



# Modoc County Community Wildfire Protection Plan

2024



# COUNTY OF MODOC

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*Prepared by*

**Modoc County Fire Safe Council**

*In cooperation with*

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DOI Bureau of Land Management, Applegate Field Office (BLM)

Modoc Resource Sustainability Group

DOI Bureau of Indian Affairs (BIA)

Modoc County Rural Fire Departments

Modoc County Office of Emergency Services

\*USDA Forest Service, Modoc National Forest (USFS)

Modoc Resource and Conservation District

USDA Natural Resources Conservation Service (NRCS)



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**California Fire Safe Council through the 22 WF CalFire County Coordinator Program Northern**

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Updated Community Wildfire Protection Plan 2024 update developed for Modoc County:

- Was collaboratively developed with consultation from interested parties and federal agencies managing land in Modoc County.
- Identifies and prioritizes areas from hazardous fuel reduction treatments and recommends the types and methods of treatment that will protect Modoc County.
- Recommends measures to reduce the ignitability of structures throughout the area addressed by the Plan.

The following entities attest that the standards listed above have been met and mutually agree with the contents of this Modoc County Community Wildfire Protection Plan.

  
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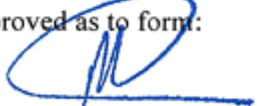
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**Table of Contents**

1. Executive Summary ..... 1

2. Modoc Fire Safe Council ..... 2

2.1. CWPP Community Meetings ..... 2

3. Background Information ..... 3

3.1. Geography and Natural History ..... 3

3.2. Land Ownership and Use ..... 3

4. Wildfire Evaluation..... 6

4.1. Climate ..... 7

4.2. Vegetation ..... 7

4.3. Fire Hazard..... 8

4.4. Fire Threat..... 9

5. Fire Issues and Community Recommendations..... 9

5.1. Advised Actions Throughout Modoc County ..... 10

5.2. Surprise Valley ..... 12

5.3. Alturas..... 14

5.4. California Pines ..... 15

5.5. Likely..... 16

5.6. Adin ..... 17

5.7. Tionesta/Perez ..... 18

5.8. Other Project Identification Resources ..... 19

Appendix A: Maps..... 20

1. Modoc County Vicinity Map ..... 21

2. Modoc County Geography Map ..... 22

3. Modoc County Land Ownership..... 23

4. Modoc County Communities & SILVIS Labs WUI Designation..... 24

5. Modoc County Communities in High to Extreme Fire Threat Zones ..... 25

6. Modoc County Designated Wildland Urban Interface (WUI) & Priority Project Areas..... 26

7. Modoc County Fire Protection Areas (FRA, SRA, LRA)..... 27

8. Fire History in Modoc County ..... 28

9. Cal Fire Lassen-Modoc Unit Fire History..... 29

10. Fire Hazard Severity in Modoc County State Responsibility Areas..... 30

11. Modoc County Fire Threat..... 31

12. Modoc County Fire Threat in the WUI..... 32

Appendix B: Modoc County CWPP Working Group – 2024 Project Rankings..... 33

# 1. Executive Summary

This Community Wildfire Protection Plan (CWPP) is an update to the 2022 Modoc County CWPP. This update was developed by the Modoc Fire Safe Council (MFSC) with funding from the California Fire Safe Council (CFSC) through the 22 WF County Coordinator Program Northern grant. MFSC worked in cooperation with numerous Federal, State, Local, and Tribal Partners to develop this plan.

Partners and Stakeholders include:

- Bureau of Indian Affairs (BIA)
- Bureau of Land Management (BLM)
- CalFire
- City of Alturas
- Fort Bidwell Indian Reservation
- Modoc County Board of Supervisors
- Modoc County, Local Fire Districts
- Modoc County, Public-At-Large
- Modoc Resource Conservation District
- Natural Resource Conservation Service (NRCS)
- North Cal-Neva Resource Conservation & Development
- Pit River Tribe
- U.S. Forest Service

These partners and stakeholders work together by analyzing lessons learned from past major wildland fires to identify issues and improvements that need to be addressed in Modoc County. Through these efforts the partners prioritize and coordinate integrated efforts to reduce the danger that wildland fire poses to the communities of Modoc County, California. The purpose of this project is to reduce the impact of catastrophic wildfire to human life, property, and natural resources in Modoc County. This will be accomplished through focused pre-fire planning and mobilization of the local community to be involved in the coordinated effort to protect Modoc County from catastrophic wildfires before they start.

Historically, in pre-settlement and settlement years through the early 1900's, wildland fire was a naturally occurring event throughout much of California and was used as the land management tool by native Tribes. Now, due in part to nearly 100 years of fire suppression, wildland fuel loads have increased to unnatural levels intensifying the risk of uncontrollable and catastrophic wildfires in the region. As a consequence, these fuel conditions coupled with the expansion of rural development into the zone of transition between unoccupied land and human development, known as the Wildland Urban Interface (WUI), have led to a significantly increased risk for potential loss of life and property from wildfire.

Modoc County's rural appeal and associated lifestyles are highly desirable and are sought by many. However, the integration of residential, recreational, and commercial occupancies and activities within the flammable natural vegetation of the area of the WUI is a dangerous mix. All or portions of each of the communities in Modoc County are within designated high or very high fire hazard severity zones (CALFIRE, 2017).

The Community Wildfire Protection Plan is a dynamic document. It should be reviewed periodically, with facilitation from the Modoc Fire Safe Council, and amended as needed by the Modoc County Board of Supervisors. It has been two years since the last update.

## 2. Modoc Fire Safe Council

The Modoc Fire Safe Council was formed in October 2000 in response to an identified need by residents who live in the WUI to be informed of the risk of potentially serious wildfires with tragic results including loss of lives and property. The Fire Safe Council is a voluntary non-profit 501(c) (3) corporation formed to enhance the effectiveness of fire prevention and protection. The cooperative nature, educational and outreach-oriented efforts of this group are critical components for wildland pre-fire planning and mitigation.

The Council adopted the Charter and Bylaws in July 2001 setting forth the mission and guiding principles of the Council, establishing a grass roots problem solving body committed to the needs of the region. The geographic area of the Council covers Modoc County and adjacent areas extending into Shasta, Siskiyou, and Lassen Counties. Included are areas within the Joint Fire Protection Districts of Adin, Tulelake, Cedarville and Eagleville. The MISSION of the Modoc Fire Safe Council is to bring together the resources of private and public sector elements and organizations in the interests of wildfire prevention and loss mitigation.

The Modoc Fire Safe Council consists of representatives from the city of Alturas and rural communities throughout Modoc County. There are also non-voting representatives from County, State, and Federal agencies, including local volunteer fire departments, Cal Fire, BLM, Modoc National Forest staff and residents of Modoc County. The Council has a strong relationship with and works closely with the County Board of Supervisors to plan and obtain funding to address wildfire concerns in Modoc County.

### 2.1. CWPP Community Meetings

The CWPP working group (MFSC, BLM, USFS, Modoc OES, and CalFire representatives) organized a series of outreach, information gathering meetings for Modoc County residents, agency representatives and the public. The meetings were held in November and December at three locations in the county: Surprise Valley, Alturas, and Adin. The purpose of the meetings was to discuss the updating of the CWPP and identify and prioritize future projects within the WUI based on local knowledge. Many members of the community participated in these meetings providing input on project needs and priorities within the community and Modoc County as a whole.

### 3. Background Information

Modoc County is located in the northeastern corner of California and is bordered by Klamath County and Lake County, Oregon to the north, Washoe County, Nevada to the east, Lassen County and Shasta County, California to the south and Siskiyou County, California to the west (See Appendix A: Figure 1). Modoc County is approximately 4,203 square miles or 1,419,840 acres. As of the 2010 census, the population of Modoc County was 9,686. As of 2002, there were 4,785 housing units, of which 68% are occupied full-time. Modoc County's government structure is typical of counties in California and is governed by a Board of Supervisors consisting of five elected members. The federally recognized tribal communities of Fort Bidwell Reservation, Cedarville Rancheria, Alturas Rancheria and the Pit River Tribe are located in Modoc County and governed by Tribal Councils.

Native American people have resided in Modoc County for at least 12,000 to 14,000 years.

The Native American tribes that have a historical presence within Modoc County are the Modoc, Northern California Paiutes and six of the eleven bands of the Pit River Tribe, which are the Hewisedawi, Kosalektawi, Hammawi, Astarawi, Atwamsini, and Ajumawi. Hudson Bay fur trappers arrived in the 1820's and 1830's. Emigrants on the way to Oregon passed through Modoc County in the 1840's and European settlement started in the 1860's in Surprise Valley, the eastern side of the county.

#### 3.1. Geography and Natural History

The county has a variety of open valleys, forested plateaus, mountain meadows, and high mountain peaks and ranges. Elevations within the county range from about 4,120 feet in Big Valley to 9,906 feet at Eagle Peak in the Warner Mountain Range. Major valleys include Surprise Valley at 4,600 feet in elevation and Hot Springs Valley at about 4,300 feet west of Alturas. The Pit River originates in the Warner Mountains. The two forks of the Pit River come together at Alturas and flow through to Big Valley where it exits the county.

