Mono County
Community Wildfire Protection Plan (CWPP)
2026 Update

[Note: This CWPP was originally developed and written for the 2019 Mono County CWPP which was incorporated into the 2019 Mono County and Town of Mammoth Lakes Multi-Jurisdictional Hazard Mitigation Plan (MJHMP). This update for Mono County for 2026 incorporates the most recent fire hazard severity zone maps released by the State Fire Marshal and updates the list of proposed fuel reduction and community safety projects throughout the county. The majority of the document, however, remains the same as the 2019 document and is expected to go through a full rewrite and update within the next 1-2 years.]

Signature Page

The following signatories mutually agree on and approve the final contents of this CWPP:

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1. COMMUNITY WILDFIRE PROTECTION PLAN

The Mono County CWPP is a comprehensive, scientifically based analysis of wildfire-related hazards and risks in the WUI areas of Mono County, California. Originally prepared for Mono County (County) and the Town of Mammoth Lakes (Town) in concert with the 2019 MJHMP, it was an incisive update to the 2009 Community Wildfire Protection Plan. The 2019 MJHMP and CWPP were prepared based on a countywide effort that included extensive stakeholder engagement, the compilation of existing documents and GIS data, scientifically based analyses of risk and vulnerability, confirmation of field data gathered in 2009, and recommendations designed to reduce the threat of wildfire-related damages to assets, also known as values, at risk. For 2026, minimal but important updates have been made to reflect updated fire hazard severity maps and additional projects to improve the resilience of the county to the threat of wildfires.

In 2019, this document incorporated new and existing information relating to wildfire which will be valuable to citizens, policy makers, and public agencies in Mono County. Participants in this project include BLM, USFS, Regional Planning Advisory Councils, Mammoth Lakes Fire Department, Cal Fire, the LADWP, the County's volunteer fire departments, Fire Safe Councils, and stakeholders. A more detailed description of the planning and stakeholder process is included in Chapter 1 of the 2019 Mono County and Town of Mammoth Lakes Multi-Jurisdictional Hazard Mitigation Plan (MJHMP). A detailed description of the planning area is included in Chapter 2 of the 2019 MJHMP. This document meets the requirements of the federal Healthy Forest Restoration Act (HFRA) of 2003 for community fire planning.

This document examines the wildfire hazard, vulnerabilities, and means of reducing risk for the County and Town, meeting the hazard-specific requirements of a MJHMP for both jurisdictions.

1.1 Method

The assessment portion of this document is an evaluation and update of identified hazards and risks associated with wildland fire in proximity to communities; the assessment is based on stakeholder expertise, available state-level fire data, and recent growth patterns and fuel reduction activities. This information defines "areas of concern" for Mono County and allows for an updated prioritization of mitigation efforts. From the analysis of this data,

solutions and mitigation recommendations are offered that will assist homeowners, land managers, and other interested parties in the process of developing short-term and long-term fuels and fire management plans. Wildfire hazard data is derived from Cal Fire FRAP data and Wildfire Hazard Severity Zone maps, as well as fire behavior potential data developed in 2009 from Fire Family Plus, BEHAVE, and FlamMap fire behavior models.

The CWPP presents a two-fold evaluation of wildfire hazard, risk, and vulnerabilities. Section 1.3 presents a general hazard profile based on historic wildfire activity and wildfire hazard severity zones, as established by Cal Fire, and identifies vulnerable assets and populations located within high and very high wildfire severity zones. A detailed description of methodologies for the general hazard profile and vulnerabilities analysis is in Chapter 3 of the 2019 MJHMP. Section 1.4 provides an assessment of potential fire behavior in the wildland urban interface, including flame length, rate of spread, and crown fire based on fire behavior modeling. It also identifies risk to communities in the WUI based on locations in hazard areas and potential fire behavior as well as infrastructure and development characteristics. Section 1.5 identifies changes since 2009 that affect fire behavior and community vulnerability, including updated development and infrastructure conditions, potential changes in fuel load that could lead to inaccuracies in existing state and local wildfire hazard mapping such as previous fires and tree mortality, completed and ongoing fuels reduction projects, as well as possible implications of climate change. Section 1.6 presents priority projects and a set of actions the County and Town plan to take that can increase preparedness, response, and education of the community in relation to wildfire threats. These actions supplement mitigation and related measures provided in Chapter 5 of the 2019 MJHMP.

1.2 Background

1.2.1 National Fire Plan (NFP) and the HFRA

In the year 2000, more than 8 million acres burned across the United States, marking one of the most devastating wildfire seasons in American history. One high-profile incident, the Cerro Grande fire at Los Alamos, New Mexico, destroyed more than 235 structures and threatened the Department of Energy's nuclear research facility.

Two reports addressing federal wildland fire management were initiated after the 2000 fire season. The first report, prepared by a federal interagency group, was titled "Review and Update of the 1995 Federal Wildland Fire Management Policy" (US Department of the Interior, et al. 2001). This report concluded, among other points, that the condition of

America's forests were continuing to deteriorate.

The second report, titled "Managing the Impacts of Wildfire on Communities and the Environment: A Report to the President in Response to the Wildfires of 2000," was issued by the BLM and the USFS. It became known as the NFP. This report, and the ensuing congressional appropriations, ultimately required actions to:

- Respond to severe fires
- Reduce the impacts of fire on rural communities and the environment
- Ensure sufficient firefighting resources

Congress increased its specific appropriations to accomplish these goals. 2002 was another severe season: more than 1,200 homes were destroyed and over 7 million acres burned. In response to public pressure, Congress and the Bush administration continued to designate funds specifically for actionable items such as preparedness and suppression. That same year, the Bush administration announced the HFRA initiative, which enhanced measures to restore forest and rangeland health and reduce the risk of catastrophic wildfires. In 2003, that act was signed into law.

Through these watershed pieces of legislation, Congress continues to appropriate specific funding to address five main subcategories: preparedness, suppression, reduction of hazardous fuels, burned-area rehabilitation, and state and local assistance to firefighters. The general concepts of the NFP blended well with the established need for community wildfire protection in the study area, which encompasses the entirety of the Town of Mammoth Lakes and Mono County. The spirit of the NFP is reflected in the Mono County CWPP.

The requirements of the HFRA are met by:

1. Identifying and prioritizing fuels reduction opportunities across the landscape (see Fuels Modification Projects, Section 1.5.5).
2. Addressing structural ignitability (see Home Mitigation, Section 1.6, and Appendix 2).
3. Assessing community fire planning, response, and suppression capabilities (see 2019 MJHMP, Chapter 5).
4. Collaborating with stakeholders (see 2019 MJHMP, Chapter 1, and Appendix 6).

1.2.2 Outcomes

Intended outcomes from this project include the following:

1. Enhance life safety for residents and responders.
2. Mitigate undesirable fire outcomes to property and infrastructure.

To accomplish these goals, the following objectives have been identified:

1. Establish an approximate level of risk (the likelihood of a significant wildfire event in the study area).
2. Provide a scientific analysis of the fire behavior potential of the study area.
3. Group values at risk into "communities" that represent relatively similar hazard factors.
4. Identify and quantify factors that limit (mitigate) undesirable fire effects to the values at risk (hazard levels).
5. Recommend specific actions that will reduce the vulnerability of the values at risk.

Other desired outcomes:

1. To promote community awareness: Quantifying the community's hazards and risk from wildfire will facilitate public awareness and assist in creating public action to mitigate the defined hazards.
2. To improve wildfire prevention through education: Community awareness, combined with education, will help to reduce the risk of unplanned human ignitions.

To facilitate and prioritize appropriate hazardous fuel reductions:

1. The identification of areas of concern will improve the focus and accuracy of pre-planning, and facilitate the implementation of cross-boundary, multi-jurisdictional projects.

1.3 Hazard and Risk Assessment

1.3.1 Hazard Description

The term wildfire refers to any fire that starts in a rural, sparsely populated or largely undeveloped area. In many parts of the world, wildfires form part of the ecosystem and often burn at a safe distance from areas of human settlement. Under dry conditions and when fanned by strong winds, however, fires can spread into heavily populated districts, causing major damage to property. Buildings may be set alight by radiant heat, contact with the flames, or flying embers. Smoke can also cause property damage, and indirect losses can result from business interruption.

A complex interplay of natural and anthropogenic (human-caused) factors influences the extent and magnitude of wildfires. Most significant factors include the type and dryness of vegetation, slope, and wind, and other climactic components such as temperatures and precipitation. Conflagration can result in many circumstances as the result of lightning, downed or arcing power lines, or man-made fires accidentally or deliberately spread. These changing anthropogenic and natural factors make wildfires a risk that is extremely difficult to quantify. Even if hazard zones can be clearly identified, fires can cause significant losses in unexpected locations under unique circumstances.

1.3.2 Location and Magnitude

Wildland fires in Mono County have ranged from fires that burned less than 1 acre in size to the Cannon Fire in Walker in 2002, which burned 22,750 acres. With its sloped geography, vegetation, and climate, Mono County has many fire-prone landscapes, on both public and private lands. Wildfire burns indiscriminately across property boundaries, which means that the way potential fuels are managed on one piece of property can affect wildfire risk on neighboring lands. Public lands surrounding communities in the County contain highly flammable vegetation that in many cases has not been thinned in years. The area experiences high temperatures and high winds over mountainous terrain that makes firefighting difficult. Highway and air access to the area is limited, further increasing the difficulty of fighting wildland fires. Continued population growth into WUI areas, but unchanging relative isolation from resources, and an increasing frequency of elevated fire weather conditions present major challenges to county residents.

Cal Fire is required by state law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as FHSZ, influence how people construct buildings and protect property to reduce risk associated with wildland fires. As required by law, the model evaluates hazard, but not risk. The model underlying FHSZ evaluates properties using characteristics that affect the probability of the nearby area burning, and the potential fire behavior in the area such as topography and historical wind speeds to project embers that could be cast onto the property. Many factors are considered such as fire history, existing and potential fuel, flame length, ember travel, terrain, and weather. Fire hazard severity has two key components: probability of an ignition starting a wildfire and expected fire behavior if a wildfire were to occur.

Based on these factors, each area is assigned a zone, categorized as moderate, high, or very high. The FHSZ is intended to provide a broad-stroke understanding of level of wildfire hazard across the state and may not always reflect hazard from highly localized and fine-grained factors. Further, as these zones represent hazard, not risk, any past, current, or future actions taken to reduce risk (e.g., forest thinning or fuels reduction projects, home hardening) are not reflected in the hazard rating. A primer prepared by Cal Fire, contained in Appendix G of the 2019 MJHMP, describes in greater detail the method and granularity of the FHSZ.

The FHSZ maps are the primary tool used to establish state and local rules and regulations governing building, infrastructure, and maintenance requirements. Consequently, Table 1.1 of this analysis classifies the land in Mono County based on high and very high wildfire hazard zones of the FHSZ map. It is worth noting that current FHSZ maps were last updated

in March 2025 for the local responsibility areas and in April 2024 for state responsibility areas. Table 1.2 evaluates hazard and risk analysis more tailored to the County and, within the WUI, recent changes to community conditions and their effects on risk and vulnerability.

As identified in Table 1.1, moderate, high, and very high wildfire zones are present in both unincorporated Mono County and the Town of Mammoth Lakes.

Mono County

Table 1.1 shows the ownership and administration of lands within the high and very high wildfire severity zones in Mono County. Relative to the prior FHSZ maps, the new map reflects more than 5 times the number of acres both in the very high and in the high severity zones in Mono County.

Table 1.1: 2025 Wildfire Severity Zones by Fire Protection Responsibility

Wildfire Protection Responsibility Entity Category	Moderate Wildfire Severity Zone			High Wildfire Severity Zone			Very High Wildfire Severity Zone		
	Acres	Percent of Total Zone	Percent of Total Mono County Area	Acres	Percent of Total Zone	Percent of Total Mono County Area	Acres	Percent of Total Zone	Percent of Total Mono County Area
Local[1] /Private	9,518	8.4%	<0.05%	2,024	1.5%	0.1%	2,908	--	0.1%
State	103,379	91.6%	5.2%	134,594	98.5%	6.7%	17,577	--	0.09%
Total (excluding Federal[2])	112,898	--	5.6%	136,618	--	6.8%	20,485	--	1.0%

[1] Local includes; Local government property owner such as Town of Mammoth Lakes

[2] Federal owned land is not classified by Cal Fire's hazard severity model but encompasses 1,734,479 of the total 2,004,480 acres (87%) in Mono County per the 2010 US Census Gazette

Table 1.2 reflects the prior FHSZ maps and shows the land within the high and very high wildfire severity zones in Mono County as of 2019 broken down by the planning areas defined in the Mono County General Plan. Based on the latest FHSZ maps, the communities of Mammoth Lakes, Bridgeport, and Antelope Valley have seen the largest increases in very high severity acreage and surrounding communities including Benton, Long Valley, and Lee Vining have seen the largest increases in high severity acreage.

Table 1.2: 2019 Wildfire Severity Zones by Planning Areas

Planning Area	High Wildfire Severity Zone			Very High Wildfire Severity Zone		
	Acres in Zone	Percent of Total Planning Area	Percent of Total Mono County Area	Acres in Zone	Percent of Total Planning Area	Percent of Total Mono County Area
Antelope Valley	1,279	4.3%	<1%	-	-	-
Benton	-	-	-	-	-	-
Benton Hot Springs	-	-	-	-	-	-
Bodie Hills	-	-	-	-	-	-
Bridgeport	2,667	5.2%	<1%	333	<1%	<1%
Chalfant Valley	-	-	-	-	-	-
Hammil Valley	-	-	-	-	-	-
June Lake	12,613	23.8%	<1%	8,016	15.1%	<1%
Long Valley	3,649	20.2%	<1%	-	-	-
Mammoth Vicinity	42,216	51%	2.6%	1,514	1.6%	<1%
Mono Basin	4,428	2%	<1%	-	-	-
Oasis	-	-	-	-	-	-
Sonora Junction	7,419	6.5%	<1%	11,253	9.8%	<1%
Swauger Creek	663	35.0%	<1%	-	-	-
Upper Owens	4,304	28%	<1%	-	-	-
Wheeler Crest	244	4.2%	<1%	-	-	-

Mammoth Lakes

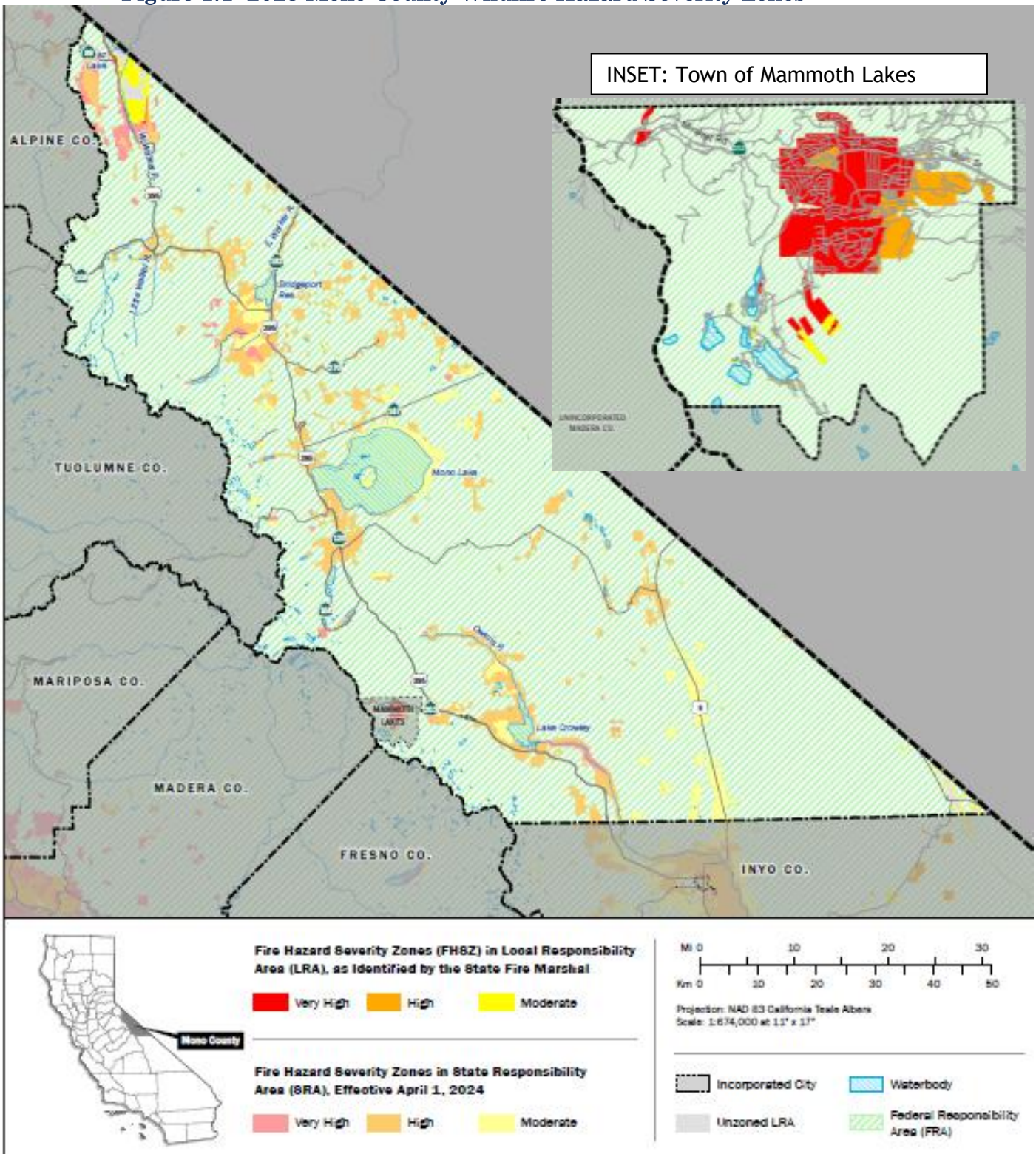
Wildfire is a concern for the entire Town; historically, wildfires have occurred on all sides of Town. However, the vast majority of Mammoth Lakes now is classified at the highest hazard exposure. Figure 1.1 shows the FHSZs for Mono County and the Town of Mammoth Lakes (the only area in Mono County separately mapped by CalFIRE). Overall, over 80 percent of the incorporated Town of Mammoth Lakes is in a very high fire severity zone and the remaining 20 percent is in a high fire severity zone, based on the most recent CalFIRE FHSZ mapping.

