is home to an untested backup IP radio system.	Physical keys and the alarm code are needed off hours to access the facility. The backup IP radio system needs testing to determine capacity.
	Hamilton Mountain	Mountain top repeater site used by Sheriff's Office. Brings signal to Sheriffs Office from partner agency.	This site is state-owned with county equipment co-located on it, which presents challenges. The county-owned infrastructure lacks back-up power and structural integrity.
	Little Antelope Mountain	Mountain top repeater site used by Sheriff's Office. Has IP network connections to three sites.	Site requires lease from USDA.
	Black Mountain	Mountain top repeater site used by Sheriff's Office. Has an IP connection to Shaffer Mountain and the Jail Annex.	Needs a base station.
	Jail Annex	Received Public Safety Radio signals from Black Mountain via converted IP signal to Dispatch consoles. This site offers easy access to send and receive signals via the IP Radio network to Little Antelope Mountain and Black Mountain.	None
	Fredonyer Peak	Mountain top repeater site used by Sheriff's Office.	None
	Likely Mtn	Mountain top repeater site used by Sheriff's Office.	Shared with Modoc County.
	Widow Mountain	Mountain top repeater site used by Sheriff's Office.	None
	West Prospect	Mountain top repeater site used by Sheriff's Office.	Shared with Modoc and Plumas County
Leased Private Fiber		This is fiber owned by private telecommunications companies. The public utilize this system.	Need redundancies to prevent community islanding.
Outlying Area Fiber		Leased point-to-point fiber with Westwood, Bieber, and Herlong.	None
County-Owned Fiber		Fiber owned by the County which transmits between County facilities or leased locations.	None
IP Radio		A back-up radio system for the Courthouse campus and Sheriff's Office. Used if an outage occurs on the leased private fiber hub.	None
GSM or CDMA		Phones, routes, tablets and other devices connected by cellular data use this.	None
Frontier PRI		The database of phone numbers needed to have long distance calls.	This system has a single connection and has failed several times in recent years. A phone system augmentation is needed to remediate reliance on this single network connection.
Frontier Internet		This is a connection to the internet via Redding, CA. This connection carries Verizon, AT&T, US Cellular, and Frontier Communications (home phones).	This has suffered extended outages, and creates extensive impacts to County community members when it's down.
Plumas-Sierra Telecom Internet		This is another connection to the Internet via Reno, NV.	None

Source: County of Lassen, 2022.

Extreme Cold and Snow

Extreme cold occurs when tempratures fall far below freezing and can result in health complications and hospitalizations. Extreme cold can also cause infrastructure failures and agricultural impacts. When accompanied by snow, many of the issues can be compounded to impact health, buildings, transportation, and communication. Cold temperatures vary throughout the county, based mainly on elevation. Temperatures can reach freezing conditions at any point in the year. Generally, the majority of the County will experience single-digit temperatures annually, but only some areas will experience temperatures below zero degrees Fahrenheit, and usually only for a few days a year. Individuals are generally vulnerable to this hazard due to physical sensitivities such as age or preexisting conditions. As it relates to snow, buildings and infrastructure can also be vulnerable. Certain roads are seasonally closed due to snow, and ocassionally mountain passes west of Susanville on Highway 36 are closed. Road closures can lead to issues with emergency response by residents nd first responders. Snow also impacts access to the mountain top communications infrastructure listed on **Table 1-1**. Power infrastructure can be similarly impacted by snow or energy surges from elevated electric heating needs (see Energy Shortages and Outages, above).

Related to climate change, extreme cold is likely to become less of a concern in Lassen County in the coming century. Annual average daily minimum temperatures (the average of the coldest temperatures for every day in a year) are projected to increase between 4- and 10-degrees Fahrenheit over the next 80 years, depending on the climate model used. Climate change is also expected to impact snow, with temperature increases over time likely causing a shift in some snow events becoming rain instead. This does not mean that these extreme cold or snow events will disappear entirely, but they are not expected to get more frequent in the future.

Extreme Heat

Extreme heat events are hot days, warm nights, or heat waves that can result in heat-related illness and hospitalization. Extreme heat is measured locally as communities are acclimatized to their historic environment. In Lassen County, temperatures can range depending on where you are, but for the purposes of this element extreme heat days will be considered days that exceed 100°F.[6] Heat waves are periods of time where consecutive days exceed 100°F.

Extreme heat occurs most often in the summer in Lassen County. Climate change is expected to increase the average temperature year-round, including the frequency of extreme heat days. Depending on the climate model used, extreme heat days are projected to occur 2 to 10 times more often than historic averages.[7] Additionally, historic heat waves lasted 2.8 days on average and are projected to increase to 8.2 days on average by 2050.

Flooding

Flooding is caused by increased rain, causing rivers and urban drainage basins to fill and overflow. Increased flooding occurs when rain occurs over a shorter time period, even if there is less overall rain, because the soil does not have enough time to absorb the rainfall. Flooding occurs in low-lying areas near lakes and

6 Cal-Adapt. 2020. "Extreme Heat Days & Warm Nights." Accessed January 1, 2021. https://cal-adapt.org/tools/extreme-heat/.

7 Cal-Adapt. 2020. "Extreme Heat Days & Warm Nights." Accessed January 1, 2021. https://cal-adapt.org/tools/extreme-heat/.

other waterways. Generally, the floodplain most often refers to the area that would be inundated by a 100-year flood, or the flood that has a 1% chance of occurring in any year.[8] To further illustrate, a property in the floodplain has a 26% chance of being flooded at least once over the course of a 30-year mortgage. Due to this high risk, property owners in the 100-year flood plain are required by Federal Emergency Management Agency (FEMA) to purchase flood insurance. The 500-year floodplain is the area that has a 0.2% chance of being flooded on annual basis. Flood insurance is not required in the 500-year flood zone. Flooding occurs in the winter months when Lassen County receives the most rain. Climate change is predicted to increase the number of extreme rain events, when large amounts of rain fall over a short period of time, which does not allow it to infiltrate into the ground. Additional factors that have impacted flooding in Lassen County include snowpack melt, natural and manmade chokepoints in drainages, and ice jams. There are floodplains throughout Lassen County where common flooding occurs (see **Figure 1-2, Flood Zones in Lassen County**). In addition to regular flooding from precipitation, dam failures can cause a form of flooding called dam inundation. Only specific communities are downstream from dams in Lassen County. As such, further information on dam inundation in the County can be found in the Community Profiles.

Wildfire

Wildfires are most commonly caused by two sources: humans (through the use of electrical equipment and vehicles), or lightning. They are known to spread more quickly on dry, windy days and move more easily in an uphill direction and in areas with higher-density vegetation, which can be impacted by vegetation or timber management. Major land managers for fire risk areas in proximity of Lassen County include Lassen, Plumas, and Modoc National Forests, as well as the Bureau of Land Management. Wildfires are a natural and important part of the ecosystem, but can become more intense and dangerous as a result of climate change and inadequate land management. Lassen County's Board of Supervisors has expressed concerns to land managers about inadequate land management across the county in the past. Climate change is likely to increase the number of large fires in the region, which are more difficult to control and can pose serious threats to rural communities with limited evacuation routes. When analyzing wildfire risks, State law requires the identification of critical assets, developed areas, and planned uses in **Very High Wildfire Hazard Severity Zones (VHWFSZs)** and **State Responsibility Areas (SRAs)** (see **Figure 1-3, Wildfire Hazard Severity Zones in Lassen County**). Wildfire severity zones serve to prioritize the most at-risk areas and outline the policies in areas where the State is financially responsible for wildfire. In addition to mapping VHWFSZs and SRAs, State law requires that historical wildfires are mapped to provide a historical context (see **Figure 1-4, Historic Wildfires in Lassen County**). Depending on the location of the fire, local, state, or federal firefighting agencies

VERY HIGH WILDFIRE HAZARD SEVERITY ZONES (VHWFSZS)

Very High Wildfire Hazard Severity Zones are those most at risk. Inclusion within these zones is based on vegetation density, slope severity and other relevant factors that contribute to fire severity.

STATE RESPONSIBILITY AREAS (SRAS)

The State Responsibility Area (SRA) is the area of the state where the State of California is financially responsible for the prevention and suppression of wildfires. SRA does not include lands within city boundaries or in federal ownership.

8 USGS (U.S. Geological Survey). 2020. "Floods and Recurrence Intervals."

can hold jurisdiction. The majority of Lassen County is covered by state and federal jurisdiction, but some subsets of the County are covered by local fire departments (see **Figure 1-5, Fire Protection Responsibility**). There are also response capabilities by other organizations such as the Sierra Army Depot in Herlong and the California Department of Corrections & Rehabilitation at the California Correctional Center in Susanville. The Susanville Interagency Fire Center (SIFC) acts as a dispatching center that is able to coordinate with the various responders. In addition, certain communities in Lassen County have their own recognized fire districts with various levels of full time and volunteer fire fighters.

The Lassen County Fire Protection Districts are listed here:

- Big Valley Fire Protection District
- Clear Creek Community Services District
- Doyle Fire Department
- Herlong Fire Department
- Janesville Fire Department
- Lake Forest Fire Department
- Little Valley Community Service District
- Madeline Fire Department
- Milford Fire Department
- Spalding Fire Department
- Standish-Litchfield Fire Department
- Stones Bengard Community Services District
- Susan River Fire Protection District
- Susanville City Fire Department
- Westwood Fire Department
- Hallelujah Junction Fire Protection District

These fire districts are discussed in the subsequent Community Profiles for applicable communities, and further information about Lassen County's local fire districts can be seen on Lassen County's LAFCo website.[9] Additional fire protection services are not anticipated, as the County is projected to experience slow declines in population through 2060.[10] As populations decline, obtaining adequate funding and finding volunteers for fire departments may become larger issues.

Separate from fire protection are fire mitigation and preparedness activities. Depending on property ownership and other factors, various parties can contribute to the implementation of mitigation and preparedness activities. Wildfire Protection Plans act as a way to organize fire mitigation and preparedness projects. Lassen County's Wildfire Protection Plan is developed by Lassen Fire Safe Council, Inc., and more specific Community Wildfire Protection Plans have been developed for communities within Lassen County. These plans are listed below and can be found at the Lassen Fire Safe Council, Inc's website (https://www.lassenfiresafecouncil.org):

- Lassen County Community Wildfire Protection Plan
- Standish Litchfield CWPP
- Richmond Gold Run Johnstonville CWPP
- Ravendale Termo CWPP
- Pittville CWPP
- Madeline CWPP
- Herlong CWPP
- Doyle CWPP
- Bieber-Nubieber CWPP

9 Lassen County LAFCo. (2020). *Fire Protection Districts*. Retrieved October 8, 2021, from https://www.lassenlafco.org/uploads/1/1/4/5/11454087/a_lassen_fire-msr-soi_2020_d5_w_maps.pdf.

10 California Department of Finance. (2021). *County Population Projections 2010-2060*. Projections. Retrieved October 20, 2021, from https://www.dof.ca.gov/Forecasting/Demographics/Projections/.

Figure 1-2. Flood Zones in Lassen County

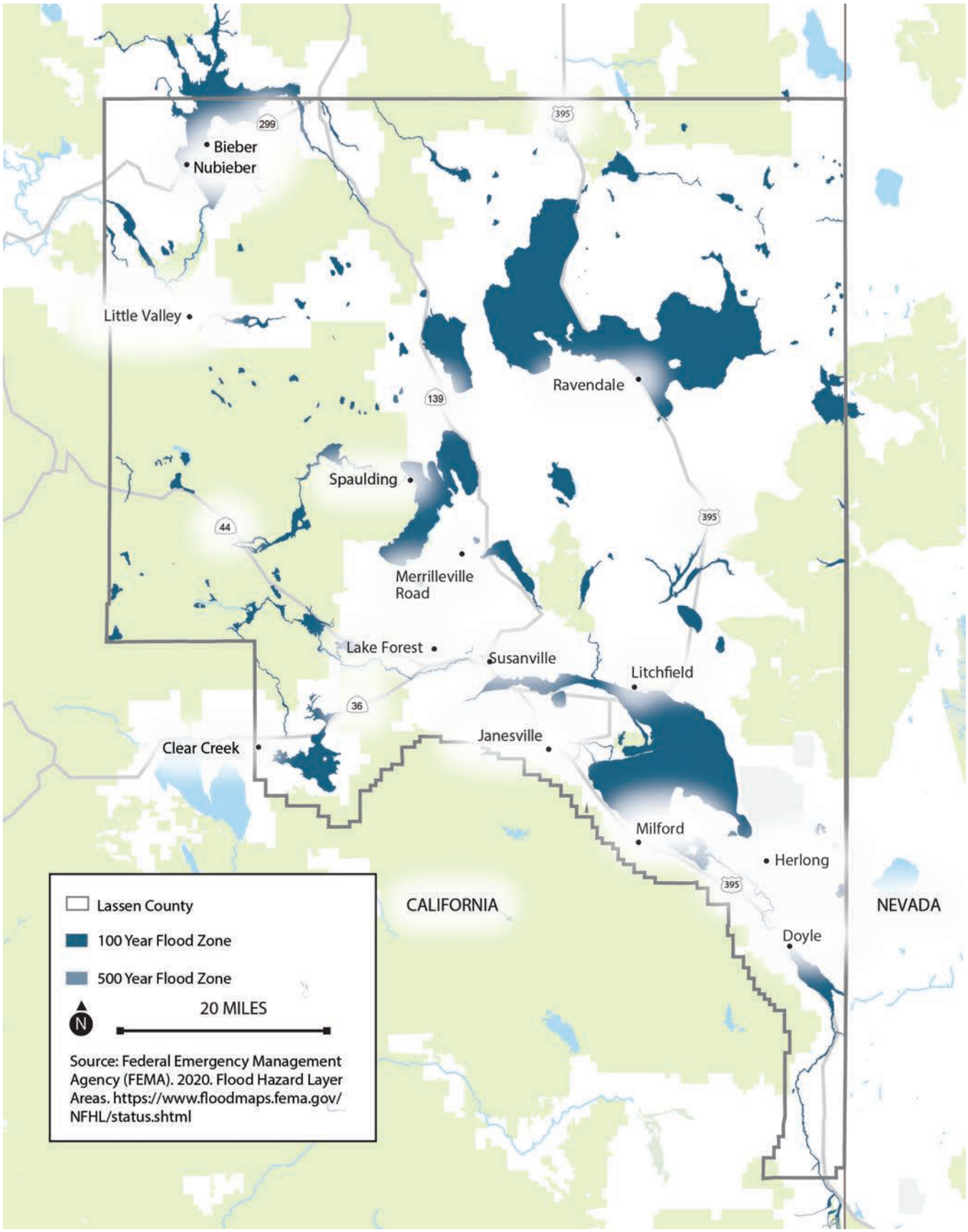


Figure 1-3. Wildfire Hazard Severity Zones in Lassen County

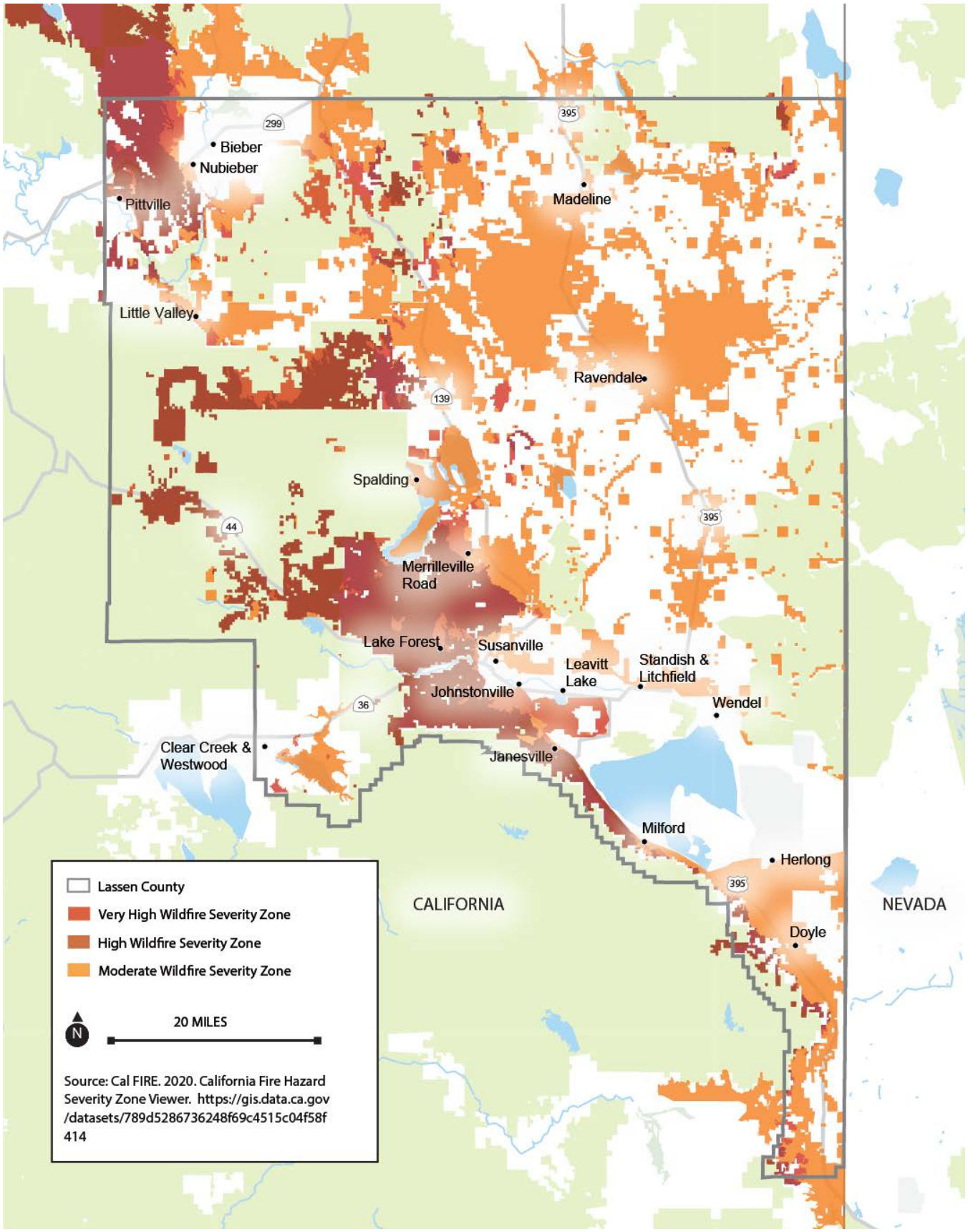


Figure 1-4. Historic Wildfires in Lassen County

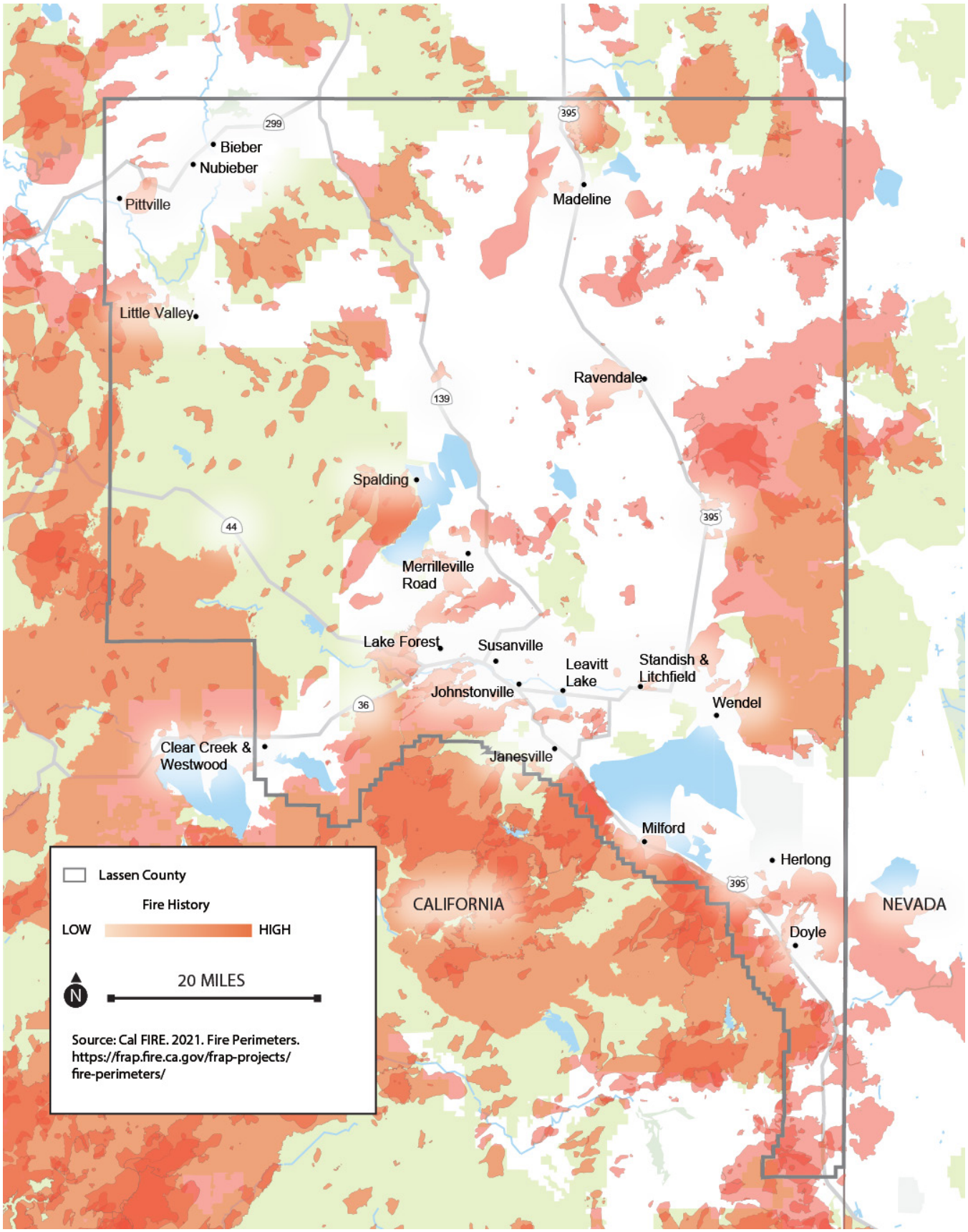
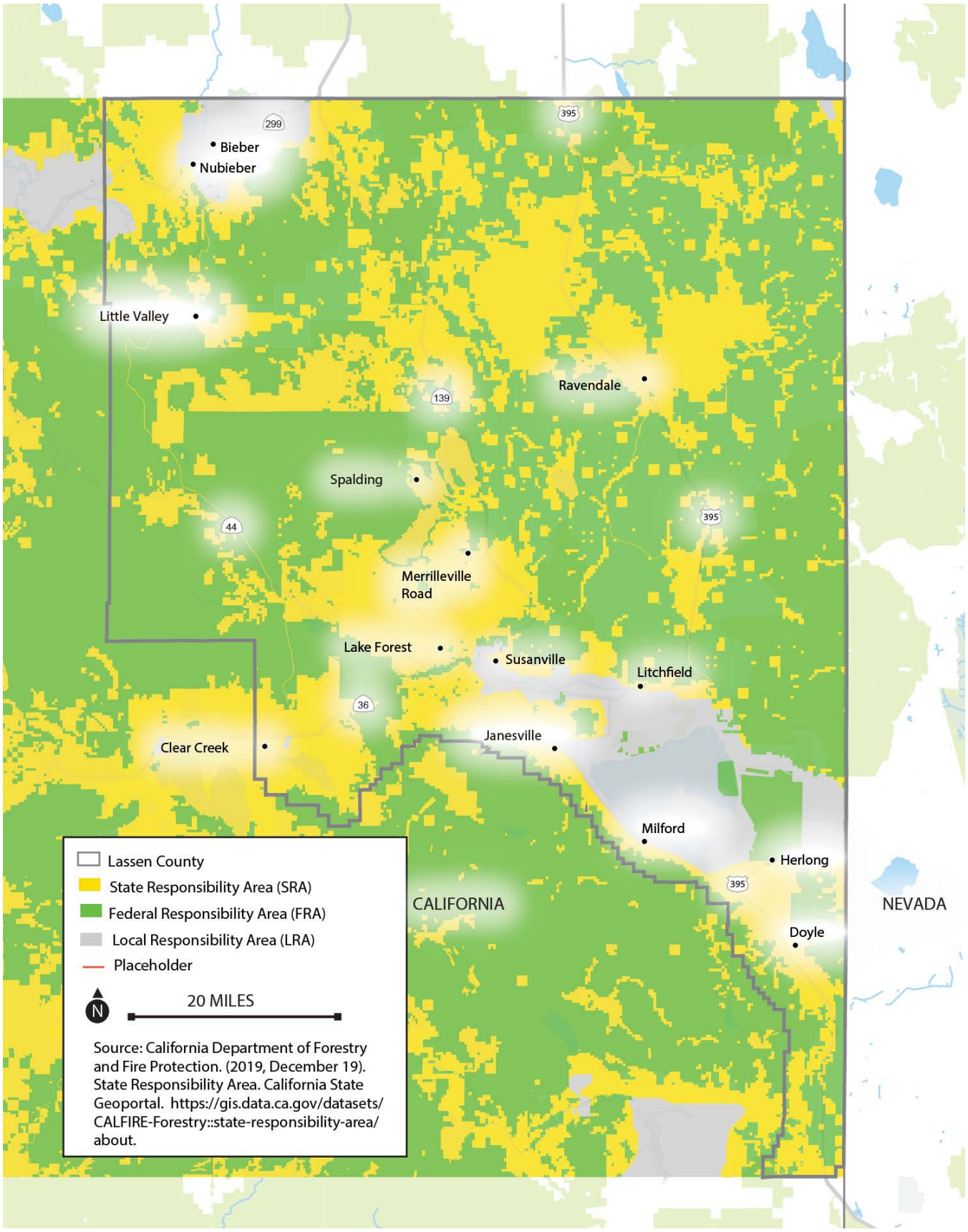


Figure 1-5. Fire Protection Responsibility





2. Community Profiles

Lassen County is composed of multiple unincorporated communities, often separated by large swaths of forest and natural lands. In recognition that these communities are often far apart with their own identities, needs, and emergency responses, the risk to each of these communities is addressed individually, while the goals, policies, and actions will apply Countywide, and are prioritized where noted. All communities in Lassen County, with the exception of the City of Susanville and tribal communities, are under the jurisdiction of the County.

Each community profile includes six main sections: introduction, hazard assessment, critical assets, vulnerable populations, evacuation routes, and summary of findings. Each section is explained below before the community profiles are provided.

Introduction

This section provides a basic overview of the community, including where it is located, the population, and the most pressing issues in the community.

HAZARD ASSESSMENT

It is impossible to know when a hazard will occur and the damage that it will cause; however, based on historical events and forecasted role of climate change, it is possible to identify which hazards pose the greatest risk to a community. Each hazard has an expected **probability** that is assessed as high, medium, or low. Extreme cold and snow, included in the countywide assessment, is not included in this assessment as there is not community-specific data on this hazard.

PROBABILITY

A hazard has a high probability if is expected to occur by 2050, a medium probably if it could happen by 2050, and low if it is unlikely to occur because there is no history of the hazard occurring the community.



COMMUNITY CAPACITY

Once it is understood how likely it is for a hazard to occur, it is important to understand how the community will respond and adapt to an impact. Community capacity is low if a hazard would affect everyone and basic functions, medium if the hazard would only affect vulnerable people and supporting function, and high if the hazard would not cause major impact to anyone or community function. Community capacity is analyzed by understanding the critical assets and emergency response, vulnerable populations, and evacuation routes, each described in detail below.

Critical Assets and Emergency Response

Critical assets are pieces of infrastructure that are important to the regular functioning and emergency response services for a community. These can include roads, first responder facilities, and other important community buildings. These assets need to be protected from hazards to ensure people can evacuate, find shelter, and recover from hazards. Each community profile lists each critical asset in the community and the relevant hazards that could threaten it. Current emergency response and critical assets are examined, and population impacts on emergency services are currently evaluated on a project-by-project basis through the development review process.

COMMUNITY CAPACITY

LOW – most or all critical assets could not function in a hazard because they are located in a hazard zone and lack necessary fortification.

MEDIUM – many assets could function in a hazard event, maintaining flexible response

HIGH – all assets could function as intended

Vulnerable Populations

Vulnerable populations are groups of people likely to be more affected by hazards because they need assistance evacuating, have special medical needs, or have a more difficult time rebuilding or otherwise recovering from a hazard. Each community profile lists the proportion of those populations in the community compared to the whole County. If there is a large proportion of a vulnerable population in a community, special considerations should be made in hazard response.

COMMUNITY CAPACITY

LOW – a community includes many vulnerable members of a community and does not have specific plans to address their hazard response needs.

MEDIUM – a community includes vulnerable members, but has a plan to respond to their specific hazard response needs

HIGH – a community does not have vulnerable populations.

Evacuation Routes

Evacuation routes are the major roads used to escape during a hazard event. If these roads are vulnerable to hazards, or there is only one way in and out of a community, people could become trapped. Maintenance of evacuation routes is enforced by the County and provided by the particular road's owner, which varies between the County, the California Department of Transportation (Caltrans), private owners, and other agencies.

COMMUNITY CAPACITY

LOW – All evacuation routes are unusable in hazard event

MEDIUM – Evacuation routes require additional maintenance or planning to function

HIGH – Multiple evacuation routes outside hazard areas

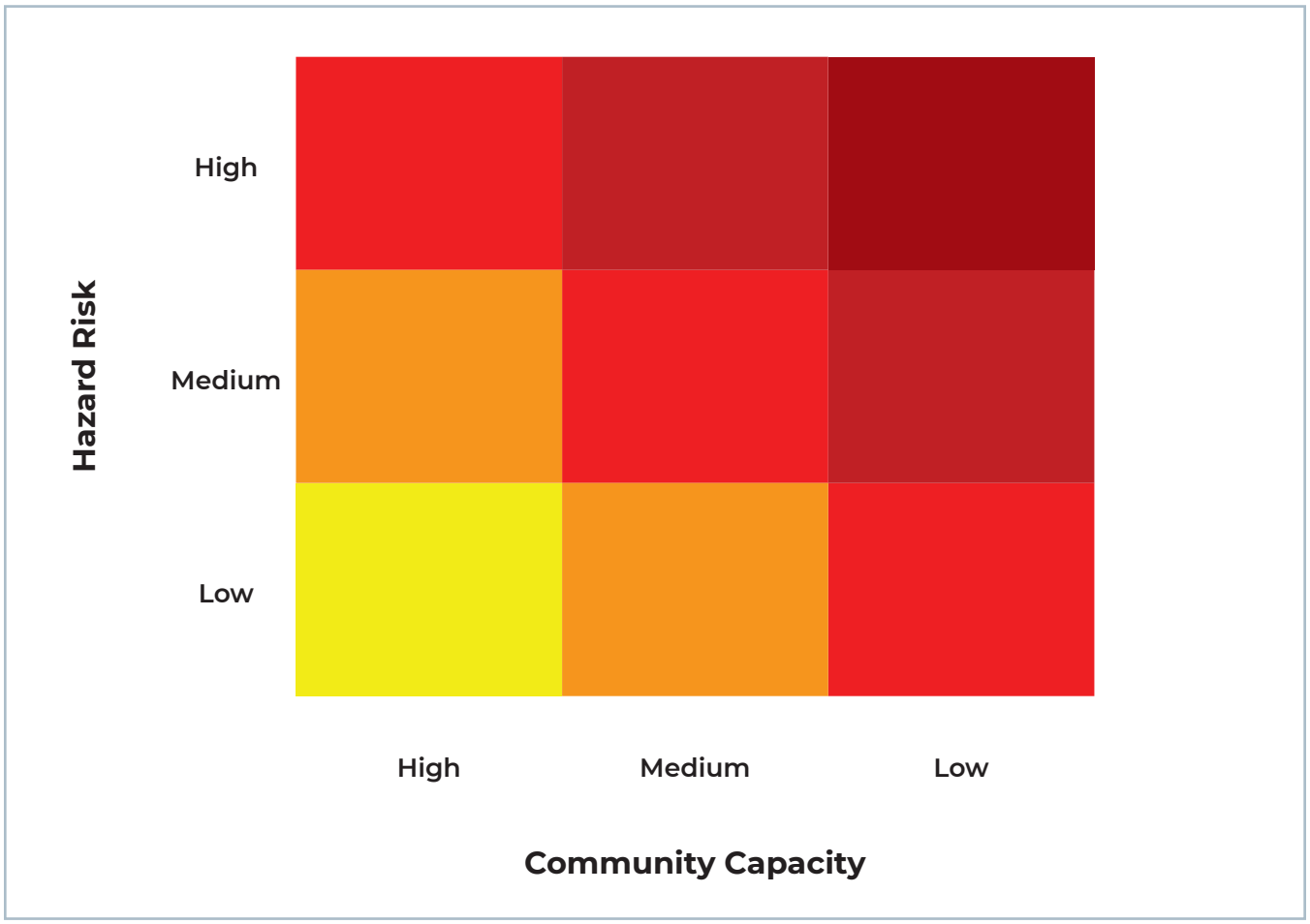
SUMMARY OF FINDINGS

For each relevant hazard that is ranked as a **priority** in the hazard assessment, a detailed assessment and maps are included to provide a more robust and custom risk analysis. For each hazard a risk and community capacity score are assessed. By combining these scores, the County can understand which hazards are likely to cause the most potential damage and disruption in the next 30 years (see **Figure 2-1, Example Hazard Risk**). This informs how the goals, policies, and actions are prioritized and implemented.

PRIORITY

A priority hazard is one that could occur in the next 30 years and would likely result in a medium impact (see Figure 5). This is indicated in the hazard assessment by scoring at least a "medium" in probability and potential impact.