The Warner Mountain Range, a volcanic mountain chain, dominates the eastern side of the county. The Modoc Plateau, built up of irregular masses of volcanic materials and mountain peaks, occupies the central and northern areas. It is a high desert plateau dominated by sagebrush and ancient lava flows. The many hills and basins formed across the plateau are a result of volcanic activity and geologic block faulting over a long time period. The Adin Mountains and Big Valley Mountains surround Big Valley in the southwest. The Tulelake Basin, rich agricultural land claimed when Tule Lake was drained, is in the northwest part of the county. The lower slopes of the Medicine Lake Highlands, the largest shield volcano in North America, lie on the western edge of the county (See Appendix A: Figure 2).

#### 3.2. Land Ownership and Use

The majority of Modoc County is in public ownership (approximately 85%) (See Appendix A: Figure 3).

Much of this public land is unoccupied natural habitat managed by federal and state agencies (See Figure 3). This includes:

- U.S. Forest Service – Modoc National Forest
- Bureau of Land Management (BLM) – Applegate Field Office
- Bureau of Indian Affairs (BIA)
- Bureau of Reclamation (BOR)
- U.S. Fish and Wildlife Service (USFWS) – Modoc National Wildlife Refuge, Tule Lake National Wildlife Refuge, & Clear Lake National Wildlife Refuge
- California Department of Fish and Wildlife (CDFW) – Ash Creek Wildlife Area

The citizens of the United States are the largest landowner in Modoc County. The Modoc National Forest administers the USDA Forest Service lands. These lands are managed under the multiple use concepts, which include recreation, watershed and wildlife uses, timber production and grazing. The Department of the Interior’s Bureau of Land Management administers a large area of federal lands, especially in the non-timbered central and eastern portions of the county.

Other public lands in the county include US Fish and Wildlife Refuges and portions of Lava Beds National Monument. On the east side of the Warner Mountain range, located in the most northeastern corner of Modoc County and the State, the Fort Bidwell Indian Reservation manages commercial and non-commercial forest, woodland, and pasture lands on Tribal lands. In addition to these resources the Fort Bidwell Indian Reservation has government facilities, commercial operations, and residential homes. The township of Fort Bidwell is east of the Reservation. The Cedarville Rancheria also lies on the east side of the Warner Mountain range and has residential homes, a store, and a commercial truck scale off of Hwy 299. The Pit River Tribe which has jurisdiction over the XL Reservation has administrative and commercial operations, residential homes, woodland, pasture for farming and ranching, and scattered parcels of land throughout the county. The Alturas Rancheria has a few residential homes and a casino with administrative offices.

Private lands within Modoc County have many different uses. Private timber lands owned by Sierra Pacific Industries (SPI) in addition to land managed by W.M. Beaty and Associates, Inc., and other smaller landowners, conduct timber growing and harvesting operations under the sustained yield concept, which under state law provides equal consideration to non-timber forest values.

Agriculture, including livestock production, is another private land use activity within Modoc County. Mainly in the major valleys of the county, farmers and ranchers produce field crops such as potatoes, grain, mint, wild rice, and hay. Livestock products include beef and some goats and sheep. Fish farming is becoming more common.

The 2020 United States Census reported that Modoc County had a population of 8700. The racial makeup of Modoc County was 7586 (87.2%) White, 139 (1.6%) African American, 470 (5.4%) Native American, 122 (0.1.4%) Asian, 3 (0.004%) Pacific Islander 339 (3.9%) from two or more races and Hispanic or Latino of any race were 1,340 persons (15.4%). In the county the population was spread out with 23% under the age of 18, 50.9% from 18 to 64, and 28.4% who were 65 years of age or older.

Median age was 42 years. For every 100 females there were 102.4 males. For every 100 females age 18 and over, there were 98.7 males (U.S. Census Bureau 2010).

The median income for a household in the county was \$25,578 and the median income for a family was \$51,520. Males had a median income of \$30,538 versus \$23,438 for females. The per capita income for the county was \$17,285. About 16.4% of families and 17.9% of the population were below the poverty line, including 29.7% of those under age 18 and 8.6% of those aged 65 or over. Modoc County has the lowest median household income of any county in California (U.S. Census Bureau 2010).

The City of Alturas, located in the central portion of the county, is the county seat and the only incorporated city in the county. Approximately 2,837 residents live in the greater Alturas area. Approximately 21 unincorporated, smaller communities comprise the remainder of the population centers in Modoc County (See Appendix A: Figure 4). The County is accessed from Lakeview, Oregon and the north via Hwy 395, from Klamath Falls, Oregon, via Hwy 139, from Susanville, California to the south via US 395, from Redding to the west via Hwy 299 and from Gerlach, Nevada, to the south via NV 447.

Due to the abundance of public lands with natural landscapes, all of the communities in Modoc County, including residential neighborhoods, commercial districts, and government infrastructure, are within the WUI and subject to high and very high fire threat (See Appendix A: Figure 5). Area communities have been listed in the Federal Register (August 17, 2001) as Urban Wildland Interface Communities in the Vicinity of Federal Lands that are at High Risk from Wildfire (See Appendix A: Figure 6). These communities within the defined MFSC geographic area include:

- Adin
- Alturas
- Cal-Pines Lower Units
- Cal-Pines Upper Units
- Canby
- Cedarville
- Day
- Eagleville
- Davis Creek
- Fort Bidwell
- Lake City
- Likely
- Lookout
- New Pine Creek
- Newell
- Tulelake

Features within these communities that are potentially at risk from encroaching wildfires include:

- Human lives
- Existing residences and outbuildings
- Churches
- Small businesses such as stores, restaurants, and motels
- Schools
- Railroads
- Utilities and associated infrastructure for delivery of emergency and other critical services
- Recreational areas and activities
- Roads and highways
- Livestock and feed
- Agricultural Crops
- Archaeological Sites and Artifacts
- Wildlife and wildlife habitat
- Air and water quality
- Aesthetic

A loss of any number of these features or intrinsic values may also impact employment, cost-of living, insurability and rates, health, and community stability.

All communities are surrounded by a variety of diverse natural resources including forestland, croplands, rangelands, numerous watercourses, and natural vegetative cover. All are at risk from potentially devastating and catastrophic losses from wildland fire. A loss or damage to any of these key natural resources would result in a negative impact as they play an important role in the stability of these communities.

In addition to these uses, the natural resources in and around these communities provide shelter and create recreational opportunities such as hunting, fishing, and hiking. The forest and vegetative cover also nurture the soil and reduces erosion and resulting sedimentation into nearby creeks and rivers. The county has several important watersheds to protect from wildfire. They include the Pit River, Tulelake Basin and Surprise Valley watersheds. Protecting the natural resources surrounding these communities is essential to maintain and enhance the communities' economic stability.

There are numerous wildland fire protection agencies that have responsibility within the county, including the USDA Forest Service, the Bureau of Land Management, Bureau of Indian Affairs, and the California Department of Forestry and Fire Protection. There are also numerous fire departments and fire protection districts that serve local areas, many of whom have mutual aid agreements with each other as well as state and federal agencies for fire suppression and protection. The level of fire protection provided to the communities in the county is sufficient but could benefit from upgrading and improving preparedness. The overall goal is to protect life, resources, assets, and wildlife against loss from fire. Appendix A: Figure 7 shows the Local Responsibility Areas (LRA) and State Responsibility Areas (SRA) in Modoc County.

- Fire Protection Districts and Volunteer Fire Departments in Modoc County include:
- Adin Fire Protection District
- Alturas City Fire Department
- Alturas Rural Fire Protection District
- Bieber Fire Protection District
- Cal Pines CSD Fire Department
- Canby Fire Protection District
- Cedarville Fire Protection District
- Davis Creek Fire Protection District
- Eagleville Fire Protection District
- Fort Bidwell Fire Protection District
- Lake City Fire Protection District
- Likely Fire Protection District
- Lookout Fire Protection District
- Tulelake Fire Protection District
- Willow Ranch Fire Protection District

## 4. Wildfire Evaluation

The forested areas north of Lookout, north and east of Davis Creek, south and east of Likely and many other areas scattered through the county have had a history of large fires (See Appendix A: Figure 8 and Figure 9).

## 4.1. Climate

The climate in Modoc County is typical of Great Basin high desert with warm, dry summers and cold, dry winters. Thunderstorms are common over the adjacent mountains during the summer with dry lightning a common occurrence. The prevailing afternoon wind is S-SW at 5-15 mph. Summers in the county are described as warm days with cool nights. July temperatures are generally in the 80s during the day and 40s at night. Temperatures can reach the low 100s for a time in the summer but are usually in the 80s and low 90s. Winters average around freezing during the day. Lows have been recorded in the minus 30s. Daily differences of 50 degrees are common.

Winter storms moving inland from the Pacific Ocean lose much of their moisture over the Marble and Trinity Mountains and Mount Shasta before reaching Modoc County. Total precipitation ranges from 11 inches in the Tulelake Basin to 20 inches in the Warner Mountains with most rain, sleet, hail, and snowfall occurring between November and May. Little precipitation can be expected during the summer months, June through October. Humidity in the summer will range between 7% and 15% with evenings at 30% to 40%. Because much of the county is a broad and open plateau at an elevation of 4000 feet, summer winds can become strong and the humidity can drop well below 10%, creating a serious fire hazard.

The normal fire season extends from June through mid-October, with July, August, and September being the peak fire season period. Many fires in this area are started by equipment or lightning. Much of the vegetation in and around the county which is irrigated in the summer provides a measure of protection to the community. Due to the presence of flammable grass, sagebrush, and trees, wind-driven wildfires can threaten ranch buildings and outlying homes.