Table 1.3 gives the acreage and percentage of total land area located within high and very high wildfire severity zones.

Table 1.3: 2025 Wildfire Severity Zones in Mammoth Lakes

Planning Area	Total Town Area Acreage	High Wildfire Severity Zone		Very High Wildfire Severity Zone	
		Acres in Zone	Percentage of Total Town Area	Acres in Zone	Percentage of Total Town Area
Town Inside Urban Limit	2,536	~400	<20%	~2,136	>80%

Figure 1.1: 2025 Mono County Wildfire Hazard Severity Zones



1.3.3 Hazard History

Dozens of fires of various sizes typically burn in the County each year. Swall Meadows, June

Lake, and Antelope Valley are populated areas that have experienced one or more significant fires since 2000 and have a pattern of fires from prior years. As of 2019, there had been 16 significant fires, described below, that have affected the County since 2000, or more than one a year on average. Since 2019, there have several additional fires including the Mountain View Fire in November 2020 in Walker consuming over 20,000 acres and 80 structures up to fires as recent as the Pack Fire in November 2025 in McGee Creek consuming nearly 2,000 acres and 30 structures. Typically, these fires were wind-driven, exhibited extreme fire behavior, and consumed several thousand acres before suppression efforts were successful.

1. Cannon Fire. June 2002. Walker.

The Cannon Fire burned 22,750 acres. Three fatalities occurred due to an air-tanker crash, and one person was injured when a water truck was destroyed in a rollover accident. Economic damages from the fire totaled $7.9 million. The fire is thought to be human-caused but was strongly influenced by high winds (20–30 mph), dry fuel conditions, varied fuel types, and mountainous topography. Hundreds of evacuations occurred east and west of US 395 and portions of US 395 were closed.

2. Gate Complex Fire (Slinkard, Gate, Buckeye, and Coleville Fires). July 2002. West side of Antelope Valley.

The Complex Fire consisted of four fires that burned in the same region simultaneously. The Slinkard fire, the largest of the four, burned north from Slinkard Valley near SR 89 to the Topaz Lodge along US
395. In total, the fires burned roughly 9,866 acres and incurred more than $1.6 million in damages. Portions of US 395 (Bridgeport to Holbrook Junction) and SR 89 (Monitor Pass) closed. The fires are believed to have been started by lightning in a wildland area and spread quickly due to wind and dry ground conditions. Evacuations were required for all of Coleville and areas north to Nevada. All residents from the Monitor Pass turnoff north to the Nevada state line and from the Monitor Pass turnoff south to Topaz Lane were evacuated. Power and telephone outages occurred in Walker and Coleville. Just over 900 fire personnel were on scene, as well as helicopters and air tankers.

3. Birch Fire. July 2002. Birch Creek Canyon near Swall Meadows.

The Birch Fire was caused by a sparking power line, and resulted in 2,500 acres burned and $386,000 in damages. The entire Rock Creek drainage area (including USFS campgrounds), local residents (including the entire Swall Meadows community), and merchants were

evacuated. Lower and Upper Rock Creek Roads closed. No structures were destroyed.

4. Larsen Fire. June 2007. West of Coleville in Antelope Valley.

The Larsen fire burned for close to 20 days, ultimately burning 1,080 acres. The blaze caused mandatory evacuations in portions of Coleville and U.S. Marine housing, school closures, and the closure of US 395 from Bridgeport to Holbrook Junction. High winds caused quick spreading. Lightning is believed to have started the blaze.

5. Indian Fire. August 2012. North of SA 120 and southwest of Mono Lake.

The Indian Fire burned for roughly a week but burned more than 12,576 acres in that time and required 571 personnel on-site. The fire was believed to be caused by a lightning strike. The fire did not threaten life or property but it destroyed critical habitat for sage grouse.

6. Spring Peak Fire. August 2013. East of Bodie State Park.

The Spring Peak Fire started in Nevada from a lightning strike and crossed into California a few days later. The fire came within miles of Bodie State Park. The roads to the park were closed, State Routes 267 and 170. The fire burned over 14,300.

7. June Lake Fire. September 2014. June Lake Mountain.

The June Fire, which started at the base of June Mountain, was caused by an employee of June Mountain operating heavy equipment on June Mountain Ski Area. The fire threatened residential structures and necessitated mandatory evacuations east of June Mountain and south of Highway 158. Highway 158 was closed at the south junction with Highway 395 and to the north to Rainbow Lane.

8. Van Dyke Fire. February 2015. Point Ranch, South of Bridgeport.

The Van Dyke Fire began west of Route 395 and north of Point Ranch, at one point it shut down Route 395 to thru traffic. The fire damaged a Southern California Edison power sub-station and residents of Evans Track south of the Bridgeport Ranger Station were evacuated. A total of 509 acres burned.

9. Round Fire. February 2015. Swall Meadows and Paradise.

The most destructive fire in recent history, the Round Fire burned 36 homes, most of them in Swall Meadows, and 7,000 acres. The communities of Paradise and Swall Meadows were placed under mandatory evacuation orders. The blaze was started when strong winds caused

a tree to fall over power lines, which sparked.

10. Walker Fire. August 2015. Southwest of Lee Vining.

The fire burned for roughly two weeks and consumed 3,676 acres. It resulted in the temporary closure of SR 120 and Tioga Pass Road, and mandatory evacuations of several campgrounds and resorts near Lee Vining and Walker Lake. The fire was human-caused.

11. Marina Fire. June 2016. Hwy 395 & Mono Lake.

The Marina Fire burned on the slopes above Old Marina on Hwy 395 about one mile north of the town of Lee Vining. The fire caused parts of Hwy 395 to close. The Tioga Lodge and the Mono Inn were evacuated. An evacuation warning was issued for Lee Vining and Mono City. The fire was determined to be human-caused, but the exact cause and origin are still under investigation. A total of 650 acres burned.

12. Clark Fire. August 2016. On Bald Mountain, northeast of Mammoth.

A lightning-sparked wildfire in the Inyo National Forest south of Mono Lake, the Clark Fire burned 2,819 acres. Clark Canyon was evacuated as a precaution. Due to elevated particulate pollution levels (from the Clark Fire as well as a smaller fire, the Wilson Fire), the Mono County Health Department has issued a Stage 1 Air Pollution Health Advisory for Northern Mono County.

13. Rock Creek Fire. August 2016. North of Swall Meadows.

The Rock Creek fire was caused by a mountain biker, and was primarily carried by dry cheatgrass. No structures were burned, but an evacuation occurred in Swall Meadows.

14. Owens River Fire. November 2016. East of June Lake, Clark Canyon.

Burning for roughly a week, the fire covered 5,443 acres. The Big Springs Campground, Clark Canyon (a popular climbing area), and nearby ranches and developments were evacuated. The Owens River Road and Whitmore Springs Roads were closed and visitors were advised to avoid Bald Mountain Road, as well.

15. Slinkard Fire. September 2017. West slope of Antelope Valley, south of Topaz.

The Slinkard fire burned for roughly two weeks, burning more than 8,925 acres. The blaze was started by a lightning strike in Slinkard Valley. CA 395 was temporarily closed in both directions

and voluntary evacuation notices were issued to residents in and around Topaz.

16. Boot Fire. September 2018. Southeast of Walker, north west of Bridgeport.

The Boot fire burned 6,974 acres, the cause of the fires is still under investigation (as of November 2018). Certain areas and campgrounds within the Humboldt-Toiyabe National Forest were closed, as well as portions of US 395 and CA 108.

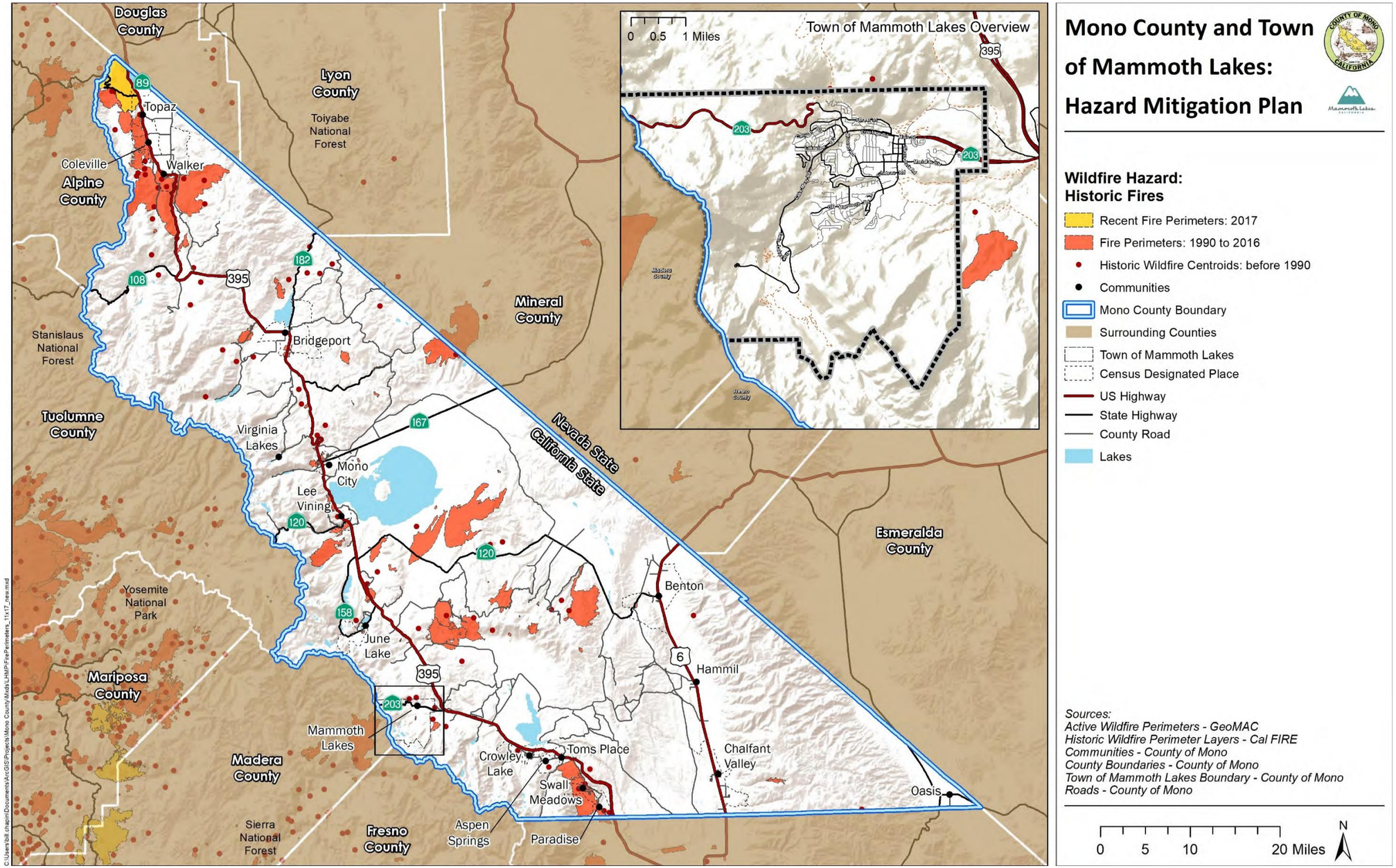
Mammoth Lakes

The Town of Mammoth Lakes regularly experiences wildfires in proximity to Town boundaries. Most of these fires are extinguished before growing over 100 acres. The major threats to the Town are fires that start on adjacent public lands and spread into the communities. As a result, most fire mitigation and prevention projects in the area focus on fuel breaks.

The most destructive fire that occurred within the vicinity of thein Town was the 1992 Rainbow Fire, which began near the Devils Postpile National Monument. In addition to a variety of other conditions, winds between 30 and 60 miles an hour fanned the fire, leading it to expand to more than 8,000 acres within 24 hours. In total the fire burned 8,347 acres; the fire burned more than 85 percent of the monument's acreage. The Rainbow Fire was ignited by lightning on August 20, 1992, in the Inyo National Forest, south of Devils Postpile National Monument. Fortunately, ideal weather conditions prevented the fire from reaching and spreading into the Town of Mammoth Lakes.

Figure 1.2 shows all fire perimeters from 1990 to 2017 as well as the general location (displayed as single dot) of fires going to back to 1900 for the County and Town of Mammoth Lakes. A full list of documented fires is contained in Appendix H of the 2019 MJHMP.

Figure 1.2: Historic Fires



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1.3.4 Risk and Vulnerability

The location, frequency, and severity of potential future wildfire hazard events is by itself insufficient to describe Mono County and Town of Mammoth Lakes' vulnerability to wildfire. A risk assessment is necessary to prepare a more accurate view of the threat that the county and the city face as a result of wildfire events likely to occur in their areas. Risk and vulnerability are assessed in terms of critical facilities and vulnerable populations that are located in high or very high wildfire severity zones. The approach and method for risk and vulnerability assessment are described in greater detail in Chapter 4 of the MJHMP.

Social Vulnerability

A number of community members considered to have higher vulnerability in a hazard event reside within the high and very high hazard severity zones of both the county and town. However, there is no significant difference in social vulnerability between residents in the high wildfire hazard zones compared to residents in the entirety of the communities. Tables 1.4 and 1.5 summarize, as of 2019, the social vulnerability for unincorporated Mono County and Mammoth Lakes residents, respectively, in the high and very wildfire hazard zones. Given the latest hazard maps show over five times the number of acres in very high and high zones, an updated analysis would likely show a similar magnitude of increase for social vulnerability.

Table 1.4: Social Vulnerability for 2019 Wildfire Hazard Zones – Unincorporated Mono County

Social Vulnerability Metric	Wildfire Hazard Zone		
	High	Very High	Mono County Total
Population	1,225	227	6,042
Number of households	485	52	2,469
Median household income†	$61,643	$40,533	$56,944†
Number of households under poverty limit	7.0%	<1%	5.1%
Percent elderly households	42.7%	<1%	35.2%
Percentage of adults with English competency	98.6%	99.4%	95.5%
Percentage of households with a disabled member	17.3%	15.4%	15.3%
† Median income for the unincorporated county was not available so the total county median is shown			

Table 1.5: Social Vulnerability for 2019 Wildfire Hazard Zones – Mammoth Lakes

Social Vulnerability Metric	Wildfire Hazard Zone		
	High	Very High	Mammoth Lakes Total
Population	2,130	267	8,104
Number of households	798	132	3,299
Median household income	$68,947	$69,438	$55,799
Number of households under poverty limit	4.0%	1.5%	4.3%
Percentage elderly households	19.3%	12.1%	6.9%
Percentage of adults with English competency	90.9%	91.0%	88.7%
Percentage of households with a disabled member	15.8%	7.6%	12.0%

Critical Facilities

In Mono County as of 2019, 35 critical facilities are in the high hazard severity zone and 5 in the very high hazard severity zones. Of these, 11 are in the Town of Mammoth Lakes. Facilities at risk include half the county's medical service centers and more than 40 percent of the emergency services and emergency operations centers. Table 1.6 lists the number of facilities located in wildfire hazard zones for unincorporated Mono County and the Town of Mammoth Lakes. Additionally, the Digital 395 cables run through areas of moderate and high fire risk and major power lines run through all hazard severity zones.