Figure 2-1 – Example Hazard Risk



BIEBER

Introduction

Bieber is a community in northern Lassen County situated along the Pit River. As of 2019, 156 people call Bieber their home.[1] The community of Bieber is most at risk of wildfire and energy shortage and outages. Bieber has a strong presence of people with disabilities and older adults living alone relative to the County. Both groups of people are vulnerable to wildfire and energy shortages and outages. Bieber is primarily a residential community, with commercial hubs abutting Highway 299. Bieber is also home to the Bieber Fire Station and Big Valley Jr/Sr High, which are considered critical assets.

Hazard Assessment

Table 2-1 shows the potential hazards in Bieber and how likely they are to occur in the next 30 years. Bieber is likely to experience extreme heat and energy shortages and outages before 2050, and may experience an earthquake, flooding, or wildfire.

Table 2-1 – Hazards in Bieber

Hazard	Probability
Earthquake	Low
Energy Shortage and Outages	High
Extreme Heat	High
Flooding	Medium
Wildfire	Medium

Community Capacity

CRITICAL ASSETS AND EMERGENCY RESPONSE

Bieber has multiple critical assets, including an airport, school, health center, and fire station, as shown in **Table 2-2**, all of which are located outside of hazard zones; however, the Fire Station, health center, and Big Valley High School require power to function properly and are therefore vulnerable to energy shortages and outages. The transmission line that runs through Bieber is within a moderate fire hazard severity zone.

Table 2-2 – Critical Assets in Bieber

Asset Type	Asset Name	Relevant Hazards
Local and Regional Infrastructure	Southard Field*	N/A
	Bieber Fire Station	Energy Shortages and Outages
	69 kV Transmission Line	Wildfire
Major Commercial Hubs	None	N/A
Medical	Big Valley Health Center	Energy Shortages and Outages
Schools	Big Valley Jr/Sr High	Energy Shortages and Outages

* Airport within 1 mile of Bieber.

1 U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table B01003.

VULNERABLE POPULATIONS

As shown in **Table 2-3**, Bieber has a high proportion of older adults living alone and people with disabilities.[2] These community members are vulnerable to all hazards because they have a difficult time evacuating due to medical needs. Older adults also often die at higher rates than the general population during extreme heat events.

Table 2-3 – Vulnerable Populations in Bieber

Vulnerable Population	Presence in Bieber	Presence in Lassen County	Relevant Hazards
People with Disabilities[1]	21.2%	18.4%	Flooding, Wildfire, Earthquakes, Energy Shortages and Outages , Extreme Cold and Snow
Limited English-Speaking Households[2]	0.0%*	0.8%	Flooding, Wildfire, Earthquakes
Renters[3]	27.5%	32.4%	Flooding, Wildfire, Earthquakes
Older Adults Living Alone[4]	37.5%	12.9%	Flooding, Wildfire, Earthquakes, Extreme Heat, Energy Shortages and Outages, Extreme Cold and Snow
Young Children[5]	12.8%	4.6%	Extreme Heat, Wildfire (smoke), Extreme Cold and Snow

LIMITED ENGLISH-SPEAKING HOUSEHOLD

A "limited English speaking household" is one in which no member 14 years old and over (1) speaks only English or (2) speaks a non-English language and speaks English "very well." In other words, all members 14 years old and over have at least some difficulty with English. By definition, English-only households cannot belong to this group.

Notes:

* It has been noted by community members that the lack of limited-English speaking households in Bieber is inaccurate. This data is an esitmate based on Census Bureau survey data and should be updated in the future if more fine-grain data becomes available.

1 Percent with a disability out of total civilian noninstitutionalized population.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1810.

2 Percent limited English-speaking households out of all households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1602.

3 Percent of renter-occupied housing units out of all occupied housing units.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP04.

4 Percent of householders living alone that are 65 years and over, out of total households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1101.

5 Percent of total population under 5 years.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP05.

EVACUATION ROUTES

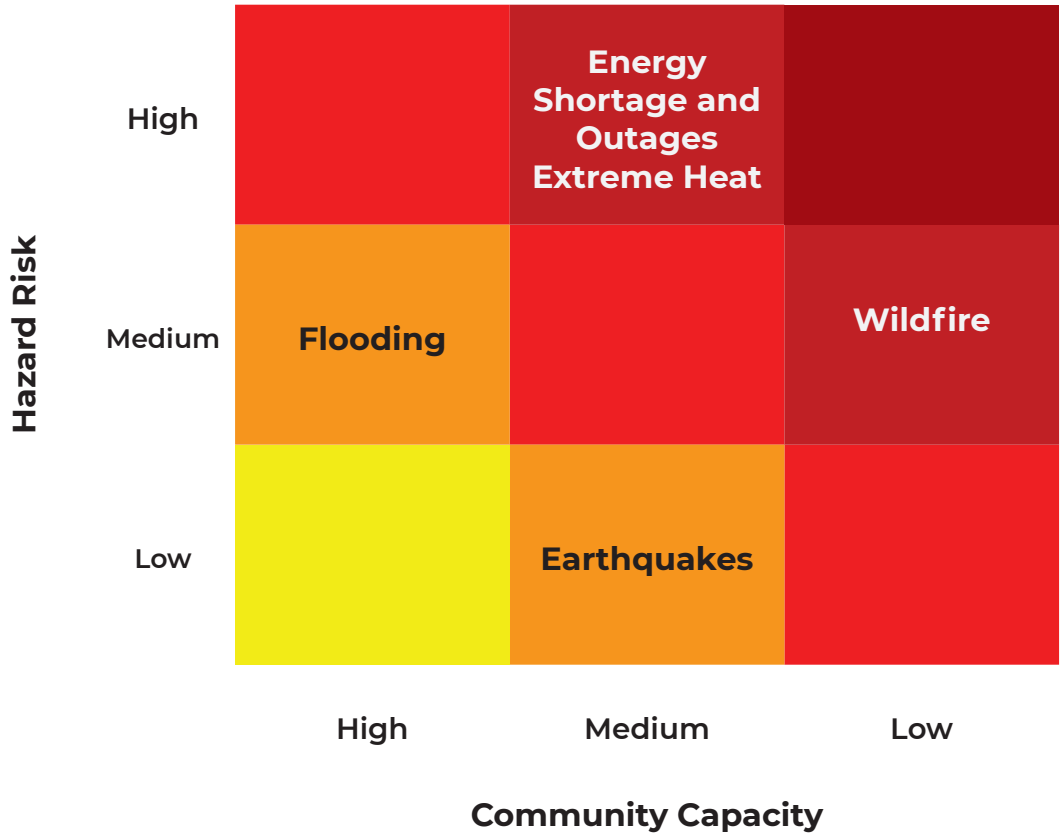
Evacuations from Bieber would occur to the southwest or northeast via Highway 299. There are multiple local roads that could act as detours if necessary in the event of an evacuation. Much of these routes traverse through moderate fire hazard severity zones.

2 It is likely that many older adults living alone also have a disability, and there is significant overlap between these groups.

Summary of Findings

Bieber is most at risk from energy shortages and outages and extreme heat (see **Figure 2-2**). Both are likely to occur between the years 2020 and 2050 at a scale that would disrupt community life, potentially require evacuations, threaten critical facilities, and pose significant risk to people with disabilities, older adults living alone, and young children, all of which live in Bieber at higher rates than the County as a whole.

Figure 2-2 – Hazard Risk in Bieber



ENERGY SHORTAGE AND OUTAGES

Similar to many isolated communities in Lassen County, Bieber is vulnerable to energy shortages and outages as a result of hazard events damaging powerlines. The main well in Bieber is equipped with a backup generator that is regularly checked and maintained.

EXTREME HEAT

Historically, Bieber had 4 extreme heat days a year and is projected to experience 16 extreme heat days a year by 2050.[3] Historically, heat waves lasted 2.7 days and are projected to increase to 7.2 days between 2020 and 2050. Bieber also has a significant number of older adults living alone, who are more susceptible to extreme heat events. Older adults are more likely to suffer from heat stroke due to their age and physical health, and older adults living alone are less likely to have someone check in on them during a heatwave and help them seek medical attention when they start showing signs of heat-related illness.

FLOODING

The 100-year flood zone in Bieber abuts the Pit River and includes several homes on the western side of the community; however, the majority of the developed areas in Bieber are not in an area of flood risk (see **Figure 2-3**). If severe flooding occurred, evacuation could be difficult because Highway 299, which is the only access road leaving the community, is also within the 100-year flood zone. No critical facilities are located in a flood zone. Older adults and people with disabilities could have a challenge evacuating in the event of severe flooding. Another important aspect to note is that some of the outskirts of Bieber near the Pit River are located in a dam inundation zone for the Roberts Dam.[4] This means should the Roberts Dam have a breach, flooding could occur along the Pit River adjacent to Bieber.

WILDFIRE

Bieber is surrounded by wildfire hazard zones, but no residential land uses, or commercial land uses in the community are within a wildfire hazard severity zone (see **Figure 2-4**). One critical asset, a transmission line that serves Bieber, runs westward through all levels of fire hazard severity zones that are within State Responsibility Areas. Historically, wildfire perimeters have not impacted Bieber, although there have been some fires and prescribed burns within 5 miles of Bieber over the last 30 years (see **Figure 2-5**).

Bieber has a high number of people with disabilities and older adults living alone, who likely will have a more difficult time evacuating. Bieber is protected by the Big Valley Fire Protection District, which maintains a close relationship with CALFIRE and benefits from the CALFIRE station in Bieber. It should also be noted that the CALFIRE station in Bieber supports a Helitack base, the only such base in Lassen County. No air attack bases are in Lassen County, with the closest such base being in Plumas County. The Lassen County Department of Community Development, CAL FIRE, and Lassen Fire Safe Council, Inc. adopted a Bieber-Nubieber Community Fire Safe Plan in 2004, which included multiple recommendations for property owners to protect their homes and to make it fire safe for themselves, their communities, and fire-fighting agencies, such as defensible space recommendations.[5] Bieber is not a certified **Firewise** Community at this time.

FIREWISE

Firewise USA is a community-based program initiated by the National Fire Protection Association. A Firewise board is made up of residents and stakeholders representing a community. Firewise communities write and update and implement an action plan every three years that identify projects and programs to reduce local fire risk.

https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA/Become-a-Firewise-USA-site

3 Cal-Adapt 2020.

4 California Department of Water Resources. (2021). *Dam Breach Inundation Map*. Retrieved October 20, 2021, from https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2.

5 Lassen Fire Safe Council, Inc.. 2004c. Bieber-Nubieber Community Fire Safe Plan. January 2004. https://www.lassenfiresafecouncil.org/wp-content/uploads/2015/02/Bieber-Nubieber-CWPP.pdf.

Figure 2-3. Flood Risk Zone in Bieber



Figure 2-4. Fire Hazards Zone in Bieber

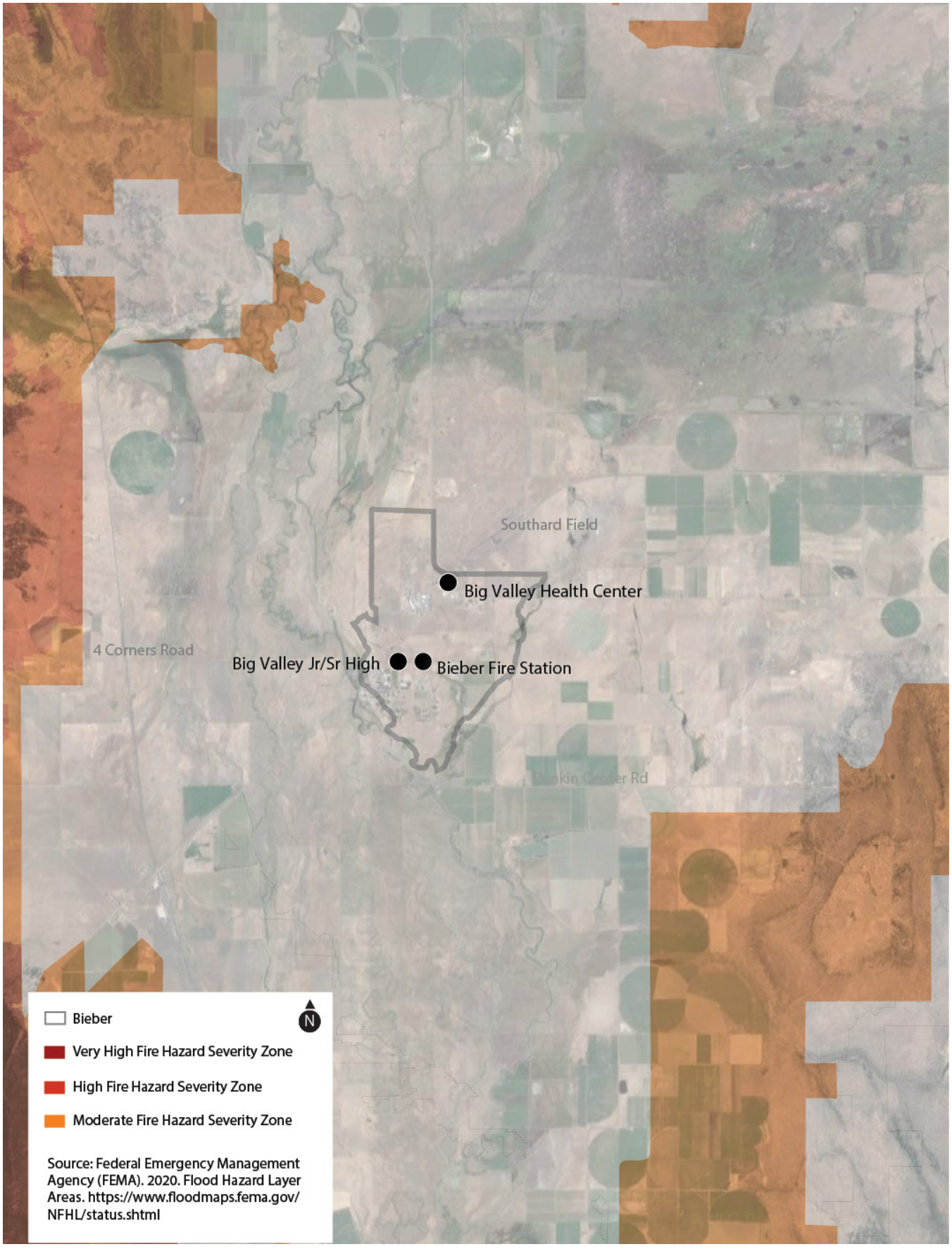


Figure 2-5. Historic Fires in Bieber



CLEAR CREEK AND WESTWOOD

Introduction

Clear Creek and Westwood are primarily residential communities located on the southwestern edge of Lassen County, 25 miles southwest of Susanville. As of 2019, 1,855 people call Clear Creek and Westwood their home (210 and 1,645 in Westwood).[6] The communities of Clear Creek and Westwood are most at risk of wildfire, energy shortages and outages, and extreme heat. Clear Creek has a large proportion of limited English-speaking households, renters, and older adults living alone relative to the County. All three of these groups of people are vulnerable to wildfire. Additionally, older adults living alone are vulnerable to energy shortages and outages. Westwood has large vulnerable population with a higher proportion of people with disabilities, renters, and older adults living alone compared to the County.

Hazard Assessment

Table 2-4 shows the potential hazards in Clear Creek and Westwood and how likely they are to occur in the next 30 years. Clear Creek and Westwood are most at risk from wildfire, energy shortages and outages, and extreme heat. Clear Creek and Westwood could be impacted by an earthquake or flooding; however, these are less likely to profoundly impact the community because there are no Alquist-Priolo zones in the community, and flooding and dam inundation zones do not include developed areas.

Table 2-4 – Hazards in Clear Creek and Westwood

Hazard	Probability
Earthquake	Low
Energy Shortage and Outages	High
Extreme Heat	High
Flooding and Dam Failure	Medium
Wildfire	High

Community Capacity

CRITICAL ASSETS AND EMERGENCY RESPONSE

As shown in **Table 2-5**, Clear Creek and Westwood have multiple critical facilities, all of which are located outside of hazard zones; however, the fire department and schools require power to function regularly and are therefore vulnerable to energy shortages and outages.

6 U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table B01003.

Table 2-5 – Critical Assets in Clear Creek and Westwood

Asset Type	Asset Name	Relevant Hazards
Local and Regional Infrastructure	Clear Creek Volunteer Fire Department	Energy Shortages and Outages, Wildfire
	Westwood CalFire Station	N/A
	60 kV Transmission Line	Wildfire
Major Commercial Hubs	None	N/A
Medical	None	N/A
Schools	Westwood High School	Energy Shortages and Outages, Extreme Heat
	Fletcher Walker Elementary	Energy Shortages and Outages, Extreme Heat

VULNERABLE POPULATIONS

As shown in **Table 2-6**, Clear Creek and Westwood both have a higher portion of renters and older adults living alone than the County averages. Westwood also has a high proportion of people with disabilities, and Clear Creek has a high proportion of limited English-speaking households. All of these populations are vulnerable to wildfire because they may have difficulty evacuating and rebuilding after a fire.

Table 2-6 – Vulnerable Populations in Clear Creek and Westwood

Vulnerable Population	Presence in Clear Creek	Presence in Westwood	Presence in Lassen County	Relevant Hazards
People with Disabilities[1]	1.9%	31.8%	18.4%	Flooding, Wildfire, Earthquakes, Energy Shortages and Outages, Extreme Cold and Snow
Limited English-Speaking Households[2]	7.0%	0.0%	0.8%	Flooding, Wildfire, Earthquakes
Renters[3]	65.0%	36.4%	32.4%	Flooding, Wildfire, Earthquakes
Older Adults Living Alone[4]	22.0%	21.1%	12.9%	Flooding, Wildfire, Earthquakes, Extreme Heat, Energy Shortages and Outages, Extreme Cold and Snow
Young Children[5]	0.0%	6.7%	4.6%	Extreme Heat, Wildfire (smoke), Extreme Cold and Snow

Notes:

1 Percent with a disability out of total civilian noninstitutionalized population.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1810.

2 Percent limited English-speaking households out of all households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1602.

3 Percent of renter-occupied housing units out of all occupied housing units.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP04.

4 Percent of householders living alone that are 65 years and over, out of total households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1101.

5 Percent of total population under 5 years.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP05.

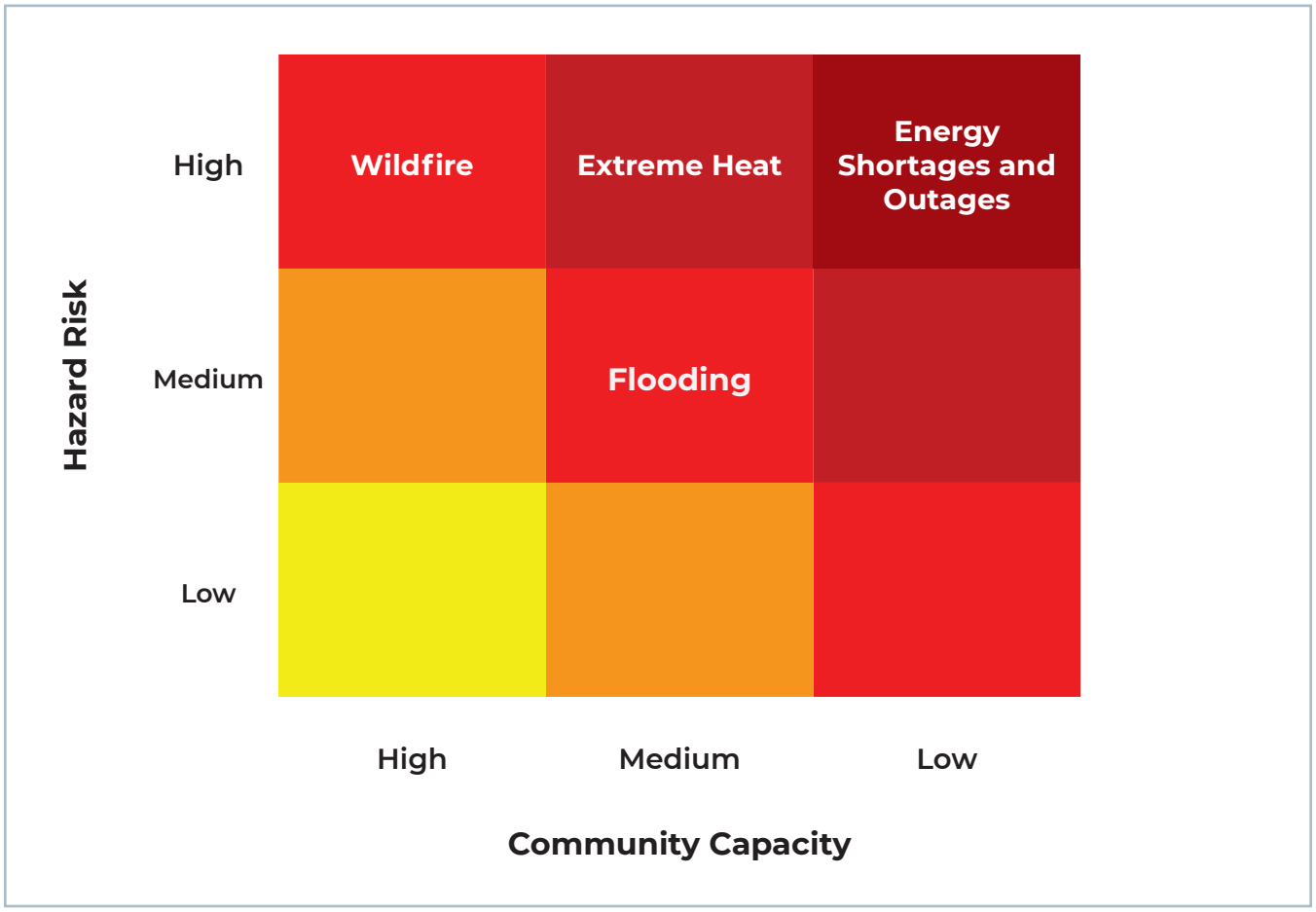
EVACUATION ROUTES

Clear Creek and Westwood have multiple routes for potential evacuations. Each would occur by traveling on California State Route (SR) 147 either to the north to SR-36 or to the south to SR-89. SR-36 allows for evacuation to the east or west. Each of these routes travel through very high fire hazard severity zones.

Summary of Findings

Clear Creek and Westwood are most at risk from energy shortage and outages, extreme heat, and wildfire (see **Figure 2-6**). Both are likely to occur between the years 2020 and 2050 at a scale that would disrupt community life, potentially require evacuations, threaten critical facilities, and pose significant risk to limited English-speaking households, renters, and older adults living alone in Clear Creek, as well as people with disabilities, renters, older adults living alone, and young children in Westwood, all of which live in these communities at higher rates than the County as a whole.

Figure 2-6 – Hazard Risk in Clear Creek and Westwood



ENERGY SHORTAGES AND OUTAGES

Hazard events and storms, including hazards far outside of Clear Creek and Westwood, could cause power lines to be knocked down and result in power outages in these communities. Additionally, wildfire risk could cause planned power shutoffs more regularly in the future. Energy shortages pose the highest risk to people who are medically dependent, including people whose medication requires refrigeration. Although energy shortages and outages are likely to occur, sufficient planning can mitigate the impact to people's lives. This is of special concern in Clear Creek and Westwood, given the large proportion of older adults living alone in both communities and people with disabilities in Westwood who may be medically dependent on machines or refrigeration.

EXTREME HEAT

Historically, Clear Creek and Westwood had 4 extreme heat days a year and is projected to experience 21 extreme heat days a year by 2050.[7] Historically, heat waves lasted 2.6 days and are projected to increase to 9.0 days between 2020 and 2050.[8] Clear Creek and Westwood have a significant number of older adults living alone, who are more susceptible to extreme heat events. Older adults are more likely to suffer from heat stroke due to their age and physical health, and older adults living alone are less likely to have someone check in on them during a heatwave and help them seek medical attention when they start showing signs of heat-related illness.

FLOODING

The 100-year flood zone in Clear Creek and Westwood surrounds the Mountain Meadows Reservoir and crosses Highway 36 to the east of Westwood. No developed areas nor critical facilities are located in a flood zone. The high proportion of older adults living alone in both communities, as well as the high proportion of people with disabilities in Westwood, could have a more difficult time evacuating. In addition, limited English-speaking households in Clear Creek may have difficulty accessing important evacuation information. The high proportion of renters in Clear Creek and Westwood are more likely to be displaced as a result of a flood damaging their residence because renters often have less insurance and recovery aid than homeowners.

Additionally, it should be mentioned that the Indian Ole Dam is upstream of Clear Creek.[9] At this time, no development in Clear Creek is directly in this dam inundation zone, but the Clear Creek community is adjacent to the Hamilton Branch which would flood in the event of a breach at the Indian Ole Dam.

7 Cal-Adapt 2020.

8 Cal-Adapt. 2021. "Extreme Heat Days & Warm Nights." Accessed March 31, 2021. https://cal-adapt.org/tools/extreme-heat/.

9 California Department of Water Resources. (2021). *Dam Breach Inundation Map*. Retrieved October 20, 2021, from https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2.

WILDFIRE

A portion of Westwood is classified as a High Wildfire Severity Zone, and the entirety of Clear Creek falls within a very high fire hazard severity zone. The land uses within the fire hazard severity zones in these communities are low-density residential, planned development, and small amounts of industrial and commercial. In regard to critical facilities, the Clear Creek volunteer fire department is located in a very high fire hazard severity zone, while all other critical and emergency response facilities are outside fire hazard zones (**see Figure 2-7**). Historically, there have been wildfires nearby Clear Creek and Westwood in the forested open space; however, all of these fires occurred before 1990 (see **Figure 2-8**).

Clear Creek and Westwood both have a high number of older adults living alone and renters. Older adults living alone will likely have a more difficult time evacuating. Non-English-speaking households in Clear Creek and people with disabilities in Westwood will also likely have a more difficult time evacuating. Renters also make up a large number of the occupied units in both Clear Creek and Westwood; renters may be displaced and have fewer protections than homeowners after a wildfire.

Clear Creek and Westwood communities adopted a Community Fire Safe Plan in 2004, and this plan included multiple recommendations for the community, including infrastructure improvements, a community fuel break, defensible space recommendations, and more. In recent years additional fire mitigation projects have been performed and funded by Lassen Fire Safe Council, Inc., including brush fuel clearing, structure ignitability assessments, watershed restoration, and fuel load reduction.[10] Clear Creek and Westwood have an active Firewise Board and are considered a certified Firewise Community. A portion of Clear Creek is provided fire protection services by the Clear Creek Community Services District, with the remainder being provided by CAL FIRE.



Google Earth image of Westwood, Lassen County, CA

10 Lassen Fire Safe Council, Inc.. 2004a. Westwood-Clear Creek Community Fire Safe Plan. January 2004. https://www.lassenfiresafecouncil.org/wp-content/uploads/2015/02/Westwood-Clear-Creek.pdf.

Figure 2-7. Wildfire Hazard Severity Zones in Clear Creek and Westwood

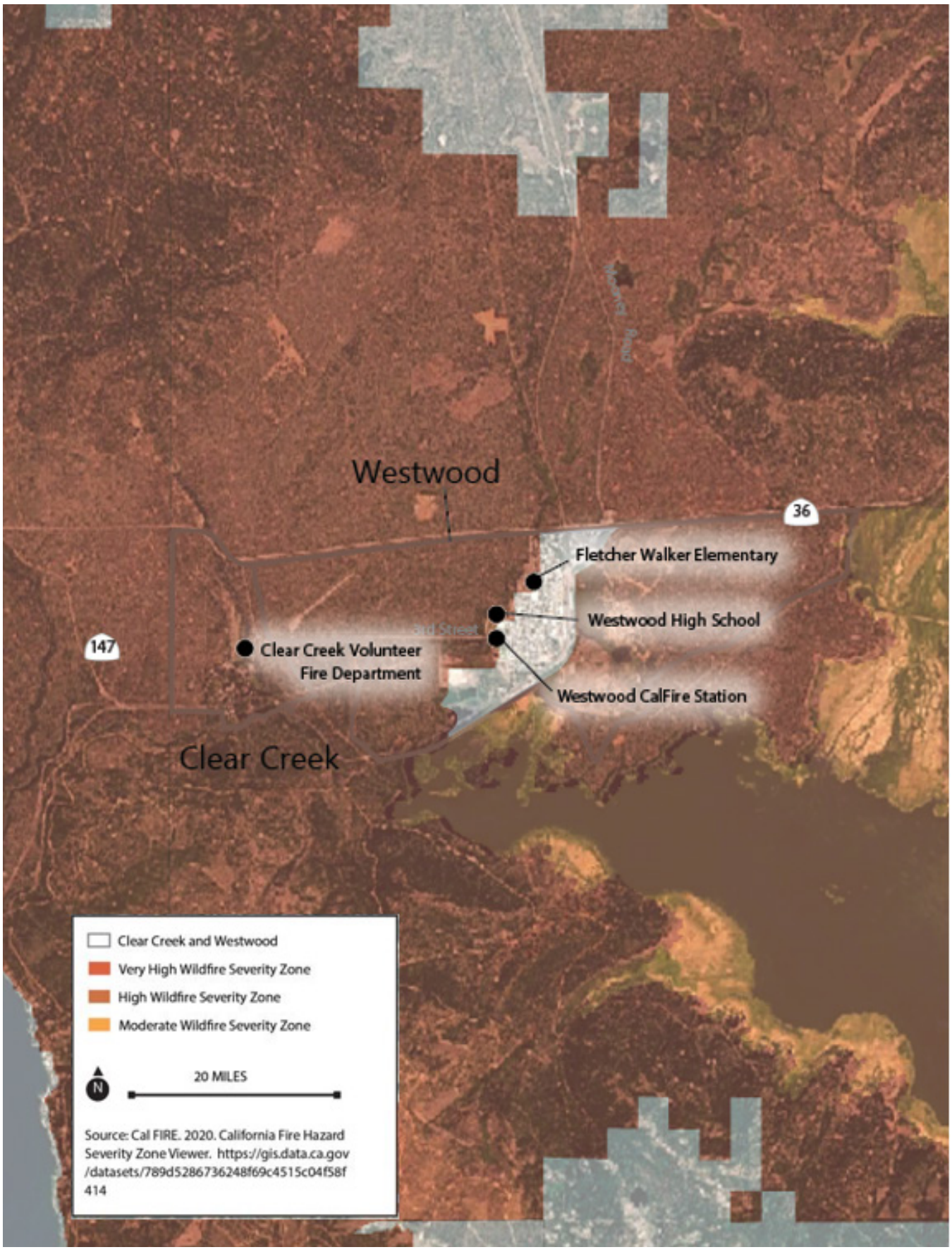
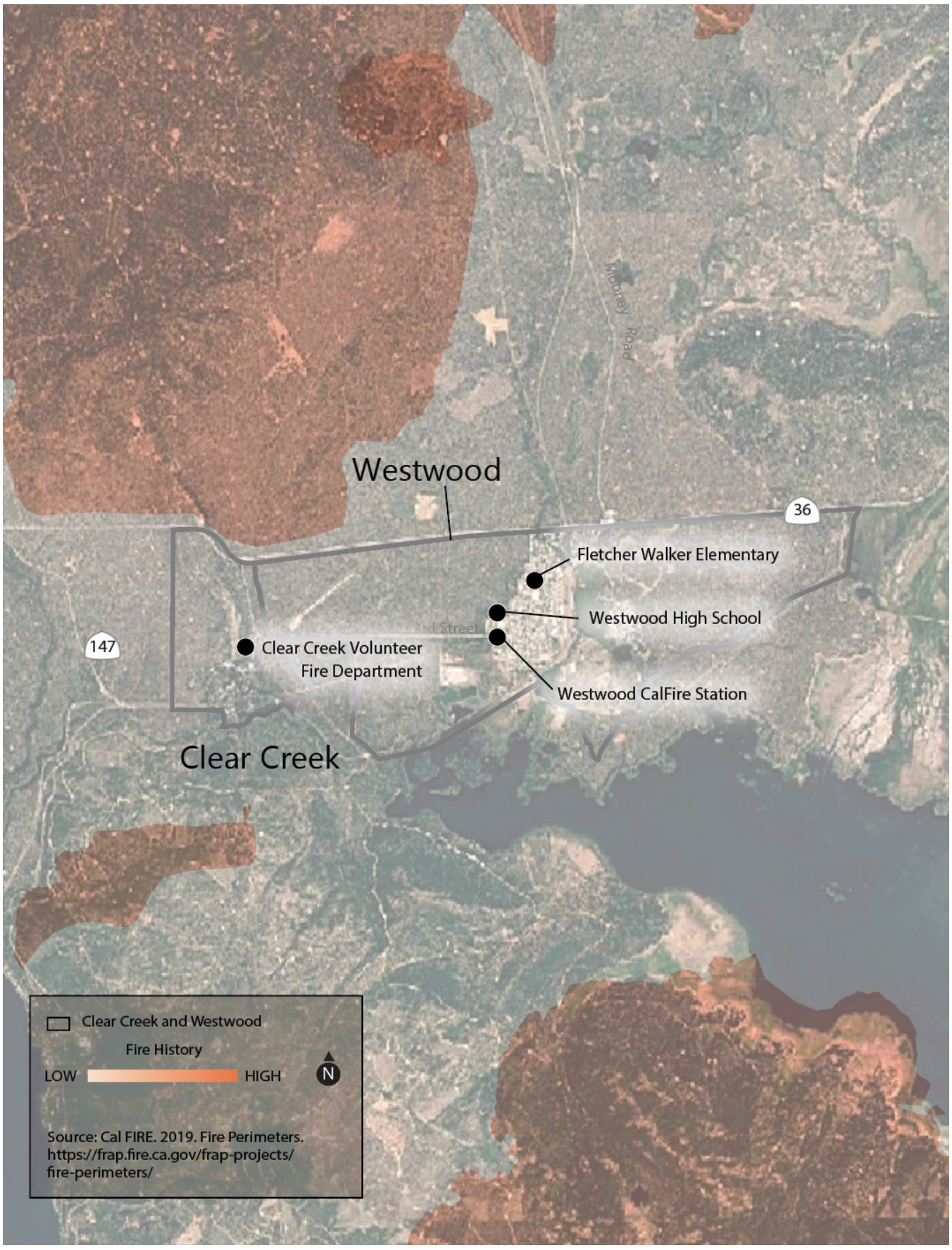


Figure 2-8. Historic Wildfires in Clear Creek and Westwood



DOYLE

Introduction

Doyle is a community in southern Lassen County situated along the Long Valley Creek. As of 2019, 622 people call Doyle their home.[11] The community of Doyle is most at risk of wildfire, extreme heat, and energy shortage and outages. Doyle has a strong presence of people with disabilities and older adults living alone relative to the County. Both groups of people are especially vulnerable to wildfire and energy shortages and outages. Doyle is also home to the Doyle Fire Station and Long Valley Charter School, which are considered critical assets. Both are vulnerable to wildfire.