## 4.2. Vegetation

Vegetation types in Modoc County are largely dependent on the mean annual precipitation received in any given area, generally in the form of snow. Precipitation, in turn, is largely determined by geographic location and the rain shadow effect. In general, higher amounts of precipitation occur on the western side of the county, dropping off rapidly on the eastern side and in the valleys.

Areas of higher precipitation and sufficient soil depth support tree dominated vegetation types such as mixed conifer and pine forests. The amount of brush and grass associated with these types varies but can be tall and thick, especially in openings void of trees.

Within the tree-dominated vegetation types, both the live vegetation and particularly the non-living by-product of vegetation (leaves, needles, twigs, branches, and standing dead brush and trees) provide fuels for wildfire. According to the Anderson (1982) Fuel Model System, the forested areas comprised of timber and slash fuel complexes would generally predict fire behavior that is difficult to suppress.

In slightly drier zones of the county, the predominant vegetation type is pine or juniper with a grass understory. The density of trees and shrubs is generally much lower in this type of forest. Grass, shrub,

and to a lesser degree the timber fuel model complexes are represented in these areas. The amount of burnable fuel in dead material and buildup of thick and continuous brush and grass can still contribute to and create dangerous fuel and fire behavior conditions.

Much of the vegetation in the lower elevations of the county is comprised of shrub-dominated types such as sagebrush and bitterbrush. Trees, if any, are typically juniper, and the distribution of shrubs, grasses, and forbs is variable, often depending on the type of soil. The lower elevations are characterized by the grass and shrub fuel model complexes and generally contribute to fire behavior that is relatively easier to control when compared to tree dominated vegetation types. However, fires in lower elevations can spread quickly and be dangerous and difficult to control, particularly if wind driven.

Many other vegetation types are found in smaller pockets within the county. These include riparian areas (generally narrow, dense groves of broadleaved and deciduous trees and shrubs), aspen groves, wetlands, irrigated pastures, grassy meadows, and areas of tall chaparral throughout the county. These areas have various uses including agriculture, livestock grazing as well as wildlife habitat and are, with exceptions, generally lower wildfire risk areas.

Wildfire plays a critical role in altering vegetation. In the timbered portions of the county, generally east and west of Alturas, areas affected by wildfires are often reduced to early stages of vegetation including grass and brush-fields and/or young timber stands that take long periods of time to recover and regain pre-fire conditions. In the eastern portions of the county, natural post-fire recovery is also very slow. The generally dominant bitterbrush and sagebrush component is often succeeded by rabbitbrush and invasive noxious weeds, including low value cheat grass. Restoration efforts on these arid vegetation types are particularly difficult and expensive after the devastating effects of wildfire.

Existing fire hazards within the communities primarily consist of the natural vegetation and overstocked forest lands. In addition, the annual grasses are at risk as they continue to dry through the summer months. Sources of fire risk from within the communities include normal residential activities, particularly the common seasonal use of wood stoves for heating as well as the use of equipment and burn barrels.

### **4.3. Fire Hazard**

Fire Hazard is a way to measure physical fire behavior so that people can predict the damage a fire is likely to cause. Fire hazard measurement includes the speed at which a wildfire moves, the amount of heat the fire produces, and most importantly, the burning fire brands that the fire sends ahead of the flaming front.

The fire hazard model considers the wildland fuels. Fuel is that part of the natural vegetation that burns during the wildfire. The model also considers topography, especially the steepness of the slopes. Fires burn faster as they burn up-slope. Weather (temperature, humidity, and wind) has a significant influence on fire behavior. The model recognizes that some areas of California have more frequent and severe wildfires than other areas. Finally, the model considers the production of burning fire brands (embers) how far they move, and how receptive the landing site is to new fires. Appendix A: Figure 10 shows the

Fire Hazard Severity for Modoc County within the State Responsibility Area. CAL FIRE has determined that this county has no Very High Fire Hazard Severity Zones in LRA. Therefore, this county will not have a map of recommended VHFHSZ in LRA.

#### **4.4. Fire Threat**

The California Fire Alliance, a coalition of representatives from state and federal fire agencies originally formed in 1996 that collaborate on integrating fire management and planning across jurisdictional boundaries and develop procedures to identify areas in California that pose significant threats from wildfire to the people of California. The three main components in the assessment of threat from wildland fire to WUI areas of California are:

- Ranking fuel hazard
- Assessing the probability of wildland fire
- Defining areas of suitable housing density that lead to Wildland-Urban Interface fire protection strategy situation.

Appendix A: Figure 11 shows the Fire Threat assessment for Modoc County and Appendix A: Figure 12 shows the fire threat within the WUI.

### **5. Fire Issues and Community Recommendations**

The following issues listed by geographic area have been identified by agency representatives and community members during public meetings. Primary concerns of the 41 residence that responded included: absentee owners that do not protect their properties from fire danger; heavy fuel loads on public lands, and an uninformed public regarding fire danger and emergency response.

The Working Group for the Modoc County Community Wildfire Protection Plan has considered its plan for identifying roles and responsibilities, funding needs, and timetables for carrying out priority projects using the data collected at the three public meetings held in November 2024. This will include fuels treatment priorities, preferred methods for fuels treatment projects, location of the wildland-urban interface, structural ignitability recommendations, and information and action identified. Appendix B contains all of the recommendations in order of priority and will be updated annually by the CWPP Working Group. The Fire Safe Council and other parties will accomplish these recommendations as funds become available using community input and then distribute the new recommendations and educate stakeholders.

## 5.1. Advised Actions Throughout Modoc County

1. Address properties that pose a risk to neighbors and communities: There are many absentee and uninformed landowners in Modoc County whose lack of fire protection measures are resulting in a risk to neighbors and the community. In addition, there are many low income, elderly, and disabled residence that need assistance maintaining fire safe homes.

### ***Recommendations:***

- a) Continue to seek annual funding for the MFSC's Residential Chipping and Landowner Assistance Program.*
  - b) Conduct outreach to landowners to identify properties that pose a fire risk to neighbors and communities.*
  - c) Promote the Firewise USA Program to facilitate neighborhood organization and collaboration with fire experts for education and priority of reduction efforts.*
2. Address Public Lands within or adjacent to the WUI that pose a risk or provide emergency access to Modoc County Communities: There are many communities in Modoc County that are adjacent to public lands or have public roads that provide access. Effort should be made to address hazardous fuel conditions in these areas and develop projects to address these issues.

### ***Recommendations:***

- a) Seek annual funding to develop the County Public Road Chipping Program to reduce fuel loads along public roads to improve access for the public and emergency personnel.*
  - b) Work with the Modoc National Forest and the Bureau of Land Management – Applegate Field Office to develop Fire Prevention Plans for Modoc National Forest and BLM managed lands within the WUI and obtain funding to implement fuel reduction projects in high priority areas,*
  - c) Identify critical areas along easements and rights-of-way that would benefit from roadside chipping.*
3. Community outreach regarding defensible space and fire danger in Modoc County: Many residents of Modoc County, including absentee owners, have not created defensible space around their residence or property. Many residents are not aware of the resources available to assist them in preparing for a catastrophic wildfire event in Modoc County.

### ***Recommendations:***

- a) Periodic outreach in both English and Spanish including workshops, newsletters, web posts, Firewise USA, regarding defensible space, fire safe landscaping, and the MFSC's chipper program*

b) *Keep MFSC website current and updated. Utilize social media to share fire prevention information and resources.*

4. Fuel breaks around telecommunication and other sites important for emergency operations: There are many telecommunication sites throughout Modoc County that are important for emergency communication that need fuel breaks around them for protection.

**Recommendations:**

a) *Work with Federal, State, and local governments to create fuel breaks around important telecommunication and emergency operations sites (Priority: High*

5. Maintain Existing fuel breaks within Modoc County: Modoc FSC and other partners have implemented many fuel breaks in Modoc County. Many of them need maintenance to remain effective. As part of the ongoing efforts to ensure that the Modoc County communities continue to be protected and reduce the risk from wild land fires, efforts should be made to monitor and evaluate the implementation and effectiveness of community fire safe projects. Those projects designed to create defensible space around community structures and individual residences should be monitored on an annual basis to reinforce implementation and to ensure that they are properly and effectively carried out.

**Recommendations:**

- a) *Evaluate existing fuel breaks, including California Pines, Rush Creek, Emerson Canyon, Lake City, Ft. Bidwell Power Station, Modoc Recreational Estates, Granger Canyon and obtain funding to maintain them.*
- b) *Develop a monitoring plan that identifies responsible parties to annually evaluate existing fuel breaks.*

6. Defensible space regulations within Local Responsibility Areas (LRAs): While regulations exist at both the state and county level concerning maintenance of defensible space and other fire safe issues, those regulations do not apply to Local Responsibility Areas (LRA) where the local fire department is responsible for suppression of wild land fires. LRA regulations would assist with various fire safe issues that currently cannot be addressed or enforced.