Table 1.6: Critical Facilities in 2019 Wildfire Hazard Zones – Unincorporated Mono County and Mammoth Lakes

Facility Type	Number of Facilities Not at Risk	At Risk – Mammoth Lakes		At Risk – Unincorporated Mono County	
		High	Very High	High	Very High
Communications Facilities	15	1	0	3	0
Emergency Operations Center	7	1	0	4	0
Emergency Services	15	4	0	5	2
Hazardous Materials	9	0	0	0	1
Lifeline Utility Systems	42	3	0	8	2
Medical Services	2	1	0	1	0

Facility Type	Number of Facilities Not at Risk	At Risk – Mammoth Lakes		At Risk – Unincorporated Mono County	
		High	Very High	High	Very High
Schools	11	0	0	0	0
Transportation Systems	7	1	0	2	0
Vulnerable Populations	4	0	0	1	0
Total	112	11	0	24	5

There are three facilities that meet the Environmental Protection Agency's standards for "cleaner air shelter" in the county: Lee Vining Community Center, Twin Lakes Annex, and June Lake Community Center. These shelters allow for residents to escape smoke and particulate pollutants that occur during wildfires and pose a significant health hazard. To qualify as a cleaner air shelter, locations must meet the following requirements:

- Tight-sealing windows and doors
- Public access
- A ventilation system that can significantly reduce or eliminate intake of outdoor air
- A central air filtration system of medium or high efficiency

The Crowley Lake Community Center meets three of the four requirements to be considered a cleaner air shelter, but does not have outside air ventilation. Only the June Lake Community Center is officially considered a critical facility in Mono County.

1.4 Potential Fire Behavior and Fuel Conditions in the Wildland Urban Interface

Note that the text and analysis of this section 1.4 was developed for the 2019 CWPP and has not been updated. Fire science and fire behavior modeling have continued to evolve and updating this analysis will take substantial time and expertise that was not available for this 2026 update but will be undertaken for the full update planned to follow in the next few years.

The WUI is defined as the area where structures and other human development meet or intermingle with undeveloped wildland. The WUI creates an environment in which fire can move readily between natural vegetation fuels to structures and from structures into the natural vegetation fuels.

All developed areas and communities in Mono County sit directly adjacent to huge swaths of forestland and open space lacking in human infrastructure. People come to this region to live in rural areas and direct proximity to natural ecosystem areas with attractive recreational and aesthetic amenities, especially forests. Consequently, all urbanized areas in the county are considered within the WUI and face significant risk and likelihood that wildfires will threaten structures and people. There are significant implications for both the character and development of structures and behavior within those communities and for the health and management of wildlands directly adjacent to those communities and the thousands of acres beyond them.

For the purpose of this CWPP, the County applies WUI boundaries developed by Cal Fire. Additionally, the entire Town of Mammoth Lakes is considered to be in the WUI, as approved by Town Council in 2007 and shown in Figure 1.3. Cal Fire considers three main components in the assessment of threat from wildland fire to WUI areas:

1. Ranking fuel hazard.
2. Assessing the probability of wildland fire.
3. Defining areas of suitable housing density that lead to WUI fire protection strategy situations.

These three independent components were then combined using GIS capabilities to identify WUI areas threatened by wildfire. In addition to mapping these areas, a list of communities was developed that summarized a nonspatial assessment of key areas within the vicinity of significant threat from wildland fire.

Figure 1.3 displays the WUI (shown in orange) for the county. The entire Town of Mammoth Lakes is in the WUI; the Fire Commissioners approved and the Town Mayor ratified WUI boundaries in 2007, as shown in Figure 1.4. The WUI is defined as a 1.5-mile buffer around developed areas with densities greater than 1 unit per 40 acres. As is the case with most defined WUIs, some homesteads and ranches may lie outside of the defined boundary, as they are too dispersed to be included. These are not considered communities and are therefore not within the scope of this CWPP, although they may fall within the defined WUI.

1.4.1 Fire Regime Condition Class (FRCC)

Historical fires can provide a great deal of information for understanding future fire risk. However, as noted above, a complex interaction of natural and human conditions greatly impact both hazard and risk. Wildfire is a natural component of many ecosystems, including

high-altitude forest and grassland that is predominant in Mono County. However, changes in those ecosystems—many driven by human development and action, such as long-term fire suppression to protect homes and other structures— have altered conditions in ways that change fire-related risk. Many of California's largest fires in recent decades resulted from changes to the ecosystem that drastically increased the fire risk and led to extremely large conflagrations.

The FRCC provides a landscape evaluation of expected fire behavior as it relates to the departure from historical norms. The FRCC is derived by comparing current conditions to an estimate of the historical range that existed prior to substantial settlement by Euro-Americans. The departure of the current condition from the historical baseline serves as a proxy to likely ecosystem effects. The condition class concept assumes that historical fire regimes accurately represent the conditions under which the components within a fire-adapted ecosystem naturally evolved.

The data used for this study is from California's FRAP vegetation data. Condition class measures are assigned, comparing natural fire regime and current fire conditions. FRCCs are defined as the "relative risk of losing key components that define an ecosystem." The conceptual basis is that for fire-adapted ecosystems, much of their ecological structure and processes are driven by fire. Departure from natural fire regimes creates instability and increases the risk to key components of that ecosystem. The method utilized follows that which is used at the national level, where lands are assigned one of three condition class levels—low, mixed, and high—which qualitatively rank the potential effects to the ecosystem based on the percentage of the dominant overstory vegetation that has been replaced. The five natural (historical) fire regimes are classified based on average number of years between fires (fire frequency) and divided into the categories of 0–35 years, 35–100 years, and over 100 years. Figure 1.5 shows the FRCC for Mono County and the Town of Mammoth Lakes.

Figure 1.3: Mono County Wildland Urban Interface

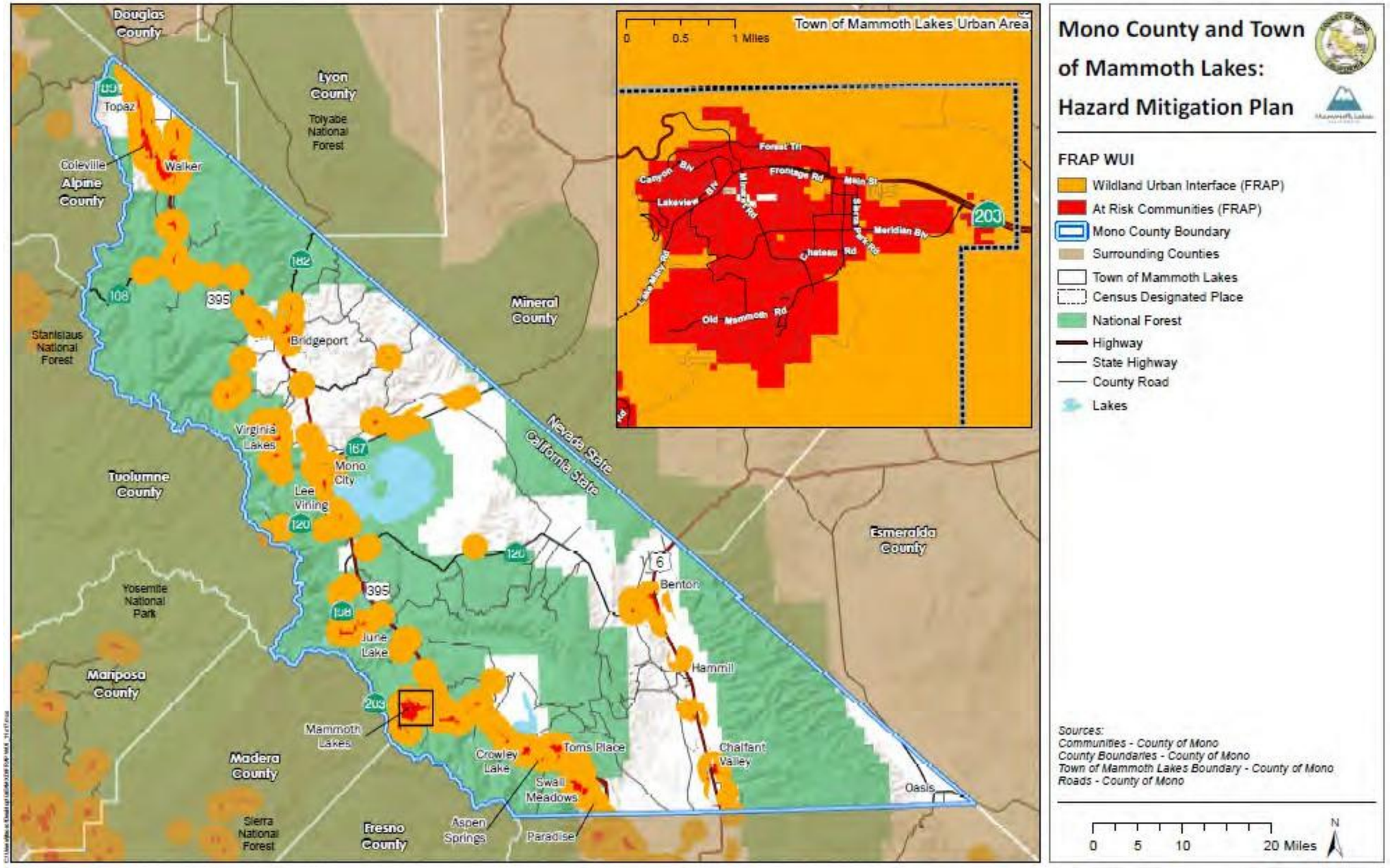

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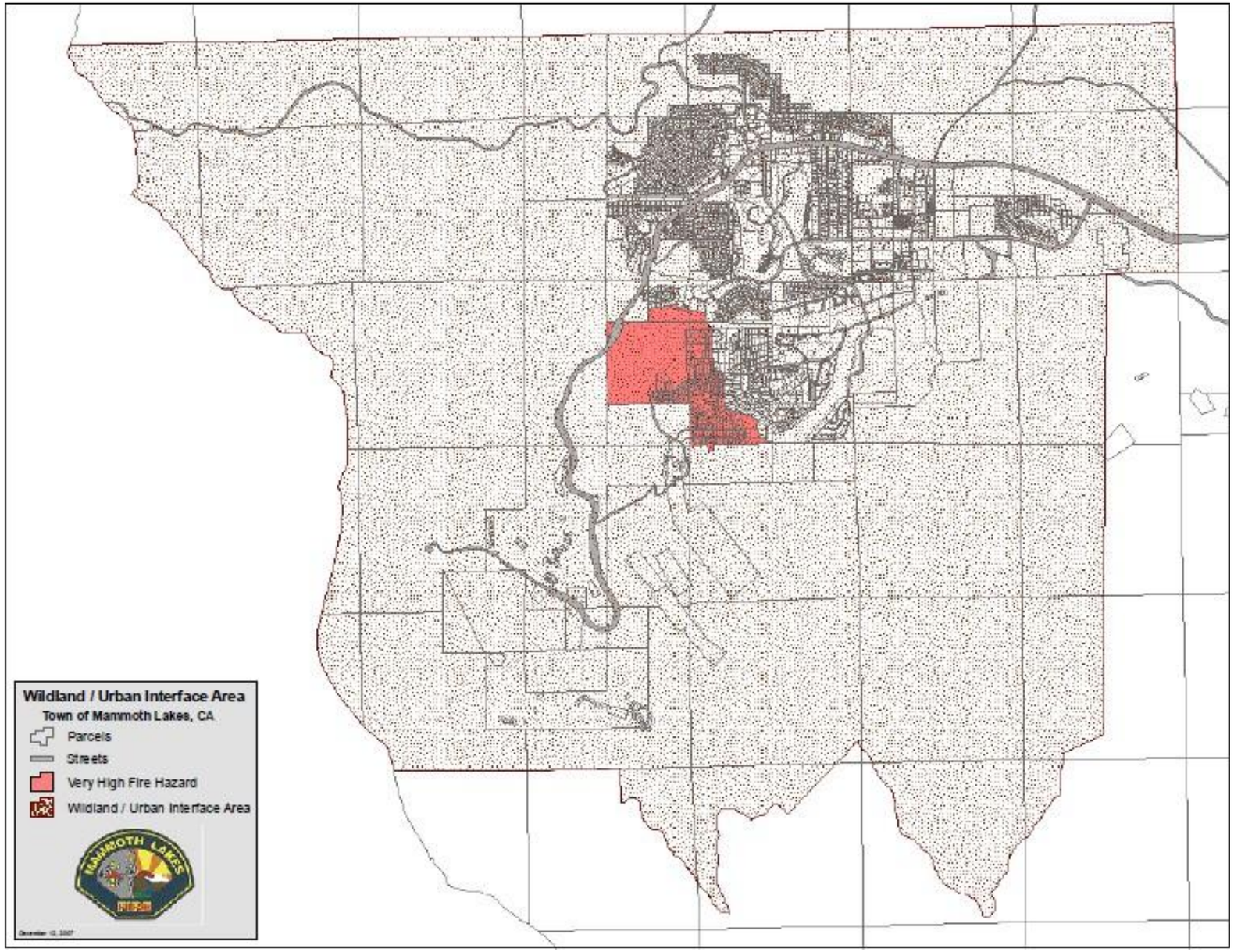
Figure 1.4: Town of Mammoth Lakes Approved Wildland Urban Interface



Source: Town of Mammoth Lakes 2007

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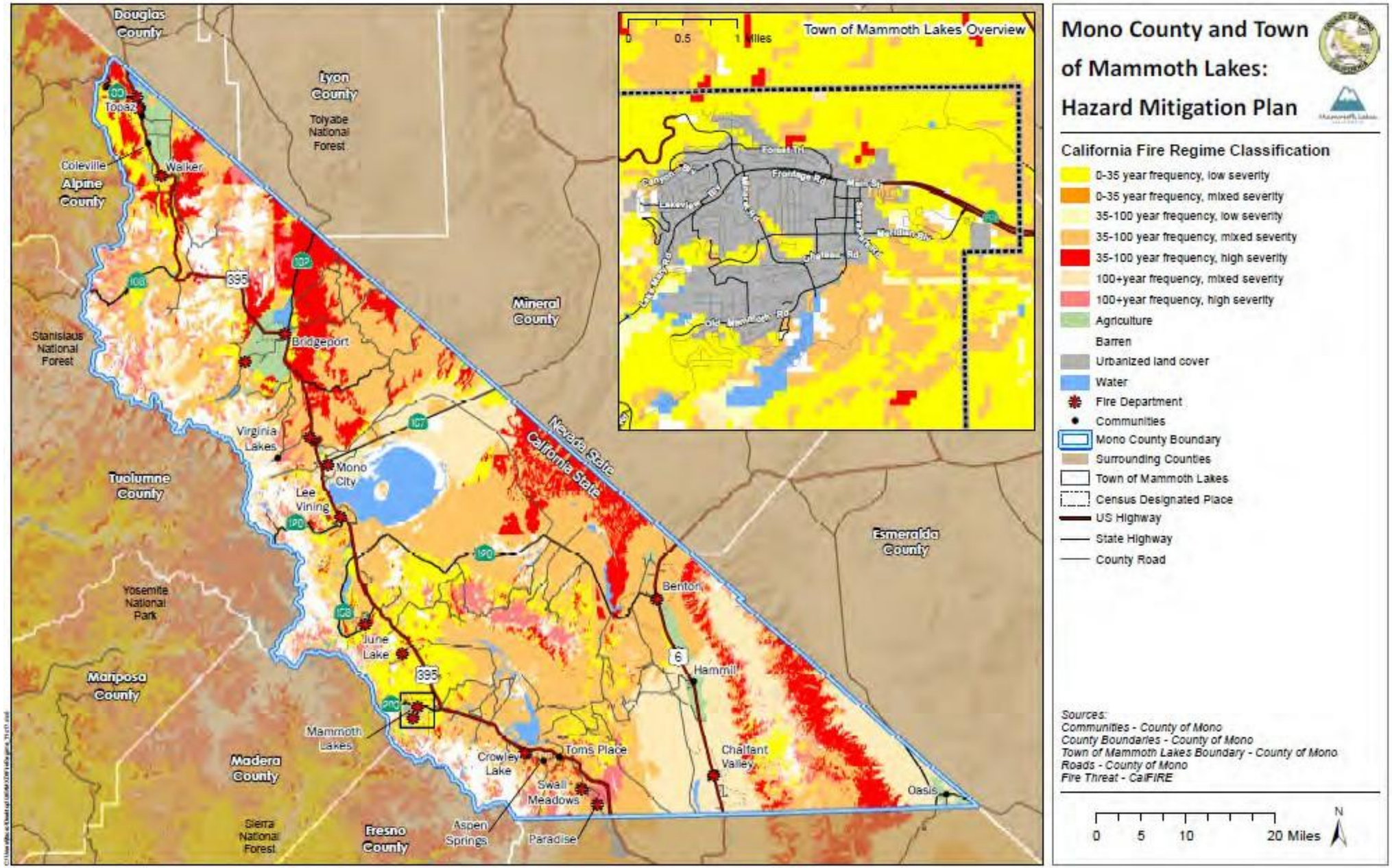
Figure 1.5: Fire Regimes Condition Class



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1.4.2 Fire Behavior Potential

This section predicts likely fire behavior in Mono County and the Town of Mammoth Lakes using three USFS software systems. The modeling evaluation was completed in 2009. The methodology used data inputs representing the three factors that determine fire behavior: the amount and arrangement of fuel, topography, and weather (Bennett et al. 2010). Weather observations, including measures of windspeed and moisture, were collected for a 20-year period (1986–2006) and used to define two scenarios (moderate and extreme) for modeling fire behavior potential. Other model inputs included the type and coverage of surface fuels based on Cal Fire's vegetation data and such topographical features as slope, elevation, and aspect.