Hazard Assessment

Table 2-7 shows the potential hazards in Doyle and how likely they are to occur in the next 30 years. Doyle is most at risk from wildfire, energy shortages and outages, and extreme heat. Doyle does include Alquist-Priolo zones; however, earthquakes do not happen at the same regular intervals as wildfires and extreme heat. Additionally, the flood zones in Doyle do not include developed areas.

Table 2-7 – Hazards in Doyle

Hazard	Probability
Earthquake	Medium
Energy Shortage and Outages	High
Extreme Heat	High
Flooding	Medium
Wildfire	High

Community Capacity

CRITICAL ASSETS AND EMERGENCY RESPONSE

As shown in **Table 2-8**, Doyle has two critical facilities, both of which are located within a moderate fire hazard severity zone.

Table 2-8 – Critical Assets in Doyle

Asset Type	Asset Name	Relevant Hazards
Local and Regional Infrastructure	Doyle Fire Department	Wildfire, Energy Shortages
	60 kV Transmission Line	Wildfire
Major Commercial Hubs	None	N/A
Medical	None	N/A
Schools	Long Valley Charter School	Wildfire, Energy Shortages

11 U.S. Census Bureau 2019.

VULNERABLE POPULATIONS

As shown in **Table 2-9**, Doyle has a higher proportion of people with disabilities, who may have a more difficult time evacuating from a hazard event. They also may be more dependent on energy for medical supplies or medication that requires refrigeration.

Table 2-9 – Vulnerable Populations in Doyle

Vulnerable Population	Presence in Doyle	Presence in Lassen County	Relevant Hazards
People with Disabilities[1]	25.7%	18.4%	Flooding, Wildfire, Earthquakes, Energy Shortages and Outages, Extreme Cold and Snow
Limited English Speaking Households[2]	0.0%	0.8%	Wildfire; Flooding, Earthquakes
Renters[3]	12.6%*	32.4%	Flooding, Wildfire, Earthquakes
Older Adults Living Alone[4]	16.7%	12.9%	Flooding, Wildfire, Earthquakes, Extreme Heat, Energy Shortages and Outages, Extreme Cold and Snow
Young Children[5]	1.3%	4.6%	Extreme Heat, Wildfire (smoke), Extreme Cold and Snow

Notes:

1 Percent with a disability out of total civilian noninstitutionalized population.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1810.

2 Percent limited English-speaking households out of all households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1602.

3 Percent of renter-occupied housing units out of all occupied housing units.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP04.

4 Percent of householders living alone that are 65 years and over, out of total households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1101.

5 Percent of total population under 5 years.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP05.

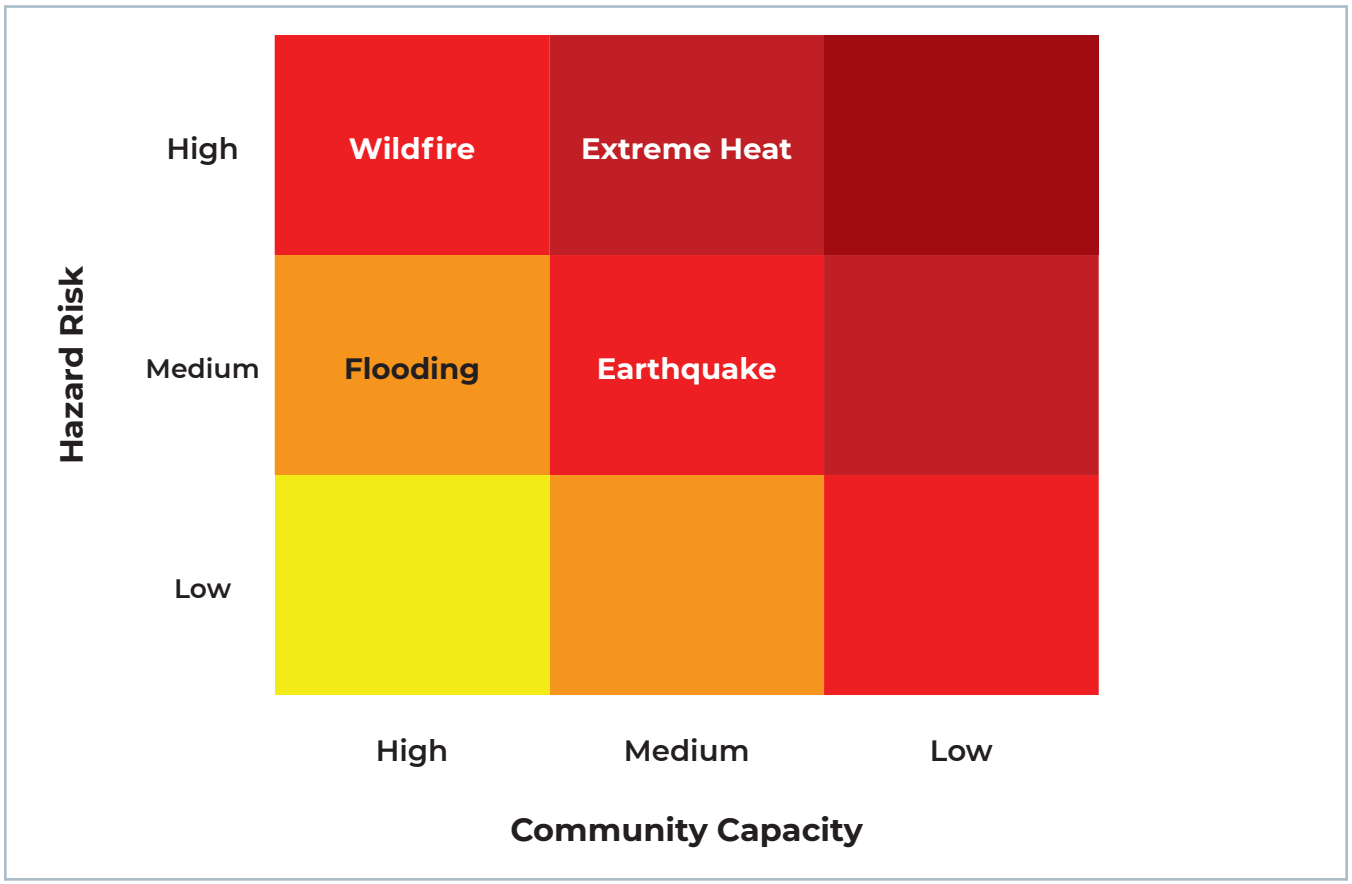
EVACUATION ROUTES

Evacuations from Doyle must evacuate onto U.S. Highway 395, and if it were are closed due to fire, evacuation would be severely hindered, especially if needing to evacuate to the south. Some local roads could be used to evacuate north toward Herlong. These evacuation routes are mostly located in moderate fire hazard severity zones.

Summary of Findings

Doyle is most at risk from energy shortages and outages, extreme heat, and wildfire (see **Figure 2-9**). All are likely to occur between the years 2020 and 2050 at a scale that would disrupt community life, potentially require evacuations, threaten critical facilities, and pose significant risk to people with disabilities and older adults living alone, both of which live in Doyle at higher rates than the County as a whole.

Figure 2-9– Hazard Risk in Doyle



EARTHQUAKE

Active faults run transverse Doyle. No critical assets are within the Alquist-Priolo zone and therefore are not subject to additional building regulations. The large proportion of older adults and people with disabilities could need additional assistance in the immediate aftermath of a large earthquake.

ENERGY SHORTAGES AND OUTAGES

Hazard events and storms, including hazards far outside of Doyle, could cause power lines to be knocked down and result in power outages in this community. Additionally, wildfire risk could cause planned power shutoffs more regularly in the future. Energy shortages pose the highest risk to people who are medically dependent, including people whose medication requires refrigeration. Although energy shortages and outages

are likely to occur, sufficient planning can mitigate impact to people's lives. This is of special concern in Doyle, given the large proportion of people with disabilities and older adults living alone who may be medically dependent on machines or refrigeration.

EXTREME HEAT

Historically, Doyle had 4 extreme heat days a year and is projected to experience 16 extreme heat days a year by 2050.[12] Historically, heat waves lasted 2.7 days and are projected to increase to 6.3 days between 2020 and 2050. Doyle has a slightly higher than average number of older adults living alone, who are more susceptible to extreme heat events. Older adults are more likely to suffer from heat stroke due to their age and physical health, and older adults living alone are less likely to have someone check in on them during a heatwave and help them seek medical attention when they start showing signs of heat related illness.

FLOODING

The 100-year flood zone in Doyle abuts Long Valley Creek, the majority of the developed areas in Doyle are not in an area of flood risk. If severe flooding occurred, evacuation could be difficult because Highway 299, which is the only access road leaving the community, is also within the 100-year flood zone. No critical facilities are located in a flood zone. Older adults and people with disabilities could have a challenge evacuating in the event of severe flooding; however, the low proportion of renters in Doyle means that community members are less likely to be displaced.

WILDFIRE

All developed areas in Doyle are designated as agriculture and are all within a moderate fire hazard severity zone (see **Figure 2-10**). Doyle is surrounded by very high wildfire severity zones to the south west. Historically, wildfires have occurred in around Doyle, notably the Long Valley Fire in 2017 (see **Figure 2-11**). Doyle has a higher number of people with disabilities and older adults living alone, who likely will have a more difficult time evacuating; however, the low proportion of renters in Doyle means that community members are less likely to be displaced long term. The Doyle community adopted a Community Fire Safe Plan in 2004. This plan included multiple recommendations for the community, including infrastructure improvements, a community fuel break, defensible space recommendations, and more. Fire protection services for Doyle are provided by the Doyle Fire Protection District. Doyle is not a certified Firewise Community at this time.

12 Cal-Adapt 2020.

Figure 2-10. Wildfire Hazard Severity Zones in Doyle

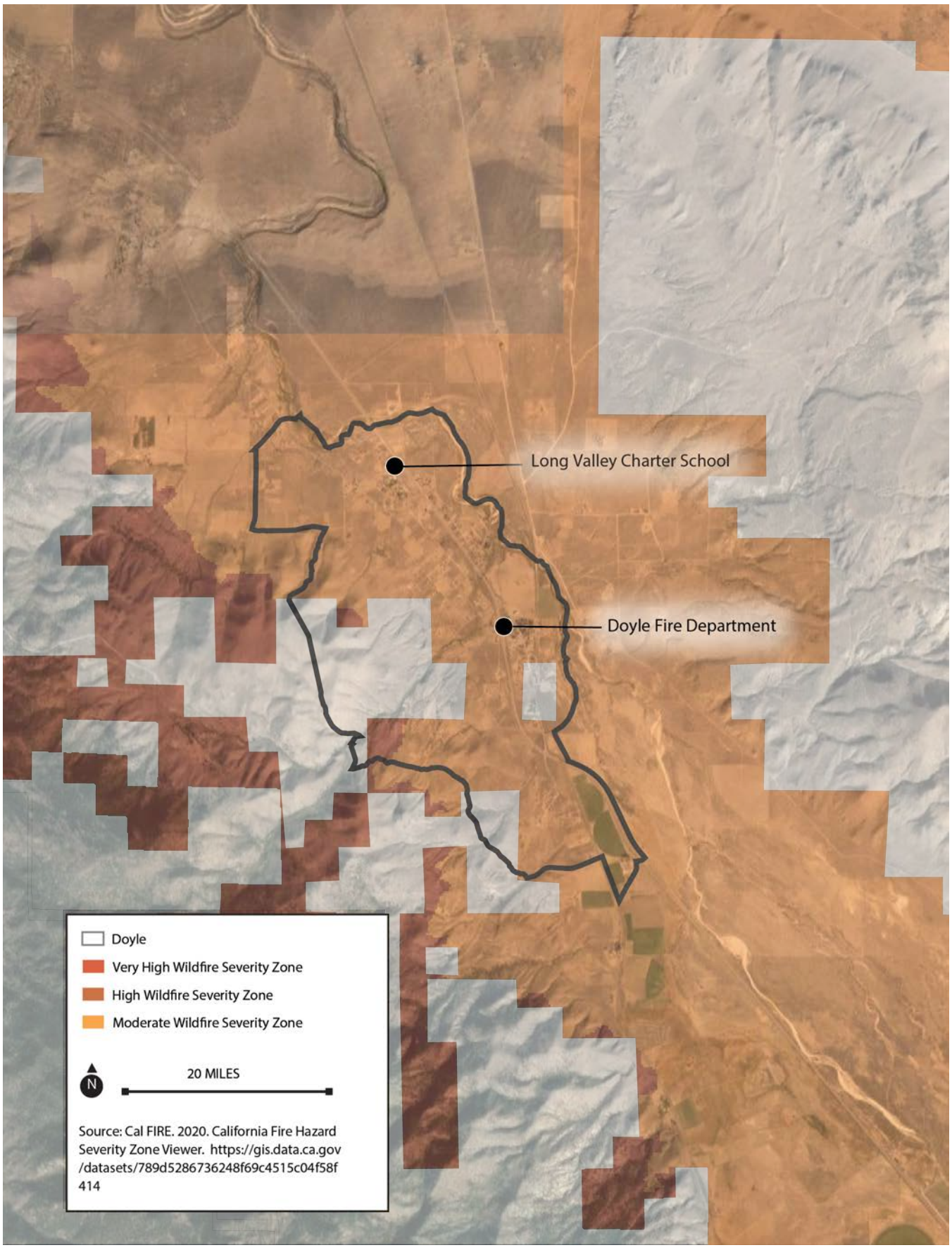
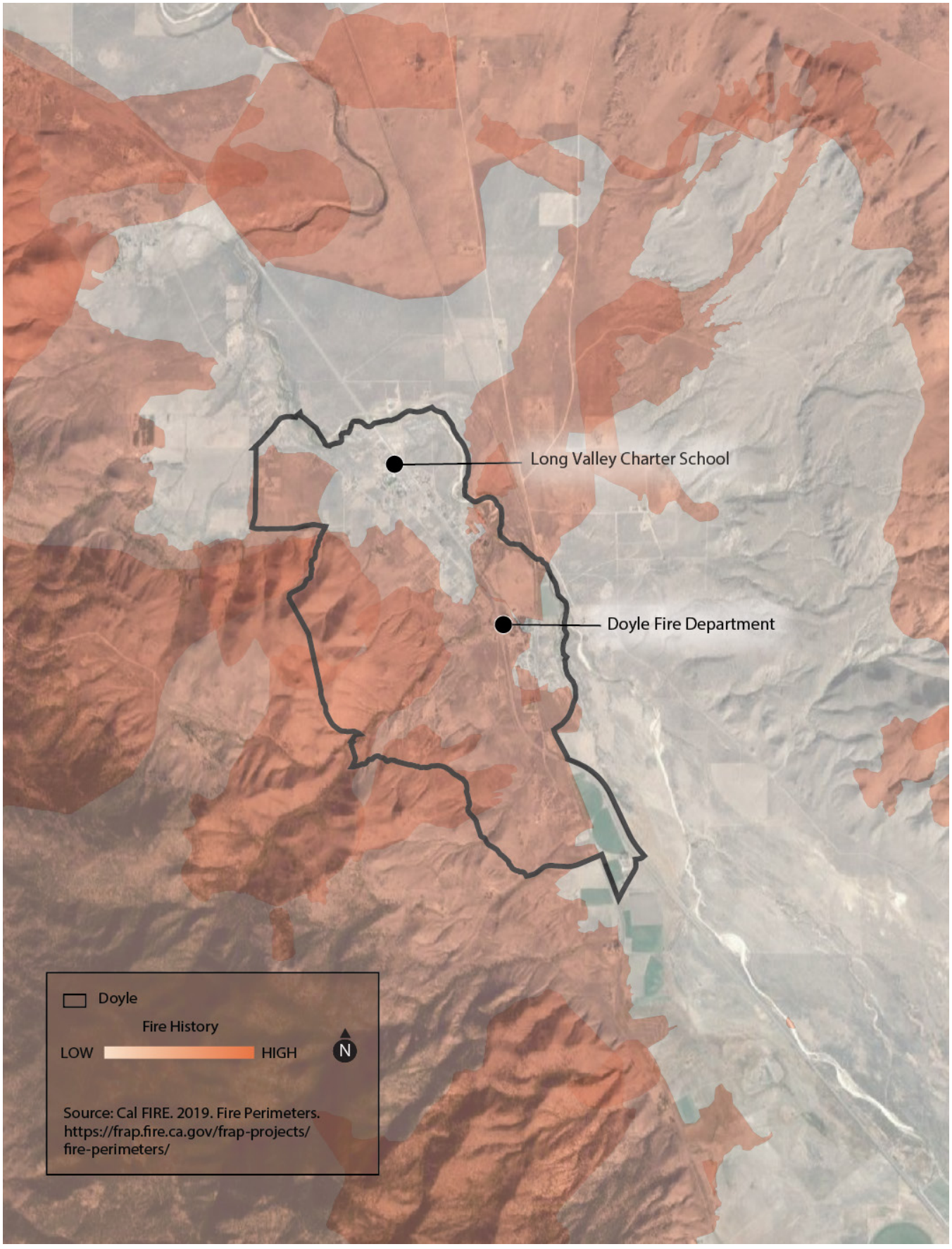


Figure 2-11. Historic Wildfires in Doyle



HERLONG AND PATTON VILLAGE

Introduction

Herlong and Patton Village are adjacent communities in southern Lassen County situated on the southeastern region of Honey Lake Valley and Honey Lake. As of 2019, 1,925 people call Herlong and Patton Village their home (1,295 people in Herlong and 630 in Patton Village).[13] The communities of Herlong and Patton Village are most at risk of energy shortages and outages, extreme heat, and wildfire. Patton Village is also home to the Herlong Airstrip, which is considered a critical asset, and is vulnerable to wildfire.

Hazard Assessment

Table 2-10 shows the potential hazards in Herlong and Patton Village, and how likely they are to occur in the next 30 years. Herlong and Patton Village are most at risk from wildfire, energy shortages and outages, and extreme heat. Herlong and Patton Village do include Alquist-Priolo zones, and there are several in the surrounding areas; however, earthquakes do not happen at the same regular intervals as wildfires and extreme heat. Additionally, the flood zones in Patton Village do not include developed areas.

Table 2-10 – Hazards in Herlong and Patton Village

Hazard	Probability
Earthquake	Medium
Energy Shortage and Outages	High
Extreme Heat	High
Flooding	Medium
Wildfire	High

Community Capacity

CRITICAL ASSETS AND EMERGENCY RESPONSE

As shown in **Table 2-11**, Herlong and Patton Village have multiple critical facilities, including an airstrip, public utility district, correctional institution, army depot, transmission lines, and two schools. Herlong Airstrip is located within a moderate wildfire severity zone.

13 U.S. Census Bureau 2019.

Table 2-11 – Critical Assets in Herlong and Patton Village

Asset Type	Asset Name	Relevant Hazards
Local and Regional Infrastructure	Herlong Airstrip	Wildfire
	Herlong Public Utility District	Energy Shortage and Outage
	Herlong Federal Correctional Institution	Energy Shortage and Outage
	Sierra Army Depot	N/A
	PSREC Solar Array	Energy Shortage and Outage
	60 kV Transmission Line	Wildfire
	345 kV Transmission Line	Wildfire
Major Commercial Hubs	None	N/A
Medical	None	N/A
Schools	Herlong High School	Extreme Heat
	Fort Sage Middle School	Extreme Heat

VULNERABLE POPULATIONS

As shown in **Table 2-12**, Patton Village has higher proportions of people with disabilities, renters, and young children than Lassen County averages. As shown in **Table 2-12**, Herlong has higher proportions of people with disabilities and renters than Lassen County averages.

Table 2-12 – Vulnerable Populations in Herlong and Patton Village

Vulnerable Population	Presence in Herlong	Presence in Patton Village	Presence in Lassen County	Relevant Hazards
People with Disabilities[1]	21.2%	27.0%	18.4%	Flooding, Wildfire, Earthquakes, Energy Shortages and Outages, Extreme Cold and Snow
Limited English Speaking Households[2]	0.0%	0.0%	0.8%	Flooding, Wildfire, Earthquakes
Renters[3]	100%	46.2%	32.4%	Flooding, Wildfire, Earthquakes
Older Adults Living Alone[4]	7.8%	6.9%	12.9%	Flooding, Wildfire, Earthquakes, Extreme Heat, Energy Shortages and Outages, Extreme Cold and Snow
Young Children[5]	1.2%	6.3%	4.6%	Extreme Heat, Wildfire (smoke), Extreme Cold and Snow

Notes:

1 Percent with a disability out of total civilian noninstitutionalized population.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1810.

2 Percent limited English-speaking households out of all households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1602.

3 Percent of renter-occupied housing units out of all occupied housing units.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP04.

4 Percent of householders living alone that are 65 years and over, out of total households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1101.

5 Percent of total population under 5 years.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP05.



Google Earth image of Herlong, Lassen County, CA

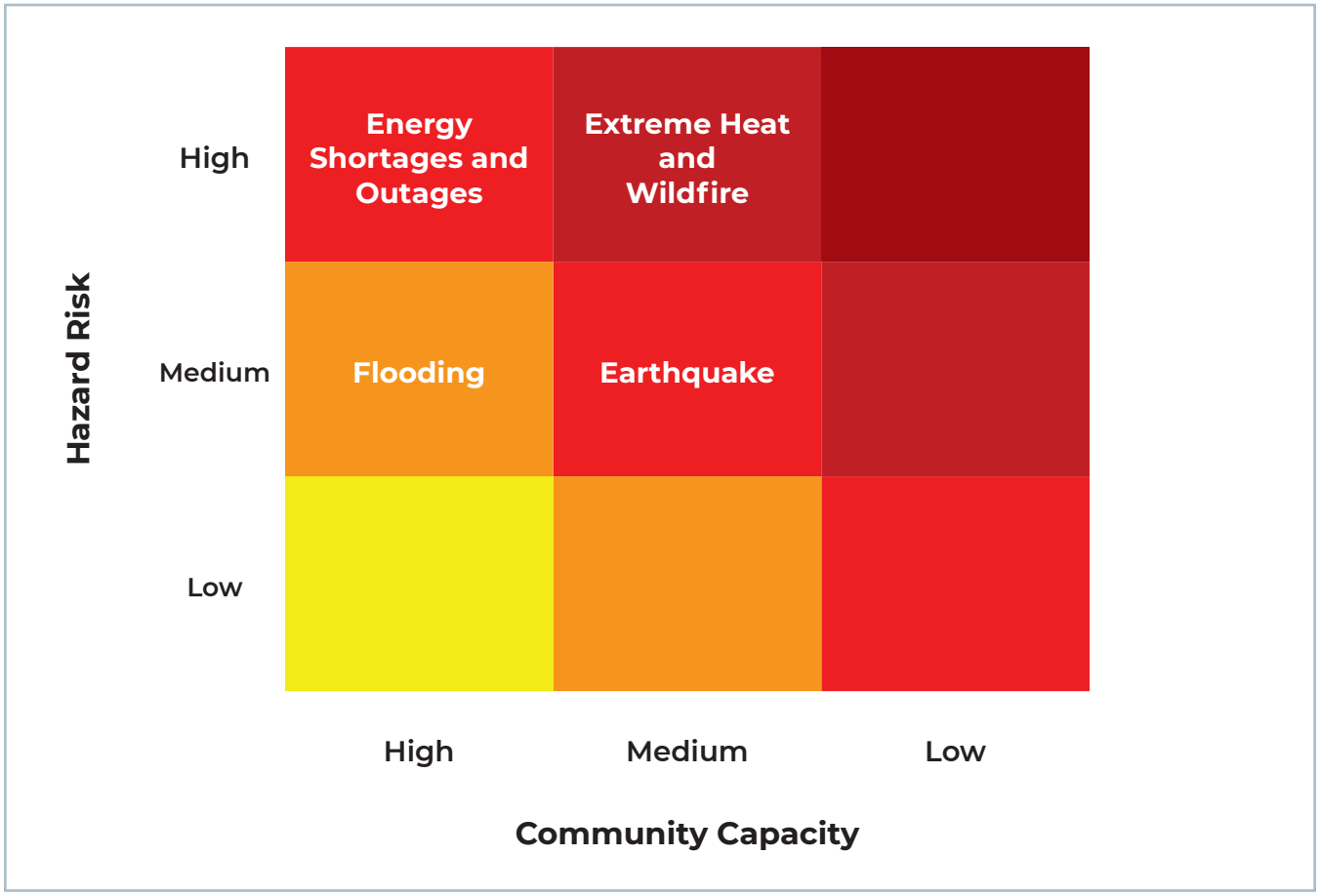
EVACUATION ROUTES

Evacuations from Herlong and Patton Village must evacuate southwest onto Herlong Access Road (County Highway A25) and then to U.S. 395 at Herlong Junction. If either of these roads are closed, evacuation would be severely hindered. Garnier Road (County Highway A26) can be accessed south of Herlong Access Road (County Highway A25) to U.S. 395 if the southwestern portion of Herlong Access Road (County Highway A25) were to be closed. Herlong Access Road (County Highway A25) and Garnier Road (County Highway A26)—the primary and secondary routes to U.S. 395—are both within 100-year flood zones where they intersect with Long Valley Creek. Evacuation along these routes may be difficult or infeasible if severe flooding occurs on these roadways. Part of U.S. 395, which is the nearest major highway to the communities, is also within the 100-year flood zone and may block vehicles traveling southbound out of the communities. Part of U.S. 395 is also within the Alquist-Priolo zone, which may make evacuation along this route difficult or infeasible after an earthquake. The southern part of Patton Village, as well as the area south of the communities, are within a moderate wildfire severity zone, and include most of Garnier Road (County Highway A26) and U.S. 395. Herlong's location in a moderate wildfire severity zone causes most evacuation routes to also be in moderate fire hazard severity zones.

Summary of Findings

Herlong and Patton Village are most at risk from extreme heat, and wildfire (see **Figure 2-12**). Both are likely to occur between the years 2020 and 2050 at a scale that would disrupt community life, potentially require evacuations, threaten critical facilities, and pose significant risk to people with disabilities and renters in Herlong, as well as people with disabilities, renters, and young children in Patton Village, all of which live in these communities at higher rates than the County as a whole.

Figure 2-12 – Hazard Risk in Herlong and Patton Village



EARTHQUAKE

Although most active faults run in multiple areas outside of Herlong and Patton Village, the Alquist-Priolo zone crosses slightly into Patton Village just north of the Herlong Federal Correctional Institution and another Alquist-Priolo zone crosses very slightly into Herlong north of the Herlong Public Utility District. No critical assets are within the Alquist-Priolo zone and therefore are not subject to additional building regulations. Additionally, earthquakes can have far-reaching impacts beyond the fault zones themselves. Earthquakes are a hazard of concern for nearly all vulnerable populations in Herlong and Patton Village. Herlong and Patton Village have higher proportions of people with disabilities than the Lassen County average; this population could need additional assistance in the immediate aftermath of a large earthquake. Both Herlong and Patton Village have a higher proportion of renters than the Lassen County average. Renters may have a more difficult time recovering because they may be displaced after an earthquake and they may lack appropriate insurance and depend on a limited rental stock for housing.

ENERGY SHORTAGES AND OUTAGES

Hazard events and storms, including hazards far outside of Herlong and Patton Village, could cause power lines to be knocked down and result in power outages in these communities. Additionally, wildfire risk could cause planned power shutoffs more regularly in the future. Energy shortages pose the highest risk to people who are medically dependent, including people whose medication requires refrigeration. Although energy

shortages and outages are likely to occur, sufficient planning can mitigate impact to people's lives. This is of special concern in Herlong and Patton Village, given the large proportion of people with disabilities who may be medically dependent on machines or refrigeration. The community is located adjacent to the new PSREC solar array, which has the capacity to provide emergency backup power for PSREC customers in Herlong and Patton Village. This improves the community's capacity to respond to outages caused by fires, earthquakes, or other issues in surrounding areas outside of Herlong and Patton Village.

EXTREME HEAT

Historically, Herlong and Patton Village had 4 extreme heat days a year, and these communities are projected to experience 19 extreme heat days a year by 2050.[14] Historically, heat waves lasted 2.6 days and are projected to increase to 8.2 days between 2020 and 2050.[15] In Patton Village, there is a higher proportion of young children than the Lassen County average. Young children may need to be monitored for signs of heat-related illness and would require assistance seeking medical attention.

FLOODING

The southeastern stream of Long Valley Creek on the west end of Patton Village is within the 100-year floodplain. No developed areas or critical assets are within a flood risk area (see **Figure 2-13**).

WILDFIRE

Much of the areas of Patton Village are within a moderate wildfire severity zone, including the Herlong Airstrip (see **Figure 2-14**). The land uses of Patton Village within the moderate wildfire severity zone include Town Center, Rural Residential, and Low Density Urban Residential. Historically, wildfires have largely occurred in the forested land south of Herlong and Patton Village (see **Figure 2-15**). Compared to the Lassen County averages, Herlong and Patton Village have a higher number of people with disabilities; this population likely will have a more difficult time evacuating. Renters also make up a large number of Patton Village's households and all of Herlong's households. Renters may be displaced and have fewer protections than homeowners after a wildfire. Young children may also be particularly sensitive to smoke and should be given special consideration during and after a wildfire.[16]

The Lassen County Department of Community Development, California Department of Forestry and Fire Protection (CAL FIRE), and Lassen Fire Safe Council, Inc. adopted a Herlong Community Fire Safe Plan in 2004, which included multiple recommendations for property owners to protect their homes and to make it fire safe for themselves, their communities, and fire-fighting agencies. Recommendations included infrastructure improvements, defensible space recommendations, and more.[17] Herlong and Patton Village are not certified Firewise Communities at this time.[18] Herlong Public Utility District provides fire protection for Herlong and Patton Village.

14 Cal-Adapt 2021.

15 Cal-Adapt 2021.

16 EPA (U.S. Environmental Protection Agency). 2019. "Which Populations Experience Greater Risks of Adverse Health Effects Resulting from Wildfire Smoke Exposure?" Updated September 30, 2019. https://www.epa.gov/wildfire-smoke-course/which-populations-experience-greater-risks-adverse-health-effects-resulting#adults.

17 Lassen Fire Safe Council, Inc.. 2004b. Herlong Community Fire Safe Plan. January 2004. https://www.lassenfiresafecouncil.org/wp-content/uploads/2015/02/Herlong-CWPP.pdf.

18 NFPA (National Fire Protection Association). 2021. "State Listing of Participants." https://www.nfpa.org/Public-Education/Fire-causes-and-risks/Wildfire/Firewise-USA/Firewise-USA-Resources/Firewise-USA-sites/State-listing-of-participants.