**Recommendations:**

a) *Encourage Modoc County to adopt LRA regulations equivalent to SRA regulations.*

7. Training and equipment for volunteer fire departments:

**Recommendations:**

a) *Many volunteer fire stations have outdated equipment and volunteers lack training that could result in safety issues.*

**Recommendations:**

a) *Pursue funding to continue training and obtain suppression equipment for volunteer fire stations.*

## 5.2. Surprise Valley

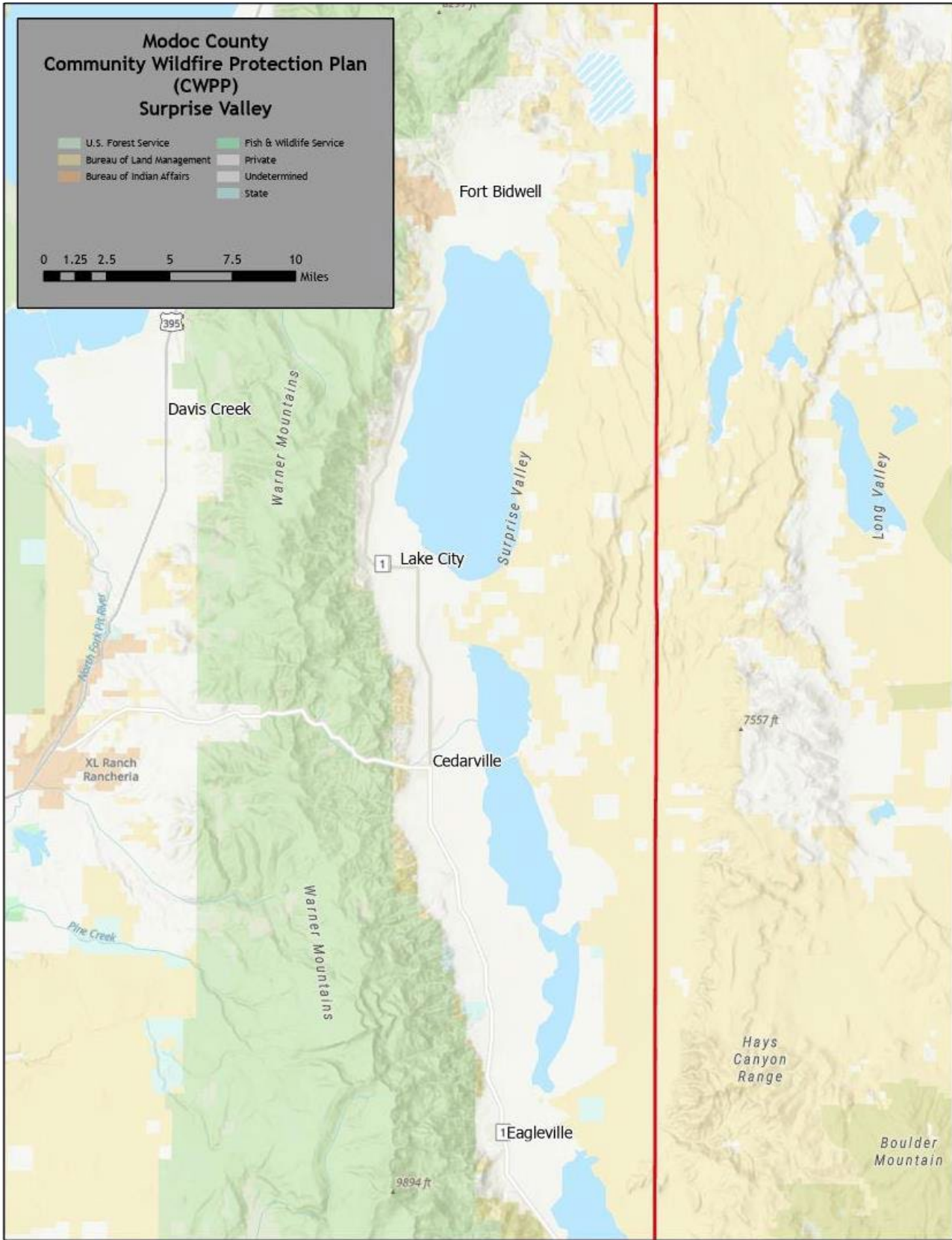
1. Fire danger on the eastside of the Warner Mountains: The east side of the Warner Mountain has a unique, yet extremely dangerous factor of strong down slope west to east afternoon winds. This situation includes HEAVY fuel loaded canyons with residences at the base and north and south. This is especially true for the Cedarville/Lake City area.

***Recommendations:***

- a) *Continue to develop a contiguous fuel break from Fort Bidwell to south of Eagleville.*
2. Dangerous fuel loads on Cedar Pass, including the Summerland Subdivision: Large areas along Hwy 299E from Hwy 395 to Cedarville have damaged timber from bug infestations and heavy fuel loads. This area is within the Cedarville WUI. There is limited egress from the Summerland subdivision in case of evacuation or emergency and the one main road goes across an old bridge. Currently, they do not have an evacuation plan available. The Summerland Wildfire Hazard Mitigation plan will be used for project planning.

***Recommendations:***

- a) *Develop alternative evacuation route for the Summerland subdivision (Priority: High)*
- b) *Encourage residents to download GENASYS for emergency evacuation notices for the Summerland subdivision (Priority: High)*
- c) *Reach out to absentee owners regarding fire hazard issues and conduct fuel reduction project in the Thoms Creek Estate.*

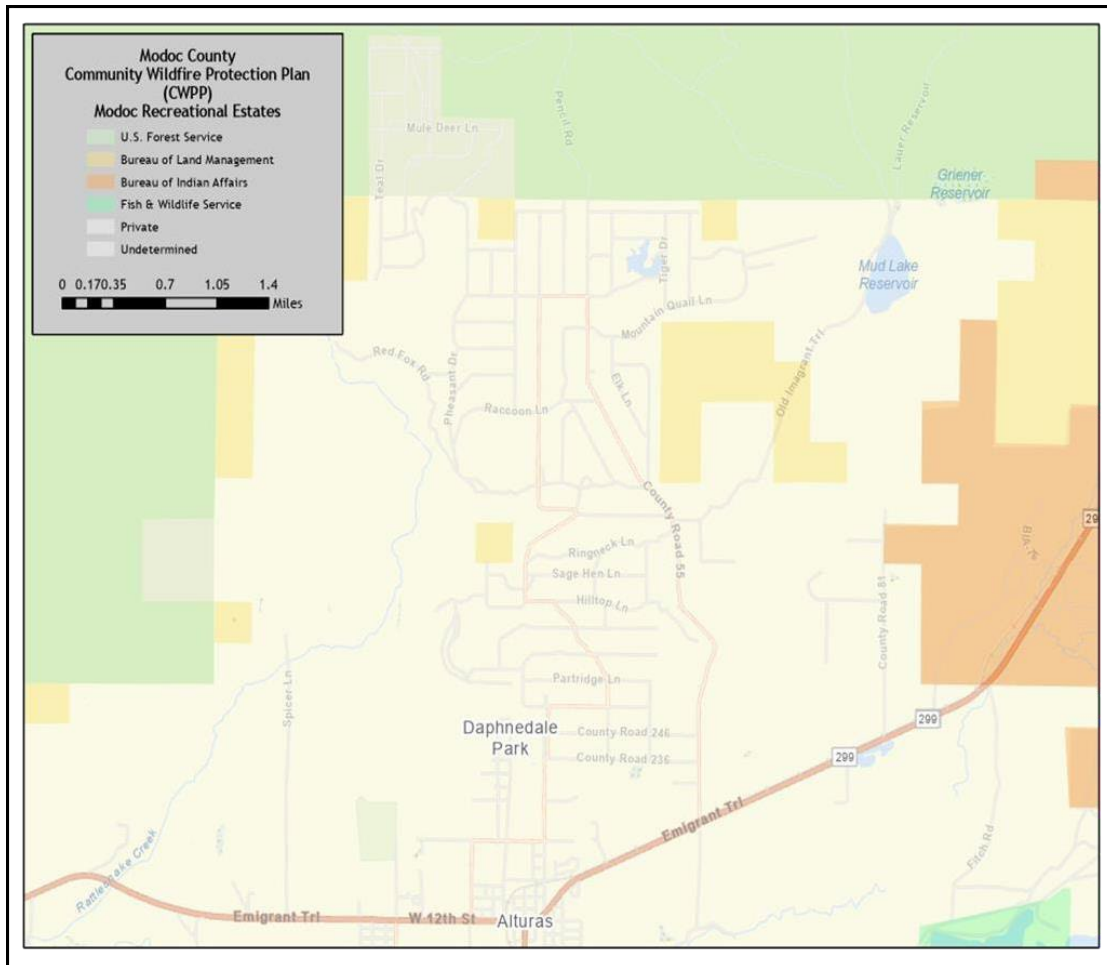


### 5.3. Alturas

1. Alternative evacuation route, emergency water source, and heavy fuels around the Modoc Recreational Estates (MRE): MRE is a residential subdivision northwest of Alturas with 1,900 lots and 350 year-round residents. MRE borders Forest Service land where heavy fuel loads are present. There is only one paved, maintained road (Pencil Road) that would be used by fire personnel and residences in the case of an emergency. MRE does not have an emergency water source for fire protection. Many absentee owners in MRE, as well as other subdivisions in Modoc County, need support understanding and creating defensible space and fuel reduction in residential areas.