Of these variables, only weather inputs could potentially be updated following the methodology described in the 2009 CWPP. Topographical inputs remain essentially unchanged. While there have been a number of projects implemented since 2009 to reduce or modify fuels within Mono County, as well as changes to the fire regime caused by wildfires, these are not reflected Cal Fire's surface fuels dataset; it remains the best vegetation data available, but it primarily dates to 2003. Given the data limitations, the Planning Team decided to re-use the 2009 modeling data for this update and explore any changes in conditions that could affect fire behavior, including fuels projects and dry conditions, in narrative form within Section 1.5.

For the model, values for moderate and extreme weather scenarios were calculated using Fire Family Plus software. These calculations were incorporated into the BEHAVE fire modeling system to calculate surface fire predictions, i.e. rate of spread and flame length. Finally, the FlamMap 3.0 mapping and analysis program combined the surface fire predictions with crown fire potential to generate a set of maps that display potential rate of spread, flame length, and crown fire activity for both weather scenarios. The model does not calculate the probability a wildfire will occur; it assumes an ignition occurrence for every cell. However, it does predict how a wildfire would behave in each given area based on the inputs mentioned above. Additional information on the assumptions and methodology used are contained in the Appendices.

Rate of Spread

Figure 1.6 and Figure 1.7 show the predicted rates of spread for the moderate fire weather and extreme fire weather scenarios, respectively. Rates of spread are expressed in chains/hour (CPH). A chain is a unit of measure commonly used by foresters and firefighters. It is equal to

66 feet; therefore, 1 mile equals 80 chains. Rates of fire spread are influenced primarily by the wind, slope steepness, fuel type/continuity, and fuel sheltering from the wind. Fire is the only force of nature which moves faster uphill than downhill. In areas where high to extreme rates of spread are predicted (rates of spread of >40 CPH or one-half mile per hour), it is possible fires could spread faster than humans can escape, creating extremely dangerous conditions for firefighters and evacuating residents. High rates of spread also make suppression efforts less effective and increase the tactical complexity of the incident. Rates of spread in the Eastern Sierra can follow a pattern of strong down-winds that can cause fast-moving extreme fire behavior down drainages in the afternoons during summer days, especially associated with frontal passages.

In the moderate fire weather scenario, moderate to extreme rates of spread are predicted throughout the populated areas in the northern parts of the study area. High rates of spread (>40 CPH or one-half mile per hour, shown in red) are predicted for portions of the southwestern part of the county where desert grasses and shrubs with little sheltering from the wind are the dominant fuels, including parts of Upper Owens, Mono Vicinity, Long Valley, Wheeler Crest, and Oasis. Rates of spread increase to extreme levels (>60 CPH, shown in brown), where these conditions are combined with increasing slopes, most notably in the lower slopes of the Eastern Sierra and the mountain ranges of the desert areas in the eastern and southern portions of the county. These include smaller portions of Upper Owens and Wheeler Crest in the southern part of the county, as well as swaths of the northern county along the US 395 corridor, including virtually all of Antelope Valley and Bridgeport Valley as well as portions of Sonora Junction and the northern side of Mono Basin. These model results are consistent with recent historic wildfires, which have been most frequent and burned the most acreage in these areas with rates of spread predicted at greater than 60 CPH.

In the extreme fire weather scenario, extreme rates of spread are predicted for all of the urbanized communities in the county with the exception of the higher elevations of the Sierra and White Mountains and areas where combustible fuels are sparse or not present.

Figure 1.6: Rate of Spread, Moderate Weather Conditions

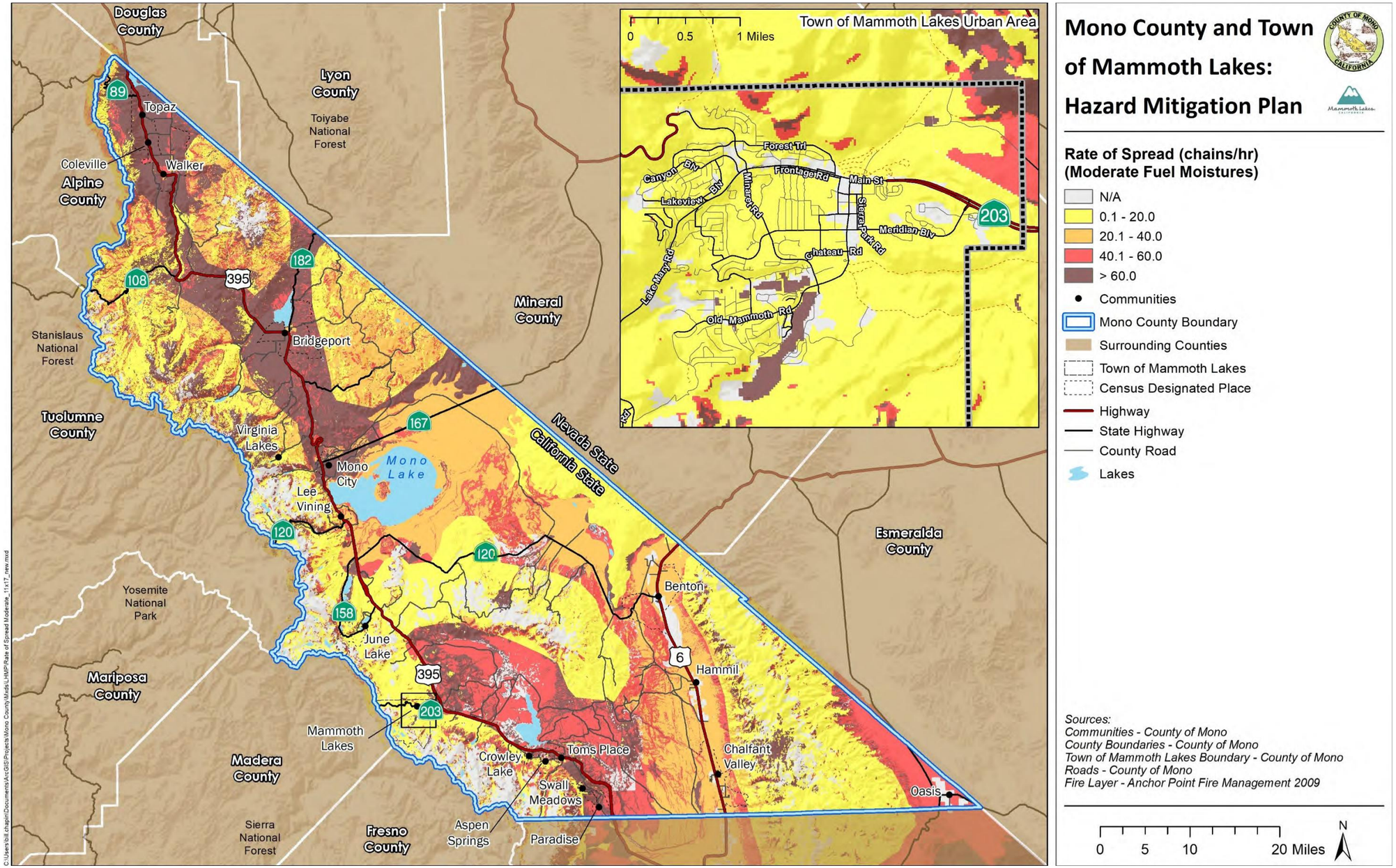

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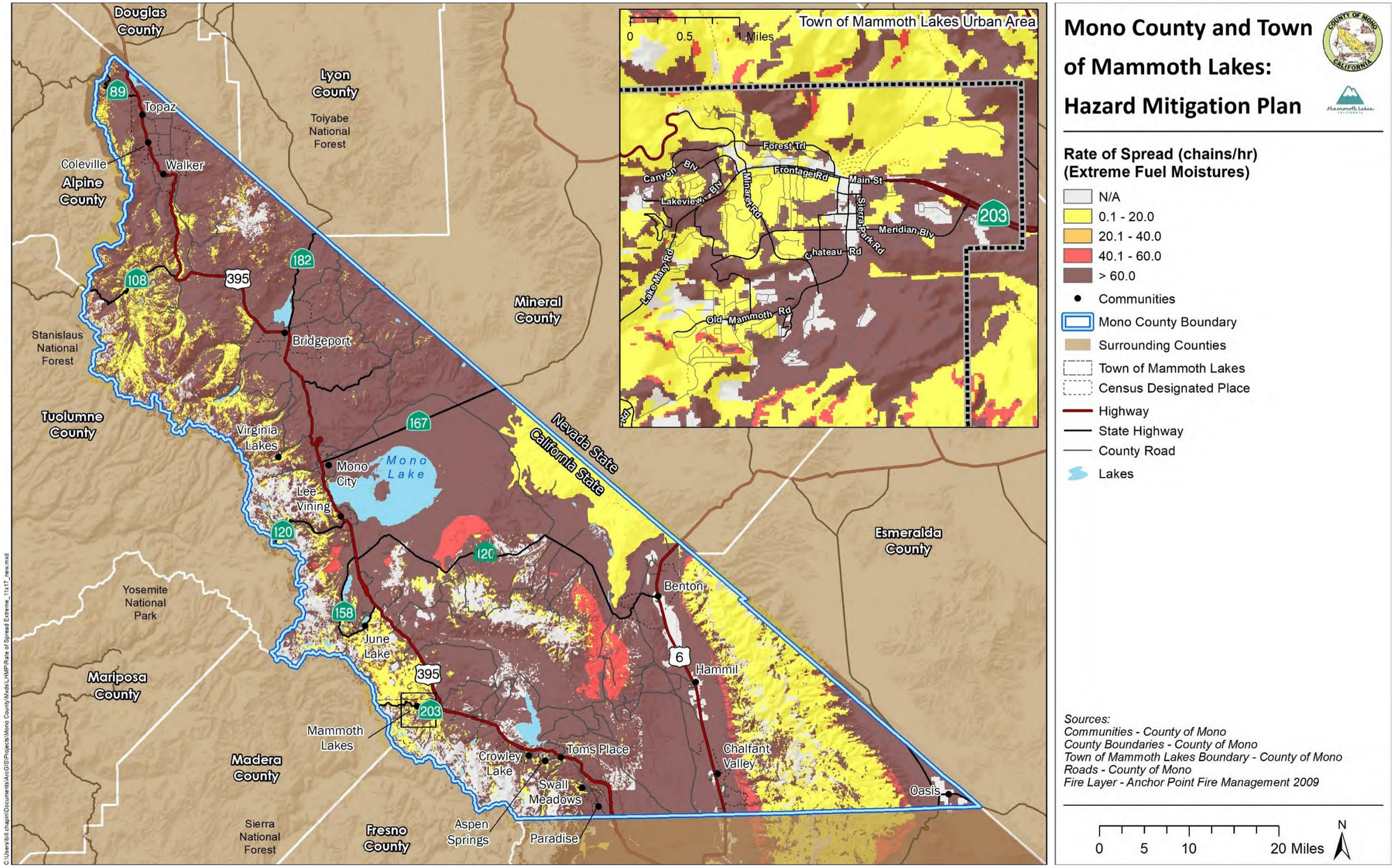
Figure 1.7: Rate of Spread, Extreme Weather Conditions



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Flame Length

Flame length is used as a proxy for fire intensity. It is important to note that flame length represents the entire distance from the base of the flame to the tip, irrespective of angle—not simply the flame height above the ground. In high wind conditions, it is possible to have very intense flames (high flame lengths) which are relatively close to the fuel bed.

Figure 1.8 and Figure 1.9 display flame length in ranges that are meaningful and useful to firefighters. Flame lengths of 4 feet or less (shown in yellow) are considered low-enough intensity to be suitable for direct attack by hand crews, which represents the best chance of direct extinguishment and control. Flame lengths of less than 8 feet (shown in orange and yellow) are suitable for direct attack by equipment such as bulldozers and tractor plows. Flame lengths of 8 to 12 feet (shown in red) are usually attacked by indirect methods and aircraft. In conditions where flame lengths exceed 12 feet (shown in brown), the most effective tactic is fuel consumption ahead of the fire by burnouts or mechanical methods. Although indirect fire line and aerial attack are also used for such fires, flame lengths increase as the effectiveness of these tactics decrease. Their use in this case is generally intended to slow rates of spread and reduce fire intensity, especially in areas where values at risk are concentrated.

Even in the moderate fire weather scenario, most urbanized communities are located in areas with likely flame lengths of greater than 4 feet. Many areas—including the western side of Antelope Valley; portions of Sonora Junction, Bridgeport Valley, Bodie Hills, and Upper Owens; and nearly all of Mammoth Vicinity, Long Valley, and Swall Meadows—are predicted to have the potential for extreme flame lengths of 12 feet or greater.

Under the extreme fire weather scenario, high to extreme flame lengths are predicted throughout the areas covered by the WUI communities, with the exceptions of some small pockets, such as Tri-Valley and Oasis, where elevations and/or fuel conditions moderate the large-scale conditions. Under extreme weather and fuel moisture conditions, fire intensity is expected to be a genuine issue and control will be difficult and complex to establish and maintain.

Crown Fire Activity

The crown fire activity maps, shown in Figure 1.10 and Figure 1.11, display the potential for fires to move from the surface into the canopy of trees and shrubs. The likelihood of progression from the surface into the aerial fuels is displayed in four categories. N/A ("not applicable") refers to areas where surface fires are unlikely to develop due to the lack of

combustible fuels. These would include areas lacking a combustible fuel bed, such as rock, ice, snow fields, water, sand, or some urban landscapes. The surface fire category (shown in yellow) covers areas where fires are expected to be limited to the surface fuels and lack the energy to initiate and sustain vertical development into the aerial fuels. Areas where grass fuels without overstory plants are dominant fall into this category, regardless of the energy produced by the fire, due to the lack of an aerial fuel bed. Areas designated by the torching category (shown in orange) are expected to experience isolated combustion of the tree crowns in individual trees and groups of trees. The active crown fire category (shown in red) includes areas where sustained horizontal movements through tree crowns are expected. Crown fires represent extreme fire behavior conditions and are notoriously resistant to all methods of suppression and control.

Weather variables had trivial effects on the development of crown fire in the study area, as shown by the limited differences displayed on the two figures. In general, there is a possibility of torching and/or active crown fire development wherever timber fuels are present, which includes most of the WUI, except for eastern Antelope Valley, Mono Basin, Tri-Valley, and Oasis.