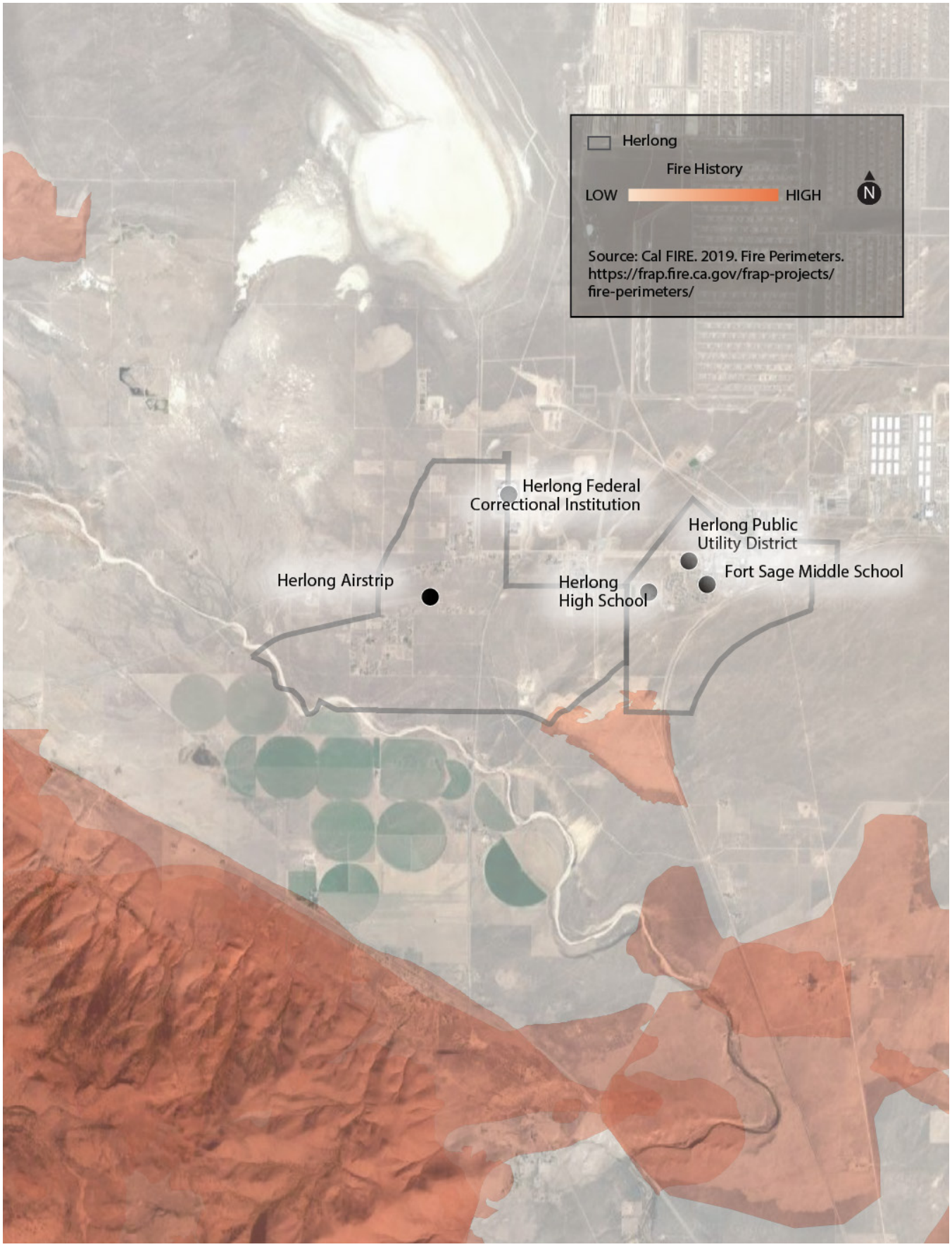
Figure 2-13. Flood Zones in Herlong



Figure 2-14. Wildfire Hazard Severity Zones in Herlong



Figure 2-15. Historic Wildfires in Herlong



JANESVILLE

Introduction

Janesville is a community located in southern Lassen County, just west of Honey Lake and about 10 miles south of Susanville. As of 2019, 1,409 people call Janesville their home.[19] The community of Janesville is most at risk of earthquakes, extreme heat, wildfire, and energy shortage and outages. Janesville has a slightly higher proportion of renters and young children relative to the County (see **Table 2-13**). Both of these groups of people are vulnerable to wildfire. Renters are also vulnerable to displacement when hazards such as earthquake or flood damage their residences. Janesville's critical assets are the Janesville Fire Protection District, 60-kilovolt (kV) transmission line, and Janesville Elementary. All are vulnerable to wildfire, and the Fire Protection District and Elementary School are vulnerable to energy shortages and outages.

Hazard Assessment

Table 2-13 shows the potential hazards in Janesville and how likely they are to occur in the next 30 years. Janesville is likely to experience extreme heat, energy shortages and outages, and wildfire before 2050, and may experience an earthquake and flooding.

Table 2-13 – Hazards in Janesville

Hazard	Probability
Earthquake	Medium
Energy Shortages and Outages	High
Extreme Heat	High
Flooding	Medium
Wildfire	High

Community Capacity

CRITICAL ASSETS AND EMERGENCY RESPONSE

Janesville has two critical assets, a fire protection district and a school, as shown in **Table 2-14**. Both of these critical assets are located in high wildfire severity zones.

Table 2-14 – Critical Assets in Janesville

Asset Type	Asset Name	Relevant Hazards
Local and Regional Infrastructure	Janesville Fire Protection District	Energy Shortages and Outages, Wildfire
	60 kV Transmission Line	Wildfire
Major Commercial Hubs	None	N/A
Medical	None	N/A
Schools	Janesville Elementary	Energy Shortages and Outages, Extreme Heat, Wildfire

19 U.S. Census Bureau 2019.

VULNERABLE POPULATIONS

As shown in **Table 2-15**, Janesville has a high proportion of renters and young children compared to the Lassen County averages. Both of these groups of people are vulnerable to wildfire. Renters are also vulnerable to earthquakes and flooding. Young children are also vulnerable to extreme heat.

Table 2-15 – Vulnerable Populations in Janesville

Vulnerable Population	Presence in Janesville	Presence in Lassen County	Relevant Hazards
People with Disabilities[1]	13.6%	18.4%	Flooding, Wildfire, Earthquakes, Energy Shortages and Outages, Extreme Cold and Snow
Limited English Speaking Households[2]	0.5%	0.8%	Flooding, Wildfire, Earthquakes
Renters[3]	36.6%	32.4%	Flooding, Wildfire, Earthquakes
Older Adults Living Alone[4]	5.1%	12.9%	Flooding, Wildfire, Earthquakes, Extreme Heat, Energy Shortages and Outages, Extreme Cold and Snow
Young Children[5]	5.9%	4.6%	Extreme Heat, Wildfire (smoke), Extreme Cold and Snow

Notes:

1 Percent with a disability out of total civilian noninstitutionalized population.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1810.

2 Percent limited English-speaking households out of all households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1602.

3 Percent of renter-occupied housing units out of all occupied housing units.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP04.

4 Percent of householders living alone that are 65 years and over, out of total households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1101.

5 Percent of total population under 5 years.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP05.

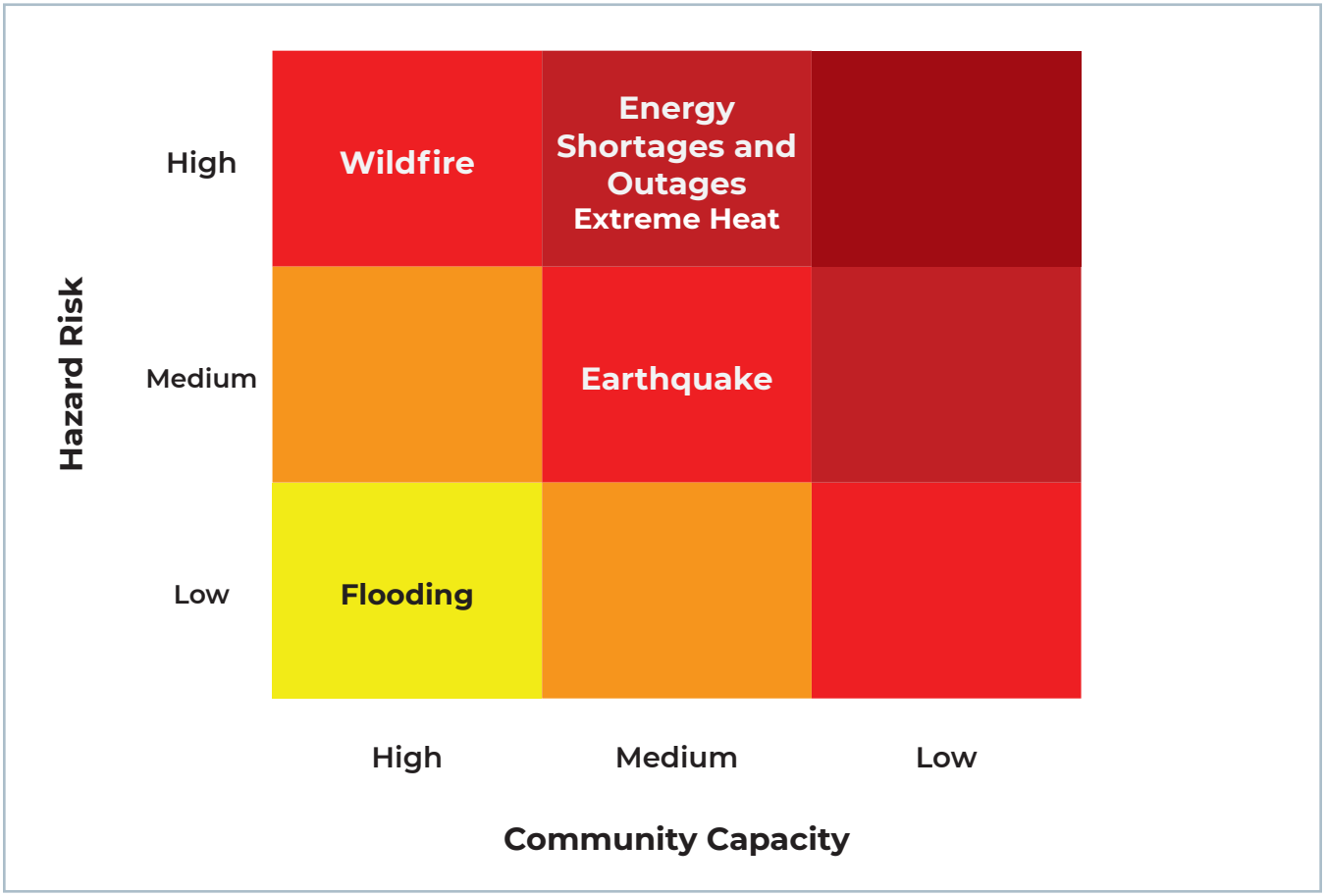
EVACUATION ROUTES

Janesville is located along U.S. 395, which allows for evacuations to the north and south. If this route is blocked or unable to be used, Standish Buntingville Road (County Route A3) could be used to evacuate to the northeast. U.S. 395 is along wildfire severity zones along the entire northeastern Janesville border and is within an Alquist-Priolo zone along the southeastern border of Janesville. Standish Buntingville Road (County Route A3) is in a wildfire severity zone and an Alquist-Priolo zone where it intersects with U.S. 395. Routes to the south are bordered by a very high fire hazard severity zone, and routes north run through various levels of severity zones, but routes to the northeast stay relatively clear from fire hazard severity zones.

Summary of Findings

Janesville is most at risk from energy shortages and outages, extreme heat, and wildfire (see **Figure 2-16**). All are likely to occur between the years 2020 and 2050 at a scale that would disrupt community life, potentially require evacuations, threaten critical facilities, and pose significant risk to renters and young children, both of which live in Janesville at higher rates than the County as a whole.

Figure 2-16 – Hazard Risk in Janesville



EARTHQUAKE

There is an Alquist-Priolo zone along a portion of the northern border on the eastern side of Janesville. Although there are no critical assets within the Alquist-Priolo zone, there are some developed land uses within and north of Janesville, which would be subject to additional building regulations. Janesville has a slightly higher proportion of renters than the Lassen County average. Renters may have a more difficult time recovering if displaced after an earthquake.

ENERGY SHORTAGE AND OUTAGES

Hazard events and storms, including hazards far outside of Janesville, could cause power lines to be knocked down and result in power outages in this community. Additionally, wildfire risk could cause planned power shutoffs more regularly in the future. Energy shortages pose the highest risk to people who are medically dependent, including people whose medication requires refrigeration. Although energy shortages and outages are likely to occur, sufficient planning can mitigate impact to people's lives. This is less of a special concern in Janesville, given the lower proportion of people with disabilities and older adults living alone relative to County averages.

EXTREME HEAT

Historically, Janesville had 4 extreme heat days a year and is projected to experience 16 extreme heat days a year by 2050.[20] Historically, heat waves lasted 2.6 days and are projected to increase to 6.9 days between 2020 and 2050.[21] In Janesville, there is a higher slightly proportion of young children than the Lassen County average; however, Janesville does not have any significant vulnerable populations.

FLOODING

The 100-year flood zone in Janesville abuts the Elysian Creek; however, the majority of the developed areas in Janesville are not in an area of flood risk. If severe flooding occurred, evacuation could be difficult because U.S. Highway 395 is also within the 100-year flood zone. No critical facilities are located in a flood zone. The high proportion of renters in Janesville are more likely to be displaced as a result of a flood damaging their residence because renters often have less insurance and recovery aid than homeowners.

WILDFIRE

Nearly all of Janesville is within a very high wildfire severity zone. High and moderate wildfire severity zones cover all of the northern portion of Janesville, which is made up of rural residential and institutional land uses. Janesville Elementary and the Janesville Fire Protection District are both located along the border between the very high fire hazard severity zone and the moderate fire hazard severity zone (see **Figure 2-17**). Janesville has had multiple wildfires within its community boundaries over the last 100 years, and has more recently had fires within a few miles of the community (see **Figure 2-18**).

Renters make up nearly one-third of Janesville's households, and they may be displaced or more impacted after a wildfire. Young children may also be particularly sensitive to smoke and should be given special consideration during and after a wildfire.[22]

Janesville is home to the Janesville Fire Protection Special District, which is in charge of providing services related to fire protection in Janesville. Janesville has had fuel treatments and structural ignitability assessments since 2014. More recently, Janesville has been sited with planned fire mitigation treatments, including developing defensible space around homes and 200 acres of landscape scale fuel treatments. Homes and evacuation corridors will be prioritized in this treatment.[23] Janesville is considered a certified Firewise Community.[24]

20 Cal-Adapt 2021.

21 Cal-Adapt 2021.

22 EPA 2019.

23 Lassen Fire Safe Council, Inc. 2018. *Lassen County Community Wildfire Protection Plan 2017 Work Plan*. September 2018. https://www.lassenfiresafecouncil.org/wp-content/uploads/2018/01/2017-CWPP-Work-Plan-reduced.pdf.

24 NFPA 2021.

Figure 2-17. Wildfire Hazard Severity Zones in Janesville

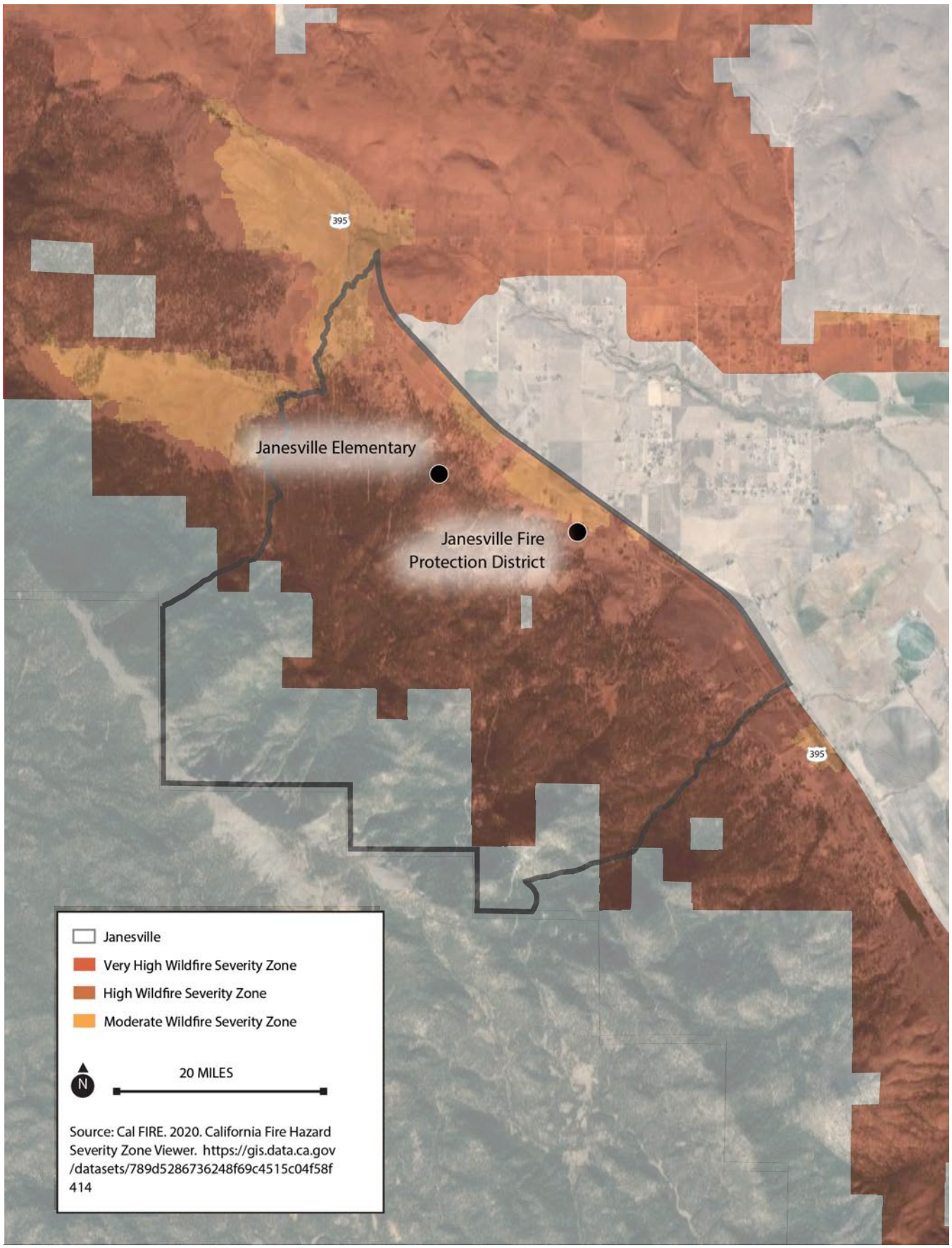
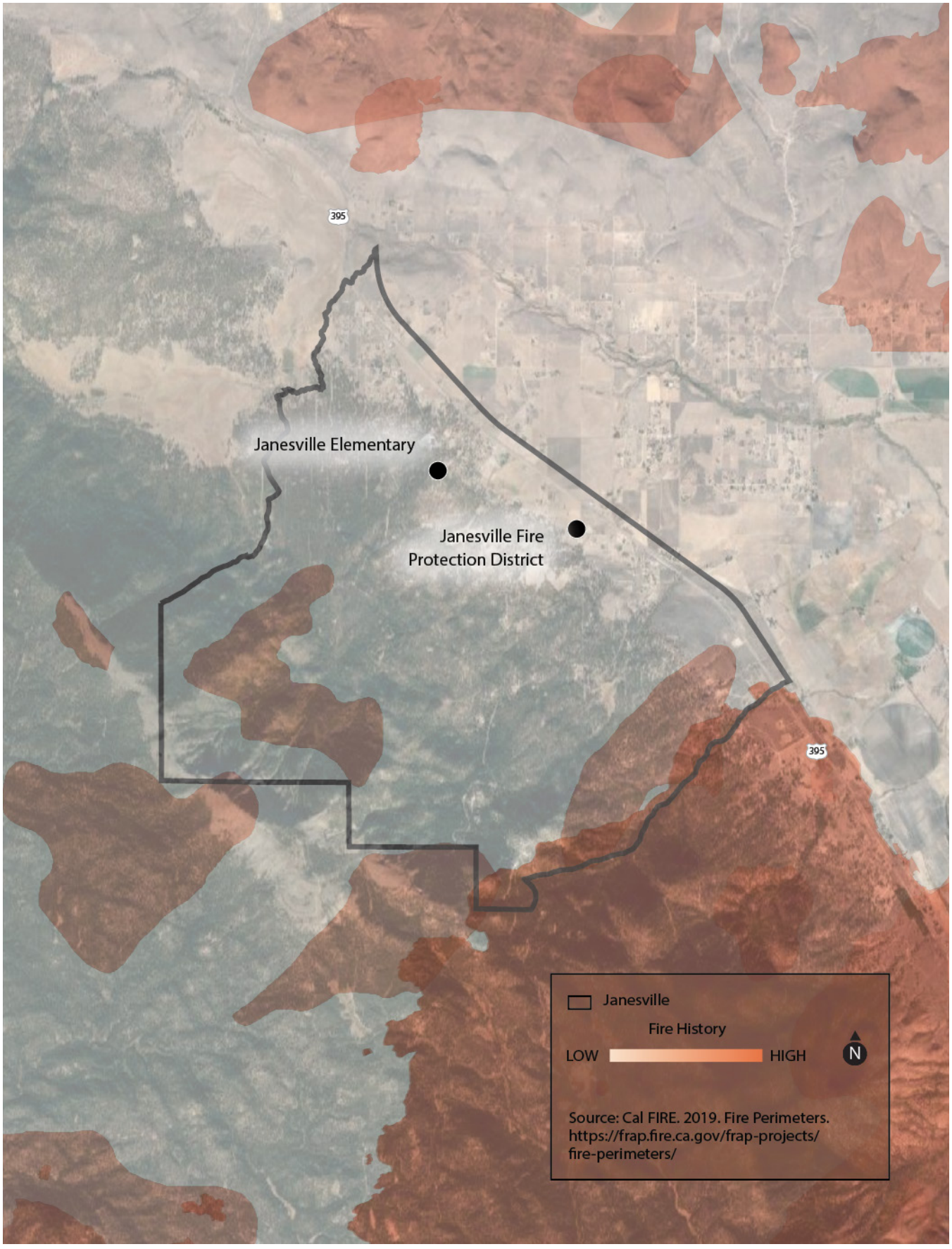


Figure 2-18. Historic Wildfires in Janesville



LAKE FOREST

Introduction

Lake Forest is a small community in Southern Lassen County, south of Eagle Lake. Lake Forest is not recognized by the U.S. Census Bureau; therefore, specific population data is not available. Lake Forest is most at risk from wildfire because the entire community is in the very high wildfire severity zone. Similar to nearby communities, it can be assumed that Lake Forest is also at high risk for energy shortages and outages extreme heat events.

Hazard Assessment

Table 2-16 shows the potential hazards in Lake Forest and how likely they are to occur in the next 30 years. Lake Forest is most at risk from wildfire, energy shortages and outages, and extreme heat.

Table 2-16 – Hazards in Lake Forest

Hazard	Probability
Earthquake	Low
Energy Shortage and Outages	High
Extreme Heat	High
Flooding	Low
Wildfire	High

Community Capacity

CRITICAL ASSETS AND EMERGENCY RESPONSE

Lake Forest has no critical assets.

VULNERABLE POPULATIONS

As stated above, specific population data is not available for Lake Forest.

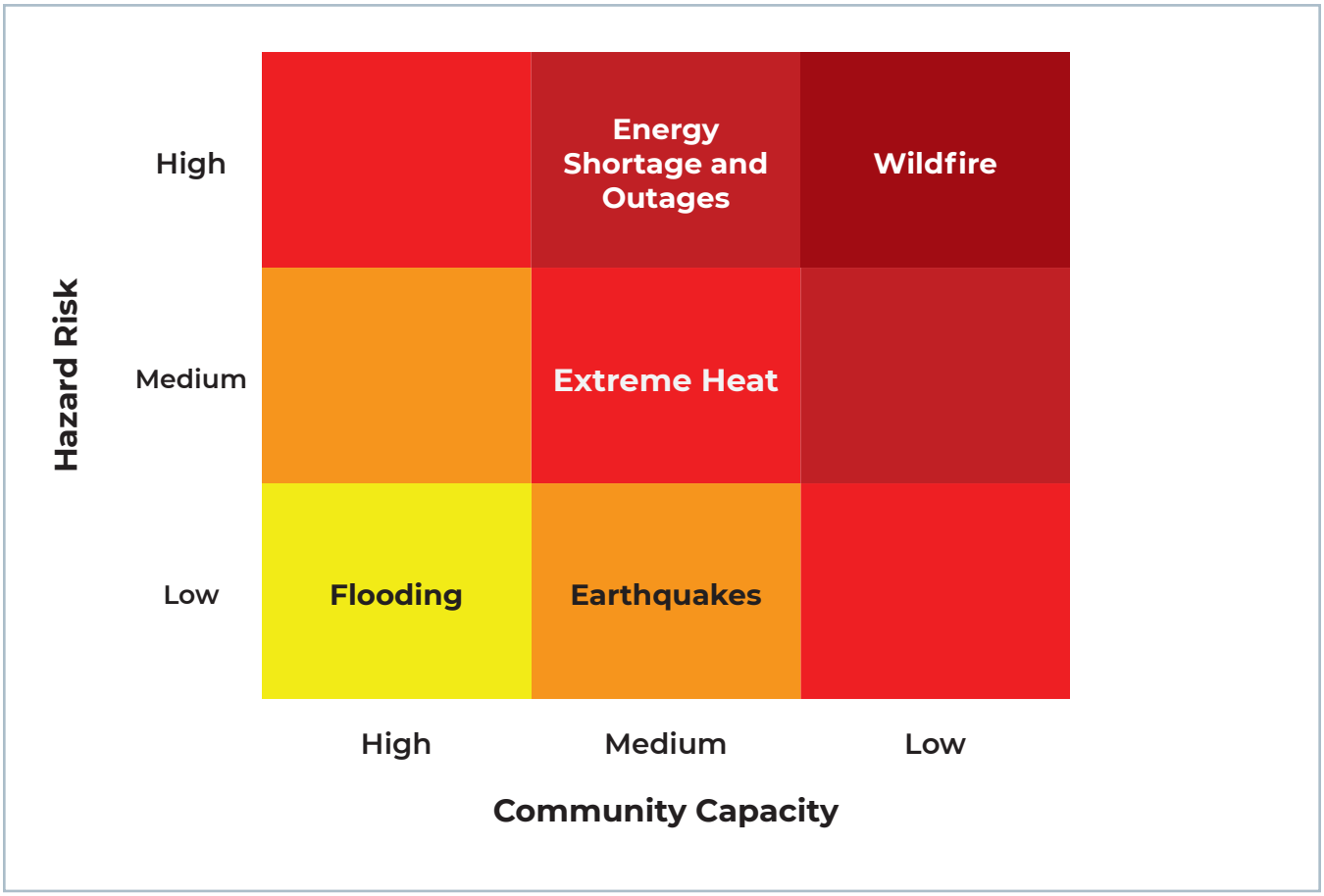
EVACUATION ROUTES

Evacuation routes run north/south on Lake Forest Drive and east/west on Eagle Lake Road (County Route A1). Both are forested roads in the very high fire hazard severity zone.

Summary of Findings

Lake Forest is most at risk from wildfire, extreme heat, and energy shortages and outages (see **Figure 2-19**). All three all likely to occur between the years 2020 and 2050 at a scale that would disrupt community life.

Figure 2-19 – Hazard Risk in Lake Forest



ENERGY SHORTAGE AND OUTAGES

Hazard events and storms, including hazards far outside of Lake Forest, could cause power lines to be knocked down and result in power outages. Additionally, wildfire risk could cause planned power shutoffs more regularly in the future. Energy shortages pose the highest risk to people who are medically dependent, including people whose medication requires refrigeration. Although energy shortages and outages are likely to occur, sufficient planning can mitigate impact to people's lives.

EXTREME HEAT

Similar to Lassen County as a whole, extreme heat days are anticipated to happen more often, and heat waves are forecasted to last longer.

FLOODING

No developed areas in Lake Forest are within a flood zone.

WILDFIRE

The entire single-family residential community of Lake Forest is within a very high wildfire severity zone. Lake Forest is not a certified Firewise Community and does not have a specific Community Fire Safe Plan, but is within the jurisdiction of the County CWPP. Fire protection services are provided for Lake Forest by the Lake Forest Fire Protection District.

LITCHFIELD

Introduction

Litchfield is a community located on the southeastern portion of Lassen County, between Shaffer Mountain and Honey Lake. As of 2019, 205 people call Litchfield their home.[25] The community of Litchfield is most at risk of extreme heat and flooding. Litchfield has a strong presence of older adults living alone relative to the County, who are vulnerable to wildfire and extreme heat. Litchfield's has two critical assets, Shaffer Elementary School and a 60 kV transmission line, which are both located in the moderate wildfire severity zones.

Hazard Assessment

Table 2-17 shows the potential hazards in Litchfield and how likely they are to occur in the next 30 years. Litchfield is likely to experience extreme heat, energy shortages and outages, flooding, and wildfire before 2050, and may experience an earthquake.

Table 2-17 – Hazards in Litchfield

Hazard	Probability
Earthquake	Low
Energy Shortage and Outages	High
Extreme Heat	High
Flooding	High
Wildfire	High

Community Capacity

CRITICAL ASSETS AND EMERGENCY RESPONSE

Litchfield has three critical assets, a transmission line, Honey Lake Power, and Shaffer Elementary School, as shown in **Table 2-18**. Honey Lake Power is not directly within the communities of Standish or Litchfield, but it is nearby to the east and provides emergency power in case of wildfire or other outages.

Table 2-18 – Critical Assets in Litchfield

Asset Type	Asset Name	Relevant Hazards
Local and Regional Infrastructure	60 kV Transmission Line	Wildfire
	Honey Lake Power	Wildfire
Major Commercial Hubs	None	N/A
Medical	None	N/A
Schools	Shaffer Elementary School	Energy Shortages, Extreme Heat, and Wildfire

25 U.S. Census Bureau 2019.

VULNERABLE POPULATIONS

As shown in **Table 2-19**, Litchfield has a high proportion of older adults living alone and young children than the County as a whole.[26] These community members are vulnerable to all hazards because they have a difficult time evacuating. Older adults also often die at higher rates than the general population during extreme heat events.

Table 2-19 – Vulnerable Populations in Litchfield

Vulnerable Population	Presence in Litchfield	Presence in Lassen County	Relevant Hazards
People with Disabilities[1]	10.7%	18.4%	Flooding, Wildfire, Earthquakes, Energy Shortages and Outages, Extreme Cold and Snow
Non-English-Speaking Households[2]	0.0%	0.8%	Flooding, Wildfire, Earthquakes
Renters[3]	10.7%	32.4%	Flooding, Wildfire, Earthquakes
Older Adults Living Alone[4]	17.3%	12.9%	Flooding, Wildfire, Earthquakes, Extreme Heat, Energy Shortages and Outages, Extreme Cold and Snow
Young Children[5]	9.3%	4.6%	Extreme Heat, Wildfire (smoke), Extreme Cold and Snow

Notes:

1 Percent with a disability out of total civilian noninstitutionalized population.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1810.

2 Percent limited English-speaking households out of all households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1602.

3 Percent of renter-occupied housing units out of all occupied housing units.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP04.

4 Percent of householders living alone that are 65 years and over, out of total households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1101.

5 Percent of total population under 5 years.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP05.

EVACUATION ROUTES

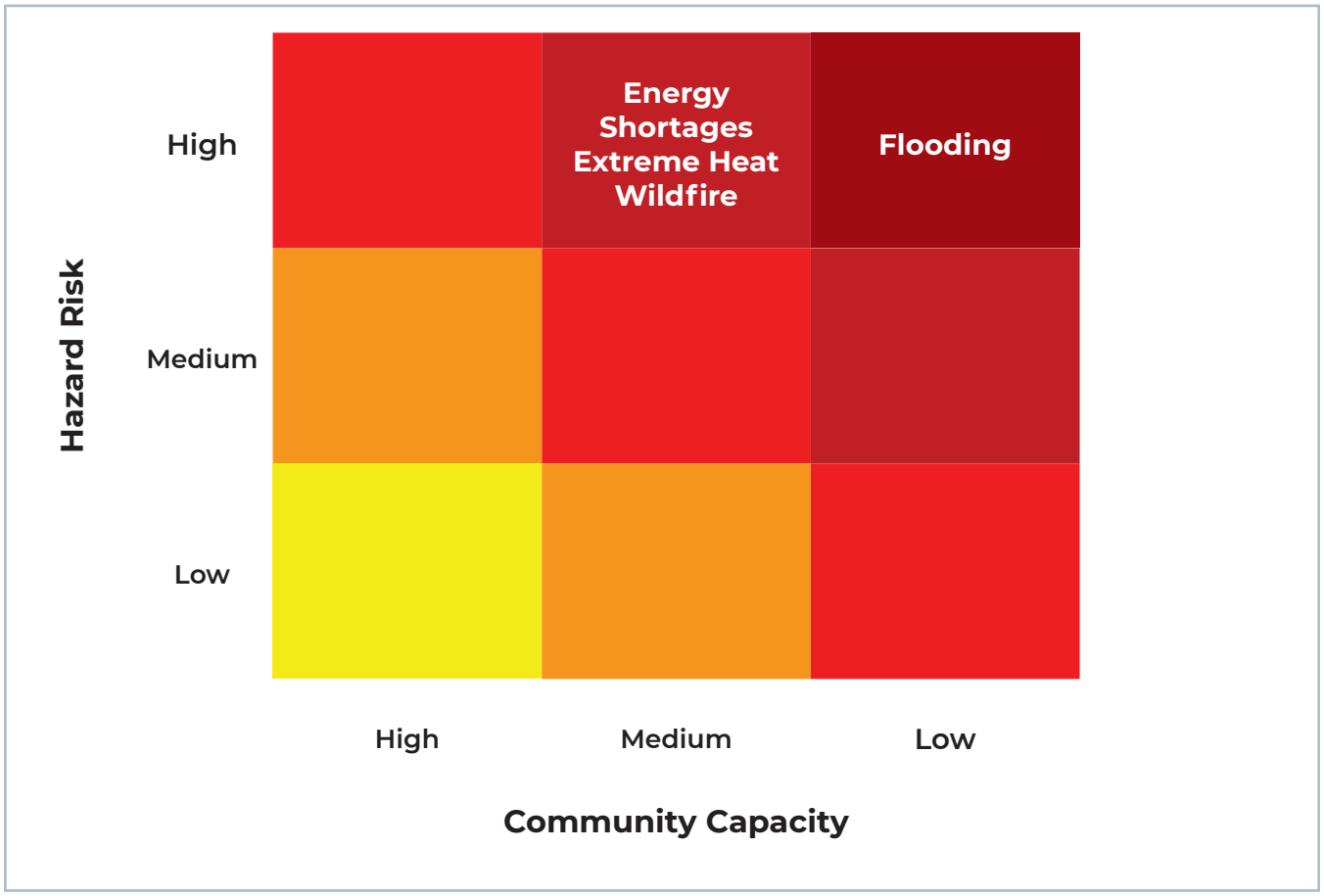
Litchfield has multiple routes for potential evacuations. Each would occur by traveling on A27 northwest or to the north or southwest onto U.S. 395. U.S. 395 allows for evacuation to the east or west. Eastbound U.S. 395 provides addition evacuation to the north. Evacuation to the east and west would traverse through moderate wildfire hazard severity zones, but south of Litchfield is free from wildfire hazard severity zones.

Summary of Findings

Litchfield is most at risk from energy shortages and outages, extreme heat, flooding, and wildfire (see **Figure 2-20**). All are likely to occur between the years 2020 and 2050 at a scale that would disrupt community life, potentially require evacuations, threaten critical facilities, and pose significant risk to older adults living alone and young children, both of which live in Litchfield at higher rates than the County as a whole.