**Recommendations:**

- a) *Develop an alternative evacuation route, evacuation plan (GENASYS), and emergency fire suppression water source (IN PROCESS) for the MRE subdivision.*
- b) *Clear brush from the right-of-way on both sides of roads maintained by MREA, as well as Pencil and Pintail roads.*
- c) *Maintain existing fuel breaks and conduct defensible space outreach to continue effective home ignition zone compliance.*



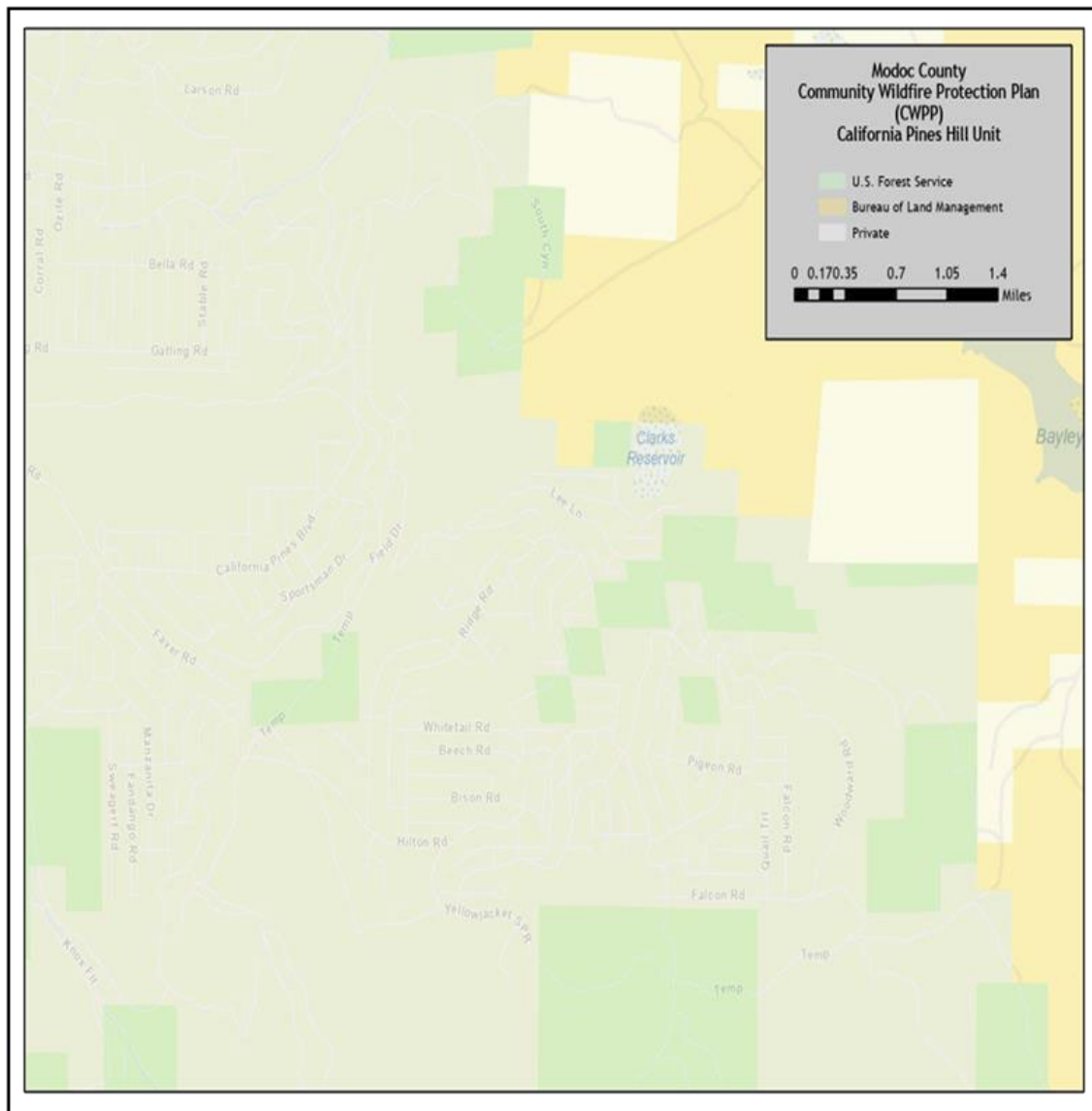
## 5.4. California Pines

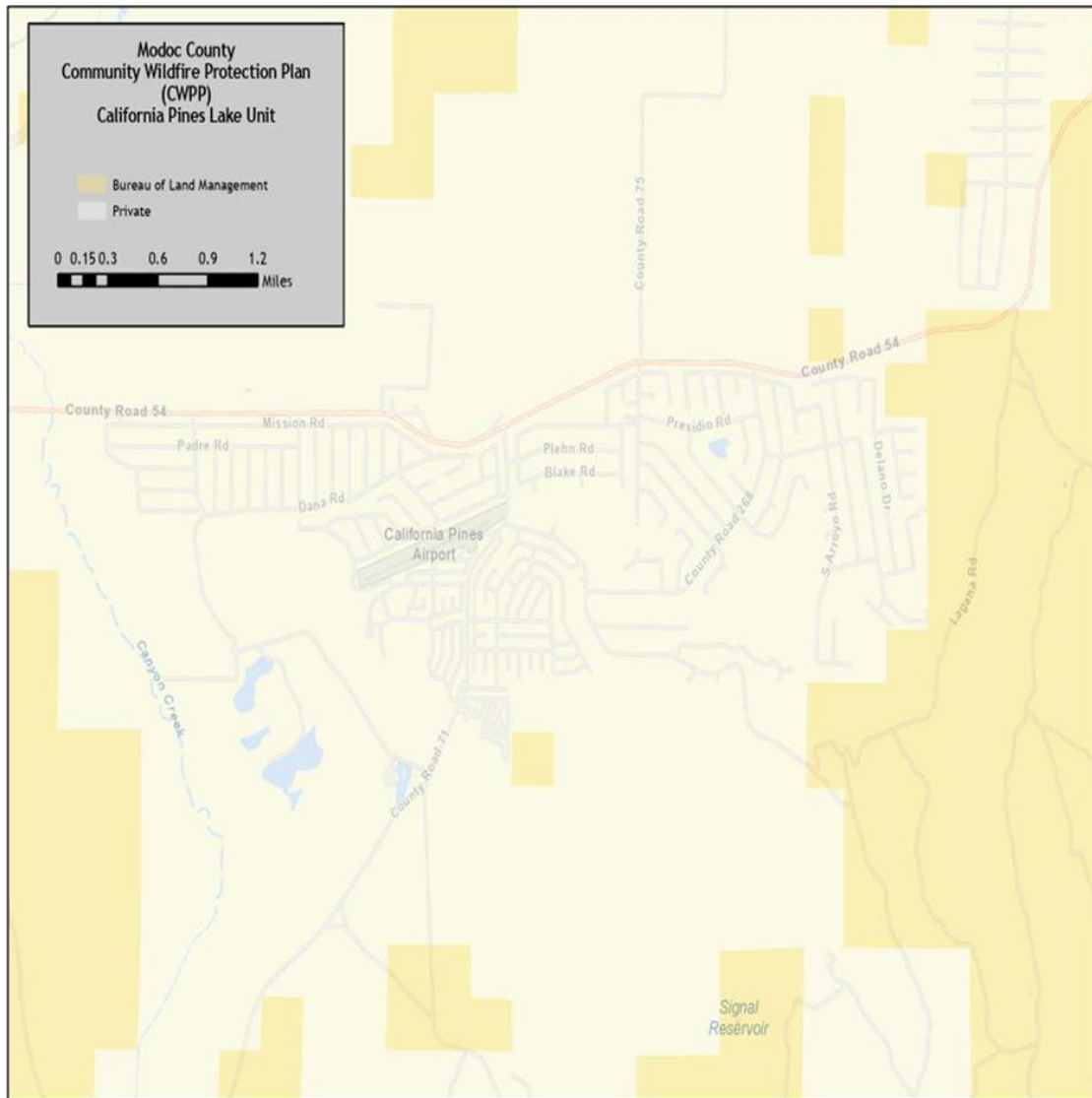
1. Heavy fuel loads and poorly marked roads in the California Pines Development: The Cal Pines Development has heavy fuel loading around the community. Many of the roads are unmarked or marked incorrectly. The upper units receive afternoon down slope winds and many lightning strikes.

Many of the lots were purchased by absentee owners and contain heavy downed and dying vegetation.

**Recommendations:**

- a) *Maintain MFSC fire break projects around Cal Pines, educate absentee landowners regarding dangers of catastrophic wildfire, and improve road signage.*





## 5.5. Likely

1. Unsafe fuel loads, evacuation plan and improved fire protection resources in Likely, CA:

A shaded fuel break was constructed in 2017-2018, maintenance is needed to protect the residents and properties southeast and east of Likely, CA, including the Pine Shadows subdivision at the north end of Jess Valley. This area currently has no evacuation plan, and the Likely Rural Fire Protection District has limited resources.

### ***Recommendations:***

- a) *Evaluate home ignition zone wildfire risk to properties along County Road 60.*
- b) *Maintain the Juniper Acres shaded fuel break to protect residents and properties southeast and east of Likely*

## 5.6. Adin

1. Fuel breaks east of Adin, south of Ash Creek, and around Lookout ranchettes: Fuel breaks are needed east of Adin and south of Ash Creek to protect communities and historic structures.