Figure 1.8: Flame Length, Moderate Fire Weather Conditions

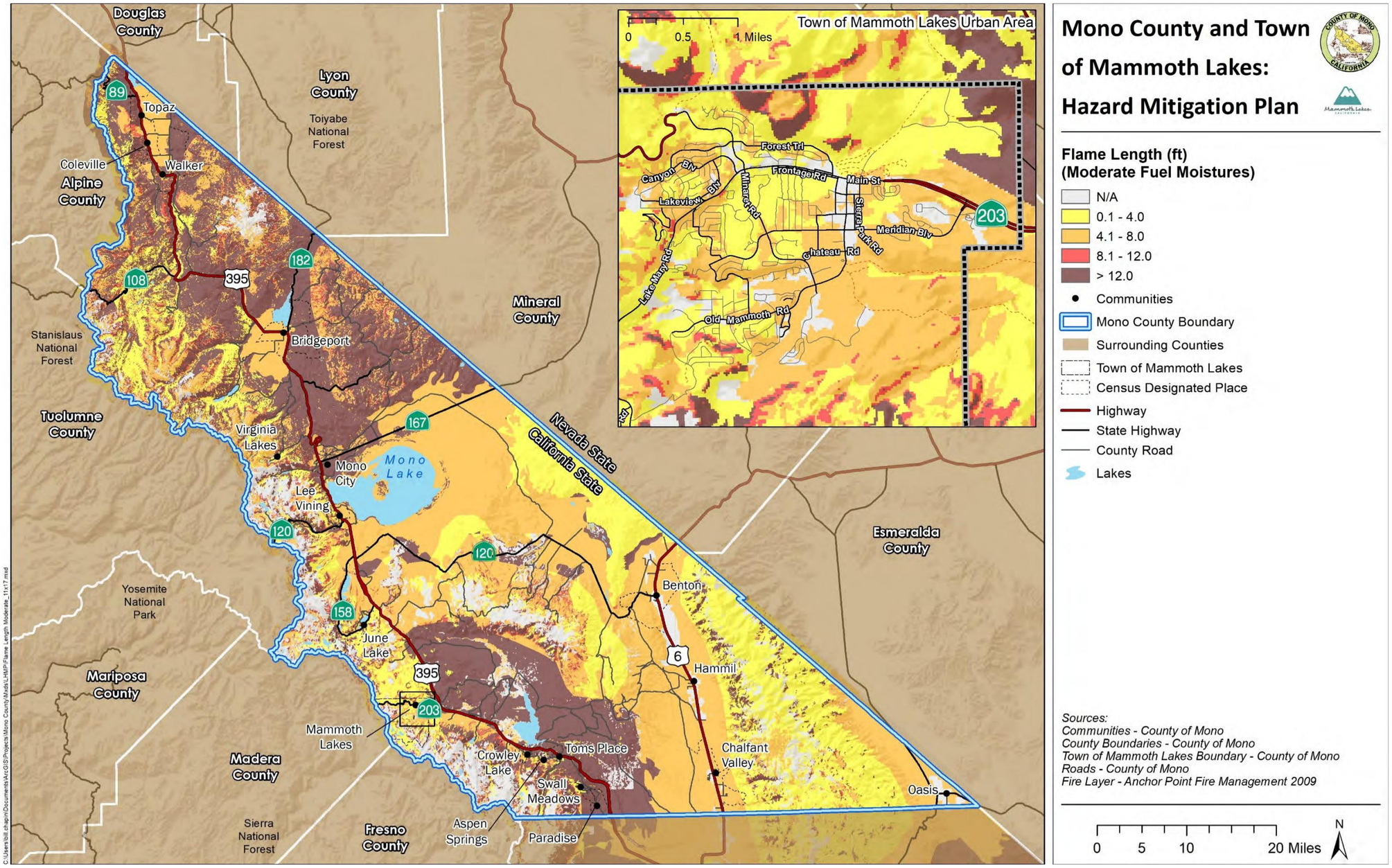

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Figure 1.9: Flame Length, Extreme Fire Weather Conditions

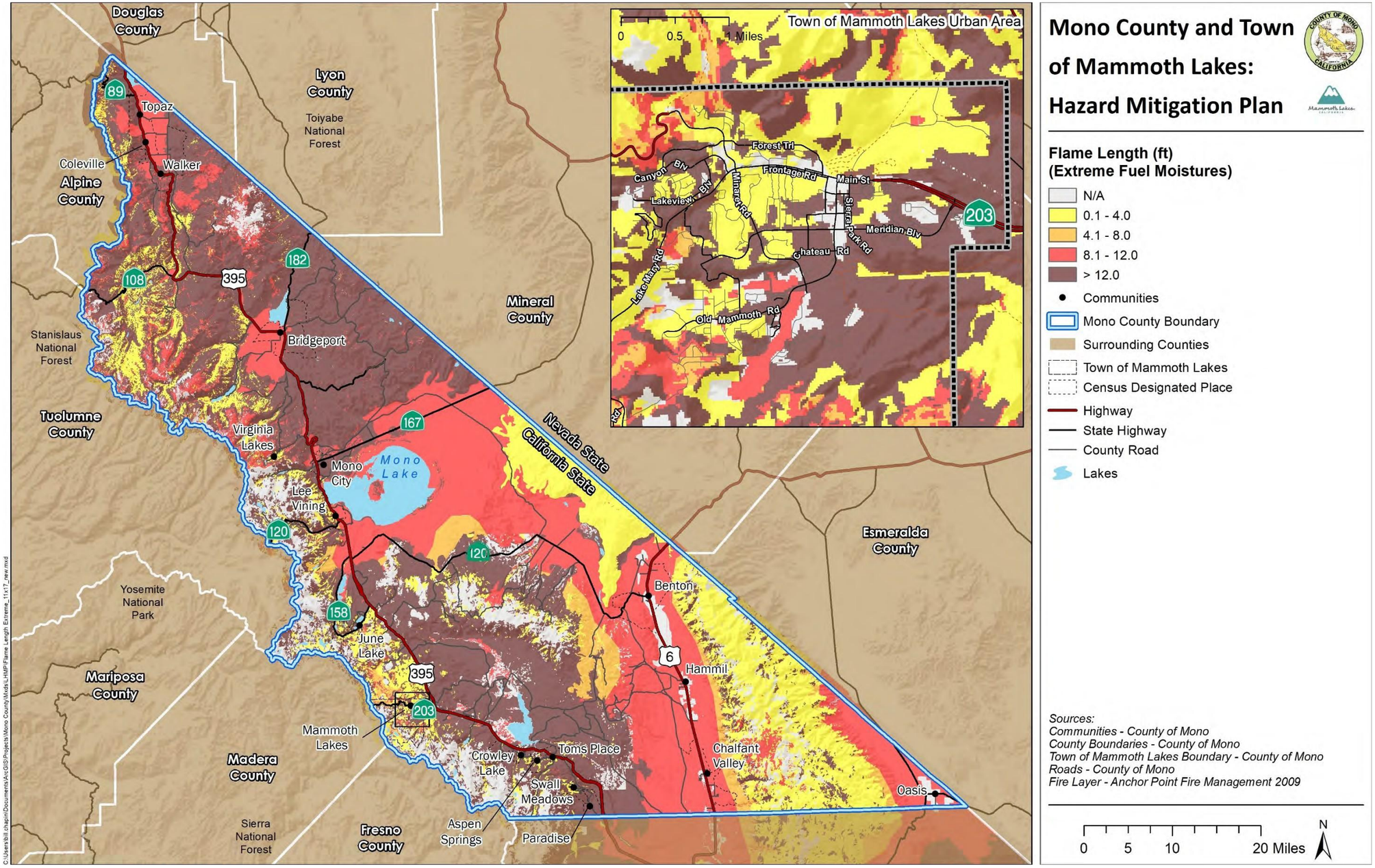

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Figure 1.10: Crown Fire Activity, Moderate Fire Weather Conditions

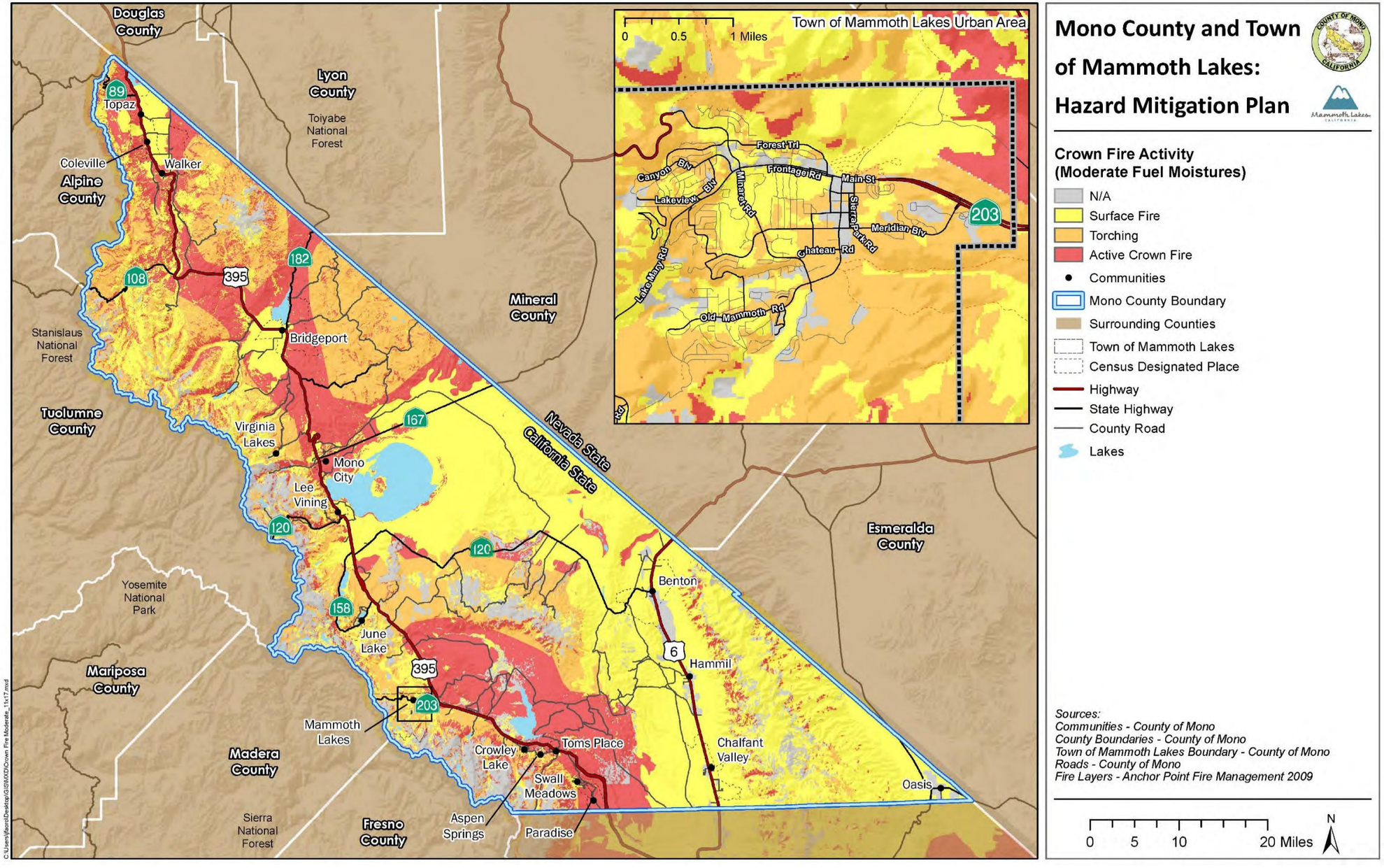

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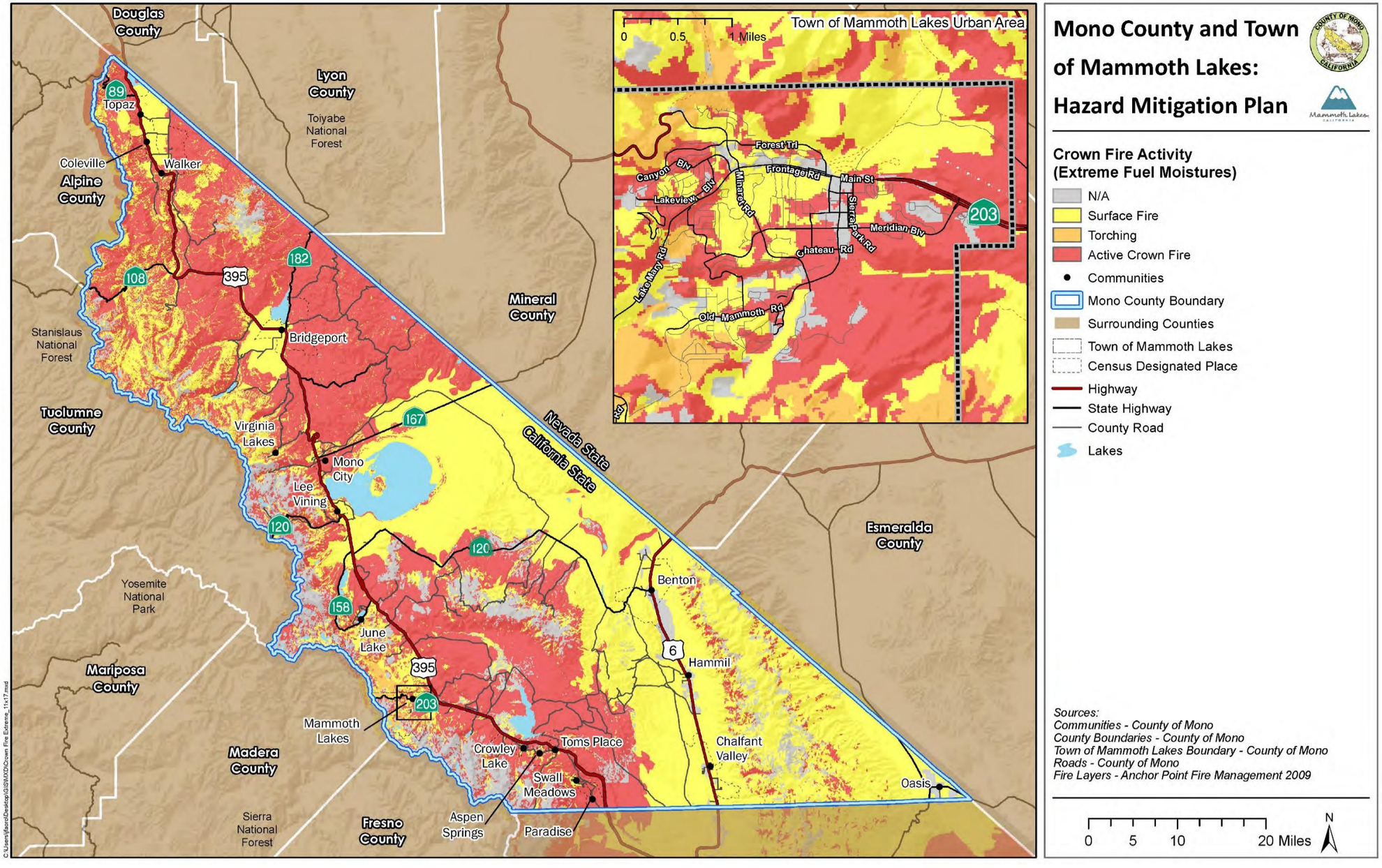
Figure 1.11: Crown Fire Activity, Extreme Fire Weather Conditions



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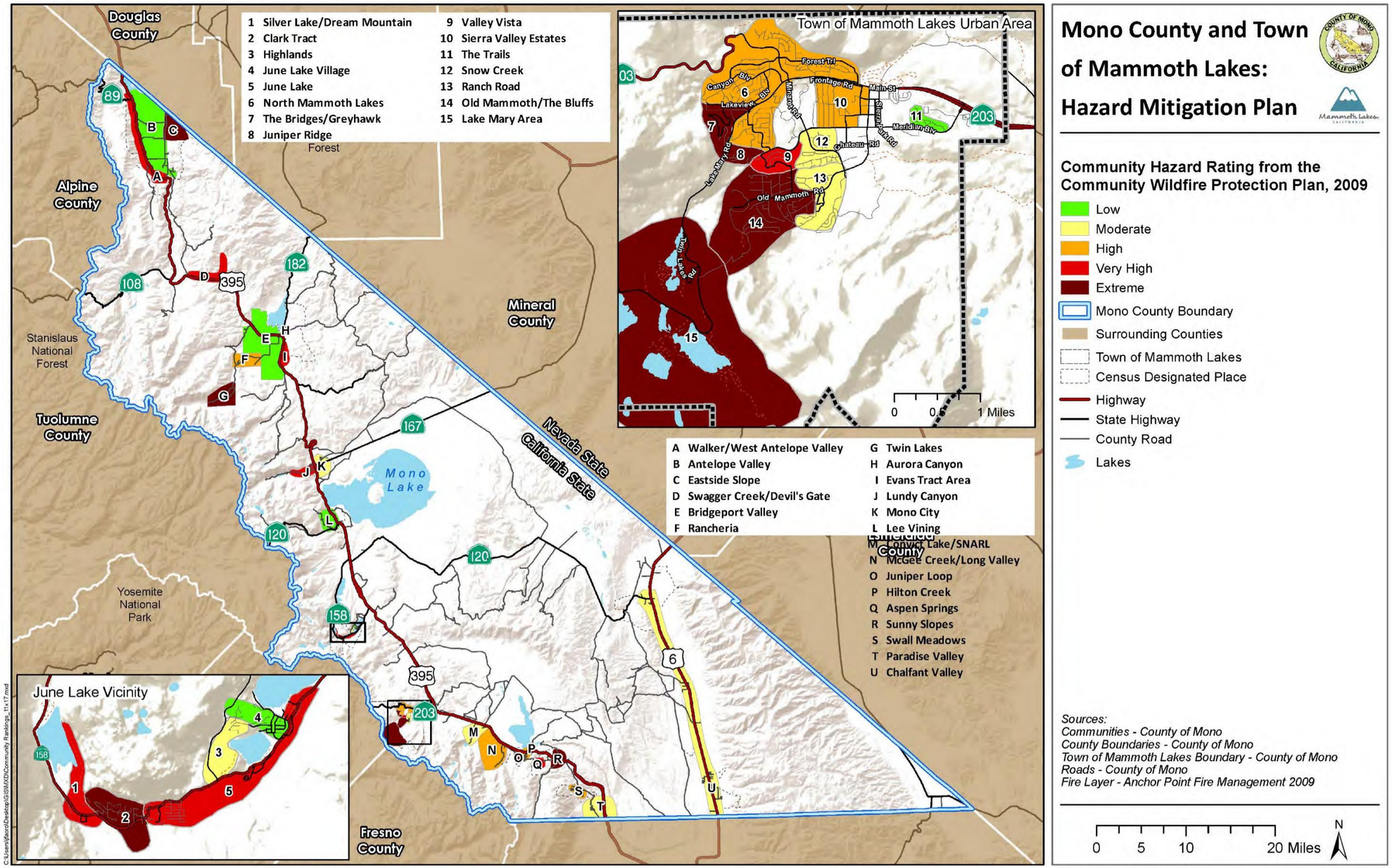
1.4.3 Community Risk Assessment

In 2009, the County and Town, in coordination with BLM Bishop Field Office, conducted a community- specific wildfire risk assessment for 36 urbanized areas. The area boundaries were selected through a stakeholder process and took into account factors including physical development characteristics such as housing density, lot size, dominant construction types, roadway access and navigational ease; availability of water for fire suppression; and natural characteristics such as slope and vegetation types.