26 It is likely that many older adults living alone also have disabilities, and there is significant overlap between these groups.

Figure 2-20 – Hazard Risk in Litchfield



ENERGY SHORTAGE AND OUTAGES

Hazard events and storms, including hazards far outside of Litchfield, could cause power lines to be knocked down and result in power outages in Litchfield. Additionally, wildfire risk could cause planned power shutoffs more regularly in the future. Energy shortages pose the highest risk to people who are medically dependent, including people whose medication requires refrigeration. Although energy shortages and outages are likely to occur, sufficient planning can mitigate impact to people's lives.

EXTREME HEAT

Historically, Litchfield had 4 extreme heat days a year and is projected to experience 15 extreme heat days a year by 2050.[27] Historically, heat waves lasted 2.5 days and are projected to increase to 6.3 days between 2020 and 2050. Litchfield also has a significant number of older adults living alone, who are more susceptible to extreme heat events. Older adults are more likely to suffer from heat stroke due to their age and physical health, and older adults living alone are less likely to have someone check in on them during a heatwave and help them seek medical attention when they start showing signs of heat-related illness.

27 Cal-Adapt 2020.

FLOODING

The 100-year flood zones abuts the southern portion of Litchfield, including some developed areas, and no critical assets. Older adults may have a harder time evacuating in an event of a flood. No critical assets are in the flood zone.

WILDFIRE

The majority of Litchfield's parcels designated as rural residential and town center are within a moderate wildfire severity zone (**see Figure 2-21**). There have been wildfires on the outskirts of Litchfield (see **Figure 2-22**). Similar to flooding, Litchfield has a high number of older adults living alone, who likely will have a more difficult time evacuating. Shafter Elementary School and Honey Lake Power are both critical assets in the moderate wildfire severity zone. The Standish-Litchfield Community Fire Safe Plan was adopted in 2004, and includes guidelines for defensible space, including residential protection measures and building regulation. Litchfield is not a certified Firewise Community at this time. Litchfield is provided fire protection services by the Standish-Litchfield Fire Protection District.



Google Earth image of Litchfield, Lassen County, CA

Figure 2-21. Wildfire Hazard Severity Zones in Litchfield

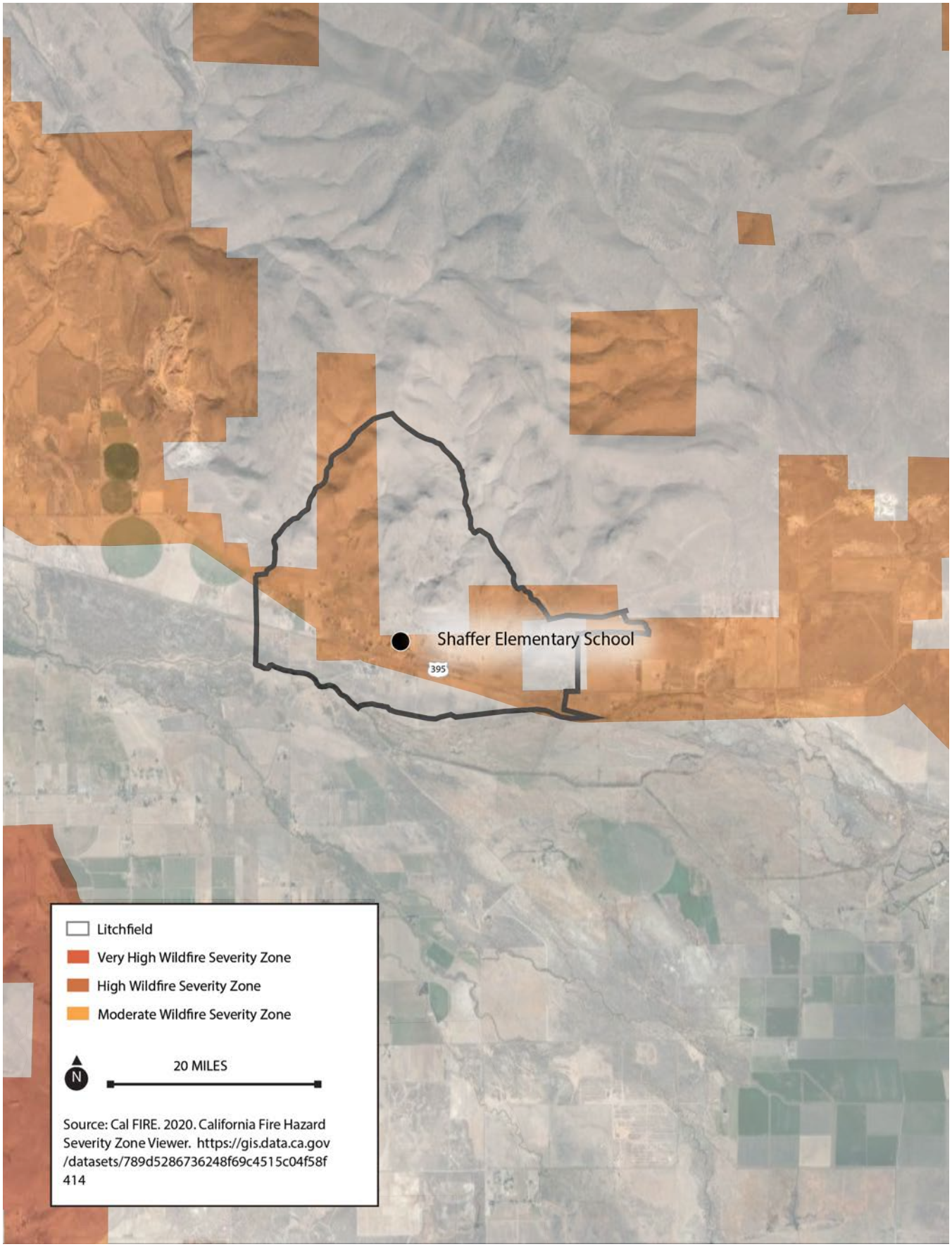
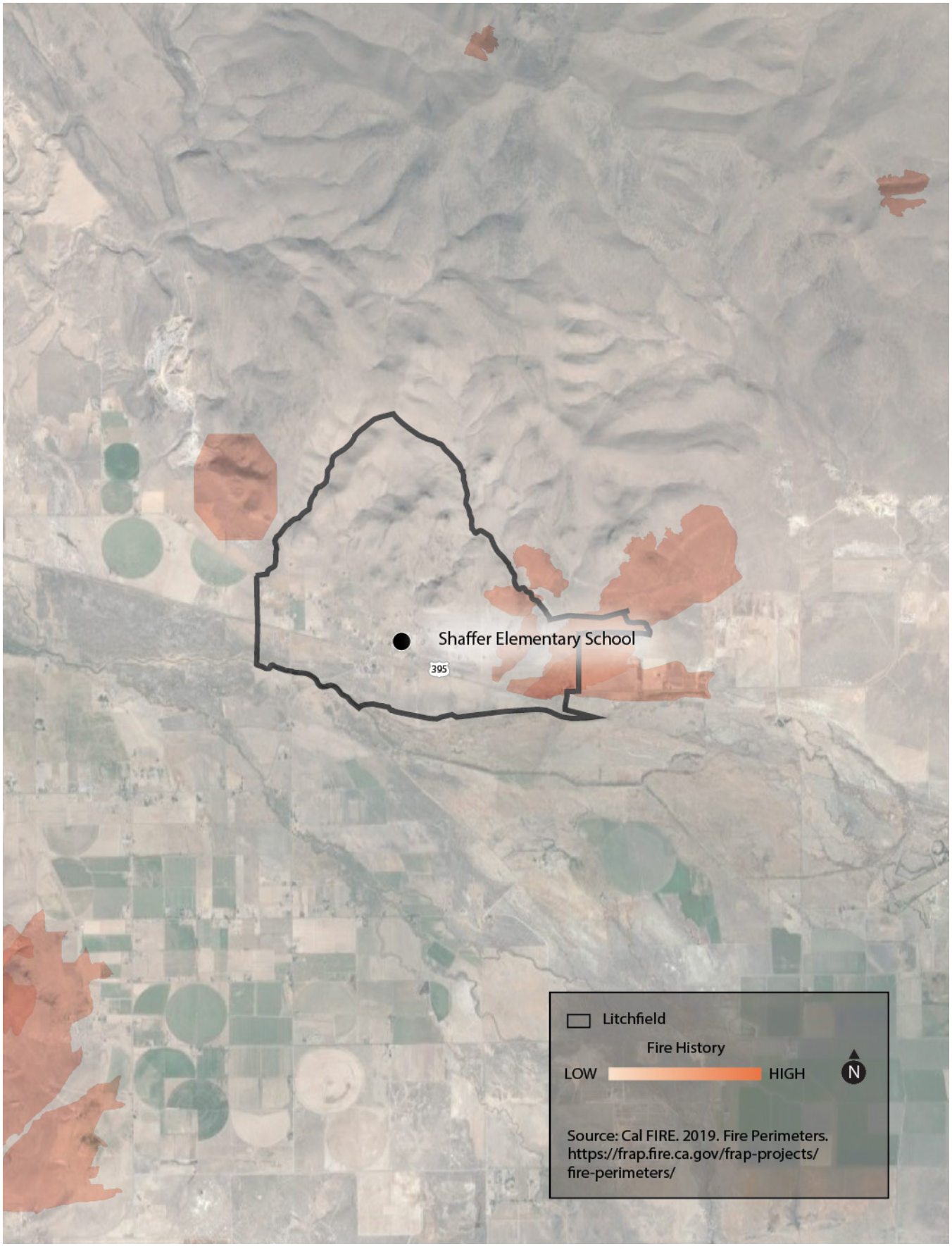


Figure 2-22. Historic Wildfires in Litchfield



LITTLE VALLEY

Introduction

Little Valley is a community in northern Lassen County situated along Horse Creek. As of 2019, 26 people call Little Valley their home.[28] The community of Little Valley is most at risk of wildfire and energy shortage and outages. Little Valley has a strong presence of people with disabilities and renters compared to the County. Both groups of people are vulnerable to wildfire and energy shortages and outages. Little Valley is primary a residential community, with no major highways and one fire department.

Hazard Assessment

Table 2-20 shows the potential hazards in Little Valley and how likely they are to occur in the next 30 years. Little Valley is likely to experience energy shortages and outages, extreme heat and wildfire by 2050, and may experience an earthquake or flooding.

Table 2-20 – Hazards in Little Valley

Hazard	Probability
Earthquake	Low
Energy Shortage and Outages	High
Extreme Heat	High
Flooding	Medium
Wildfire	High

Community Capacity

CRITICAL ASSETS AND EMERGENCY RESPONSE

Little Valley has one critical asset, the Little Valley Fire Department, as shown in **Table 2-21**. The Little Valley Fire Department is within the moderate wildfire severity zone.

Table 2-21 – Critical Assets in Little Valley

Asset Type	Asset Name	Relevant Hazards
Local and Regional Infrastructure	Little Valley Fire Department	Wildfire, Energy Shortages
	Little Valley Community Services District	Wildfire
Major Commercial Hubs	None	N/A
Medical	None	N/A
Schools	None	N/A

28 U.S. Census Bureau 2019.

VULNERABLE POPULATIONS

As shown in **Table 2-22**, Little Valley has a high proportion of renters and people with disabilities.[29] People with a disability are vulnerable to all hazards because they have a difficult time evacuating due to medical needs, and suffer more severe health effects from power outages if they are medically dependent on medical machines or refrigeration for medication. Renters may have a harder time recovering from fires and floods because they may lack insurance or face difficulty in relocating from a damaged property.

Table 2-22 – Vulnerable Populations in Little Valley

Vulnerable Population	Presence in Little Valley	Presence in Lassen County	Relevant Hazards
People with Disabilities[1]	46.2%	18.4%	Flooding, Wildfire, Earthquakes, Energy Shortages and Outages, Extreme Cold and Snow
Limited English-Speaking Households[2]	0.0%	0.8%	Flooding, Wildfire, Earthquakes
Renters[3]	53.8%	32.4%	Flooding, Wildfire, Earthquakes
Older Adults Living Alone[4]	0.0%	12.9%	Flooding, Wildfire, Earthquakes, Extreme Heat, Energy Shortages and Outages, Extreme Cold and Snow
Young Children[5]	0.0%	4.6%	Extreme Heat, Wildfire (smoke), Extreme Cold and Snow

Notes:

1 Percent with a disability out of total civilian noninstitutionalized population.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1810.

2 Percent limited English-speaking households out of all households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1602.

3 Percent of renter-occupied housing units out of all occupied housing units.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP04.

4 Percent of householders living alone that are 65 years and over, out of total households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1101.

5 Percent of total population under 5 years.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP05.

EVACUATION ROUTES

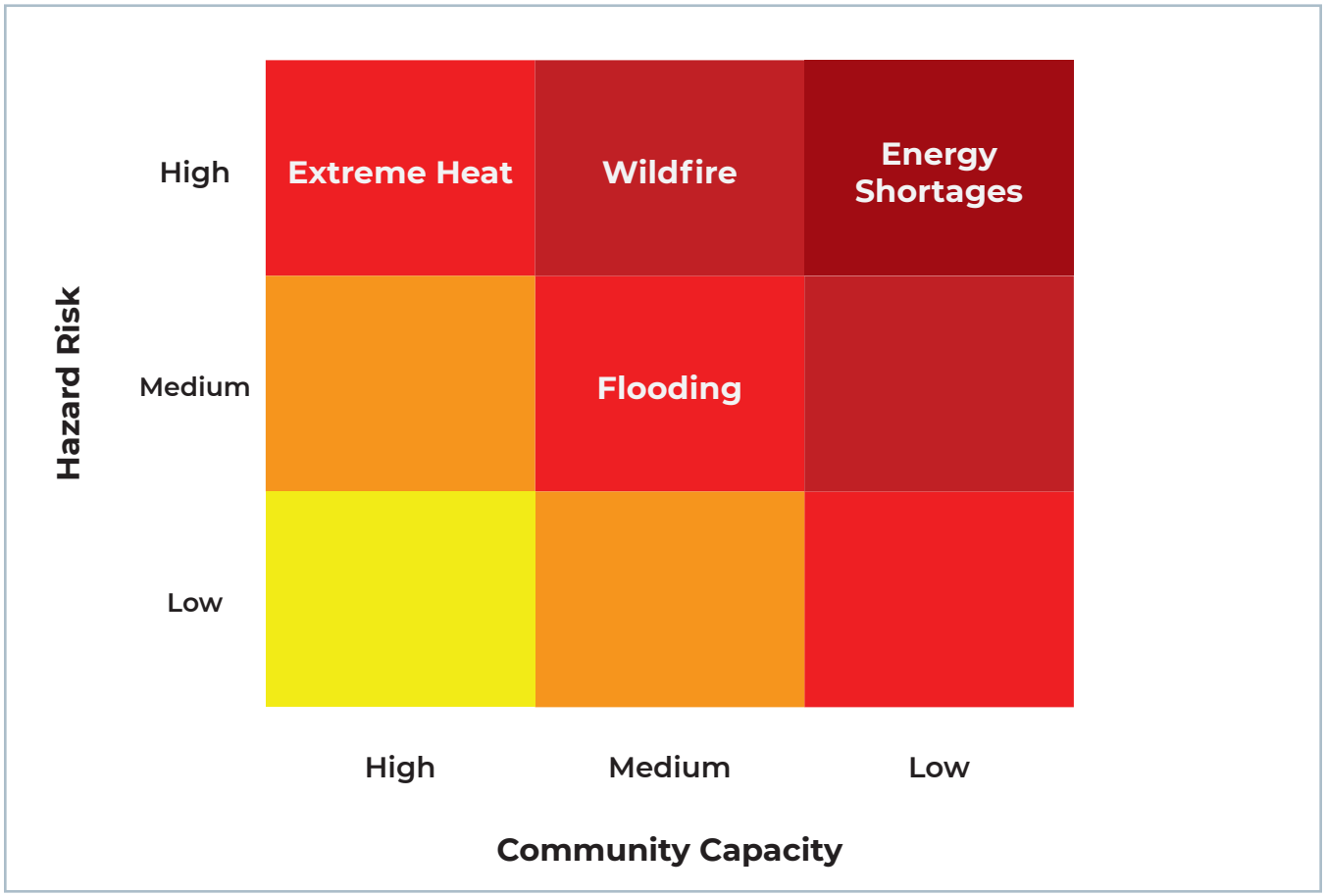
Evacuations from Little Valley can evacuate northbound on Little Valley Road (Forest Route 35N01), westbound through Loomis Cabin Road, and southbound through Black Gulch Road and Little Valley Road (Forest Route 35N05). Evacuations to the north and east go through moderate fire hazard severity zones, whereas evacuations to the west go through very high fire hazard severity zones.

Summary of Findings

Little Valley is most at risk from energy shortages and outages, extreme heat, and wildfire (see **Figure 2-23**). All are likely to occur between the years 2020 and 2050 at a scale that would disrupt community life, potentially require evacuations, threaten critical facilities, and pose significant risk to people with disabilities and renters, both of which live in Little Valley at higher rates than the County as a whole.

29 It is likely that many older adults living alone also have a disability, and there is significant overlap between these groups.

Figure 2-23 – Hazard Risk in Little Valley



ENERGY SHORTAGE AND OUTAGES

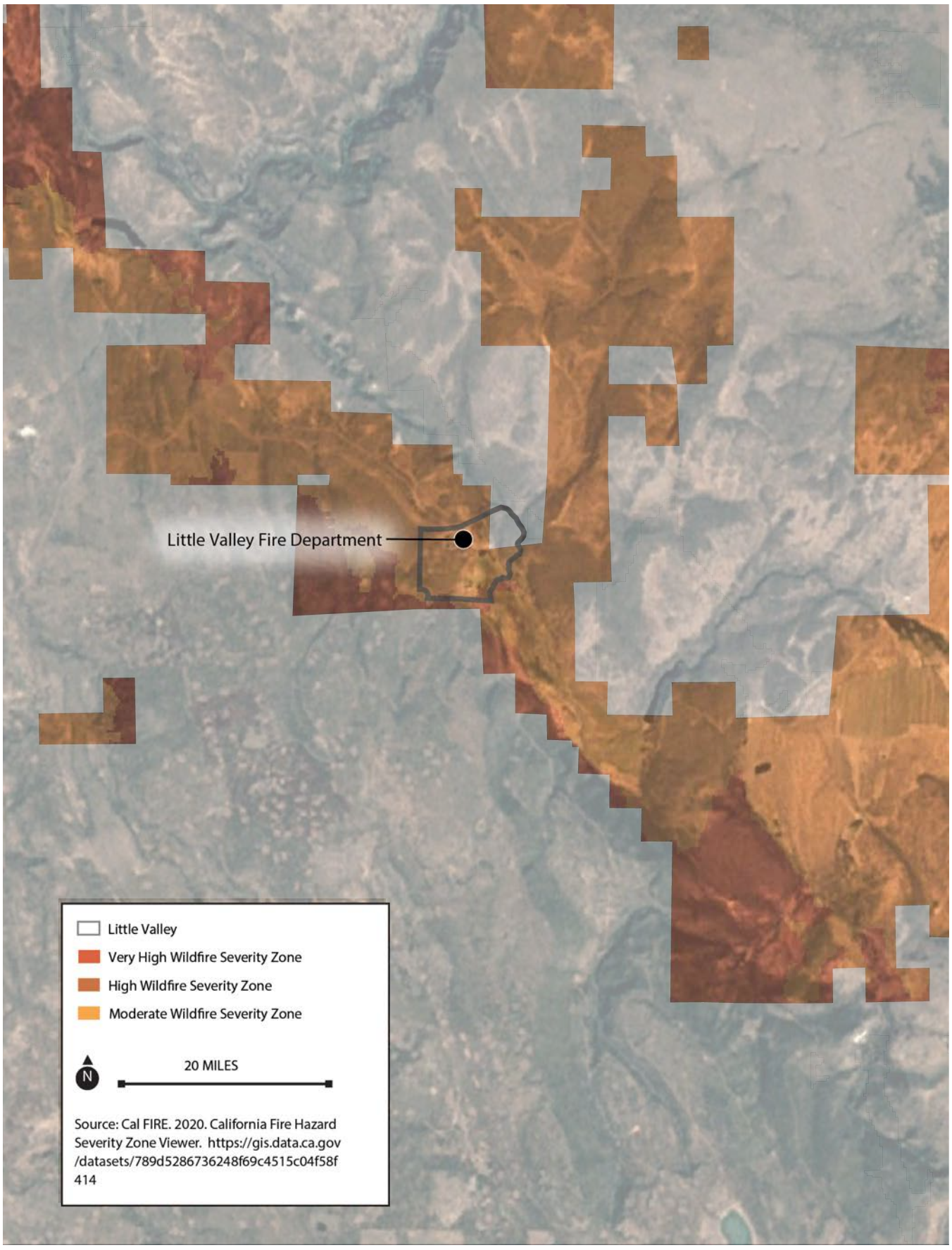
Hazard events and storms, including hazards far outside of Little Valley, could cause power lines to be knocked down and result in power outages in Little Valley. Additionally, wildfire risk could cause planned power shutoffs more regularly in the future. Energy shortages pose the highest risk to people who are medically dependent, including people whose medication requires refrigeration. Although energy shortages and outages are likely to occur, sufficient planning can mitigate impact to people's lives. This is of special concern in Little Valley, given the large proportion of people with disabilities who may be medically dependent on machines or refrigeration.

EXTREME HEAT

Historically, Little Valley had 4 extreme heat days a year and is projected to experience 6.9 extreme heat days a year by 2050.[30] Historically, heat waves lasted 2.4 days and are projected to increase to 6.9 days between 2020 and 2050. Little Valley does not have populations that are especially susceptible to extreme heat.

30 Cal-Adapt 2020.

Figure 2-24. Wildfire Hazard Severity Zones in Little Valley



FLOODING

The 100-year flood zones abuts the northeast potion of Little Valley along Horse Creek, but includes no developed areas and no critical assets. Older adults may have a harder time evacuating in an event of a flood.

WILDFIRE

All of Little Valley is designated for extensive agriculture as the land use, but much of it is occupied by single-family development. The majority of Little Valley is within a moderate wildfire severity zone, including the Little Valley Fire Department. A smaller portion of the single-family parcels in Little Valley are in high and very fire hazard severity zones. Additionally, Little Valley has a high number of people with disabilities, who likely will have a more difficult time evacuating, as well as renters who may have a harder time rebuilding after a wildfire. Little Valley has a Firewise board that helps prepare for wildfires, and is a certified Firewise Community. Fire protection services are provided to Little Valley by the Little Valley Community Services District.

MERRILLVILLE ROAD

Introduction

Merrillville Road is a small community in Central Lassen County, east of Eagle Lake. Merrillville Road is not recognized by the U.S. Census Bureau; therefore, specific population data is not available. Merrillville Road is most at risk from wildfire because the entire community is in the high wildfire severity zone. Similar to nearby communities, it can be assumed that Merrillville Road is also high risk for energy shortages and outages and extreme heat events.

Hazard Assessment

Table 2-23 shows the potential hazards in Merrillville Road and how likely they are to occur in the next 30 years. Merrillville Road is most at risk from wildfire, energy shortages and outages, and extreme heat.

Table 2-23 – Hazards in Merrillville Road

Hazard	Probability
Earthquake	Low
Energy Shortage and Outages	High
Extreme Heat	High
Flooding	Low
Wildfire	High

Community Capacity

CRITICAL ASSETS AND EMERGENCY RESPONSE

Merrillville Road has no critical assets.

VULNERABLE POPULATIONS

As stated above, specific population data is not available for Merrillville.

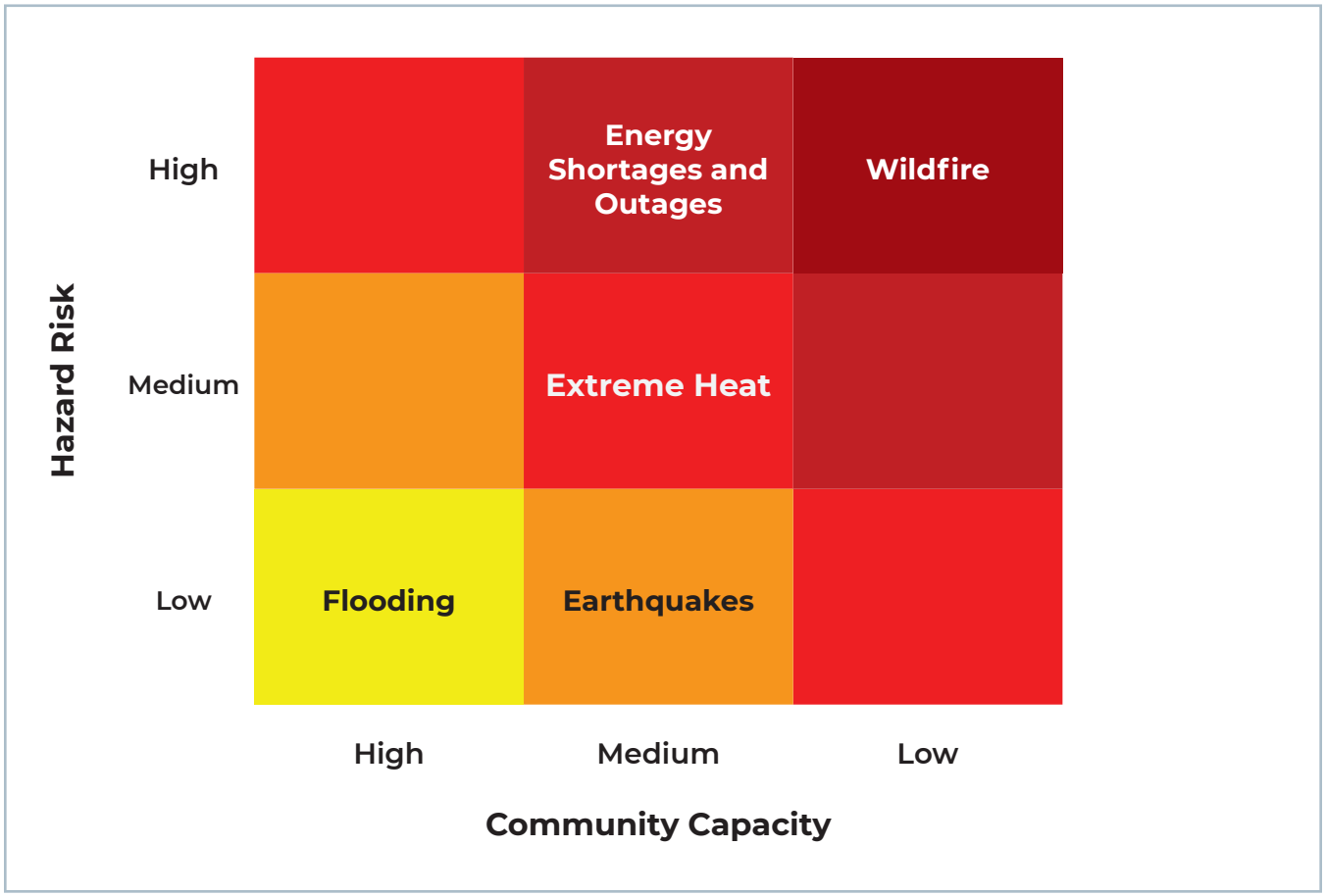
EVACUATION ROUTES

All evacuation would occur on Merrillville Road, which runs eastward through moderate and high fire hazard severity zones and westward through high and very high fire hazard severity zones. If this road were closed, evacuations would be severely impacted.

Summary of Findings

Merrillville Road is most at risk from wildfire, extreme heat, and energy shortages and outages (see **Figure 2-25**). All three all likely to occur between the years 2020 and 2050 at a scale that would disrupt community life.

Figure 2-25– Hazard Risk in Merrillville Road



ENERGY SHORTAGES AND OUTAGES

Hazard events and storms, including hazards far outside of Merrillville, could cause power lines to be knocked down and result in power outages. Additionally, wildfire risk could cause planned power shutoffs more regularly in the future. Energy shortages and outages pose the highest risk to people who are medically dependent, including people whose medication requires refrigeration. Although energy shortages and outages are likely to occur, sufficient planning can mitigate impact to people's lives.

EXTREME HEAT

Similar to Lassen County as a whole, extreme heat days are anticipated to happen more often, and heat waves are forecasted to last longer.

FLOODING

No developed areas in Merrillville are within a flood zone.

WILDFIRE

The entire community of Merrillville Road is single-family residential land use within a high wildfire severity zone. Merrillville Road is not considered a certified Firewise Community, but it is within the planning area for the Lassen County CWPP. The community is within the SRA.

MILFORD

Introduction

Milford is a community in southern Lassen County situated just south of Honey Lake. As of 2019, 206 people call Milford their home.[31] The community of Milford is most at risk of wildfire and energy shortage and outages. Milford has a strong presence of families with young children relative to the County. This group of people are vulnerable to wildfire and energy shortages and outages.

Hazard Assessment

Table 2-24 shows the potential hazards in Milford and how likely they are to occur in the next 30 years. Milford is likely to experience extreme heat and wildfire before 2050, and may experience an earthquake, energy shortages and outages, or flooding.

Table 2-24 – Hazards in Milford

Hazard	Probability
Earthquake	Low
Energy Shortage and Outages	High
Extreme Heat	High
Flooding	Low
Wildfire	High

31 U.S. Census Bureau 2019.

Community Capacity

CRITICAL ASSETS AND EMERGENCY RESPONSE

Milford has little development, and the only critical asset in the community is a 60 kV transmission line, as shown in **Table 2-25**. This transmission line runs through the community and moderate, high, and very high fire hazard severity zones.

Table 2-25 – Critical Assets in Milford

Asset Type	Asset Name	Relevant Hazards
Local and Regional Infrastructure	60 kV Transmission Line	Wildfire
Major Commercial Hubs	None	N/A
Medical	None	N/A
Schools	None	N/A

VULNERABLE POPULATIONS

As shown in **Table 2-26**, Milford has a high proportion of young children, but no other populations that may be considered vulnerable.[32] Young children are most vulnerable to extreme heat and wildfire due to smoke.

Table 2-26 – Vulnerable Populations in Milford

Vulnerable Population	Presence in Milford	Presence in Lassen County	Relevant Hazards
People with Disabilities[1]	0.0%	18.4%	Flooding, Wildfire, Earthquakes, Energy Shortages and Outages, Extreme Cold and Snow
Limited English-Speaking Households[2]	0.0%	0.8%	Wildfire, Energy Shortages
Renters[3]	0.0%	32.4%	Flooding, Wildfire, Earthquakes
Older Adults Living Alone[4]	0.0%	12.9%	Flooding, Wildfire, Earthquakes, Extreme Heat, Energy Shortages and Outages, Extreme Cold and Snow
Young Children[5]	18.9%	4.6%	Extreme Heat, Wildfire (smoke), Extreme Cold and Snow

Notes:

1 Percent with a disability out of total civilian noninstitutionalized population.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1810.

2 Percent limited English-speaking households out of all households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1602.

3 Percent of renter-occupied housing units out of all occupied housing units.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP04.

4 Percent of householders living alone that are 65 years and over, out of total households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1101.

5 Percent of total population under 5 years.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP05.

32 It is likely that many older adults living alone also have a disability, and there is significant overlap between these groups.

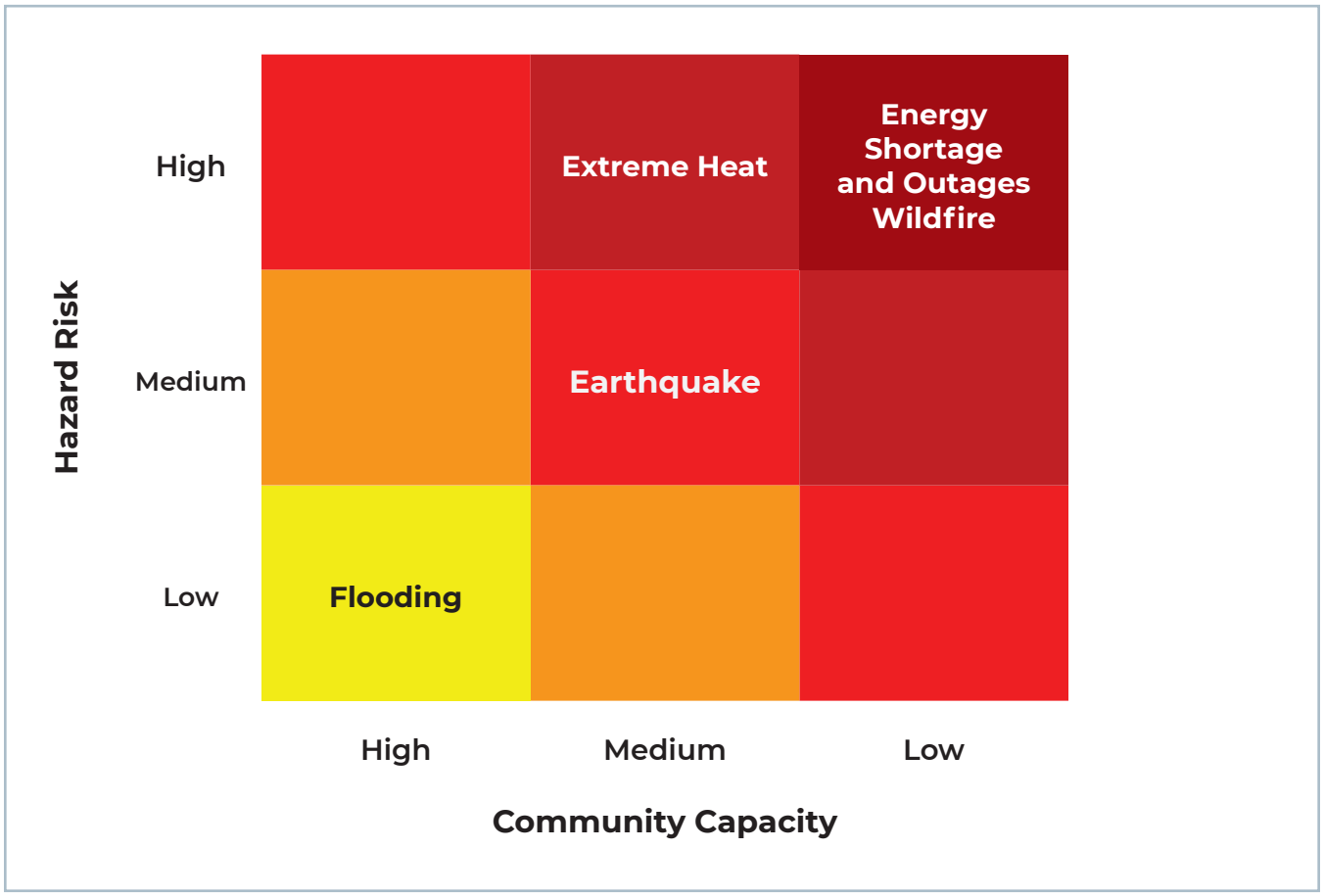
EVACUATION ROUTES

Evacuations from Milford must evacuate from Milford Grade onto U.S. 395. If either of these roads are closed by fire, evacuation would be severely hindered. To the north U.S. 395 is the border between very high fire hazard severity zone and no hazard severity zone, and to the south U.S. 395 is the border between a moderate fire hazard severity zone and no hazard severity zone.