### **Recommendations:**

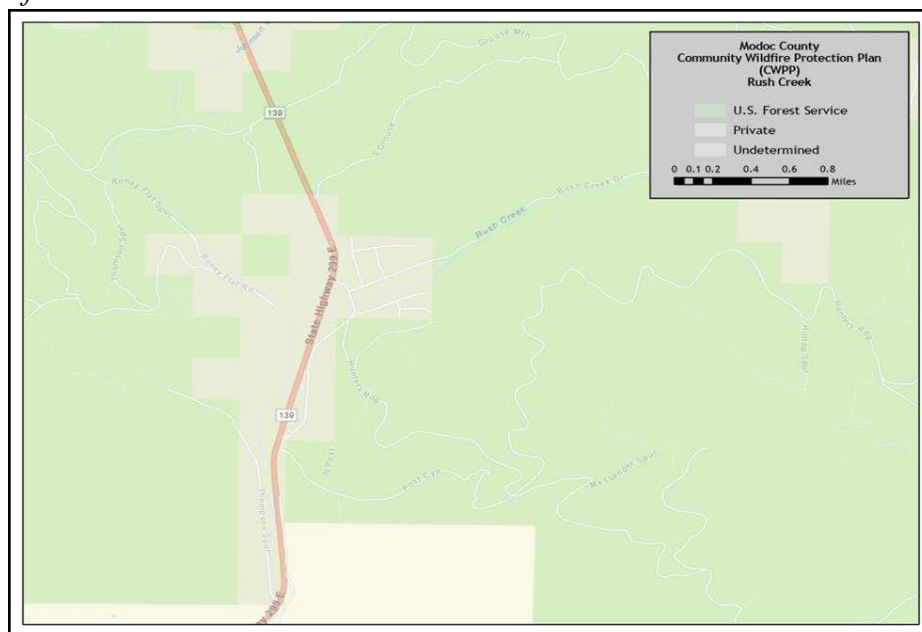
- a) *Develop a fuel reduction project on the eastside of Adin.*
  - b) *Reduce fuel loads in Lookout ranchettes on absentee landowner's properties.*
2. Evacuation fire plan, evacuation routes, and emergency water source for the Butte Creek Subdivision: The Butte Creek Subdivision need an evacuation fire plan, roads, fuel reduction throughout the community, and water resources.

### **Recommendation:**

- a) *Develop an evacuation plan, improve evacuation route roads, and develop an emergency fire suppression water source for the Butte Creek subdivision.*
  - b) *Implement fuel reduction project throughout the Butte Creek subdivision enhancing home ignition zone and defensible space compliance.*
3. Water resources and evacuation plan for the Rush Creek Estates: Rush Creek Estates consists of many absentee owners in an area of limited egress and no water source.

### **Recommendations:**

- a) *Develop evacuation plan, improved evacuation routes, and emergency fire suppression water resources in the form of a standpipe for emergency fire protection for the Rush Creek Estates.*

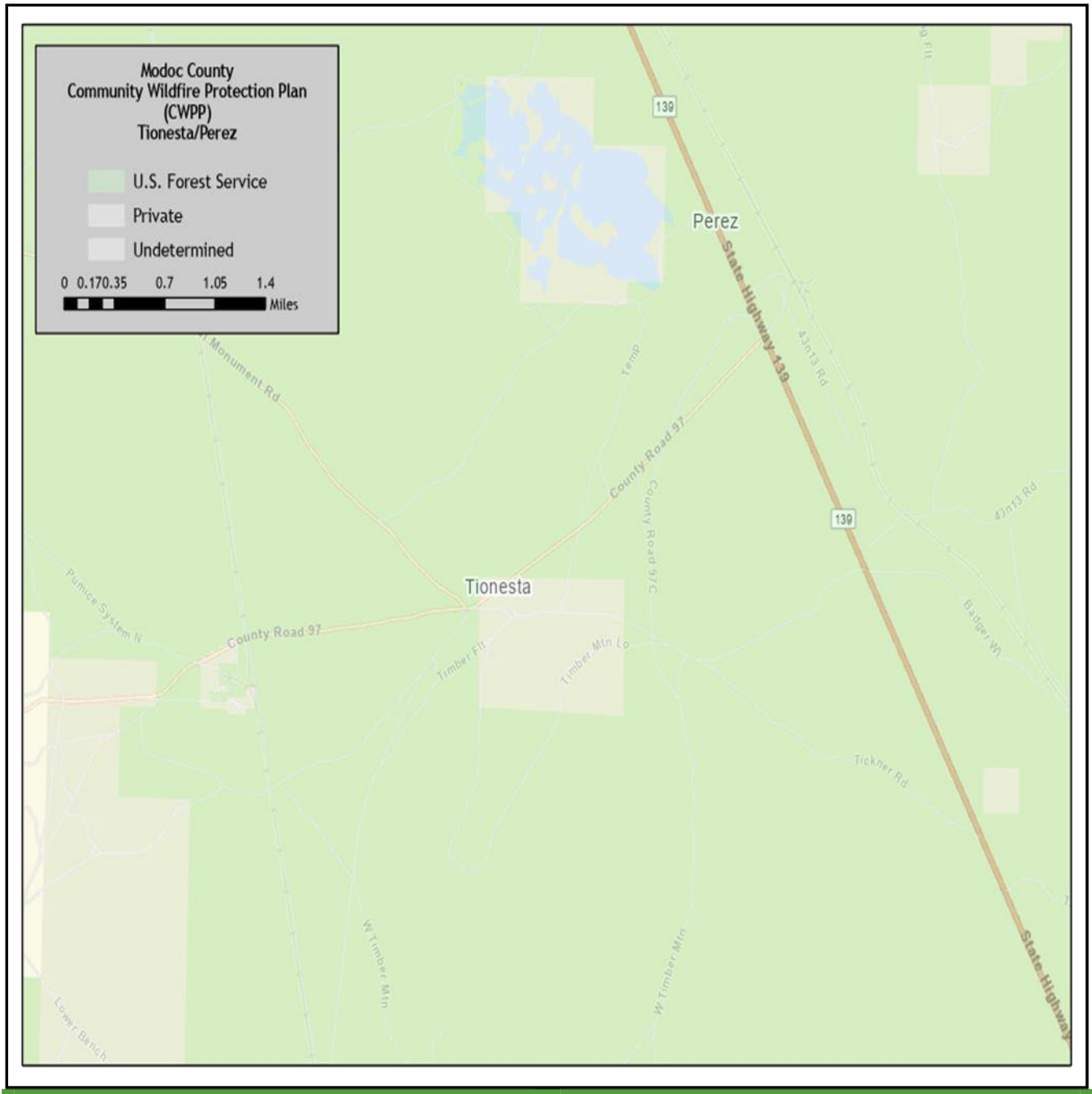


## 5.7. Tionesta/Perez

1. Fuel reduction around the Tionesta and Perez areas, south of Newell: Fuel reduction is needed around the community of Tionesta and the Perez area around power lines and to improve wildlife habitat.

### ***Recommendations:***

- a) *Fuel reduction project around the Perez area - pumping station*



## 5.8. Other Project Identification Resources

In addition to working on these community priorities the Modoc County FSC will work with agencies in the region to implement projects identified in the:

- Cal Fire Lassen/Modoc Unit Strategic Fire Plan\_  
<https://www.fire.ca.gov/media/bj4dmn2c/2022-lassen-modoc-plumas-unit-fire-plan.pdf>
- Modoc County Emergency Operations and Hazard Mitigation Plan\_  
<https://www.modocsheriff.us/office-emergency-services/pages/oes-documents>
- Modoc National Forest Schedule of Proposed Actions (SOPA)  
<https://www.fs.usda.gov/sopa/forest-level.php?110509>
- BLM Applegate Field Office Land Use Plan\_  
<https://www.blm.gov/programs/planning-and-nepa/plans-in-development>
- Modoc County Zoning Ordinance\_  
[https://www.co.modoc.ca.us/departments/planning/zoning\\_ordinance\\_2.php](https://www.co.modoc.ca.us/departments/planning/zoning_ordinance_2.php)

## Appendix A: Maps

### List of figures

Figure 1: Modoc County Vicinity Map

Figure 2: Modoc County Geography

Figure 3: Modoc County Land Ownership

Figure 4: Modoc County Communities & SILVIS Labs WUI Designation

Figure 5: Modoc County Communities in High to Extreme Fire Threat Zone

Figure 6: Modoc County Designated Wildland Urban Interface (WUI)