Each area was then assigned a hazard ranking of low, moderate, high, very high, or extreme, based on these characteristics and the fire behavior potential components described in Section 1.4. The identified communities and their hazard rankings are shown in Figure 1.12. The full methodology for ranking the community areas and profile descriptions of each are available in Appendices.

Figure 1.12: Community Area Specific Wildfire Hazard Ranking



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1.5 Changes in Conditions Over the Last Decade

Note that the text and analysis in section 1.5 were developed for the 2019 CWPP and have not been updated for 2026.

As part of the 2018 CWPP update, physical development characteristics and development growth were reevaluated and confirmed. Each of the key infrastructure components are described below.

1.5.1 Single-Route Access

The communities of Paradise, Swall Meadows, Lundy Lake, Virginia Lakes, and Twin Lakes all only have one access route. Similarly, certain neighborhoods and subdivisions in Mammoth Lakes also have only one access route. Additionally, Mono City and portions of Tom's Place have secondary access routes that are narrow, poorly maintained, dirt roads. Addressing this issue can pose an especially great challenge in Mono County as the vast majority of land and roadways is owned by federal agencies, which are often short-handed on personnel. Identifying land for road siting and ensuring proper maintenance requires extensive coordination between the County, Town, and agencies.

During evacuation and emergency response procedures, the lack of alternative routes could inhibit transportation in and out of most areas. SR 203 is the primary access in and out of the Town of Mammoth Lakes, which connects to US 395. The Mammoth Scenic Loop provides a secondary access route to US 395 when not closed during winter months. Certain neighborhoods in the southern portion of the Town do not have secondary access to either SR 203 or US 395.

1.5.2 Steep, Narrow, and Blocked-Access Roads

In most of the urbanized communities built in sloped environments, many of the roads are very narrow with poor surfaces, are poorly maintained, or are dead ends. Many roads and driveways are dirt, and rutting and washboarding are typical. These inadequacies can make access for emergency vehicles and apparatus difficult or impossible. Fire engines typically require wide turning radius and pullouts for turnarounds on dead-end roads.

Another common obstacle is the existence of locked gates blocking private, state, or federally owned roads and driveways. While concerted multiagency efforts and education campaigns over the last decades have resulted in fewer locked gates or gates with special codes or keys

for emergency personnel, the problem persists on some roadways.

1.5.3 Water Supply and Pressure

As with many of the mountainous and rural areas of California, water is a critical fire suppression issue in Mono County. Only a few communities have a reliable source of water via hydrants. Most of the communities are reliant on seasonal ponds and creeks. In areas with limited nearby surface water, large cisterns are necessary but often not available and are difficult to site.

1.5.4 Addressing

In most of the WUI communities in Mono County, missing or inadequate street signage and addressing is an issue. Where applicable, this problem is also noted in the community descriptions in the Appendices. Markers of all types, some homemade, are used throughout the study area with no particular order or system. In some parts of Mono County, street signs are broken or worn out. Address numbers on mailboxes, or on the post, are frequently the only indication of the address. In most cases, address marker poles and mailbox poles are made of wood.

There are some community driveways where multiple homes are accessed from a single driveway off the public road. Often these driveways use flagged addressing, a term describing the placement of multiple addresses on a single sign. Flagged addressing can be confusing and difficult to interpret for emergency responders.

Numerous properties throughout the county also have no address markers of any type, or have small, nonreflective addressing that is hidden from view, difficult to see, or mounted onto a flammable material.

The value of the time saved to the welfare of homes and evacuees, especially at night and in difficult conditions, cannot be overestimated. Knowing at a glance the difference between a road and a driveway (and which houses are on the driveway) cuts down on errors and time wasted interpreting maps.

1.5.5 Additional Developments Identified

As part of the 2018 reevaluation, the presence of new or excluded development was assessed. Certain smaller developments with clusters of structures were excluded from the original analysis; these additional areas have been added in Table 1.7. These include the Marine Warfare Mountain Training Center; several pockets of development along Sweetwater Road

(CA 182) north of the identified Aurora Canyon area; and Crestview, a small clustering of homes and recreational structures both at Crestview directly alongside US 395 and farther west along Deadman Creek Road.

Table 1.7: Physical Development Characteristics

Planning Area	Community Area	Single-Route Access	Steep/ Narrow Roads	Water Supply	Lacks Water Supply/ Pressure	Lacks Adequate Addressing
Mammoth Lakes	Lake Mary Area	x	x	Draft	x	x
	Old Mammoth/ The Bluffs	x	x	Hydrants		x
	The Bridges/Greyhawk		x	Hydrants	x	x
	The Trails			Hydrants		
	Valley Vista	x	x	Hydrants		x
	Snowcreek	x		Hydrants		
	North Mammoth Lakes		x	Hydrants		x
	Ranch Road	x		Hydrants		x
	Sierra Valley Estates			Hydrants		x
Antelope Valley[1]	Eastside Slope	x	x	None	x	x
	Antelope Valley/Topaz			Draft	x	x
	Walker	x	x	Draft	x	
Sonora Junction	Swauger Creek/Devil's Gate	x		Draft		x
	Mountain Warfare Training Center			Draft	x	
Bridgeport Valley	Bridgeport Valley			Hydrants		
	Twin Lakes	x	x	Draft	x	
	Virginia Lakes	x	x	Draft	x	x
	Rancheria-Bridgeport			Creek weir (portable pump)	x	
	Aurora Canyon	x		Hydrants		

	Sweetwater Road			Draft		x
	Evans Tract Area			Hydrants		x
Mono Basin	Lundy Canyon	x	x	Draft	x	
	Mono City		x	Hydrants	x	x
	Lee Vining			Hydrants		

Table 1.7: Physical Development Characteristics (cont.)

Planning Area	Community Area	Single-Route Access	Steep/ Narrow Roads	Water Supply	Lacks Water Supply/ Pressure	Lacks Adequate Addressing
June Lake	June Lake		x	Hydrants		x
	June Lake Village			Hydrants		
	Clark Tract		x	Hydrants		x
	Petersen Tract	x		Hydrants		
	Highlands			Hydrants		
	Silver Lake & Dream Mountain			Hydrants		x
Mammoth Vicinity	Crestview		x	Draft		x
	Convict Lake & SNARL	x		Hydrants	x	
Crowley Lake	McGee Creek/ Long Valley			Hydrants		x
	Juniper Loop		x	None	x	x
	Sunny Slopes	x	x	Hydrants	x	
	Aspen Springs	x		Cistern	x	
	Hilton Creek	x		Hydrants		
Tri-Valley	Chalfant Valley		x	None	x	x
Swall Meadows	Swall Meadows	x	x	Tank/ Cisterns	x	x
	Swall Meadows – Rimrock Ranch			Tank/ Cisterns		
	Paradise	x		Hydrants		

[1]Water tanks may be required on properties in certain areas

In general, conditions in the developed areas have not changed significantly since the hazard rating was first completed in 2009. However, certain areas have either seen additional growth which may increase the number of community assets at risk, or were not included within an

analyzed area despite densities of structures existing. These include:

- Old Mammoth/The Bluffs: As documented in Chapter 2, a number of new single-family and multifamily homes were built between 2015 and 2018 on the southern edge of the Old Mammoth neighborhood, such as the Snowcreek neighborhood and in The Bluffs subdivision.
- Mono City: Additional low-density housing development on the southern side of Mono City was built after 2009.
- Paradise: Additional residential units and complementary uses were approved on the site of a former lodge. The development was approved in 2010.

Table 1.7 summarizes 2018 characteristics for 39 identified areas. Projects identified in the table that address a lack of infrastructure are the highest priority for the County and Town.

1.5.6 Fuels and Vegetation

The amount and arrangement of fuels is one factor, along with weather and topography, that can alter fire behavior. A greater fuel load, or the amount of fuel in an area, is associated with an increase in fire intensity and the ability of surface flames to ignite a crown fire (Bennett et al. 2010).

Much of the available data for wildfire hazard location, intensity, and behavior potential in Mono County, including what is shown in this CWPP, is based on inputs from Cal Fire's vegetation and surface fuel mapping. Cal Fire FRAP data, in cooperation with California Department of Fish and Wildlife VegCamp program and extensive use of USFS Region 5 Remote Sensing Laboratory data, compiled the "best available" land cover data for California into a single comprehensive statewide data set, with data spanning a period from approximately 1990 to 2014. The Cal Fire surface fuels data is shown in Figure 1.13.

While Cal Fire's vegetation data is the most comprehensive available, the age of the data means it does not fully reflect 2018 conditions. Varied factors have changed the vegetation landscape of Mono County, and consequently the fuel load that directly influences fire hazard and fire behavior. These include:

Wildfire events

Of the more than 64 fires discussed above, more than 40 have occurred, burning more than 80,000 acres, since vegetation mapping was last updated in 2003 and incorporated into the

state's wildfire hazard mapping. While many of these high-intensity fires greatly reduce fuel loads in the short term, those that reach highest intensities can completely change the fire regime, and ultimately the fire likelihood and behavior potential.

Fuels modification projects

Since 2009, the USFS has completed more than 800 fuel modification actions, such as fuel breaks, prescribed burns, and thinning in Inyo National Forest. Although these projects cannot noticeably alter wildfire hazard severity areas, they can reduce risk to communities by promoting forest health, minimizing the size of fires, and helping prevent them from reaching people and structures. Several major fuel reduction projects to protect specific communities have been undertaken by the USFS from 2009 to 2018. These projects are described below.

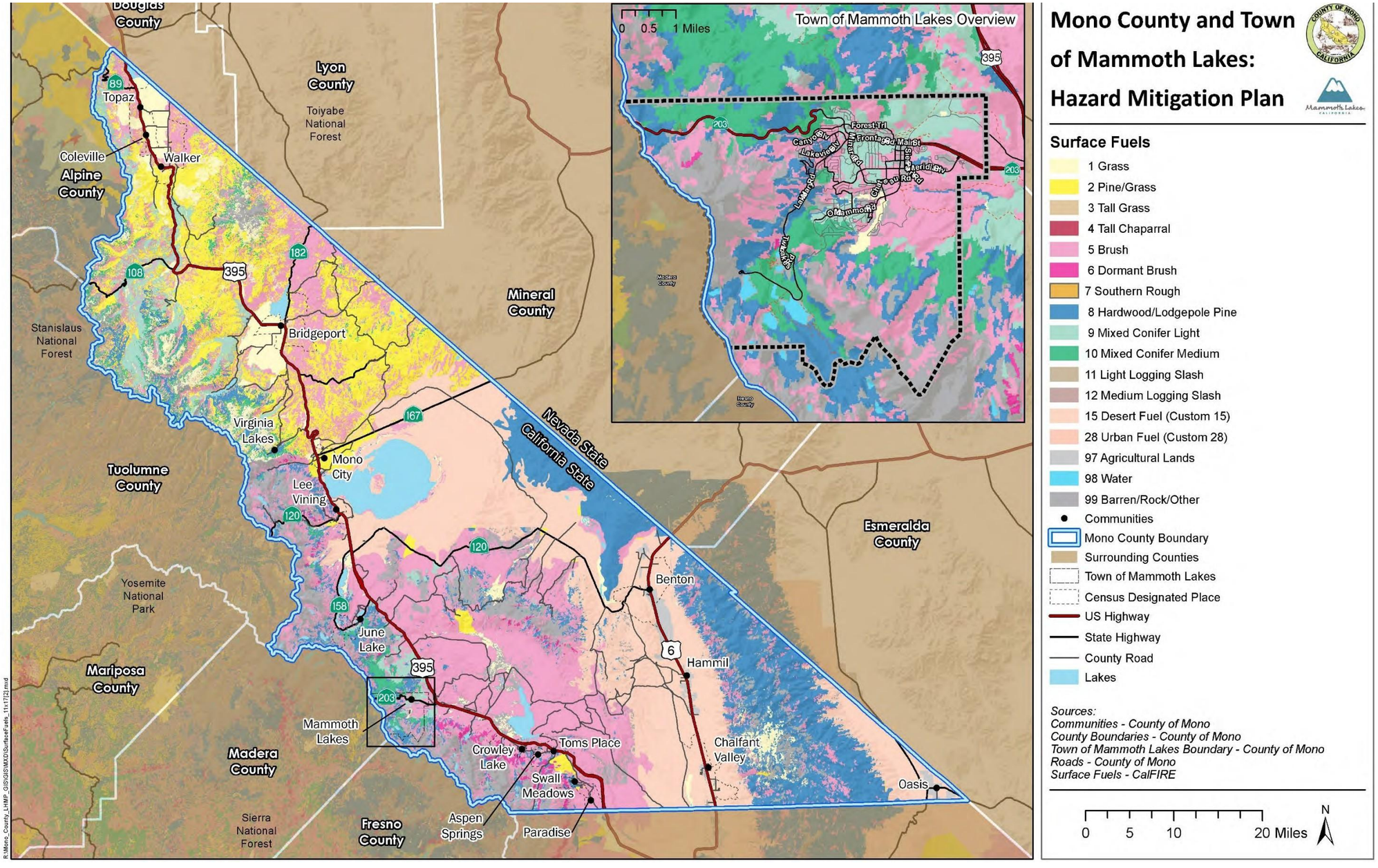
- Crowley Communities Hazardous Fuels Reduction Project: Removal of hazardous fuels, by fuel breaks, chipping, piling, and thinning around the communities of Aspen Springs, Crowley, McGee Creek, Sunny Slopes, and Tom's Place.
- Three Creeks Jeffrey Pine Forest Health and Restoration Project: Provides for healthy forest conditions, promotes establishment of old growth, and reintroduces fire to the ecosystem through pre-commercial and commercial thinning of trees, piling of fuels, burning of piles, and forest disease control measures.
- June Lake Loop Hazardous Fuels Reduction Project: Fuels reduction work on 4,578 acres within WUI defense and threat zones in the June Lake Loop. Treatments include tree thinning, shrub cutting or mowing, prescribed fire, conifer removal from aspen, and slash pile burn or chip.
- Lake Mary Treatment Plant Hazardous Fuels Reduction Project: Cooperative effort with Mammoth Community Water District to reduce fuels on 8 acres around the district's Lake Mary Water Treatment Plant. Treatments include thinning, chipping, cutting, piling and removal of fuels by carrying or dragging.
- Lost Lane Fuels Reduction Project: Cooperative effort with Mammoth Lakes Fire Protection District on a total of about 175 acres in the Old Mammoth area. Treatments include thinning, chipping, and removal of fuels by carrying or dragging.
- Mill City Fuels Reduction Project: Reduces the risk of catastrophic wildfire and protects community, water quality, and recreation values through vegetation treatments, primarily thinning, piling, burning, and chipping, on 55 acres of public land within and

adjacent to the community of Mammoth Lakes.

- Sherwin Scenic Loop Hazardous Fuels Reduction Project: Treatment to reduce hazardous fuels such as brush and trees in the Sherwin Creek, Mammoth Creek, and Mammoth Scenic Loop areas surrounding the Mammoth Lakes community, including thinning, piling, and disease control measures.
- Rust II: Thinning to reduce fuels and improve forest health on approximately 500 acres of Jeffrey pine forest located off of Bald Mountain Road.

During this period, there was also continued maintenance of a fuel break near Swall Meadows, including burning of piled materials; environmental analysis was completed in 2017 for additional fuel treatments on 108 acres adjacent to Swall Meadows, intended to lower flame length and severity while providing defensible space and safe access for the public and firefighters. The maintenance and expansion of area covered by the 2011 Mono City Hazardous Fuel Reduction Project and additional projects in Bridgeport Valley and Antelope Valley are also recommended. Both historic fire incidence and flame behavior modeling shows these planning areas to have the most extreme hazard from wildfire. In addition, since 2009 the BLM Bishop Field Office has overseen fuel breaks in Antelope and Benton valleys and to protect the Golden Gate Mill historic site, as well as multiple ecological restoration projects on BLM land with fuel-reduction benefits. The areas addressed by these projects are shown in Figure 1.14.