Summary of Findings

Milford is most at risk from energy shortages and outages, extreme heat, and wildfire (see **Figure 2-26**). All are likely to occur between the years 2020 and 2050 at a scale that would disrupt community life, potentially require evacuations, and pose significant risk to young children, who live in Milford at higher rates than the County as a whole.

Figure 2-26 – Hazard Risk in Milford



EARTHQUAKE

Active faults run transverse Milford. No critical assets are within the Alquist-Priolo zone, and therefore are not subject to additional building regulations.

ENERGY SHORTAGE AND OUTAGES

Hazard events and storms, including hazards far outside of Milford, could cause power lines to be knocked down and result in power outages in Milford. Additionally, wildfire risk could cause planned power shutoffs more regularly in the future. Energy shortages and outages pose the highest risk to people who are medically dependent, including people whose medication requires refrigeration. Although energy shortages and outages are likely to occur, sufficient planning can mitigate impact to people's lives. This is of special concern in Milford, given the large proportion of older adults who may be medically dependent on machines or refrigeration.

EXTREME HEAT

Historically, Milford had 4 extreme heat days a year and is projected to experience 18 extreme heat days a year by 2050.[33] Historically, heat waves lasted 2.6 days and are projected to increase to 7.7 days between 2020 and 2050. Young children may be more vulnerable to extreme heat, and should be considered in hazard planning; however, Milford does not have a large proportion of older adults, who are the primary population of concern.

FLOODING

Milford is just south of Honey Lake, which is in Zone A, an area with a 1% annual chance of flooding (see **Figure 2-27**). However, the developed areas within Milford are under Zone X, an area determined to be outside the 500-year flood zone, and protected by levee from 100-year flooding.

WILDFIRE

A portion of central Milford is within moderate, high, and very High fire hazard severity zones. All of the land in fire hazard severity zones is designated for extensive agriculture; however, there are some sparse residential developments within high and very high wildfire severity zones, with more densely developed residential areas located adjacent to the wildfire severity zones. Additionally, Milford has a high proportion of households with young children, who likely will have a more difficult time evacuating and are more vulnerable to smoke caused by wildfire. Milford is considered a certified Firewise Community and is within the planning area for the Lassen County CWPP. Fire protection services in Milford are provided by the Milford Fire Protection District.

33 Cal-Adapt 2020.

Figure 2-27. Flood Zones in Milford



NUBIEBER

Introduction

Nubieber is a community located in the northwestern portion of Lassen County. As of 2019, 35 people call Nubieber their home.[34] The community of Nubieber is most at risk of energy shortages and outages, extreme heat, flooding, and wildfire. Nubieber has a strong presence of older adults living alone relative to the County. This group of people is vulnerable to earthquakes, energy shortages and outages, extreme heat, flooding, and wildfire. There are no critical assets located in Nubieber.

Hazard Assessment

Table 2-27 shows the potential hazards in Nubieber and how likely they are to occur in the next 30 years. Nubieber is likely to experience energy shortages and outages, extreme heat, flooding, and wildfire before 2050.

Table 2-27 – Hazards in Nubieber

Hazard	Probability
Earthquake	Low
Energy Shortage and Outages	High
Extreme Heat	High
Flooding	High
Wildfire	High

Community Capacity

CRITICAL ASSETS AND EMERGENCY RESPONSE

The one critical asset located in Nubieber is a 60 kV transmission line, as shown in **Table 2-28**. This transmission line runs through moderate fire hazard severity zones just north of Nubieber.

Table 2-28 - Critical Assets in Nubieber

Asset Type	Asset Name	Relevant Hazards
Local and Regional Infrastructure	60 kV Transmission Line	Wildfire
Major Commercial Hubs	None	N/A
Medical	None	N/A
Schools	None	N/A

34 U.S. Census Bureau 2019.

VULNERABLE POPULATIONS

As shown in **Table 2-29**, Nubieber has a high proportion of older adults living alone. It is likely that many older adults living alone also have a disability, and there may be significant overlap between these groups. Older adults living alone are vulnerable to all hazards, particularly because they may have a difficult time evacuating due to medical needs. Older adults also often die at higher rates than the general population during extreme heat events.

Table 2-29 - Vulnerable Populations in Nubieber

Vulnerable Population	Presence in Nubieber	Presence in Lassen County	Relevant Hazards
People with Disabilities[1]	11.4%	18.4%	Flooding, Wildfire, Earthquakes, Energy Shortages and Outages, Extreme Cold and Snow
Limited English Speaking Households[2]	0.0%	0.8%	Flooding, Wildfire, Earthquakes
Renters[3]	18.8%	32.4%	Flooding, Wildfire, Earthquakes
Older Adults Living Alone[4]	25.0%	12.9%	Flooding, Wildfire, Earthquakes, Extreme Heat, Energy Shortages and Outages, Extreme Cold and Snow
Young Children[5]	0.0%	4.6%	Extreme Heat, Wildfire (smoke), Extreme Cold and Snow

Notes:

1 Percent with a disability out of total civilian noninstitutionalized population.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1810.

2 Percent limited English-speaking households out of all households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1602.

3 Percent of renter-occupied housing units out of all occupied housing units.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP04.

4 Percent of householders living alone that are 65 years and over, out of total households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1101.

5 Percent of total population under 5 years.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP05.

EVACUATION ROUTES

Evacuations from Nubieber must evacuate onto SR-299. Kramer Road and Babcock Road serve as main access roads within Nubieber. If either of these roads is closed such that residents would not be able to access SR-299, then evacuation would be severely hindered. If northbound travel along SR-299 is blocked in Nubieber, an alternate route would be by traveling north on Kramer Road, then turning right onto 4 Corners Road to arrive in Bieber. If southbound travel along SR-299 is blocked in Nubieber, an alternate route would be by traveling north on Kramer Road, then making a sharp left turn onto Hillside Station Road, then continuing south until Hillside Station Road becomes Old Cemetery Road, which will ultimately intersect with SR-299. All roads within Nubieber, as well as much of the surrounding areas, are within the 100-year flood zone (see **Figure 2-28**). The southwestern portion of SR-299 is within a moderate wildfire severity zone within the community, and a high wildfire severity zone southwest of the community. The southern portion of Babcock Road is within a moderate wildfire severity zone (see **Figure 2-29**).

Figure 2-28. Flood Zones in Nubieber

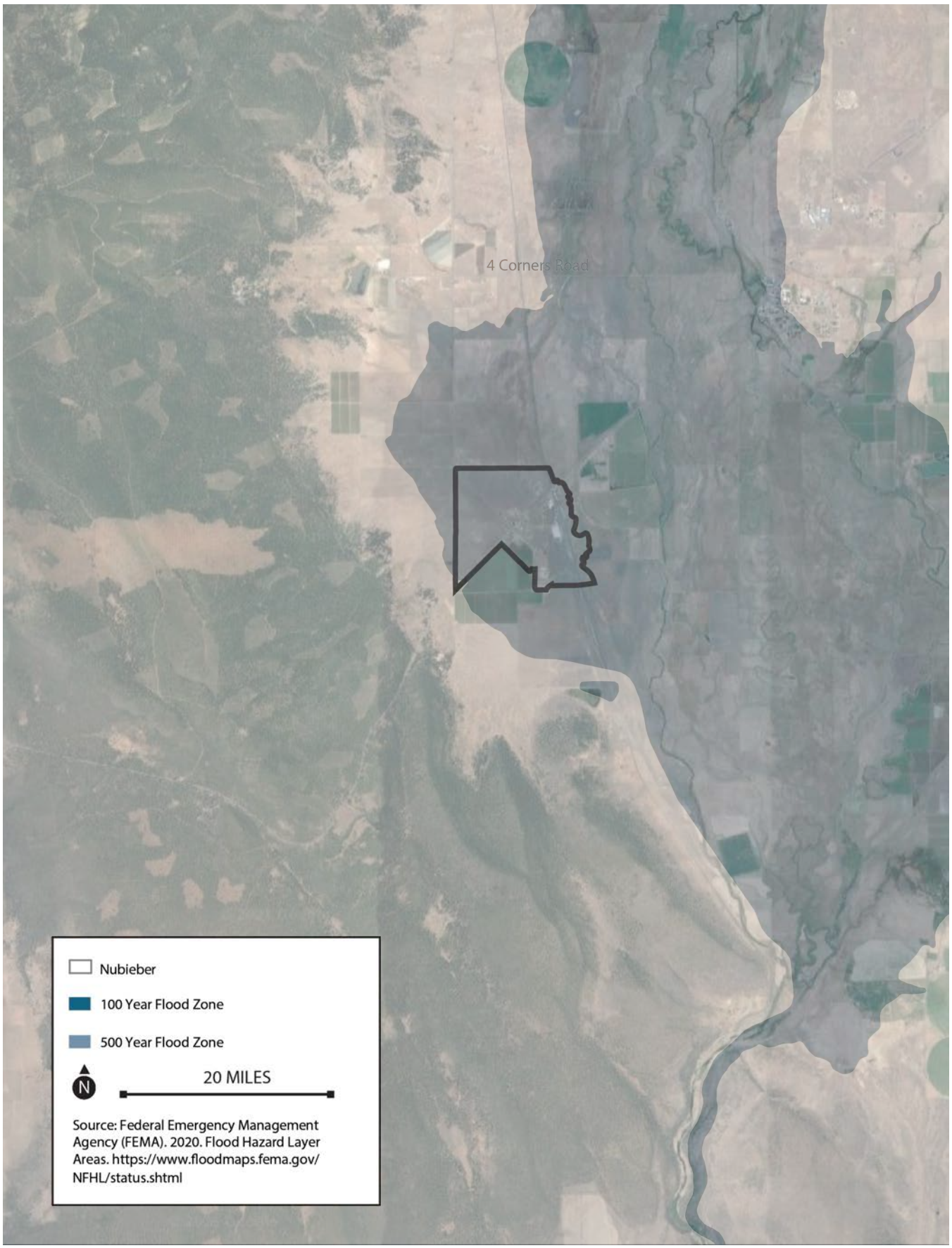
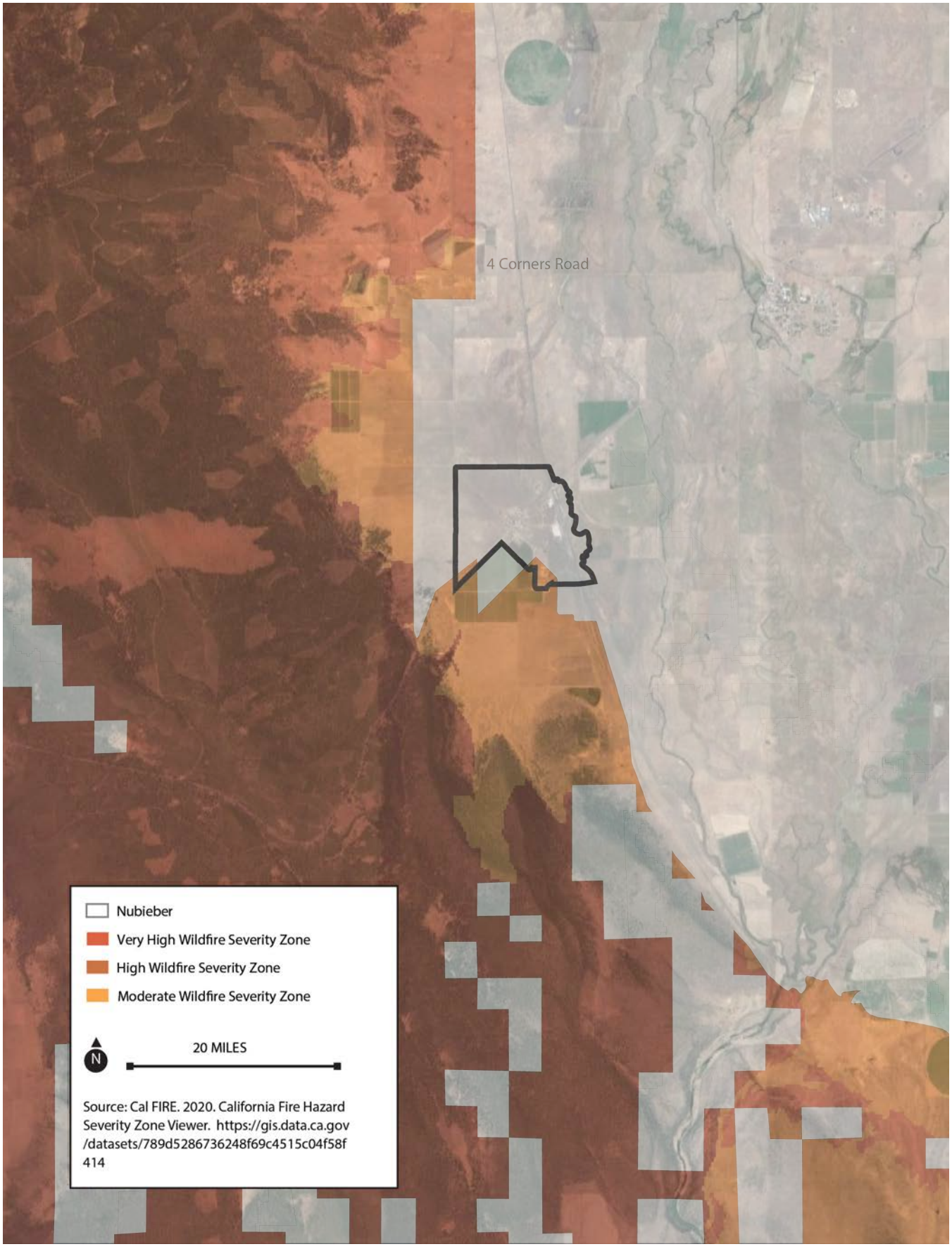


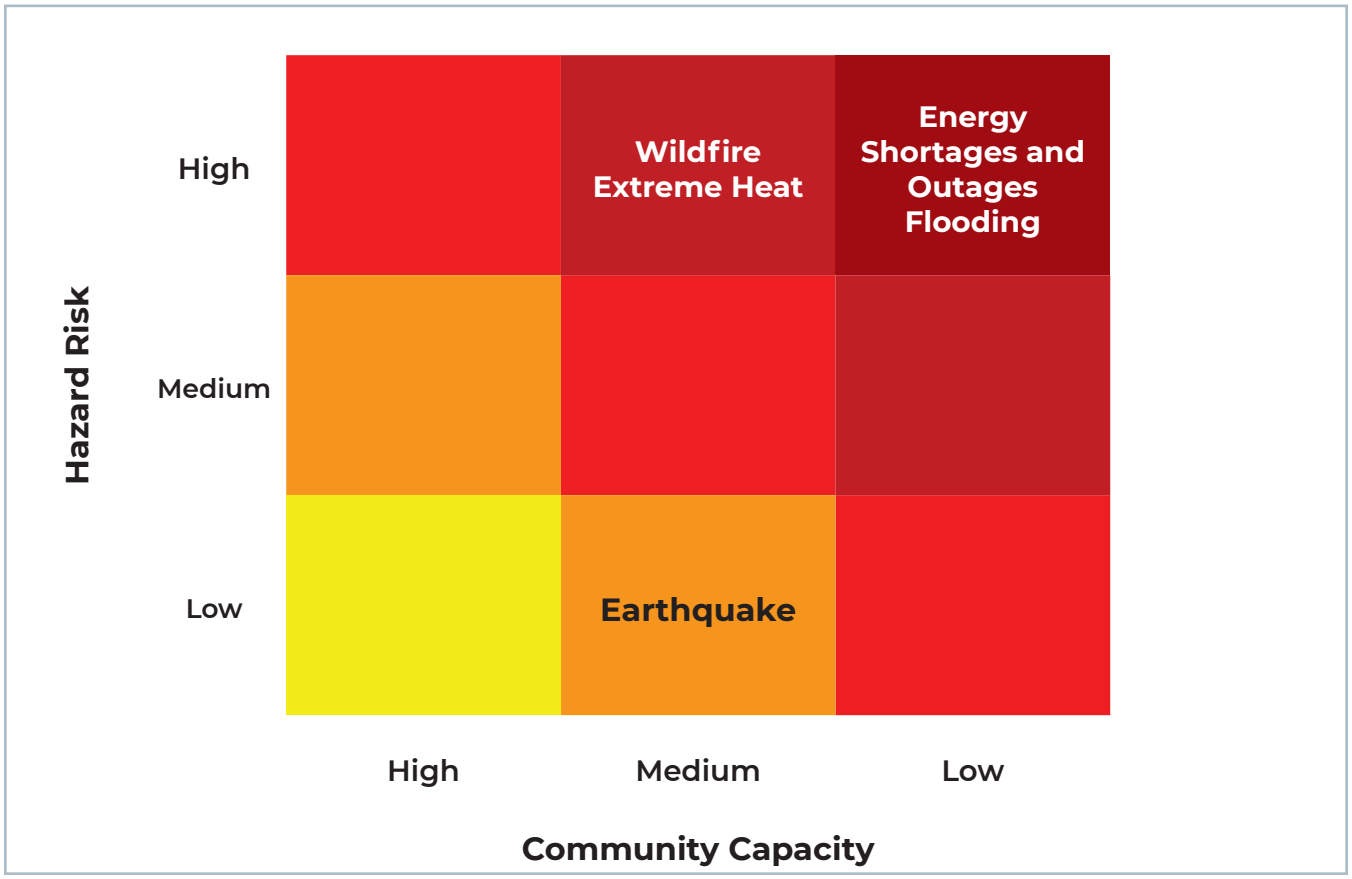
Figure 2-29. Wildfire Hazard Severity Zones in Nubieber



Summary of Findings

Nubieber is at risk from energy shortage and outages, extreme heat, flooding, and wildfire (see **Figure 2-30**). All are likely to occur between the years 2020 and 2050 at a scale that would disrupt community life, potentially require evacuations, and pose significant risk to older adults living alone, which live in Nubieber at higher rates than the County as a whole.

Figure 2-30 – Hazard Risk in Nubieber



EARTHQUAKE

There are no Alquist-Priolo zones in Nubieber. However, there are Alquist-Priolo zones approximately 5 miles west of Nubieber, near the County border. If these faults resulted in a moderate earthquake, Nubieber could experience power losses, as well as building and infrastructure damage.

ENERGY SHORTAGE AND OUTAGES

Hazard events and storms, including hazards far outside of Nubieber, could cause power lines to be knocked down and result in power outages in Nubieber. Additionally, wildfire risk could cause planned power shutoffs more regularly in the future. Energy shortages and outages pose the highest risk to people who are medically dependent, including people whose medication requires refrigeration. Although energy shortages and outages are likely to occur, sufficient planning can mitigate impact to people's lives. This is of special concern in Nubieber, given the large proportion of older adults who may be medically dependent on machines or refrigeration.

EXTREME HEAT

Historically, Nubieber had 4 extreme heat days a year, and this community is projected to experience 18 extreme heat days a year by 2050.[35] Historically, heat waves lasted 2.7 days and are projected to increase to 7.4 days between 2020 and 2050.[36] In Nubieber, there is a higher proportion of older adults living alone than the Lassen County average. Older adults living alone are more susceptible to extreme heat events and should be given special consideration during heatwaves because this population is more likely to suffer from heat stroke due to their age and physical health. Additionally, older adults living alone are less likely to have someone check in on them during a heatwave and help them seek medical attention when they start showing signs of heat-related illness.

FLOODING

The entire community of Nubieber is within the 100-year floodplain, which includes all developed areas. Severe flooding could also block evacuation routes. Furthermore, areas adjacent to Nubieber are at risk of inundation should a breach occur for the Roberts Dam or the Taylor Creek Dam Number 1.[37] Nubieber has a higher proportion of older adults living alone than the Lassen County average. Older adults living alone could have a challenge evacuating, and may need additional assistance during a flood event.

WILDFIRE

The majority of developed areas in Nubieber are not within a wildfire severity zone. There are two small portions of southern Nubieber that fall within the moderate wildfire severity zone—one is along SR-299 and another is in agricultural and industrial land that has some development. All of Nubieber is designated as intensive agriculture in the general plan. The area surrounding Nubieber, particularly the forested areas to the west, north, and south, are in moderate to high wildfire severity zones. Historically, wildfires have occurred in the forested land west of Nubieber (see **Figure 2-31**).

Additionally, Nubieber has a high number of older adults living alone, who likely will have a more difficult time evacuating. Older adults may also be particularly sensitive to smoke and should be given special consideration during a wildfire.[38]

Nubieber is provided fire protection services by the Big Valley Fire Protection District. The Lassen County Department of Community Development, CAL FIRE, and Lassen Fire Safe Council, Inc. adopted a Bieber-Nubieber Community Fire Safe Plan in 2004, which included multiple recommendations for property owners to protect their homes and to make it fire safe for themselves, their communities, and fire-fighting agencies, such as defensible space recommendations.[39] Nubieber is not considered a certified Firewise Community at this time.

35 Cal-Adapt 2021.

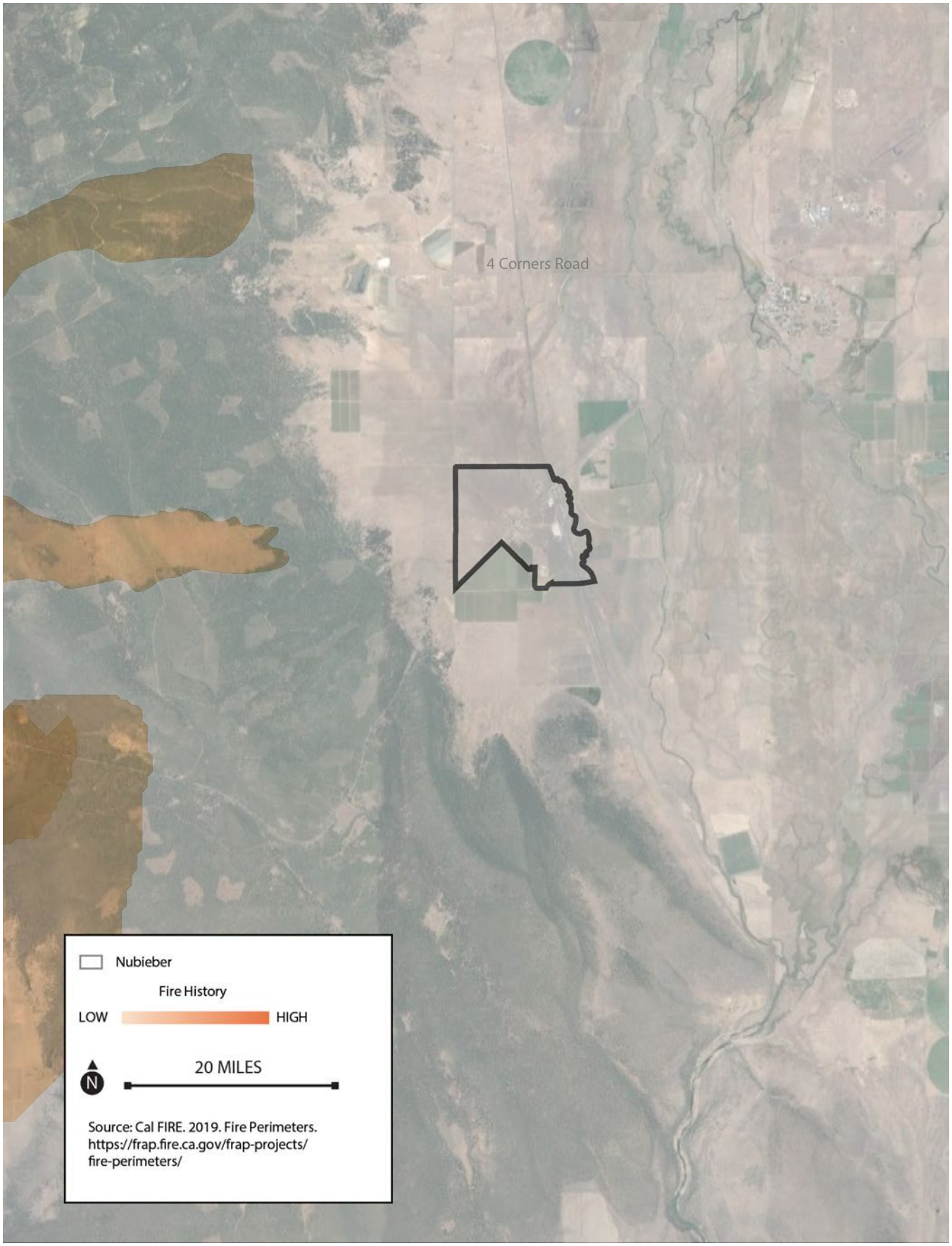
36 Cal-Adapt 2021.

37 California Department of Water Resources. (2021). *Dam Breach Inundation Map*. Retrieved October 20, 2021, from https://fmds.water.ca.gov/webgis/?appid=dam_prototype_v2.

38 EPA 2019.

39 Lassen Fire Safe Council, Inc. 2004c. Bieber-Nubieber Community Fire Safe Plan. January 2004. https://www.lassenfiresafecouncil.org/wp-content/uploads/2015/02/Bieber-Nubieber-CWPP.pdf.

Figure 2-31. Historic Wildfires in Nubieber



SPALDING

Introduction

Spalding is a community located in central Lassen County, just west of Eagle Lake. As of 2019, 108 people call Spalding home.[40] Spalding is a popular vacation community, with an increased non-resident population in the summer. Vacationers are less familiar than locals with the network of roads and evacuation procedures, and are less likely to be prepared for hazards.

Hazard Assessment

Table 2-30 shows the potential hazards in Spalding and how likely they are to occur in the next 30 years. Spalding is most at risk from wildfire, energy shortages and outages, and extreme heat. Spalding may also experience earthquakes and flooding.

Table 2-30 – Hazards in Spalding

Hazard	Probability
Earthquake	Low
Energy Shortage and Outages	High
Extreme Heat	High
Flooding	Medium
Wildfire	High

Community Capacity

CRITICAL ASSETS AND EMERGENCY RESPONSE

Spalding has two critical assets, shown in **Table 2-31**. Both are located in hazard zones.

Table 2-31 – Critical Assets in Spalding

Asset Type	Asset Name	Relevant Hazards
Local and Regional Infrastructure	Spalding Airport	Flood; Wildfire
	Spalding Community Facilities District	Wildfire; Energy outages
Major Commercial Hubs	None	N/A
Medical	None	N/A
Schools	None	N/A

40 U.S. Census Bureau 2019.

VULNERABLE POPULATIONS

As shown in **Table 2-32**, Spalding has a high proportion of older adults living alone and people with disabilities.[41] These community members are vulnerable to all hazards because they have a difficult time evacuating due to medical needs. Older adults also often die at higher rates than the general population during extreme heat events. Spalding is also a vacation community, with many seasonal residences. Vacationers are often less prepared than residents because they are not as familiar with the local roads and emergency procedures.

Table 2-32 – Vulnerable Populations in Spalding

Vulnerable Population	Presence in Spalding	Presence in Lassen County	Relevant Hazards
People with Disabilities[1]	39.8%	18.4%	Flooding, Wildfire, Seismic Hazards, Energy Shortages and Outages, Extreme Cold and Snow
Limited English-Speaking Households[2]	0.0%	0.8%	Flooding, Wildfire, Earthquakes
Renters[3]	10.5%[4]	32.4%	Flooding, Wildfire, Earthquakes
Older Adults Living Alone[5]	44.7%	12.9%	Flooding, Wildfire, Earthquakes, Extreme Heat, Energy Shortages and Outages, Extreme Cold and Snow
Young Children[6]	0.0%	4.6%	Extreme Heat, Wildfire (smoke), Extreme Cold and Snow

Notes:

1 Percent with a disability out of total civilian noninstitutionalized population.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1810.

2 Percent limited English-speaking households out of all households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1602.

3 Percent of renter-occupied housing units out of all occupied housing units.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP04.

4 Spalding is a vacation community and a large portion of non-residents that are neither owners nor renters are not captured in this data.

5 Percent of householders living alone that are 65 years and over, out of total households.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table S1101.

6 Percent of total population under 5 years.
U.S. Census Bureau. 2019. American Community Survey 2019: ACS 5-Year Estimates Detailed Tables. Table DP05.

EVACUATION ROUTES

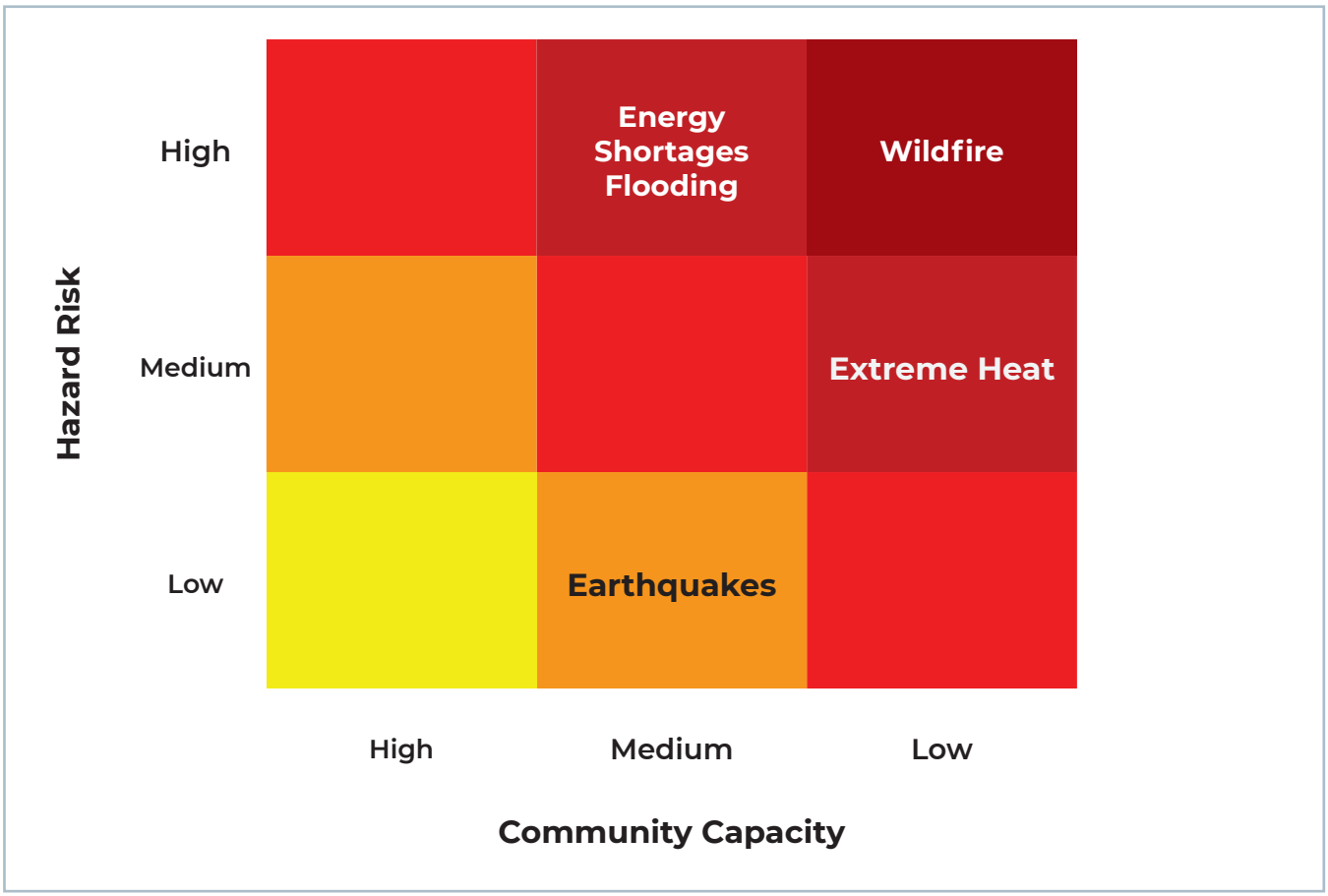
Evacuations from Spalding must evacuate north onto Spalding Road and then to Eagle Lake Road (County Route A1). If either of these roads are closed by fire, evacuation would be severely hindered. Much of Spalding Road is located in a very high fire hazard severity zone, and Eagle Lake Road (County Route A1) has portions within both high and very high fire hazard severity zones.

41 It is likely that many older adults living alone also have a disability, and there is significant overlap between these groups.