Priority Project Area

Figure 7: Federal, State, and Local Fire Protection Areas in Modoc County

Figure 8: Modoc County Fire History

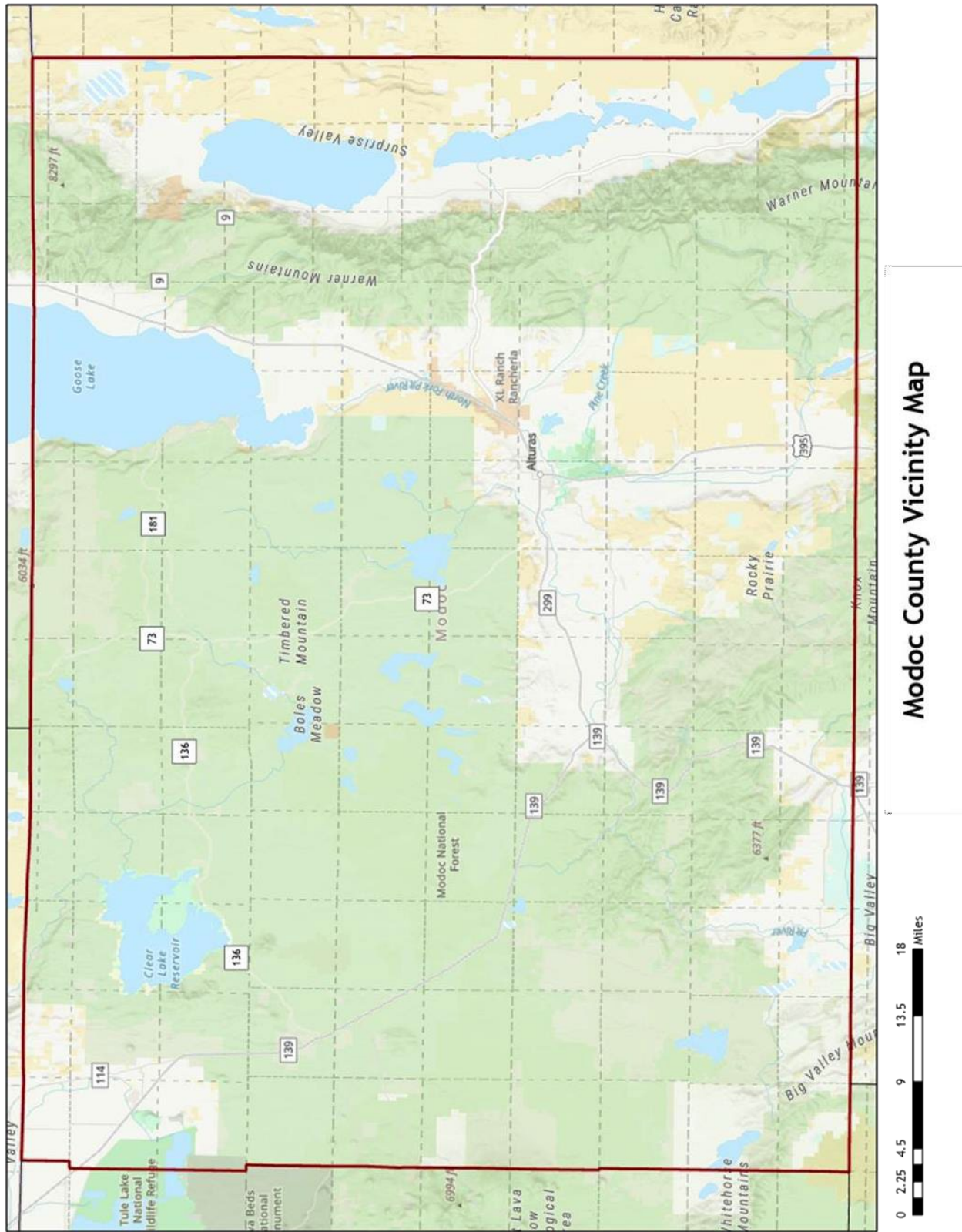
Figure 9: Lassen-Modoc Cal Fire Unit Fire History