Figure 1.13: Mono County Surface Fuels from Cal Fire



Mono County and Town of Mammoth Lakes: Hazard Mitigation Plan

Surface Fuels

- 1 Grass
- 2 Pine/Grass
- 3 Tall Grass
- 4 Tall Chaparral
- 5 Brush
- 6 Dormant Brush
- 7 Southern Rough
- 8 Hardwood/Lodgepole Pine
- 9 Mixed Conifer Light
- 10 Mixed Conifer Medium
- 11 Light Logging Slash
- 12 Medium Logging Slash
- 15 Desert Fuel (Custom 15)
- 28 Urban Fuel (Custom 28)
- 97 Agricultural Lands
- 98 Water
- 99 Barren/Rock/Other
- Communities
- Mono County Boundary
- Surrounding Counties
- Town of Mammoth Lakes
- Census Designated Place
- US Highway
- State Highway
- County Road
- Lakes

Sources:
Communities - County of Mono
County Boundaries - County of Mono
Town of Mammoth Lakes Boundary - County of Mono
Roads - County of Mono
Surface Fuels - CalFIRE

0 5 10 20 Miles N

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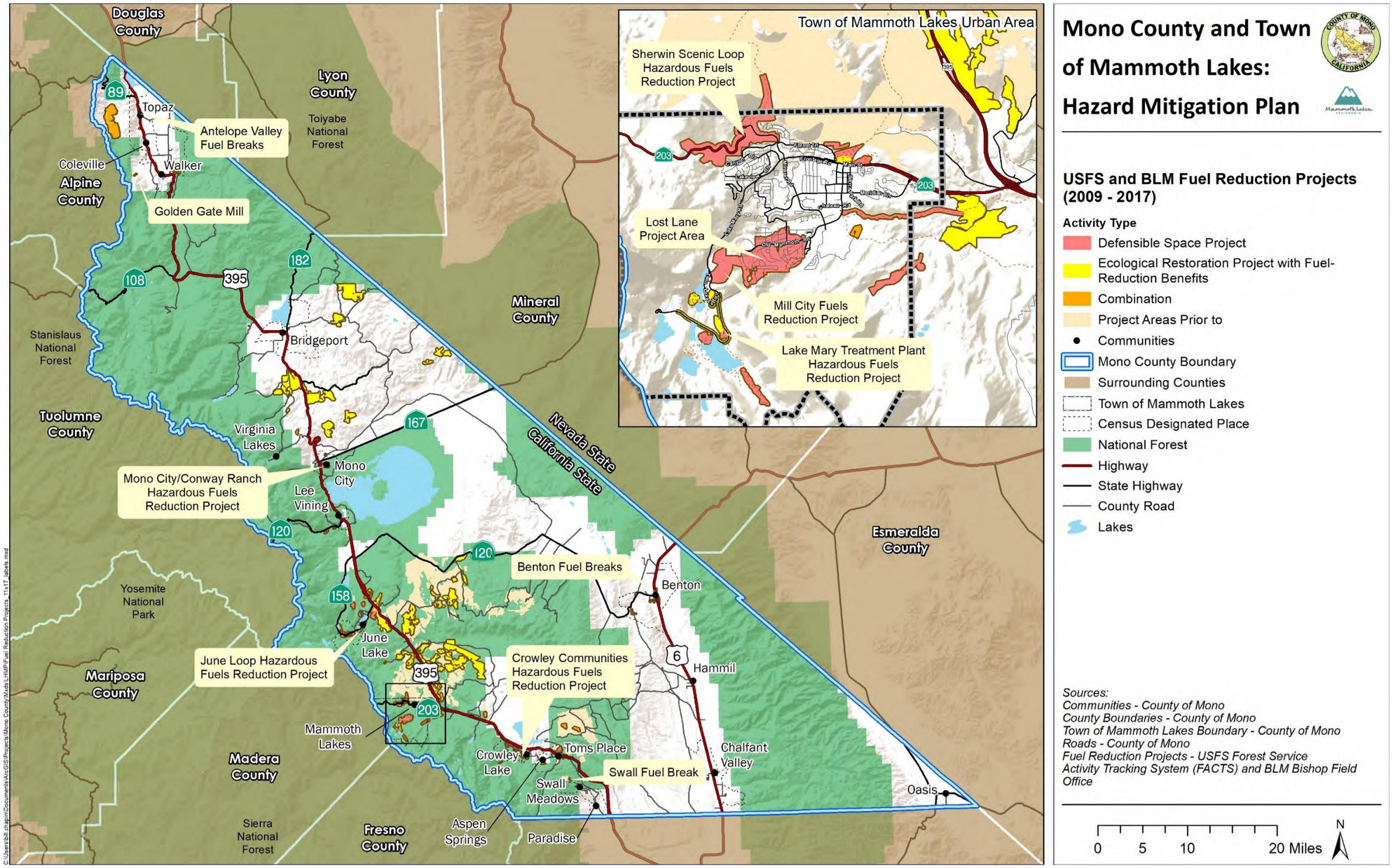
Figure 1.14: Major Fuel Reduction Projects in Mono County, 2009–2018



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The 2009 CWPP identified a total of 34 existing fuels modification projects within Mono County on federal land, including Inyo and Humboldt-Toiyabe national forests and public lands managed by the BLM's Bishop Field Office. These projects date back to 1999. In addition, the plan identified 11 future BLM projects. Table 1.8 provides an update on the status of these projects as of 2019 along with any additional projects that were identified during the planning process. In some cases, work is currently in progress to expand the number of treated acres within the total project area, while in others there is ongoing maintenance. In still others, there is no current work being done. Maintenance of all projects in the coming years is vital.

Table 1.8: Status of Existing Fuels Modification Projects in Mono County

Project Name	General Location	Year Implemented	Acres Completed	Status
BLM Bishop Field Office				
Swall Meadows Fuelbreak	Swall Meadows	2001	46	Complete
Golden Gate Mill	Walker/Coleville/ Topaz	2004	3	Complete
Mono City/Conway Ranch	Mono City/ Conway Ranch	2004	15	Continuing maintenance
Pinyon MX	Virginia Creek Settlement	2004	1,000	Continuing maintenance
Virginia Creek Lodgepole Pine Removal/Aspen Habitat Improvement	Virginia Creek Drainage	2004	30	Complete
Evaluation of Pinyon Removal Effects Typical of a Wildland-Urban Interface Fuels Reduction	Mono Basin	2005	105	Complete
Invasive Weed and Hazardous Fuels Reduction Project for Marine Housing, Slinkard, Aristo Ranch, and Dry Canyon Allotments	Walker/Coleville/ Topaz	2006	800 (7,000 planned)	In progress/ ongoing
Benton Fuelbreaks	Benton/Benton Hot Springs	2007	55	Continuing maintenance
Dog and Green Creek Aspen Drainages Habitat Improvement	Dog and Green Creek	2007	50	Complete
Fish Slough Prescribed Burn	Fish Slough	2008	176	Continuing maintenance

Project Name	General Location	Year Implemented	Acres Completed	Status
Slinkard Valley Interagency	Walker/Coleville/Topaz	2011	2,307	Continuing maintenance
Aurora Canyon Sage-Grouse Habitat Improvement Project	East of Bridgeport	2012	627	Complete
Eastside Lane	Walker/Coleville/Topaz	2013	65	Continuing maintenance
Bodie Hills Upland Vegetation Restoration	Bodie/Bodie Hills	2016	Treatment started on 3,584 acres. Maximum 21,330 acre treatment area	In progress/ ongoing
USFS Inyo National Forest				
Swall Meadows Community Defense	Swall Meadows	1998	46	Complete
DeChambeau Ranch and Meadow	Mono Basin	1999	47	Complete
West Tunnel	June Lake Junction	1999	1,260	Complete
Mammoth Rehab Fuelbreak	Mammoth Lakes	2002	329	Complete
Railroad	Mono Mills	2003	3,058	Complete
Mono City	Mono City	2004	80 (93 planned)	In progress/ ongoing
Smoke, Lookout, Crestview, Aqueduct and Pilot Timber Compartment	Crestview/Bald Mountains	2004	11,672 (14,187 planned)	In progress/ ongoing
Swall - Witcher Fuels Reduction	Swall Meadows	2004	191	Complete
June Lakes Hazardous Fuels Reduction	June Lake	2005	35	Complete
Jeffrey Pine Forest Health and Fuels Reduction	Mammoth Lakes/June Lake	2007	4,228 (ongoing logging on 300 acres)	In progress/ ongoing
Windmill Amendment to Smoke Lookout, Crestview, Aqueduct, and Pilot Timber Compartment	Owens River Road	2007	320	Complete
June Fire Forest Restoration	June Lake Junction	2008	86	Complete
Mill City	Mammoth Lakes	2008	130	Complete

Project Name	General Location	Year Implemented	Acres Completed	Status
Rust II Forest Heath and Fuels Reduction	Bald Mountain	2009	461	Complete
June Loop Hazardous Fuels Reduction Project	June Lake	2011	1,126 (4,578 planned)	In progress/ ongoing
Lake Mary Water Filtration Plant Hazardous Fuels Reduction Project	Mammoth Lakes	2011	9	Complete
Casa Diablo Understory Maintenance Burning	Casa Diablo	2017	Ongoing maintenance burning on 10,823-acrearea	Continuing maintenance
USFS Humboldt-Toiyabe National Forest				
Camp Antelope Piles	Walker/Camp Antelope	2009	50	Complete
Mill Canyon	Walker/Camp Antelope	2009	380* (2,900 planned)	In progress/ ongoing
MWTC Sonora Pass	Sonora Pass	2009	180	Complete
Twin Lakes	Twin Lakes Drainage	2011	210* (1,874 planned)	In progress/ ongoing
* Work will occur during the 2018-2019 season.				
Interagency Projects				
Antelope Valley Interagency Hazardous Fuels Reduction (BLM, Humboldt Toiyabe National Forest)	Walker/Coleville/ Topaz	2005	391	Complete
Doe Ridge Interagency Prescribed Fire (BLM, Inyo)	Long Valley	2009	995	Complete
Crowley Communities Interagency (BLM, Inyo)	Crowley Lake	2011	341 (1,585 planned)	In progress/ ongoing

Tables 1.9.1 and 1.9.2 identify planned fuels modification projects within Mono County for both BLM and Inyo National Forest that were contained in the original 2019 CWPP and newly added projects as part of this 2026 update. Table 1.9.1 includes projects that are direct fuel reduction projects while Table 1.9.2 includes community safety projects. There are currently no fuels modification projects within Mono County planned for Humboldt-Toiyabe National Forest other than ongoing work on existing projects. Previously proposed projects for which there has been no work completed thus far and no work is currently planned are not included

in this CWPP update.

Table 1.9.1: Future Fuels Modification Projects in Mono County

Project Name	Agency	General Location	Acres Planned
Proposed projects listed in 2019 CWPP:			
Walker and Eastside Lane fuel breaks	BLM	Walker/Coleville/Topaz	65
Bodie Hills upland vegetation restoration	BLM	Bodie Hills	21,330
Fish Slough prescribed burning	BLM	Fish Slough	176
Mill Canyon fuels reduction	H-T NF	Antelope Valley	2,900
Twin Lakes fuels reduction	H-T NF	Twin Lakes	1,874
Smoke, Lookout, Crestview fuels treatments	Inyo NF	Crestview-Bald Mtn	14,187
Coldwater Campground Fuel break	Inyo NF	Mammoth Lakes Basin	0.2
Lakes Basin hazardous fuels reduction	Inyo NF	Mammoth Lakes Basin	700
Lee Vining Creek watershed restoration and hazardous fuels reduction	Inyo NF	Lee Vining	7,989
Reds Valley hazardous fuels reduction	Inyo NF	Reds Meadow Valley	4,478
Swall Meadows access thinning	Inyo NF	Swall Meadows	108
2026 Update Proposed Projects:			
Mono County wide			
Forest-wide prescribed burn program	Inyo NF		
Removal of decadent veg from riparian stringers	Inyo NF		
Critical infrastructure defensible space	Mono County, MLFPD, ToML, Inyo NF		
Fuels Treatments along evacuation routes	Mono County, MLFPD, ToML, CalTrans, Inyo NF, H-T NF		
South County (Paradise to Long Valley)			
Casa Diablo fuel reduction and prescribed burning	Inyo NF	East of Tom's Place	1,600-2,000
Crowley Communities hazardous fuels reduction	Inyo NF. BLM	McGee, Crowley Lake, Hilton Creek, Aspen Springs, Sunny Slopes, Tom's Place	1,585

Project Name	Agency	General Location	Acres Planned
Rock Creek canyon fuel reduction Initial project at Rock Creek Lake Resort	NRCS Inyo NF	Rock Creek canyon	
Convict Creek riparian fuels treatments	UC, LADWP	Upstream of SNARL	
Tri-Valley			
Benton fuel break maintenance	BLM		
Mammoth Lakes & Upper Owens			
Eastern Sierra Climate and Communities Resilience Project (ESCCRP) [aka Mammoth donut]	Inyo NF	Upper Owens watershed surrounding Mammoth Lakes	58,000 42,000 initial ROD 2024
Lakes Basin hazardous fuels reduction	Inyo NF	Mammoth Lakes Basin	661
Three Creeks Jeffrey Pine forest health and restoration project	Inyo NF	Upper Owens watershed	9,590
Reds Meadow hazardous fuels reduction	Inyo NF	Reds & Agnew Meadows (in Madera Co, but affects Mono Co)	2,139
Sherwin-Scenic Loop hazardous fuels reduction	Inyo NF	Mammoth and Dry Creeks	1,026
Mill City fuels reduction	Inyo NF, MLFPD	Mammoth Creek	
Lost Lane fuels reduction	MLFPD, Inyo NF	Mammoth Lakes	4.5+
Lake Mary Treatment Plant hazardous fuels reduction – pending INF administrative actions	Inyo NF, MCWD	Lake Mary	
Casa Diablo Geothermal Complex fuels reduction	Inyo NF, Ormat	Casa Diablo Geothermal area	
Highway 395 median fuels reduction	CalTrans	Upper Owens watershed	
Multi-Use Pathways as fuel breaks	MLFPD	Mammoth Lakes	
Mammoth Lakes neighborhood fuel breaks	MLFPD	Mammoth Lakes	
Mammoth Lakes private parcel assistance	MLFPD	Mammoth Lakes	
Camp High Sierra fuels reduction	MLFPD, LADWP	Mammoth Lakes	
School Parcel behind Hospital fuels reduction	MLFPD	Mammoth Lakes	
Old Mammoth/Lake Mary junction fuel break	MLFPD	Mammoth Lakes	
Key egress road clearance & fuel reduction	MLFPD	Mammoth Lakes	

Project Name	Agency	General Location	Acres Planned
Mammoth Creek riparian fuels reduction	MLFPD, CAL FIRE	Mammoth Lakes at Waterford Bridge & Minaret Road	
MWCD Infrastructure fuels reduction to ensure access to water during fires – pending INF actions	MLFPD, MCWD	Mammoth Lakes, Lakes Basin,	
Mono Basin			
June Lake Loop hazardous fuels reduction	Inyo NF	June Lake	4.578
June Lake Junction hazardous fuels reduction	Inyo NF	June Lake	
June Mountain vegetation management planning	Inyo NF	June Mtn Ski Area	
Lee Vining Creek watershed restoration and hazardous fuels reduction	Inyo NF	Lee Vining Canyon	~8,000
West Mono Basin interagency fuels reduction	Inyo NF, BLM, LADWP, SCE		
Mono City hazardous fuel reduction (maintenance)	BLM, Inyo NF	Perimeter of Mono City	93
Water supply infrastructure protection	Lee Vining PUD, Lundy Mutual Water Co, June Lake PUD, Inyo NF		
North County (Bridgeport Valley north)			
Virginia Lakes defensible space		Virginia Lakes	
Twin Lakes hazardous fuels reduction	H-T NF	Twin Lakes	
Twin Lakes defensible space	Twin Lakes FWC	Twin Lakes	
ByDay Creek forest health restoration	CDFW, H-T NF	ByDay Creek	
Swauger Creek fuel breaks & defensible space	H-T NF, Swauger Ck homeow	Swauger Creek	

Project Name	Agency	General Location	Acres Planned
	ners		
Marine Corps Mountain Warfare Training Center forest restoration	H-T NF	Pickel Meadows	
Bodie Historical State Park defensible space	CA State Parks	Bodie	