Summary of Findings

Spalding is most at risk from wildfire, flooding, and energy shortages and outages (see **Figure 2-32**). All three are likely to occur between the years 2020 and 2050 at a scale that would disrupt community life, potentially require evacuations, threaten critical facilities, and pose significant risk to older adults and people with disabilities, both of which live in Spalding at much higher rates than the County as a whole.

Figure 2-32– Hazard Risk in Spalding



ENERGY SHORTAGES AND OUTAGES

Hazard events and storms, including hazards far outside of Spalding, could cause power lines to be knocked down and result in power outages in Spalding. Additionally, wildfire risk could cause planned power shutoffs more regularly in the future. Energy shortages and outages pose the highest risk to people who are medically dependent, including people whose medication requires refrigeration. Although energy shortages and outages are likely to occur, sufficient planning can mitigate impacts to people's lives.

EXTREME HEAT

Historically, Spalding had 4 extreme heat days a year and is projected to experience 17 extreme heat days a year by 2050.[42] Historically, heat waves lasted 2.7 days and are projected to increase to 7.5 days between 2020 and 2050. Spalding also has a significant number of older adults living alone, who are more susceptible to extreme heat events. Older adults are more likely to suffer from heat stroke due to their age and physical health, and older adults living alone are less likely to have someone check in on them during a heatwave and help them seek medical attention when they start showing signs of heat-related illness.

FLOODING

The Spalding Airport is within the 100-year flood zone; however, the majority of the developed areas in Spalding are not in an area of flood risk. If severe flooding occurred, evacuation could be difficult because Spalding Road, which is the only access road leaving the community, is also within the 100-year flood zone. Older adults and people with disabilities could have a challenge evacuating in the event of severe flooding.

WILDFIRE

The existing residential areas of Spalding are within a moderate wildfire severity zone, and the undeveloped areas are classified as a high wildfire severity zone. The Spalding Airport is within a high wildfire severity zone and the Spalding Community Facilities District, which houses the Spalding Volunteer Fire Department, is within a moderate wildfire severity zone (see **Figure 2-33**). No developed areas in Spalding are within a very high wildfire severity zone. Historically, there have been repeated wildfires directly west of Spalding in the forested open space; recently, the Whaleback fire in 2018 burned 18,000 acres north and west of Spalding (see **Figure 2-34**).

Additionally, Spalding has a high number of people with disabilities and older adults living alone, who likely will have a more difficult time evacuating. Spalding is also a popular summer vacation location, and often has many non-residents visiting who are not as aware of the area and evacuation protocols. Wildfire is anticipated to become more severe and frequent as a result of climate change.

The Spalding Firewise Board adopted a Wildfire Risk Assessment Report in 2014, which included multiple recommendations for property owners to protect their homes, including defensible space recommendations. Fire protection services are provided to Spalding by the Spalding Community Services District.

42 Cal-Adapt 2020.

Figure 2-33. Wildfire Hazard Severity Zones in Spalding

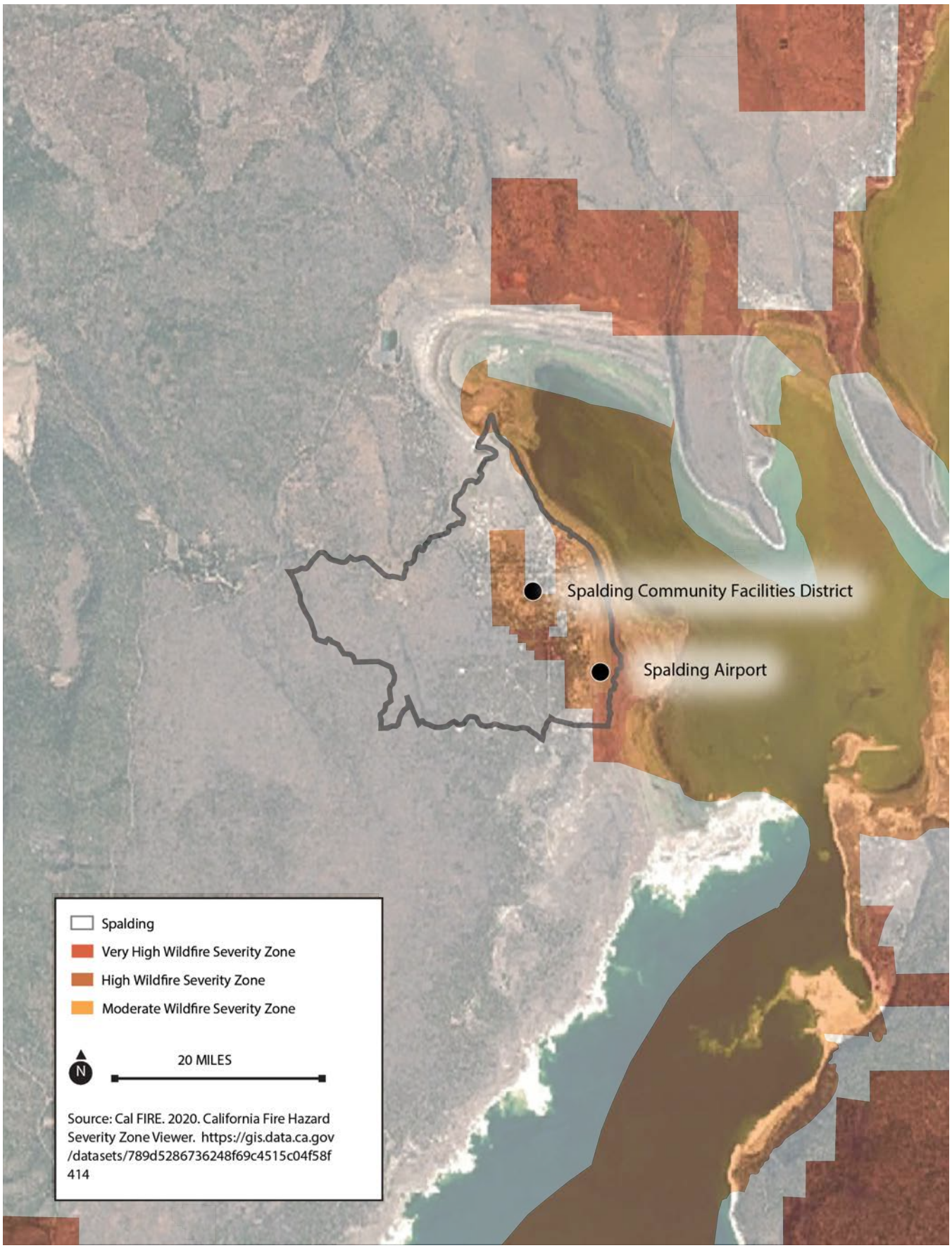
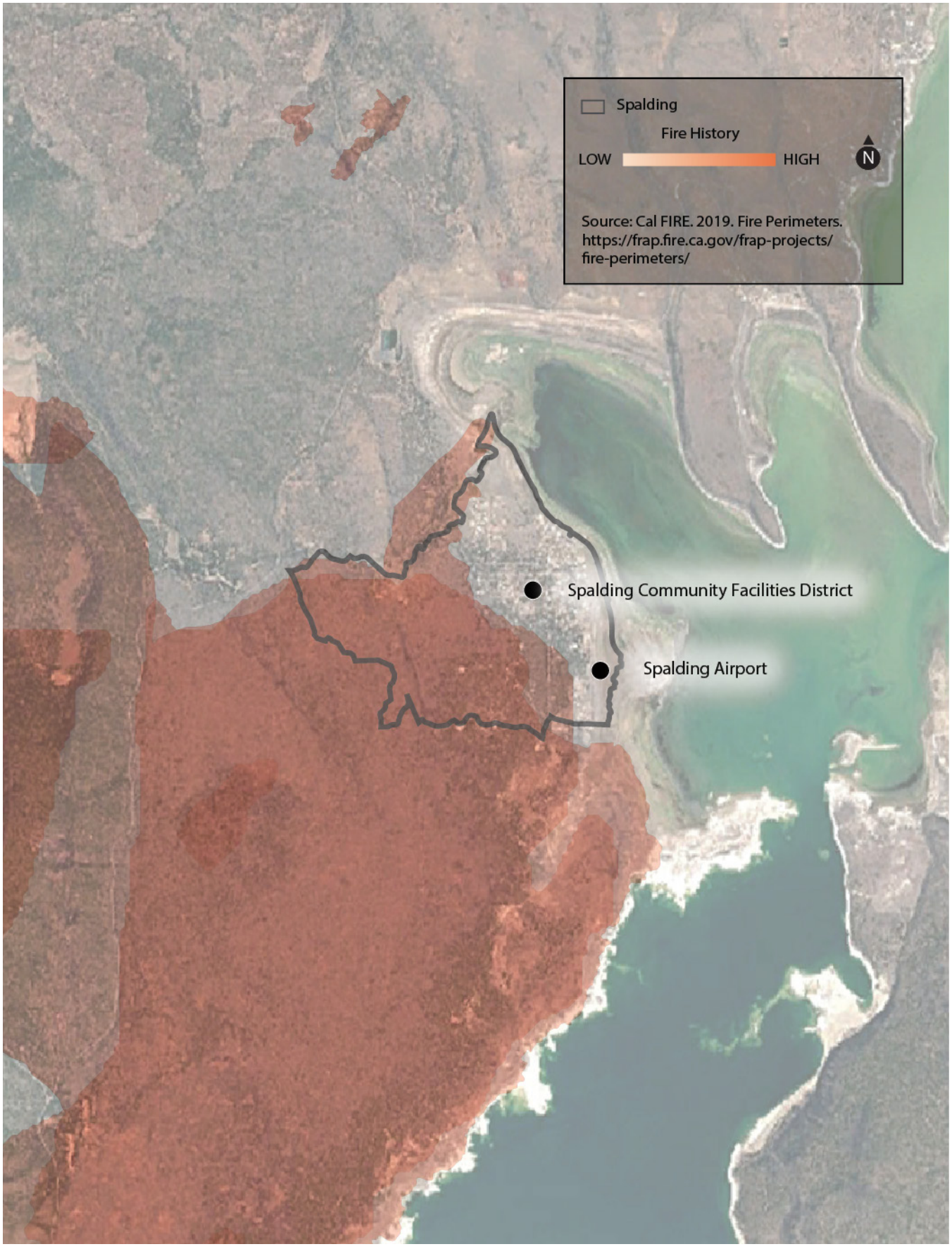


Figure 2-34. Historic Wildfires in Spalding



RAVENDALE

Introduction

Ravendale is a small community in northern Lassen County. Ravendale is not recognized by the U.S. Census Bureau; therefore, specific population data is not available. Ravendale is most at risk from wildfire because the entire community is in a moderate wildfire severity zone. Additionally, small portions of northeastern Ravendale are within a 100-year flood zone. Similar to nearby communities, it can be assumed that Ravendale is also high risk for energy shortages and outages and extreme heat events.

Hazard Assessment

Table 2-33 shows the potential hazards in Ravendale and how likely they are to occur in the next 30 years. Ravendale is most at risk from wildfire, energy shortages and outages, and extreme heat.

Table 2-33 – Hazards in Ravendale

Hazard	Probability
Earthquake	Low
Energy Shortage and Outages	High
Extreme Heat	High
Flooding	Low
Wildfire	High

Community Capacity

CRITICAL ASSETS AND EMERGENCY RESPONSE

Ravendale has one critical asset, a 345 kV transmission line that runs to the west of it (**Table 2-34**). This transmission line is in a moderate fire hazard severity zone, much like the rest of Ravendale.

Table 2-34 – Critical Assets in Ravendale

Asset Type	Asset Name	Relevant Hazards
Local and Regional Infrastructure	345 kV Transmission Line	Wildfire
Major Commercial Hubs	None	N/A
Medical	None	N/A
Schools	None	N/A

VULNERABLE POPULATIONS

As stated above, specific population data is not available for Ravendale.

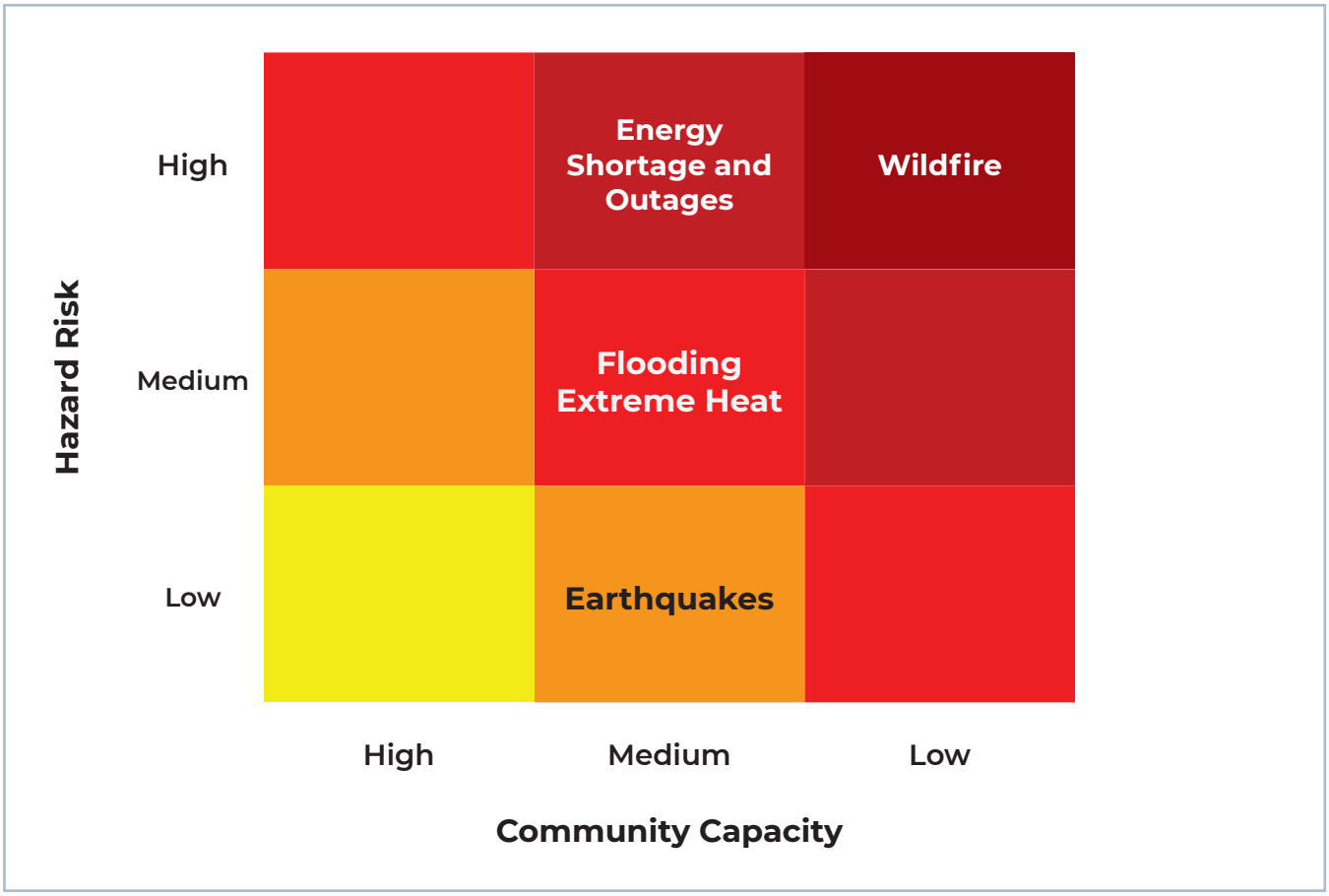
EVACUATION ROUTES

Evacuations could occur on U.S. Highway 395, with School House Road providing an alternate route if U.S. Highway 395 is impacted by a hazard. All roads surrounding Ravendale are located in moderate fire hazard severity zones.

Summary of Findings

Ravendale is most at risk from wildfire, flooding, extreme heat, and energy shortages and outages (see **Figure 2-35**). All three are likely to occur between the years 2020 and 2050 at a scale that would disrupt community life.

Figure 2-35 – Hazard Risk in Ravendale



ENERGY SHORTAGES AND OUTAGES

Hazard events and storms, including hazards far outside of Ravendale, could cause power lines to be knocked down and result in power outages in Ravendale. Additionally, wildfire risk could cause planned power shutoffs more regularly in the future. Energy shortages pose the highest risk to people who are medically dependent, including people whose medication requires refrigeration. Although energy shortages and outages are likely to occur, sufficient planning can mitigate impact to people's lives.

EXTREME HEAT

Similar to Lassen County as a whole, extreme heat days are anticipated to happen more often, and heat waves are forecasted to last longer.

FLOODING

A small developed portion of northeast Ravendale is within a 100-year food zone.

WILDFIRE

The entire community of Ravendale is within a moderate wildfire severity zone. All of Ravendale is designated as extensive agriculture in the general plan, and the community contains some sparsely placed single-family homes. Ravendale is not considered a certified Firewise Community, but it is a part of the planning area for the Lassen County CWPP. Regarding fire protection, Ravendale is within the SRA.



Countywide Findings

This section outlines the overall findings of the community profiles, and highlights which communities are considered priorities for each hazard. This, coupled with the findings in the Local Hazard Mitigation Plan, set the groundwork for both Countywide standards and local implementation priorities as presented in the goals, policies, and actions.

Drought and Water Supply

The Lassen County Water Quality Program is responsible for the enforcement of standards and codes related to water wells.[43] These wells must have an approved permit from the Environmental Health Department prior to the start of any construction. The purpose of the program is to protect groundwater quality and ensure adequate and safe drinking water supply for Lassen County. The Lassen County groundwater basin is managed under the context of the Groundwater Management Plan, which overlays local agencies, including the City of Susanville, Clear Creek Community Services District, Johnstonville Water System, Herlong Utilities Inc., Lake Forest Mutual Water Company, Lassen County Waterworks District Number 1, Leavitt Lake Community Services District, Little Valley Community Services District, Sierra Army Depot, Susan Hill Mutual Water Company, West Patton Village Community Service District, and Westwood Community Services District.

Groundwater levels in Lassen County are considered adequate for current uses.[44] In 2000, surface water made up 61% of water supplies and groundwater supplies made up 35% of water supplies.[45] It is also important to mention trends surrounding water supply. With climate change projected to increase the frequency and severity of droughts, it is likely that this water supply will be reduced over time without additional efforts to build resilience. Efforts to reduce the impacts of drought on water supply and quality are expanded upon within the goals, policies, and actions of this Safety Element.

It is important to identify peak load water supply when discussing seismic risks, because large seismic events have the potential to destroy or incapacitate the normal water supply. If a local earthquake occurs, local water piping would be at risk, and water could become temporarily out of service, which has also been addressed within the goals, policies, and actions of this Safety Element.

The County's efforts toward a continued resilient water source are outlined in the Local Hazard Mitigation Plan, and goals, policies, and actions of the Safety Element. Additionally, the County is working to continue groundwater sustainability through representing County interests in Nevada groundwater exportation projects that include interstate groundwater basins and collaborating with state and federal agencies on groundwater studies.[46]

43 County of Lassen. 2021. Water Quality Program. http://www.lassencounty.org/dept/environmental-health/water-quality-program.

44 Lassen County Environmental Health Department. 2016. *Local Area Management Plan*. December 8, 2016. https://www.waterboards.ca.gov/lahontan/water_issues/programs/owts/docs/lamp_tracking/lassen_lamp_12_16.pdf.

45 Brown and Caldwell. 2007. *Lassen County Groundwater Management Plan*. June 2007. https://www.waterbucket.ca/okw/sites/wbcokw/documents/media/183.pdf.

46 Brown and Caldwell. 2007. *Lassen County Groundwater Management Plan*. June 2007. https://www.waterbucket.ca/okw/sites/wbcokw/documents/media/183.pdf.

Earthquakes

All of Lassen County is at risk for an earthquake; however, communities in southeastern Lassen County are at greater risk due to their proximity to fault zones. Areas within an Alquist-Priolo zone are considered on a fault line and subject to additional building regulations; nearby buildings, especially older structures, are also at risk. Due to the irregularity of earthquakes, this is not considered high risk for any community. The communities that are considered priorities for earthquake policy implementation are Doyle, Herlong, Janesville, and Milford.

Energy Shortages and Outages

Due to the rural nature of Lassen County, storms or planned maintenance regularly threaten the power supply in Lassen County. This is of special concern for people with disabilities and others who may be medically dependent on energy, including refrigeration to keep medicine cool. Many communities in the unincorporated area include large proportions of people with disabilities. Specifically the communities of Clear Creek, Herlong, Little Valley, Milford, and Nubieber are considered priorities for energy shortage and outage policy implementation.

Extreme Cold and Snow

Extreme cold and snow is a hazard that can impact people, infrastructures, and buildings across the County. This is a hazard that is expected to get less frequent in the future as a result of climate change. Similar to extreme heat, older adults are the most prominent group of people at risk from this hazard in Lassen County. waves are forecasted to increase Countywide.

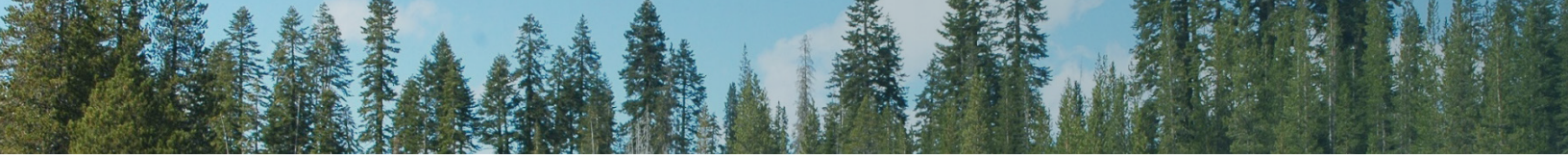
Extreme Heat

Extreme heat is potentially the deadliest hazard in Lassen County. In the past, Lassen County's forested landscape has mitigated extreme heat; however, both the number of extreme heat days and duration of heat waves are forecasted to increase Countywide. Older adults are most at risk from extreme heat. Most communities in Lassen County have a high proportion of older adults living alone, and extreme heat should be considered a priority hazard throughout Lassen County.

Wildfire

Wildfire is the most profound risk to Lassen County due to the heavily forested landscape. CAL FIRE's Lassen-Modoc Unit serves as the County's fire response provider, and their efforts are expanded upon within the Lassen-Modoc Unit Strategic Fire Plan.[47] Further Mutual Aid and Automatic Aid Agreements are in place through CAL FIRE, and are coordinated through the Susanville Interagency Fire Center. Lassen Fire Safe Council, Inc. develops the Lassen County Community Wildfire Protection Plan. The Community Wildfire Protection Plan outlines mitigation efforts and continued maintenance of these efforts. In addition to these efforts, many communities have local Firewise Boards, fire safe plans, fuel reduction projects, and other risk mitigation programs underway. These local efforts can help prepare and protect residents before a wildfire and reduce the risk that a wildfire can spread into the community or along evacuation routes. Wildfire is considered a priority in the following communities: Bieber, Doyle, Herlong, Janesville, Litchfield, Little Valley, Milford, Spalding, Lake Forest, Merrillville Road, and Ravendale. Standards consistent with CAL FIRE's best practices will be implemented Countywide.

47 CAL FIRE. 2020. Unit Strategic Fire Plan, Lassen-Modoc Unit. March 1, 2020. https://osfm.fire.ca.gov/media/4kqbid5a/2020-lmu-fire-plan.pdf.



3. Goals, Policies, and Actions

GOAL 1: Minimize risks, such as loss of life, injury, property damage, and natural resource destruction, from natural hazards.

POLICY 1.1: **Protect Lives.** Implement applicable federal and State regulations and local ordinances designed to protect life safety.

ACTION 1.1A: Defensible Development. The most recently adopted California Fire Code, Fire Hazard Severity Zone Maps, California Building Codes, SRA Fire Safe Regulations, and Fire Hazard Reduction Around Buildings and Structures Regulations shall be applied to all applicable additions, remodels, reconstruction, and **new development** in very high fire hazard severity zones and State Responsibility Areas (SRAs). Fire protection plans that include risk analysis, fire response capabilities, fire safety requirements, mitigation measures and design considerations for non-conforming fuel modification, and wildfire education and maintenance shall be required for new development and subdivisions in very high fire hazard severity zones and SRAs, as determined by the County Fire Warden.

NEW DEVELOPMENT

For the purposes of this Safety Element, new development includes any projects that require applications for building permits, tentative parcel maps, tentative maps, and installation or use permits for construction or development.

ACTION 1.1B: Water Supply. The County will work with CAL FIRE, and water providers during the review of new development to identify areas vulnerable to wildfire due to inadequate water supply for firefighting and require improvements of the applicant when deemed necessary by the County Fire Warden (e.g., expansion of water supply, storage hydrants). Ensure that water supply infrastructure adequately supports future development and provides adequate water flow to combat structural and wildland fires during peakload water use. New water systems shall equal or exceed the California Fire Code or California Code of Regulations, while aligning with the efforts of the Lassen County Groundwater Management Plan.

ACTION 1.1C: Evacuation and Access. In Chapter 9.16 of the County Code, continue to require new development in Very High Fire Hazard Severity Zones to provide a second access road or improvements to evacuation routes if necessary, to provide for safe access of emergency equipment and civilian evacuation concurrently. The width, surface, grade, radius, turnarounds, turnouts, bridge construction, and lengths of fire apparatus access roads shall meet the requirements of the State Fire Codes. All requirements and any deviations will be at the discretion of the County Fire Warden. Evacuation routes should be incorporated into existing Community Wildfire Protection Plans where available.

ACTION 1.1D: Flood Regulations. Regulatory standards for flood mitigation, located in Chapter 12.26 of the County Code, shall be updated as necessary to remain up to date with Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, regulations, and local ordinances.

ACTION 1.1E: Structural Hazards. The County shall continue to protect life and property by applying and enforcing State-adopted building codes to new construction and Alquist-Priolo requirements to new construction within Alquist-Priolo fault zones. In accordance with the California Department of Conservation Special Publication 42, require development to be located a minimum of 50 feet from active or potentially active faults, unless an alternative setback distance is approved based on geologic analysis and feasible engineering design measures adequate to demonstrate that the fault rupture hazard would be avoided.

ACTION 1.1F: Hazards-Sensitive Uses. When updating land uses and/or zoning code, consider that land uses using hazardous materials be sufficiently buffered to ensure sensitive uses, such as schools, hospitals, daycare centers, and residential neighborhoods, are protected. Similarly, avoid locating sensitive uses near established hazardous materials users or high-impact industrial areas where incompatibilities would result.

ACTION 1.1G: Airport Compatibility. Encourage the Airport Land Use Commission to review the Airport Land Use Compatibility Plan (ALUCP) when feasible and if land use changes around airports occur to ensure that the ALUCP accurately defines planning areas around airports. During updates, establish land use policies and standards appropriate for the public safety and protection of airport operations and in line with CalTrans Aeronautics handbook. As necessary, amend the General Plan Safety Element to be consistent with changes to the ALUCP.

POLICY 1.2: Protect Properties. Encourage property protection measures for all communities and structures located in hazard areas.

ACTION 1.2A: Dangerous Buildings. Continue to implement, and update as necessary, Chapter 12.23 and 1.18 of the County Code, to abate **dangerous buildings.**

DANGEROUS BUILDINGS

Any condition declared by Section 17920.3 of the California Health and Safety Code to be a "substandard building."

ACTION 1.2B: Flooding Areas. Evaluate flooding areas and implement drainage improvements as possible on public assets or rights-of-way to reduce the potential for commercial and residential flooding. Require new discretionary development to provide necessary and feasible on- and off-site improvements to stormwater runoff and drainage facilities.

ACTION 1.2C: Land Uses in Fault Zones. Prohibit allowing new development of high-occupancy uses, essential public facilities, and uses that permit significant amounts of hazardous materials currently not allowed by right within Alquist-Priolo fault zones. During the next update of the land use element, do not permit the above uses by right in Alquis-Priolo fault zones.

ACTION 1.2D: Permit Engagement. To avoid or minimize new residential development in Very High Fire Hazard Severity Zones, engage property owners during the permit process about the fire risks

associated with building in these at-risk areas and the responsibilities laid out in Chapter 9.16 of the County Code. Provide resources to ensure that insurance risks are explained.

POLICY 1.3: Critical Infrastructure. Protect critical infrastructure.

ACTION 1.3A: Update Transportation Designs. Consider updating standard design features in transportation infrastructure to improve resilience to extreme climate events. Tools may include special roadway sealants that prevent roadways from softening during extreme heat, appropriate roadway materials for wildfire prone areas, treating of rail lines to be heat-resistant, and incorporating expansion joints into rails that reduce the risk of damage during high temperatures.

ACTION 1.3B: New Critical Facilities. Ensure that new critical facilities are located to best serve existing and planned development and the corresponding demand for services. These facilities should be sited outside of areas designated as very high fire hazard severity zones, high fire hazard severity zones, moderate fire hazard severity zones, Alquist-Priolo fault zones, and 100-year flood zones when feasible. Such facilities include those that provide emergency response and those that attract over 100 people at a time, such as schools.

ACTION 1.3C: Upgrade Levees. To mitigate the impacts of severe storms and subsequent flooding, encourage and support agency efforts to implement levee upgrades for waterways throughout the County, including irrigation canals.

POLICY 1.4: Economic and Recreational Resource Protection. Minimize economic loss and disruption to agriculture (crops/animals/timber) and recreation resources from natural and human-caused hazards.

ACTION 1.4A: Fuel Management. Continue to support fuels/vegetation management programs across the County to reduce the wildfire hazard throughout County and promote forest health, timber management, livestock production and wildlife habitats. For community fuel breaks or other management programs run by local Fire Districts or State or Federal Agencies, maintain regular lines of communication and offer technical assistance as needed and possible. For County roadway vegetation management, prioritize management of roadside vegetation currently not in conformance with regulations.

ACTION 1.4B: Weed Abatement. Continue to enforce the weed abatement requirements to mitigate the risk of wildfires in the County.

POLICY 1.5: Resource Protection. Protect and preserve natural, cultural, economic, and agricultural resources in hazard mitigation and recovery planning.

ACTION 1.5A: Firewise Plants. The County should work with fire authorities and botanical experts to develop a list of recommended “Firewise” plants suited to, and/or native to, the local area. This list should be made available on the County website and include information about how to establish and maintain plants to maximize fire resistance.

POLICY 1.6: Traditional Mitigation. Promote nature based and traditional ecological knowledge mitigation techniques when feasible

ACTION 1.6A: Prescribed Burning. Support Fire Districts and prescribed burning with open lines of communication, regular meetings with Fire Districts, and discussions of the technical assistance available from the County.

GOAL 2: Coordinate preparedness across government agencies, the private sector, and the general public.

POLICY 2.1: Community Resilience Centers. Create community spaces for emergency preparation, evacuation, and recovery.

ACTION 2.1A: School Shelters. Coordinate with school districts to assess, retrofit, and maintain adequate level of emergency inventory materials (e.g., food, blankets) at schools throughout the county to accommodate emergency shelter.

ACTION 2.1B: Upgrade Resilience Centers. Assess, retrofit, and possibly purchase necessary equipment at critical facilities and resilience centers to ensure a continual power supply during events that can potentially disrupt energy. Consider installation of refrigerators at resilience centers to provide storage for medication in black out or other hazard events.

POLICY 2.2: Offer Available Information. Provide updated information about hazards, vulnerabilities, and mitigation processes to all levels of governmental jurisdictions, the private sector, and the public, including residents, community groups, schools, and religious institutions.

ACTION 2.2A: Hazard and Evacuation Education. Promote educational resources to make residents, businesses, community groups, schools, and religious institutions aware of evacuation planning and hazards. Emphasize engagement efforts for high priority hazards and at-risk groups or vulnerable populations, as identified in the Community Profiles portion of this Element.

ACTION 2.2B: Fire Outreach. Work with CAL FIRE and Fire Districts prior to fire season to utilize partnerships, coordinate outreach events, and leverage County communication resources to educate the public on wildfire preparation and response. Topics should include but are not limited to creating a defensible space around their place of residence, fire landscaping, reducing the potential for the expansion of invasive species that can occur from defensible space projects, Ready! Set! Go!, Red Flag Warning, wildfire ignition risks, resource concerns, and evacuation. Emphasize engagement efforts for fire-hazard priority communities and populations vulnerable to fire.

ACTION 2.2C: Hazard Database. Coordinate, develop, and maintain a digital inventory of areas and critical assets exposed to identified hazards.

ACTION 2.2D: Emergency Response Service. Coordinate with CAL FIRE to develop a level of service standard for all emergency response services (fire, EMS, HazMat, and rescue) and make such information public so that landowners and residents understand the distribution and quality of service. Incorporate these service standards into development review.

ACTION 2.2E: Household Hazardous Waste Disposal. Educate the public on household hazardous wastes and the proper methods of disposal.

ACTION 2.2F: Hazardous Materials Flow. Develop a commodity flow study to determine flow of hazardous materials through the county.

POLICY 2.3: Emergency Response Preparation. Further develop and improve emergency response communications, public warning systems, and evacuation routes.

ACTION 2.3A: Dry Storage. To facilitate storage for emergency response equipment and resource materials (e.g., salt, sand, heavy equipment) construct or purchase dry storage facilities in strategic locations within the County.

ACTION 2.3B: GIS Efforts. When possible, such as during Safety Element and LHMP updates, develop and maintain key data sets for the purposes of hazard resilience and safety (i.e., critical assets, backup generators, evacuation routes).

ACTION 2.3C: Standard Evacuation Plan. Develop a standardized operational area evacuation plan to streamline emergency response efforts. Publicize routes as possible.

ACTION 2.3D: Evacuation Route Improvements. Prioritize Capital Improvement Program road improvements for evacuation routes. Further prioritize improvements to evacuation routes that are within Alquist-Priolo fault zones and 100-year flood zones. When any new parcel maps or subdivision requests are submitted for approval, these areas are to be evaluated at that time to document if they have at least two emergency evacuation routes. Over time, work to map any residential areas that do not have at least two emergency evacuation routes.

ACTION 2.3E: Harden Critical Facilities. Assess and where necessary retrofit/harden facilities essential to response and recovery operations within the County.

HARDEN

To perform building material retrofits which replace materials susceptible to hazards with ones which are more resilient.

ACTION 2.3F: HazMat Trainings. Coordinate across agencies to train and conduct mock exercises with first responders in hazardous materials (HazMat) response field operations and decontamination.

ACTION 2.3G: Radio System Coverage. Pursue projects to increase emergency radio system coverage across the County.

ACTION 2.3H: Communications Equipment Purchasing. When purchasing emergency communications equipment, consider the redundancies and fail safes that are needed to accommodate unexpected power outages and Public Safety Power Shut offs (PSPS).

ACTION 2.3I: Radio Redundancies. Build redundancies at radio base stations and repeater sites. This can include improving battery backups, replacing generators and batteries where needed, and considering the addition of a solar array.

ACTION 2.3J: CJIS Compliance. Pursue **CJIS compliance** related to encrypted law enforcement communications.

CJIS COMPLIANCE

CJIS is a federal compliance standard and is designed to ensure data security in law enforcement.

POLICY 2.4: Foster Partnerships. Establish and maintain partnerships between all levels of local government, the private sector, the business community, community groups, and institutions of higher learning that improve and implement methods to protect life and property.

ACTION 2.4A: Partnerships. Continue to maintain working relationships with agencies to share resources and expertise; coordinate land management, hazard prevention, and response activities; facilitate property access; access grant funding; and use cost-sharing opportunities that further hazard mitigation efforts.

ACTION 2.4B: Local Hazard Mitigation Plan. Continue to participate in FEMA's pre-disaster mitigation program by developing, maintaining, and implementing a Local Hazard Mitigation Plan. Incorporate applicable updates to the Local Hazard Mitigation Plan into the Safety Element and vice versa.

ACTION 2.4C: Coordinate with Hospitals. Work with local medical providers and hospitals to ensure that medical facilities are prepared to meet increased demand because of hazard events.

ACTION 2.4D: CAL FIRE Coordination. Continue to coordinate with CAL FIRE on Exception Requests for all SRA fire hazard severity zones and LRA very high fire hazard severity zones. The County shall maintain efficient and timely procedures for processing SRA Exception Requests to CAL FIRE.

ACTION 2.4E: Power Shutoff Coordination. Public Safety Power Shutoff (PSPS) coordination between the County, LMUD, Plumas Sierra Rural Electric Cooperative, and PG&E should occur to limit the impacts on residents and businesses. PG&E, LMUD, and the County should collaborate while monitoring weather conditions to ensure pertinent information is shared.

ACTION 2.4F: Animal Evacuation Centers. Identify and designate domestic animal evacuation centers. Where possible link to emergency shelters as not to separate owners form their pets.

ACTION 2.4G: Regional Communication Links. Coordinate with regional partners to pursue emergency communications links that allow backup phone and radio services for County Emergency Responders.

ACTION 2.4H: Telecommunications Redundancy. Coordinate with commercial telecommunications providers to create telecommunication infrastructure redundancies and prevent **community islanding.**

COMMUNITY ISLANDING

Community islanding occurs when a telecommunications system is cut off from outside communications.

POLICY 2.5: Serve Vulnerable Populations. Develop policies and procedures to better serve disadvantaged and vulnerable populations.

ACTION 2.5A: Harden Homes. Promote structural hardening retrofits and creation of defensible space for existing structures in all SRA fire hazard severity zones and very high fire hazard severity zones in LRA's, consistent with the building standards and materials in the most current version of Chapter 7A of the California Building Code and California Fire Code. Prioritize incentives for vulnerable populations.

ACTION 2.5B: Warnings for All. Improve fire and flood warning and information dissemination, with a focus on ensuring those who lack internet access and cell phones, and for whom English is a second language can receive and understand emergency warnings.

ACTION 2.5C: Hazard Response Trainings. Coordinate with fire protection agencies operating in Lassen County to regularly train community-based emergency response teams, incorporating climate change response and recovery. Encourage recruiting includes a diverse set of community members and leaders.

ACTION 2.5D: Vulnerable Population Registry. Continue to develop a voluntary vulnerable population registry and subsequent priority list to help first responders better provide services to at-risk community members. To understand the vulnerable populations present in communities and inform outreach related to this registry, utilize the Community Profiles portion of this element.

GOAL 3: Maintain adequate emergency preparedness and response capabilities.

POLICY 3.1: Improve EOC. Ensure the Emergency Operations Center (EOC) has adequate capacity to respond to hazard events.

ACTION 3.1A: EOC Updates. Work regionally to assess and update EOC equipment and supplies as necessary to ensure effectiveness. Identify needs regularly and after major hazard responses.

ACTION 3.1B: Communication Upgrades. To improve the consistency of emergency communications and facilitate timely response, implement Firenet/Lawnet Lassen Emergency communication equipment upgrades (e.g., backup power, additional repeaters, radios).

ACTION 3.1C: EOC Trainings. Conduct EOC mock exercises and incident management position training to prepare for emergency response.

ACTION 3.1D: EOC Back Up. Assess, identify, and possibly retrofit/harden a building and/or office space to serve as the joint back up EOC.

ACTION 3.1E: House Numbering. Continue to enforce display of house numbering, as laid out in County Code Chapters 12.36 and 9.16, for the purposes of efficient and accurate emergency response. Update County Code to meet State Fire Code as necessary.

POLICY 3.2: Respond Cooperatively. Continue to coordinate jurisdictional responsibilities to various hazards through County and community disaster/emergency response plans and exercises.

ACTION 3.2A: Consistency with State and Federal Framework. County emergency response efforts shall be consistent with the California Emergency Services Act (California Government Code, section 8550 et seq.) and the federal National Response Framework (effective March 2008, as amended) and the National Incident Management System (NIMS).

ACTION 3.2B: Participation in Mutual Aid Systems. Maintain participation in local, regional, State, and national mutual aid systems to ensure that appropriate resources are available for response and recovery during and following a disaster.

ACTION 3.2C: Operational Contingency Plans. Work on a department-by-department level to develop operational contingency plans that allow for necessary work to be performed during times of hazard events and unplanned power or communication outages. Develop operational procedures in case County offices, the County Adult Detention Facility, and other locations are required to evacuate. Consider working with surrounding jurisdictions to provide mutual aid in the form of facility-sharing during times of need.

GOAL 4: Build Back Stronger

POLICY 4.1: Protect Records. Protect vital records to minimize post-disaster disruption and facilitate short-term and long-term recovery.

ACTION 4.1A: Backup Vital Records. Identify and digitize records vital to effective county operations. Ensure that vital records are regularly backed up on a cloud-based system to retain necessary information and expedite the recovery process in the event of a hazard destructive of County property.

POLICY 4.2: Recover with Partners. Coordinate with federal, State, and local agencies to establish ecological and built environment recovery programs.

ACTION 4.2A: Reassessment of Fire Hazards. Coordinate with fire protection and emergency service providers to reassess fire hazards after major wildfire events to adjust fire prevention and suppression needs, as necessary, commensurate for both short- and long-term fire prevention needs.

ACTION 4.2B: Post-Disaster Reconstruction. Participate in the development of programs and procedures that emphasize coordination between appropriate public agencies and private entities to remove debris and promote the safe and rapid reconstruction of the County following a disaster event. Evaluate redevelopment after hazard events to facilitate the necessary upgrading of the built environment as expeditiously as possible.

Implementation

This section outlines how the above actions will be implemented, including an overview of who will be responsible for implementation, when it will be implemented, applicable partner agencies, and if it is required by State or Federal law. This section is organized by implementation categories. These categories represent the role of the County and the necessary actions and typical funding required for successful implementation. These categories include municipal operations, ordinances and codes, planning, partnerships, education and outreach, and grants. In the tables below, the following items are included for each action:

- **Action Number and Title:** These identify the actions as they are outlined in the Goals, Policies, and Action section.
- **Responsible Department:** This outlines the primary County department or partner who will lead implementation.
- **Timeframe:** This outlines when this action will be implemented. “Ongoing” actions will be implemented in the next two years and continue through the life of the element. “Short” includes actions that will be achieved in the next two years. ”Medium” includes actions that will be achieved between 2-10 years. ”Long” includes actions that will be achieved in more than 10 years.
- **MHMP:** These actions are included in the County Multi-Jurisdictional Hazard Mitigation Plan Update adopted in 2020.
- **Partners:** This lists potential agencies, special districts, and other County departments that should be included in implementation and may potentially fund action items.
- **Requirements and Recommendations:** This lists any relevant State requirements and recommendations that inform an action. These actions should be considered priorities as they may be required to be eligible for recovery funds in the event of a disaster.

MUNICIPAL OPERATIONS

Municipal operations are programs the County conducts or projects the County builds. These are often the most resource intensive actions and require extensive staff time and discretionary funding.

Action Number	Action Text	Responsible County Department	Timeframe	MHMP	Partners	Requirement or Recommendation
1.1b	**WATER SUPPLY.** The County will work with CAL FIRE, and water providers during the review of new development to identify areas vulnerable to wildfire due to inadequate water supply for firefighting and require improvements of the applicant when deemed necessary by the County Fire Warden (e.g., expansion of water supply, storage hydrants, etc.). Ensure that water supply infrastructure adequately supports future development and provides adequate water flow to combat structural and wildland fires during peakload water use. New water systems shall equal or exceed the California Fire Code, or California Code of Regulations, while aligning with the efforts of the Lassen County Groundwater Management Plan.	Planning and Building Services	Medium	X	CAL FIRE, Water Providers, Fire Districts	Recommended by CAL FIRE
1.3c	**UPGRADE LEVEES.** To mitigate the impacts of severe storms and subsequent flooding, encourage and support agency efforts to implement levee upgrades for waterways throughout the County, including Irrigation Canals.	Planning and Building Services	Medium	X	Water Districts, Community Services Districts, ACE	
1.4a	**FUEL MANAGEMENT.** Continue to support fuels/vegetation management programs across the County to reduce the wildfire hazard throughout County and promote forest health, timber management, livestock production and wildlife habitats. For community fuel breaks or other management programs run by local Fire Districts or State or Federal Agencies, maintain regular lines or communication and offer technical assistance as needed and possible. For County roadway vegetation management, prioritize management of roadside vegetation currently not in conformance with regulations.	Planning and Building Services; Public Works / Roads	Ongoing	X	CAL FIRE, Fire Districts, Bureau of Land Management, US Forest Service, National Park Service, Resource Conservation Districts, Eagle Lake Guardians, Lassen Land & Trails Trust	Recommended by CAL FIRE
1.4b	**WEED ABATEMENT.** Continue to enforce the weed abatement requirements to mitigate the risk of wildfires in the County.	Fire Districts	Ongoing	X	Bureau of Land Management, National Park Service, US Forest Service, CAL FIRE, Resource Conservation Districts	

SHORT MEDIUM LONG ONGOING

Action Number	Action Text	Responsible County Department	Timeframe	MHMP	Partners	Requirement or Recommendation
2.1b	**UPGRADE RESILIENCE CENTERS.** Assess, retrofit, and possibly purchase necessary equipment at critical facilities and resilience centers to ensure a continual power supply during events that can potentially disrupt energy. Consider installation of refrigerators at resilience centers to provide storage for medication in black out or other hazard events.	Office of Emergency Services; Sheriff's Office	Medium	X	Planning and Building Services, CAL FIRE	
2.2c	**HAZARD DATABASE.** Coordinate, develop and maintain a digital inventory of areas and critical assets exposed to identified hazards.	Planning and Building Services	Medium	X	CAL FIRE, Sheriff's Office, Public Works / Roads, Fire Districts	
2.3a	**DRY STORAGE.** To facilitate storage for emergency response equipment and resource materials (e.g., salt, sand, heavy equipment) construct or purchase dry storage facilities in strategic locations within the county.	Public Works / Roads	Medium	X	Planning and Building Services, Sheriff's Office, Office of Emergency Services	
2.3b	**GIS EFFORTS.** When possible, such as during Safety Element and LHMP updates, develop and maintain key data sets for the purposes of hazard resilience and safety (i.e., critical assets, backup generators, evacuation routes).	Planning and Building Services; Sheriff's Office; Office of Emergency Services	Ongoing	X		Required by AB747
2.3d	**EVACUATION ROUTE IMPROVEMENTS.** Prioritize CIP road improvements for evacuation routes. Further prioritize improvements to evacuation routes that are within Alquist-Priolo fault zones and 100-year flood zones. When any new parcel maps or subdivisions requests are submitted for approval, these areas are to be evaluated at that time to document if they have at least two emergency evacuation routes. Over time, work to map any residential areas that do not have at least two emergency evacuation routes.	Public Works / Roads	Ongoing	X	Planning and Building Services, CAL FIRE, Sheriff's Office, Fire Districts	Required by SB 99, Recommended by CAL FIRE
2.3e	**HARDEN CRITICAL FACILITIES.** Assess and where necessary retrofit/harden facilities essential to response and recovery operations within the county.	Planning and Building Services	Medium	X	Sheriff's Office, CAL FIRE, Public Works / Roads, Fire Districts, Office of Emergency Services	
2.3f	**HAZMAT TRAININGS.** Coordinate across agencies to train and conduct mock exercises with first responders in hazardous materials (HazMat) response field operations and decontamination.	Sheriff's Office, Office of Emergency Services	Ongoing	X	CAL FIRE, Fire Districts	
2.3g	**RADIO SYSTEM COVERAGE.** Pursue projects to increase emergency radio system coverage across the County.	Sheriff's Office, IT Department	Ongoing		Office of Emergency Services, Planning and Building Services	

SHORT MEDIUM LONG ONGOING

Action Number	Action Text	Responsible County Department	Timeframe	MHMP	Partners	Requirement or Recommendation
2.3h	**COMMUNICATIONS EQUIPMENT PURCHASING.** When purchasing emergency communications equipment, consider the redundancies and fail safes that are needed to accommodate unexpected power outages and Public Safety Power Shut offs (PSPS).	IT Department	Ongoing		Sheriff's Office, Office of Emergency Services	
2.3i	**RADIO REDUNDANCIES.** Build redundancies at radio base stations and repeater sites. This can include improving battery backups, replacing generators and batteries where needed, and considering the addition of a solar array.	IT Department	Ongoing		Sheriff's Office, Office of Emergency Services	
2.3j	**CJIS COMPLIANCE.** Pursue CJIS compliance related to encrypted law enforcement communications.	Sheriff's Office	Medium			
2.5b	**WARNINGS FOR ALL.** Improve fire and flood warning and information dissemination, with a focus on ensuring those who lack internet access and cell phones, and for whom English is a second language can receive and understand emergency warnings.	Office of Emergency Services	Medium		Sheriff's Office, CAL FIRE	
2.5d	**VULNERABLE POPULATION REGISTRY.** Continue to develop a voluntary vulnerable population registry and subsequent priority list to help first responders better provide services to at-risk community members. To understand the vulnerable populations present in communities and inform outreach related to this registry, utilize the Community Profiles portion of this element.	Office of Emergency Services	Long		Sheriff's Office, CAL FIRE, Fire Districts	
3.1a	**EOC UPDATES.** Work regionally to assess and update EOC equipment and supplies as necessary to ensure effectiveness. Identify needs regularly and after major hazard responses.	Office of Emergency Services	Ongoing	X	CAL FIRE, Sheriff's Office, Fire Districts, Susanville Indian Rancheria, City of Susanville	
3.1b	**COMMUNICATION UPGRADES.** To improve the consistency of emergency communications and facilitate timely response, implement Firenet/Lawnet Lassen Emergency communication equipment upgrades (backup power, additional repeaters, radios, etc.).	Sheriff's Office	Short	X	CAL FIRE, Office of Emergency Services	
3.1c	**EOC TRAININGS.** Conduct EOC mock exercises and incident management position training to prepare for emergency response.	Office of Emergency Services	Ongoing	X	CAL FIRE, Sheriff's Office	
3.1d	**EOC BACK UP.** Assess, identify, and possibly retrofit/harden a building and/or office space to serve as the joint back up EOC.	Office of Emergency Services	Medium	X	CAL FIRE, Sheriff's Office	

SHORT MEDIUM LONG ONGOING

Action Number	Action Text	Responsible County Department	Timeframe	MHMP	Partners	Requirement or Recommendation
3.2a	**CONSISTENCY WITH STATE AND FEDERAL FRAMEWORK.** County emergency response efforts shall be consistent with the California Emergency Services Act (California Government Code, Section 8550 et seq.) and the federal National Response Framework (effective March 2008, as amended) and the National Incident Management System (NIMS).	Office of Emergency Services	Ongoing		CAL FIRE, Sheriff's Office, Fire Districts	
3.2c	**OPERATIONAL CONTINGENCY PLANS.** Work on a department-by-department level to develop operational contingency plans that allow for necessary work to be performed during times of hazard events and unplanned power or communication outages. Develop operational procedures in case County offices, the County Adult Detention Facility, and other locations are required to evacuate. Consider working with surrounding jurisdictions to provide mutual aid in the form of facility-sharing during times of need.	Administration	Medium		Sheriff's Office, Planning and Building Services, Public Works / Roads, Public Health, Lassen Regional Solid Waste Management Authority, Agricultural Commissioner	
4.1a	**BACKUP VITAL RECORDS.** Identify and digitize records vital to county operations. Ensure that vital records are regularly backed up on a cloud-based system to retain necessary information and expedite the recovery process in the event of a hazard destructive of County property.	Administration	Medium		Planning and Building Services, Public Works / Roads, Office of Emergency Services, Sheriff's Office, CAL FIRE, Agricultural Commissioner, Public Health	

ORDINANCES AND CODES

Ordinances and codes are changes to County regulations. These changes are generally only appliable to new development which also is responsible for the cost of implementation. These actions will be included in the Safety Ordinance and County staff will implement these standards during discretionary permit review.

Action Number	Action Text	Responsible County Department	Timeframe	MHMP	Partners	Requirement or Recommendation
1.1a	**ACTION 1.1A: DEFENSIBLE DEVELOPMENT.** The most recently adopted California Fire Code, Fire Hazard Severity Zone Maps, California Building Codes, SRA Fire Safe Regulations, and Fire Hazard Reduction Around Buildings and Structures Regulations shall be applied to all applicable additions, remodels, reconstruction, and new development in very high fire hazard severity zone and State Responsibility Areas (SRAs). Fire protection plans that include risk analysis, fire response capabilities, fire safety requirements, mitigation measures and design considerations for non-conforming fuel modification, and wildfire education and maintenance shall be required for new development and subdivisions in very high fire hazard severity zones and SRAs, as determined by the County Fire Warden.	Planning and Building Services (in County Code, Article 1 of Title 12)	Ongoing			Required by State Code, Recommended by CAL FIRE
1.1d	**FLOOD REGULATIONS.** Regulatory standards for flood mitigation, located in Chapter 12.26 of the County Code, shall be updated as necessary to remain up to date with FEMA Flood Insurance Rate Maps, regulations and local ordinances.	Planning and Building Services	Ongoing			Guidance from FEMA
1.1e	**STRUCTURAL HAZARDS.** The County shall continue to protect life and property by applying and enforcing state adopted building codes to new construction and Alquist-Priolo requirements to new construction within Alquist-Priolo Fault Zones. In accordance with the California Department of Conservation Special Publication 42, require development be located a minimum of 50 feet from active or potentially active faults, unless an alternative setback distance is approved based on geologic analysis and feasible engineering design measures adequate to demonstrate that the fault rupture hazard would be avoided.	Planning and Building Services	Ongoing			Guidance from California Geologic Survey
1.1f	**HAZARDS-SENSITIVE USES.** When updating land uses and/or zoning code, consider that land uses using hazardous materials be sufficiently buffered to ensure sensitive uses, such as schools, hospitals, daycare centers, and residential neighborhoods, are protected. Similarly, avoid locating sensitive uses near established hazardous materials users or High Impact Industrial areas where incompatibilities would result.	Planning and Building Services	Short			

SHORT MEDIUM LONG ONGOING

Action Number	Action Text	Responsible County Department	Timeframe	MHMP	Partners	Requirement or Recommendation
1.2a	**DANGEROUS BUILDINGS.** Continue to implement, and update as necessary, Chapter 12.23 and 1.18 of the County Code, to abate dangerous buildings.	Planning and Building Services	Short	X		
1.2c	**LAND USES IN FAULT ZONES.** Prohibit allowing new development of high-occupancy uses, essential public facilities, and uses that permit significant amounts of hazardous materials currently not allowed by right within Alquist-Priolo Fault Zones. During the next update of the land use element, do not permit the above uses by right in Alquist-Priolo fault zones.	Planning and Building Services	Ongoing			
1.3a	**UPDATE TRANSPORTATION DESIGNS.** Consider updating standard design features in transportation infrastructure to improve resilience to extreme climate events. Tools may include special roadway sealants that prevent roadways from softening during extreme heat, appropriate roadway materials for wildfire prone areas, treating of rail lines to be heat-resistant, and incorporating expansion joints into rails that reduce the risk of damage during high temperatures.	Public Works / Roads	Long		California Department of Transportation	
2.5a	**HARDEN HOMES.** Promote structural hardening retrofits and creation of defensible space for existing structures in all SRA fire hazard severity zones and very high fire hazard severity zones in LRA's, consistent with the building standards and materials in the most current version of Chapter 7A of the California Building Code and California Fire Code. Prioritize incentives for vulnerable populations.	Planning and Building Services	Ongoing		Religious Institutions, School Districts, Real Estate Community, Business Community	Recommended by CAL FIRE
3.1e	**HOUSE NUMBERING.** Continue to enforce display of house numbering, as laid out in County Code Chapter 12.36 and 9.16, for the purposes of efficient and accurate emergency response. Update County Code to meet State Fire Code as necessary.	Planning and Building Services	Ongoing		Sheriff's Office, CAL FIRE, Fire Districts	Required by State Code, Recommended by CAL FIRE

PLANNING

These are programmatic actions that require adoption of a new plan or planning effort. These typically require intensive staff resources and have long implementation timeframes. Grants are often available for planning efforts, however, pursuing grants also requires staff time.

Action Number	Action Text	Responsible County Department	Timeframe	MHMP	Partners	Requirement or Recommendation
1.1c	**EVACUATION AND ACCESS.** In Chapter 9.16 of the County Code, continue to require new development in Very High Fire Hazard Severity Zones to provide a second access road or improvements to evacuation routes if necessary to provide for safe access of emergency equipment and civilian evacuation concurrently. The width, surface, grade, radius, turnarounds, turnouts, bridge construction, and lengths of fire apparatus access roads shall meet the requirements of the State Fire Codes. All requirements and any deviations will be at the discretion of the County Fire Warden. Evacuation routes should be incorporated into existing Community Wildfire Protection Plans where available.	Planning and Building Services	Medium			Required by SB 99
1.1g	**AIRPORT COMPATIBILITY.** Encourage the Airport Land Use Commission to review the Airport Land Use Compatibility Plan (ALUCP) when feasible and if land use changes around airports occur to ensure that the ALUCP accurately defines planning areas around airports. During updates, establish land use policies and standards appropriate for the public safety and protection of airport operations and in line with CalTrans Aeronautics handbook. As necessary, amend the General Plan Safety Element to be consistent with changes to the ALUCP.	Planning and Building Services	Ongoing		Public Works / Roads, City of Susanville (Susanville Municipal Airport), U.S. Army (Amedee Army Airfield)	
1.2b	**FLOODING AREAS.** Evaluate flooding areas and implement drainage improvements as possible on public assets or rights-of-way to reduce the potential for commercial and residential flooding. Require new discretionary development to provide necessary and feasible on- and off-site improvements to stormwater runoff and drainage facilities.	Public Works / Roads, and Planning and Building Services	Ongoing	X	Public Works / Roads, Planning and Building Services	

SHORT MEDIUM LONG ONGOING

Action Number	Action Text	Responsible County Department	Timeframe	MHMP	Partners	Requirement or Recommendation
1.3b	**NEW CRITICAL FACILITIES.** Ensure that new critical facilities are located to best serve existing and planned development and the corresponding demand for services. These facilities should be sited outside of hazard areas.	Public Works	Long		Sheriff's Office, School Districts, CAL FIRE, Planning and Building Services	Recommended by CAL FIRE
1.5a	**FIREWISE PLANTS.** The County should work with fire authorities and botanical experts to develop a list of recommended "Firewise" plants suited to, and/or native to, the local area. This list should be made available on the County website and include information about how to establish and maintain plants to maximize fire resistance.	Planning and Building Services	Medium		CAL FIRE, National Park Service, Bureau of Land Management, US Forest Service, California Department of Fish and Wildlife, Resource Conservation Districts	
2.2d	**EMERGENCY RESPONSE SERVICE.** Coordinate with CAL FIRE to develop a level of service standard for all emergency response services (fire, EMS, HazMat, and rescue) and make such information public so that landowners and residents understand the distribution and quality of service. Incorporate these service standards into development review.	Sheriff's Office, and Planning and Building Services	Medium		Sheriff's Office, Office of Emergency Services, CAL FIRE	
2.2f	**HAZARDOUS MATERIALS FLOW.** Develop a commodity flow study to determine flow of hazardous materials through the county.	Planning and Building Services	Long	X	Lassen Regional Solid Waste Management Authority	
2.3c	**STANDARD EVACUATION PLAN.** Develop a standardized operational area evacuation plan to streamline emergency response efforts. Publicize routes as possible.	Sheriff's Office	Medium	X	Sheriff's Office, Public Works / Roads, Office of Emergency Services, Planning and Building Services, Fire Districts, CAL FIRE	
2.4b	**LASSEN HAZARD MITIGATION** Plan. Continue to participate in FEMA's pre-disaster mitigation program by developing, maintaining, and implementing a Hazard Mitigation Plan. Incorporate updates to the Hazard Mitigation Plan into the Safety Element and vice versa.	Office of Emergency Services; Planning and Building Services	Ongoing		Sheriff's Office, CAL FIRE, Fire Districts	Recommended by CAL FIRE
2.4d	**CAL FIRE COORDINATION.** Continue to coordinate with CAL FIRE on Exception Requests for all SRA fire hazard severity zones and LRA very high fire hazard severity zones. The County shall maintain efficient and timely procedures for processing SRA Exception Requests to CAL FIRE.	Planning and Building Services	Ongoing		CAL FIRE	
4.2a	**REASSESSMENT OF FIRE HAZARDS.** Coordinate with fire protection and emergency service providers to reassess fire hazards after major wildfire events to adjust fire prevention and suppression needs, as necessary, commensurate for both short- and long-term fire prevention needs.	Office of Emergency Services	Medium		Fire Districts, Planning and Building Services, CAL FIRE, Sheriff's Office	Recommended by CAL FIRE

SHORT MEDIUM LONG ONGOING

PARTNERSHIPS

These are actions primarily lead by outside partners, including the State and non-profit but supported by county resources, staff, and/or facilities. These should require limited.

Action Number	Action Text	Responsible County Department	Timeframe	MHMP	Partners	Requirement or Recommendation
2.1a	**SCHOOL SHELTERS.** Coordinate with school districts to assess, retrofit, and maintain adequate level of emergency inventory materials (food, blankets, etc.) at schools throughout the county to accommodate emergency shelter.	Social Services	Medium	x	School Districts, CAL FIRE, Sheriff's Office	
2.4a	**PARTNERSHIPS.** Continue to maintain working relationships with agencies to share resources and expertise, coordinate land management, hazard prevention, and response activities, facilitate property access, access grant funding, and utilize cost-sharing opportunities that further hazard mitigation efforts.	Multiple County Departments	Ongoing	x	CAL FIRE, Susanville Indian Rancheria, City of Susanville, Bureau of Land Management, US Forest Service, National Park Service, California Department of Fish and Wildlife, Development Community, Business Community, Real Estate Community, Religious Institutions, School Districts, Insurance Companies, FEMA, Lassen Land & Trails Trust	Recommended by CAL FIRE
2.4c	**COORDINATE WITH HOSPITALS.** Work with local medical providers and hospitals to ensure that medical facilities are prepared to meet increased demand because of hazard events.	Public Health	Ongoing		Medical Providers	
2.4f	**ANIMAL EVACUATION CENTERS.** Identify and designate Domestic Animal evacuation centers. Where possible, link to emergency shelters, to avoid separating owners form their pets.	Sheriff's Office	Medium	x	Planning and Building Services, CAL FIRE, Office of Emergency Services	
2.4g	**REGIONAL COMMUNICATION LINKS.** Coordinate with regional partners to pursue emergency communications links that allow backup phone and radio services for County Emergency Responders.	IT Department; Office of Emergency Services	Medium		Sheriff's Office, Plumas County, Shasta County, Modoc County	

SHORT MEDIUM LONG ONGOING

Action Number	Action Text	Responsible County Department	Timeframe	MHMP	Partners	Requirement or Recommendation
2.4h	**TELECOMMUNICATIONS REDUNDANCY.** Coordinate with commercial telecommunications providers to create telecommunication infrastructure redundancies and prevent community islanding.	IT Department	Medium		Commercial telecommunications providers	
3.2b	**PARTICIPATION IN MUTUAL AID SYSTEMS.** Maintain participation in local, regional, state, and national mutual aid systems to ensure that appropriate resources are available for response and recovery during and following a disaster.	Office of Emergency Services	Ongoing		Sheriff's Office, CAL FIRE, Fire Districts	Recommended by CAL FIRE
4.2b	**POST-DISASTER RECONSTRUCTION.** Participate in the development of programs and procedures that emphasize coordination between appropriate public agencies and private entities to remove debris and promote the safe and rapid reconstruction of the County following a disaster event. Evaluate redevelopment after hazard events to facilitate the necessary upgrading of the built environment as expeditiously as possible.	Planning and Building Services	Medium		CAL FIRE, Susanville Indian Rancheria, City of Susanville, Bureau of Land Management, US Forest Service, National Park Service, California Department of Fish and Wildlife, Development Community, Business Community, Real Estate Community, Religious Institutions, School Districts, Insurance Companies, FEMA, Lassen Land & Trails Trust	

SHORT MEDIUM LONG ONGOING

EDUCATION AND OUTREACH

Education and outreach actions depend on information sharing and education to encourage private residence to prepare or make upgrades to their private residence. Education and outreach is important to encourage rural community cohesion and can encourage improvements in existing buildings where new ordinances cannot. While education can be staff intensive, partner agencies can lessen this burden and make these actions the most cost effective.

Action Number	Action Text	Responsible County Department	Timeframe	MHMP	Partners	Requirement or Recommendation
1.2d	**PERMIT ENGAGEMENT.** To avoid or minimize new residential development in Very High Fire Hazard Severity Zones, engage property owners during the permit process about the fire risks associated with building in these at-risk areas, and the responsibilities laid out in Chapter 9.16 of the County Code. Provide resources to ensure that insurance risks are explained.	Planning and Building Services	Short		CAL FIRE, Fire Districts	Recommended by CAL FIRE
1.6a	**PRESCRIBED BURNING.** Support Fire Districts and prescribed burning with open lines of communication, regular meetings with Fire Districts, and discussions of the technical assistance available from the County.	Office of Emergency Services	Ongoing		Fire Districts, Planning and Building Services, Bureau of Land Management, National Park Service, US Forest Service, CAL FIRE	Recommended by CAL FIRE
2.2a	**HAZARD AND EVACUATION EDUCATION.** Promote educational resources to make residents, businesses, community groups, schools and religious institutions aware of evacuation planning and hazards. Emphasize engagement efforts for high priority hazards and at-risk groups or vulnerable populations, as identified in the Community Profiles portion of this Element.	Office of Emergency Services	Medium	X	CAL FIRE, Sheriff's Office, Planning and Building Services, School Districts, Religious Institutions, Fire Districts, Susanville Indian Rancheria, City of Susanville, Business Community	Recommended by CAL FIRE
2.2b	**FIRE OUTREACH.** Work with CAL FIRE and Fire Districts prior to fire season to utilize partnerships, coordinate outreach events, and leverage County communication resources to educate the public on wildfire preparation and response. Topics should include but are not limited to creating a defensible space around their place of residence, fire landscaping, reducing the potential for the expansion of invasive species that can occur from defensible space projects, Ready! Set! Go!, Red Flag Warning, wildfire ignition risks, resource concerns, and evacuation. Emphasize engagement efforts for fire-hazard priority communities and populations vulnerable to fire.	Administration	Short		CAL FIRE, Sheriff's Office, Planning and Building Services, School Districts, Fire Districts, Susanville Indian Rancheria, City of Susanville, Religious Institutions, Business Community	Recommended by CAL FIRE

SHORT MEDIUM LONG ONGOING

Action Number	Action Text	Responsible County Department	Timeframe	MHMP	Partners	Requirement or Recommendation
2.2e	**HOUSEHOLD HAZARDOUS WASTE DISPOSAL.** Educate the public on household hazardous wastes and the proper methods of disposal.	Planning and Building Services	Ongoing		Lassen Regional Solid Waste Management Authority	
2.4e	**POWER SHUTOFF COORDINATION.** Public Safety Power Shutoff (PSPS) coordination between the County, LMUD, and PG&E should occur in order to limit the impacts on residents and businesses. PG&E, LMUD, Plumas Sierra Rural Electric Cooperative, and the County should collaborate while monitoring weather conditions to ensure pertinent information is shared.	Office of Emergency Services	Ongoing		LMUD, PG&E, Plumas Sierra Rural Electric Cooperative	
2.5c	**HAZARD RESPONSE TRAININGS.** Coordinate with fire protection agencies operating in Lassen County to regularly train community-based emergency response teams, incorporating climate change response and recovery. Encourage recruiting includes a diverse set of community members and leaders.	Office of Emergency Services	Ongoing		CAL FIRE, Fire Districts	Recommended by CAL FIRE