Table 1.9.2: Future Fuels Modification Projects in Mono County

Project Name	Agency	General Location	Size (Acres)
Projects listed in 2019 CWPP:			
n/a			
Mono County wide			
Construct biomass facility	Mono County, West BioFuels, Ormat, Inyo NF	Casa Diablo Geothermal area	
Evacuation planning	Mono County Sheriff's Dept.		
Community water-supply upgrades for fire suppression	Mono County Public Works		
Wildfire preparedness O&E	Mono County		
Building code upgrades WUI code	Mono County		
Residential green waste collection	Mono County Public Works		
CWPP progress team and public engagement	Mono County, MLFPD, ToML		
Pre-planning for post-fire recovery and rehabilitation			
Highway signs – work with CalTrans to install more and higher visibility "fire awareness" signs for use along major highways to inform the public of the current fire danger and to promote fire prevention	CalTrans, Inyo NF, MLFPD		
Improve emergency communications	Mono County, MLFPD, ToML,		
Early wildfire detection systems	Mono County, MLFPD, ToML, Inyo		

Project Name	Agency	General Location	Size (Acres)
	NF		
Education for visitors about wildfire safety and emergency response	Mono County, MLFPD, ToML, Inyo NF		
Education for residents about disaster preparedness and response	Mono County, MLFPD, ToML,		
South County (Paradise to Long Valley)			
Swall Meadows secondary access route	Inyo NF	Swall Meadows	
Wheeler Crest O&E program	Wheeler Crest FSC	Swall Meadows & Paradise	
Second Long Valley fire station Sunny Slopes	LVFPD	Sunny Slopes	
Mammoth Lakes & Upper Owens			
MWCD infrastructure projects to expand hydrant & draft tube network--needs INF action	MCWD, MLFPD	Mammoth Lakes, Lakes Basin, Scenic Loop	
Update ToML tree ordinance	ToML, MLFPD	Mammoth Lakes	
Restart Mammoth Lakes FireSafe Council	MLFPD	Mammoth Lakes	
Risk assessment dashboard	MLFPD	Mammoth Lakes	
Campfire education/enforcement program	MLFPD	Mammoth Lakes	
DSI/Home hardening education campaign	MLFPD	Mammoth Lakes	
Residential green waste collection & disposal	MLFPD, Mammoth Disposal	Mammoth Lakes	
Evacuation planning	MLPD, MLFPD	Mammoth Lakes	
Community wildfire prevention grants	MLFPD	Mammoth Lakes	
Assistance for residential hazardous vegetation removal (esp. elderly, low-income, & disabled)	MLFPD	Mammoth Lakes	
Educational programs on fire as an ecosystem process	MLFPD	Mammoth Lakes	
Rebate program for home hardening upgrades	MLFPD	Mammoth Lakes	
Community technical assistance - FACT sheet	MLFPD	Mammoth Lakes	
Scenic Loop right-of-way clearing	Inyo NF	Dry Creek	

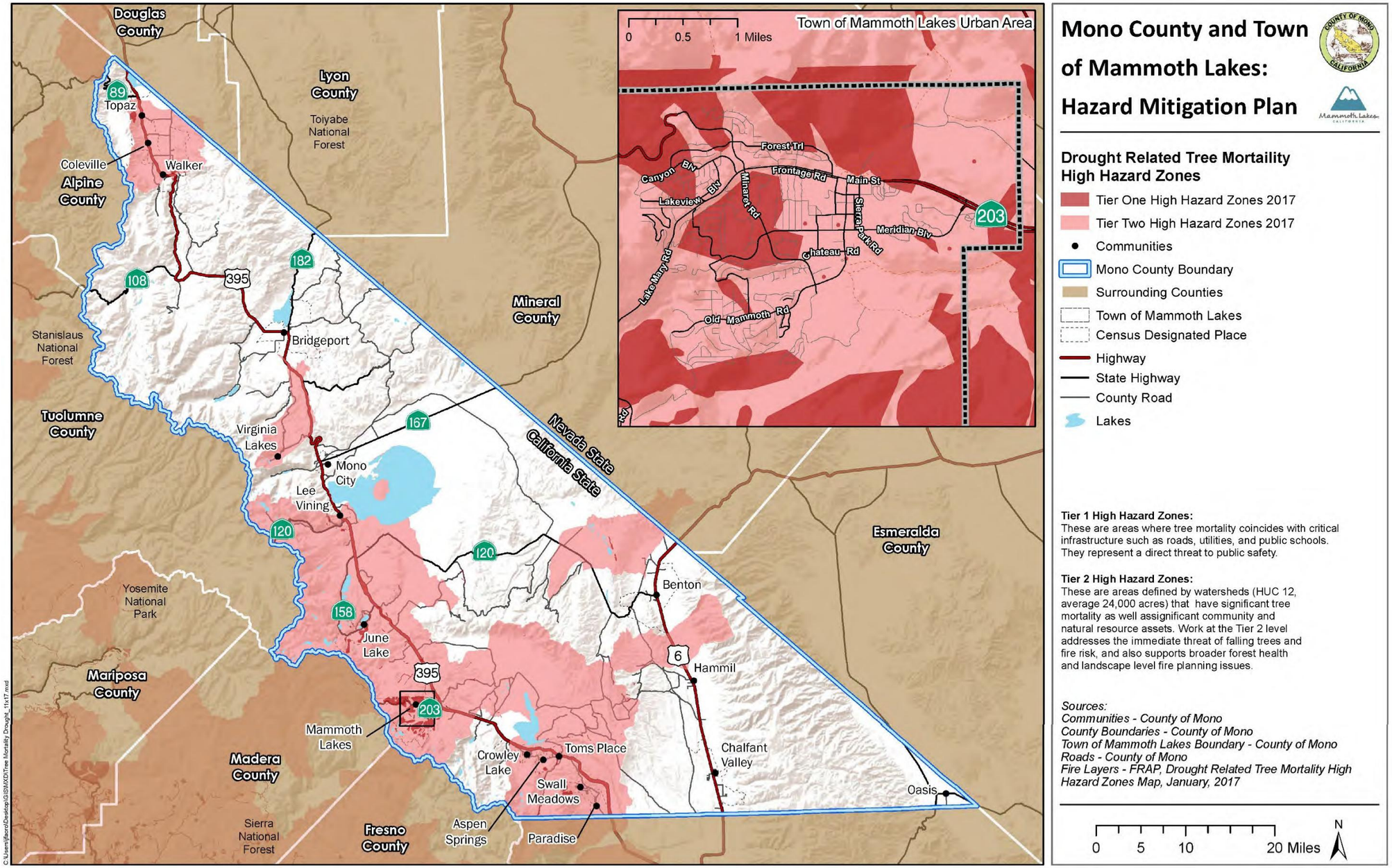
Project Name	Agency	General Location	Size (Acres)
Satellite station for CCC crews			
Mono Basin			
Campground water system and access improvements	Inyo NF	June Lake and Lee Vining Creek	

Tree Mortality

Large numbers of trees have died in Mono County and across the state as the result of the record six- year drought from 2011 to 2017. The drought weakened trees and left millions of acres of forestland highly susceptible to bark beetle attacks. The drought stress was exacerbated in forests with too many trees competing for limited resources, especially water.

In 2015, Cal Fire identified areas of greatest tree mortality in the state and the potential impacts in relation to life and property, as shown in Figure 1.15. The figure shows the tree mortality that was recorded from 2012 through 2016 within two tiers. Tier 1 zones are areas identified by Cal Fire where tree mortality coincides with critical infrastructure such as roads, utilities, and public schools, which represents a direct threat to public safety. Tier 2 zones are areas defined by watersheds that have significant tree mortality as well as significant community and natural resource assets. Work at the Tier 2 level addresses the immediate threat of falling trees and fire risk, and also supports broader forest health and landscape-level fire prevention planning issues.

Figure 1.15: Drought-Related Tree Mortality and Hazard Zones



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1.5.7 Drought

Extended drought conditions reduce the moisture levels in fuels, which can lead to more fires of greater intensity (Bennett et al. 2010). Since the 2009 CWPP and associated fire modeling were completed, California experienced a historic, six-year drought. Near the end of the drought in 2016, nearly all of Mono County was in extreme drought conditions.

As discussed above, the drought resulted in an increase in tree mortality in the area. Additionally, given the length and severity of this drought, it is possible that a fire behavior model that incorporated weather observations since 2006 would show different results from the model presented in Section 1.4. Data collected at weather stations would likely show lower average measures of fuel moisture. As a result, the modeling for the moderate fire weather scenario, which represents an average day during fire season, would more closely resemble the extreme scenario, with longer flame lengths, faster spread rates, less torching, and more active crown fire activity in some locations.

1.5.8 Future Probability

Based on the recent frequency of major fires, the 2019 CWWP projected that in the next five years, Mono County can expect about three wildfires that burn at least 1,000 acres. As of December 2025, at least four such wildfires had occurred in Mono County including the Mountain View, Dexter, Pizona, and Pack Fires with numerous smaller fires occurring as well. In addition, the probability of these wildfires causing damage to people or structures has increased within the past 20 years, as more people have built homes at the WUI and have chosen to become permanent residents of the region.

The impacts of climate change suggest a continuing and accelerated risk from wildfire. Climate change scenarios suggest more frequent droughts (Diffenbaugh et al. 2015) and higher fire severity in some portions of the state (Fried et al. 2007. Increasing temperatures have implications for vegetation distribution, which may further increase future fire extent and fire intensity (Lenihan et al. 2003). Some ecosystems may not be able to adapt fast enough to increasing drought stress, resulting in large-scale mortality from insects, fire, or disease). These future climate scenarios combined with continuing projections of residential growth into the wildland (Mann et al. 2014) suggest that existing wildfire- related problems are poised to become even larger in the near future.

Cal-Adapt estimates an increase of 1,500 to 2,600 hectares of burn area in the county by the year 2099. The estimated burn area in Mammoth Lakes is approximately double that of the annual mean burn area for the last several decades.

1.6 Wildfire Risk Reduction Actions

The information in the previous sections of this CWPP identifies the need for an action plan to mitigate the negative impacts from a wildland fire for the communities in Mono County. The entire intent of a CWPP is to provide a means to make WUI communities less vulnerable to the destructive forces of an uncontrolled wildland fire. To best reduce risk and vulnerability, the County and Town prioritize the following:

Fuel Treatment Projects: Fuel treatment projects within the WUI and adjacent to urbanized communities, while recognizing that broader health and management of the larger wildland environment is also important for long-term mitigation.

Infrastructure Lacks: Projects that address infrastructure and response needs of community areas at greatest wildfire risk, as detailed in Figure 1.12 and Table 1.6.

Parcel-Specific CWPPs: Projects recommended by local CWPPs. The County encourages its communities and Fire Safe Councils to prepare parcel-specific CWPPs, and, to the extent feasible, supports recommended projects that emerge from these plans, such as activities that educate community members about fire risk and how to prepare and protect their own properties against fire risk. While safety and fire management personnel in the county work to reduce risk as much as possible, community responsibility for self-protection from wildfire is essential. It is the priority of Mono County and the Town of Mammoth Lakes to work with communities and citizens to educate, inform, and involve them in all aspects of the wildfire issues facing its communities. Swall Meadows and Paradise recently completed a combined Cal Fire-funded parcel-specific CWPP (completed in January 2019). The Wheeler Crest Fire Safe Council obtained the grant and oversaw the project. The January 2019 Wheeler Crest CWPP is attached as Appendix I of the 2019 MJHMP.

Home Improvements: Ensuring safety of homes and private property. Construction type, condition, age, the fuel loading of the structure/contents, and position are contributing factors in making homes more susceptible to ignition under even moderate burning conditions. There is also a likelihood of rapid fire growth and spread in these communities in general due to steep topography, fast-burning or flashy fuel components, and other topographic features that contribute to channeling winds and promote extreme fire behavior. Therefore, compliant, effective defensible space for every home in the study area is the most important element for protecting life and property. Defensible space is especially important for homes with wood roofs and homes located on steep slopes, in chimneys or saddles, or near any topographic feature that contributes to fire intensity. Due to the nature of the vegetation and topography,

combined with the majority of homes situated on medium-sized parcels, an aggressive program of evaluating and implementing defensible space for all homes will do more to limit fire- related property damage than perhaps any other single recommendation in this report. Various high-quality reports and manuals are available to guide homeowners in construction and defensible space best practices, which supplement building codes from Cal Fire (California Code of Regulations (CCR), Title 24, Part 2), Mono County (Municipal Code Chapter 22), and the Town of Mammoth Lakes (Municipal Code Chapter 15.04).

Fire Management Best Management Practices for Sage-Grouse Conservation: Support of fire management best management practices for protection of sage-grouse habitat to minimize the risk of catastrophic wildfire, as directed by the Bi-State Action Plan. The County and Town will support and assist the USFS and BLM-Bishop in executing best management practices identified by those agencies. This includes active collaboration with the Bi-State Local Area Working Group and Bishop Field Office on cooperative habitat restoration projects. Recent projects have included conifer removal, improved grazing management, and fence marking. All projects are intended to further conservation of the Bi- State Distinct Population Segment of Greater Sage-Grouse, under the guidance of the Nevada Governor's Sage Grouse Conservation Team. The fire management best practices utilized by both BLM- Bishop and Inyo National Forest as they implement the Bi-State Action Plan's wildfire strategy are identified in Appendix C of BLM-Bishop's Fire Management Plan.

Table 1.10 summarizes recommended actions for Mono County and the Town of Mammoth Lakes to reduce wildfire risk. Measures directly linked to wildfire mitigation are located in Chapter 5 of the 2019 MJHMP.

Table 1.10: Recommended Preparedness and Response Actions

Action Number	Action
C.1	Develop a regional training program to facilitate local training for structural and wildland firefighting.
C.2	Work with state and federal agencies to conduct basic wildfire suppression and multiagency Incident Command System (ICS) training.
C.3	Work with state and federal agencies to conduct the pack test and annual refresher courses to work with local fire department schedules.
C.4	Consider adopting "appropriate response" or indirect fire suppression tactics in remote areas, given the threat from heavy fuel loading and the lack of County resources.
C.5	Train local fire departments and fire safe councils on how to create defensible space around homes.

Action Number	Action
C.6	Provide minimum wildland personal protective equipment for all career and volunteer firefighters.
C.7	Maintain and distribute a list of frequencies for each fire department and list the associated channels.
C.8	Test hydrants annually to ensure they are operational, obstruction-free, and visible.
C.9	Operate a public information campaign for both residents and visitors to learn about and ensure their phone numbers are provided to the CodeRed Emergency Alert System database.
C.10	Provide training for "stay and defend" tactics as a last resort for communities at highest fire risk.
C.11	Conduct annual Radio Rodeos, in coordination with state, federal, volunteer, and County staff, to share and consolidate procedures and equipment use.
C.12	Purchase and install fire-hardened structures to store gasoline for emergency-vehicle fueling along major evacuation routes.
C.13	Identify communities most in need of backup generators for water supply and work with those communities to obtain the appropriate equipment and permits.
C.15	Where secondary pressurized water sources exist (golf courses, development landscaping, or other types of sprinkler systems), develop a procedure for quickly activating these systems.
C.16	Ensure that any and all Address Map books are updated to reflect information stemming from this CWPP. Consider the development of a Wildfire Pre-Attack Plan.
C.17	Where dead-end and private road markers occur, the addresses of homes beyond the marker should be clearly posted.
C.18	Develop a grant program to renovate older structures with code-compliant exterior materials.
C. 19	Develop an animal evacuation plan as time and funding allow.

1.7 Website Resources

- American Red Cross, http://www.redcross.org/services/disaster
- Bureau of Land Management, http://www.blm.gov
- Cal Fire, http://www.fire.ca.gov
- California Department of Fish and Wildlife, https://www.wildlife.ca.gov
- California Governor's Office of Emergency Services, http://www.oes.ca.gov
- California Fire Alliance, http://www.cafirealliance.org
- Coarsegold Resource Conservation District, http://www.crcd.org
- Fire Effects Information System, http://www.fs.fed.us/database/feis
- Fire Safe Council, http://www.firesafecoucil.org
- Firewise, http://firewise.org

- Madera County, http://www.Madera-County.com
- National Fire Prevention Association, http://www.nfpa.org/codes
- North Fork Chamber of Commerce, http://www.north-fork-chamber.com
- Oakhurst Area Chamber of Commerce, http://www.oakhurstchamber.com
- Office of State Fire Marshal, http://www.osfm.fire.ca.gov
- Public Domain Software for the Wildland Fire Community, http://www.fire.org
- Sierra Nevada Alliance, http://www.sierranevadaalliance.org
- Threatened and endangered species, http://imaps.dfg.ca.gov/CNDDB_QuickViewer/list_county_species.asp
- United States Forest Service, http://www.fs.fed.us

2026 CWPP 12-18-25

Final Audit Report 2026-01-24

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