Figure 10: Fire Hazard Severity in Modoc County's State Responsibility Area

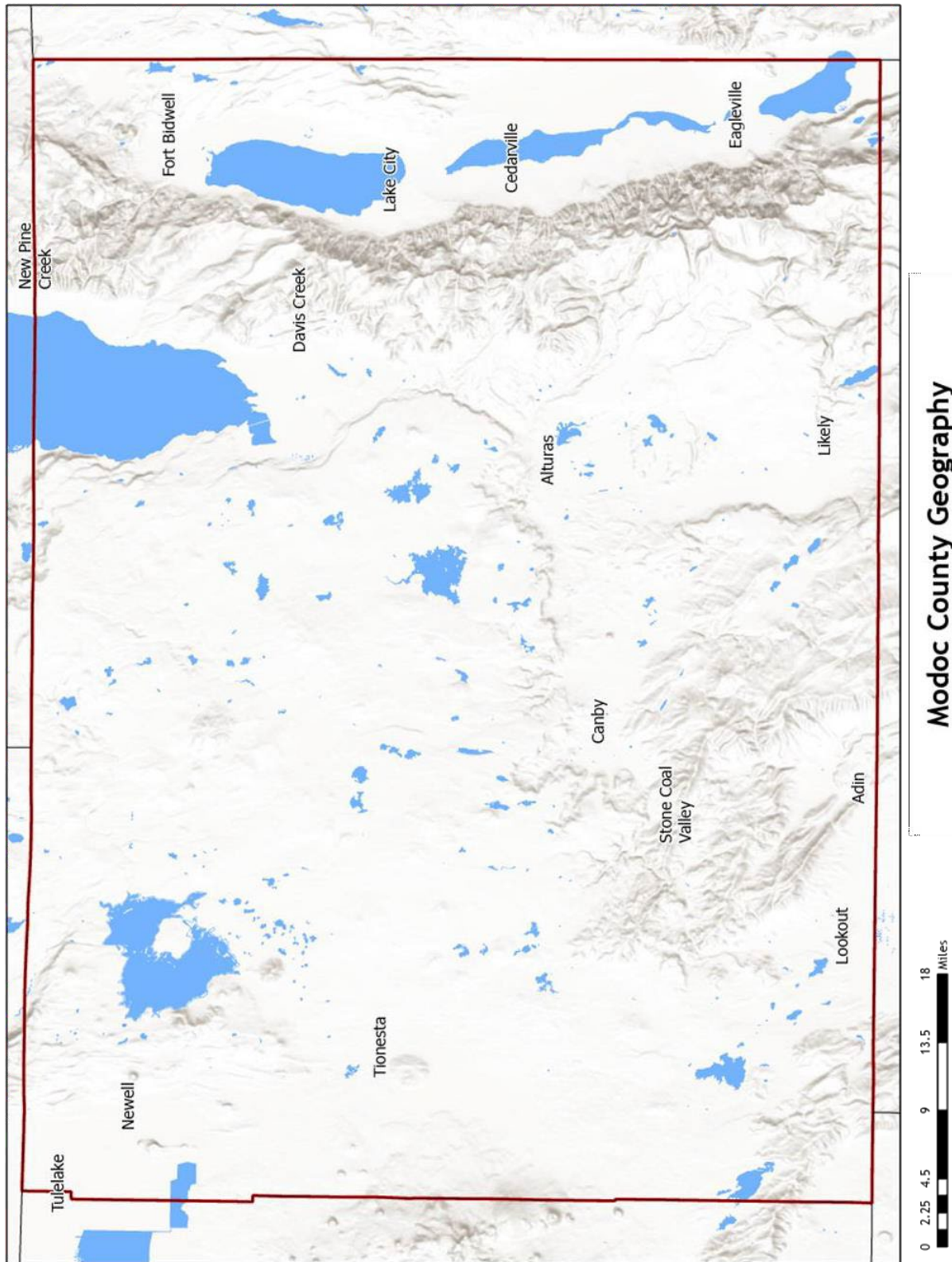
Figure 11: Fire Threat in Modoc County

Figure 12: Fire Threat in Modoc County's Designated WUI

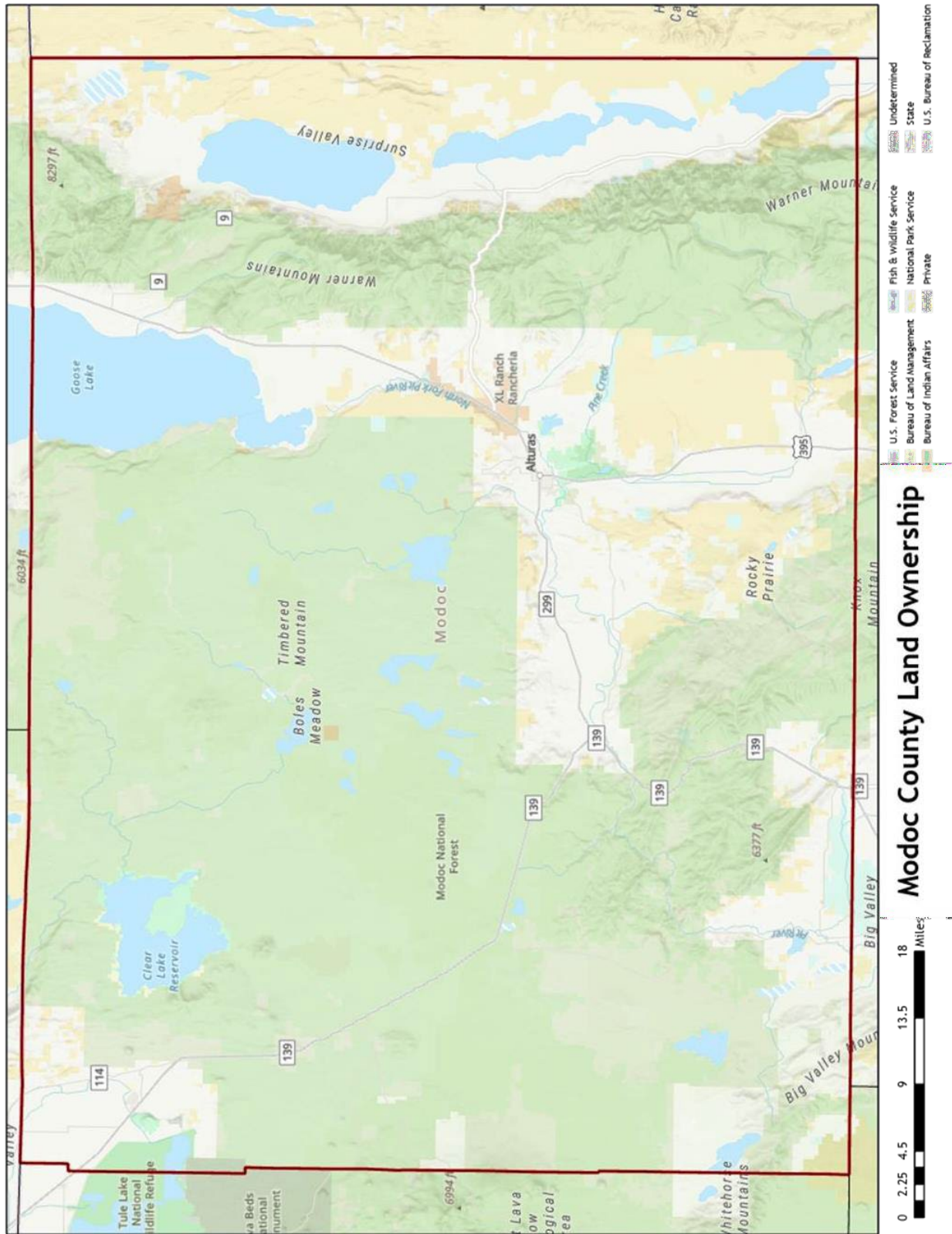
# 1. Modoc County Vicinity Map



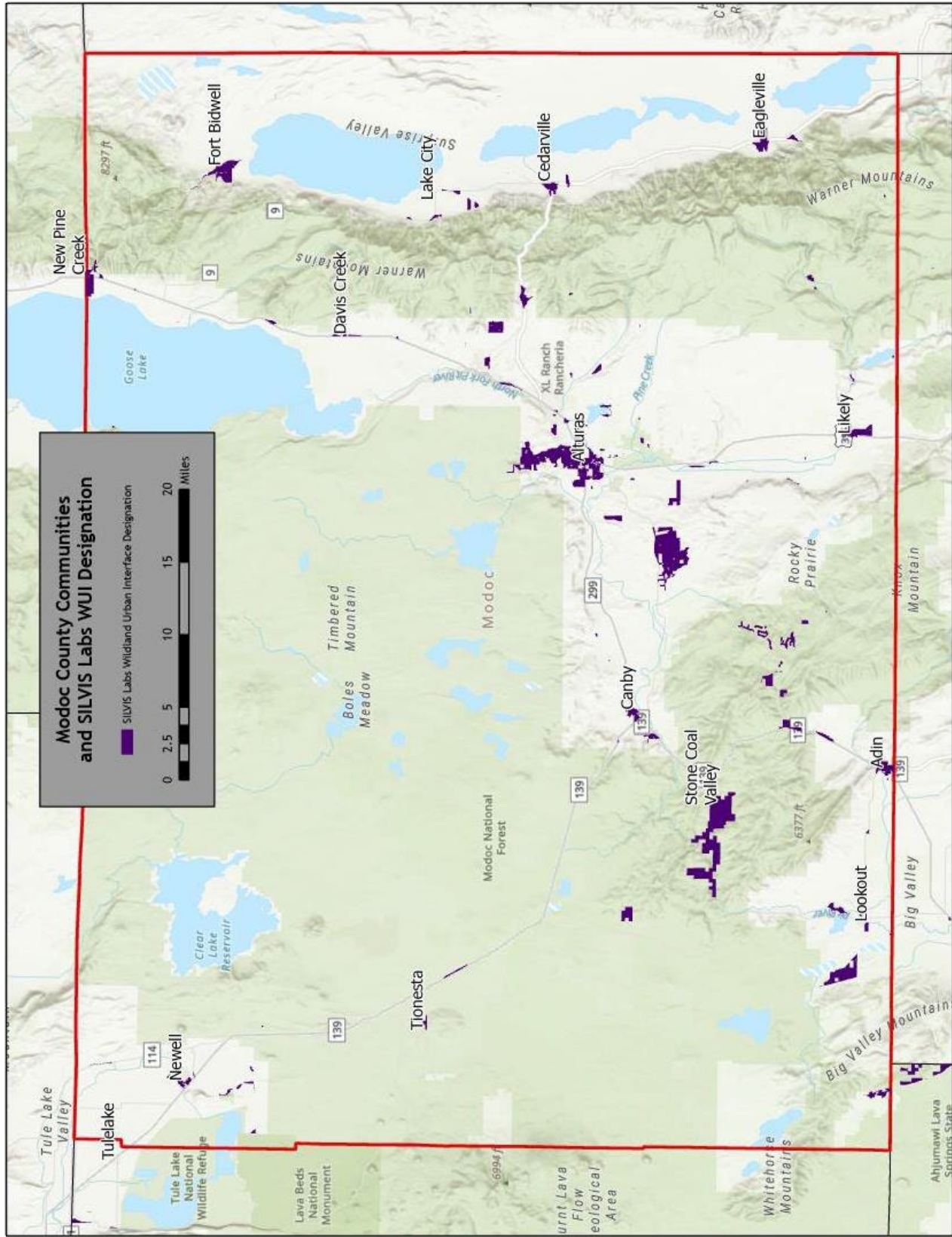
## 2. Modoc County Geography Map



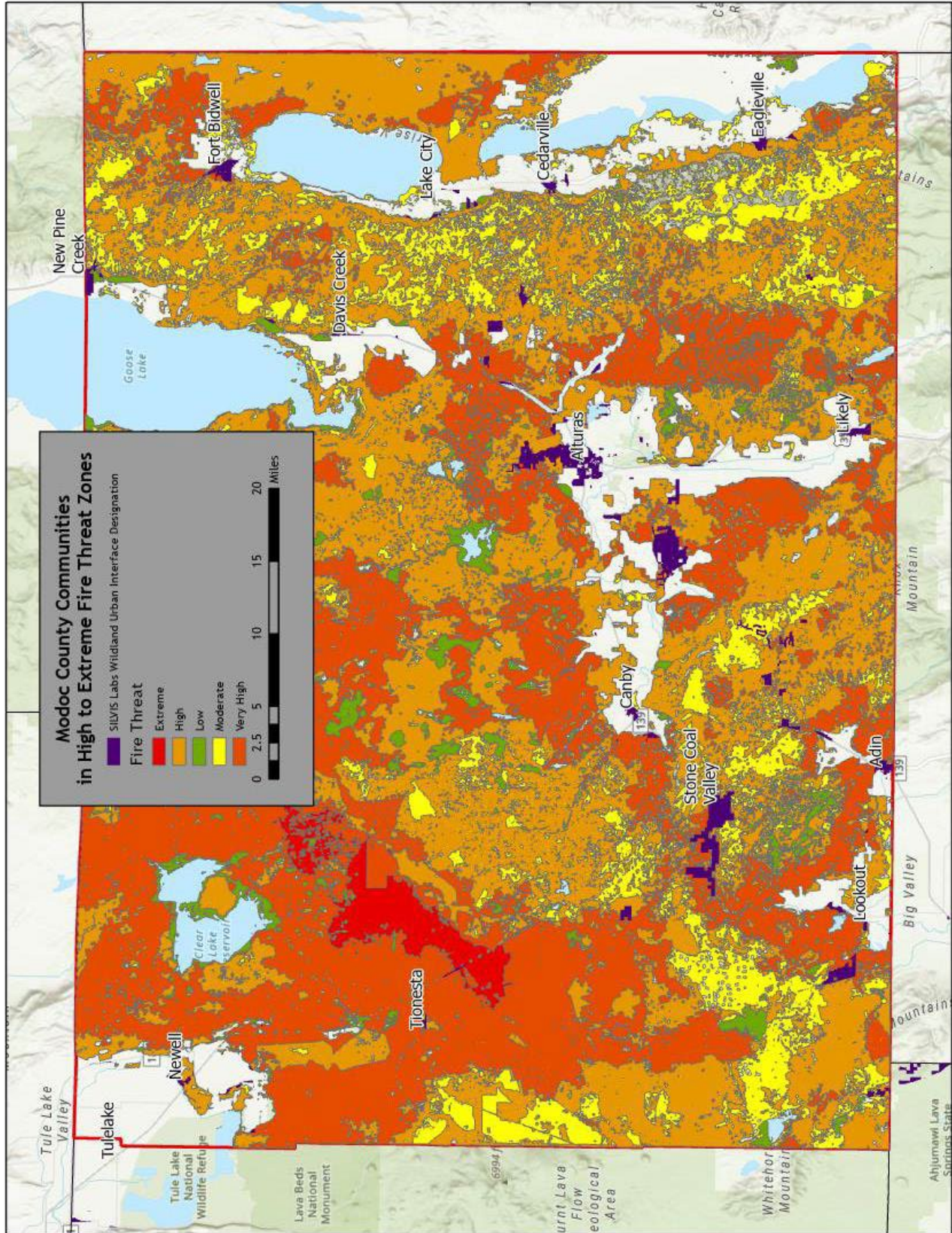
### 3. Modoc County Land Ownership



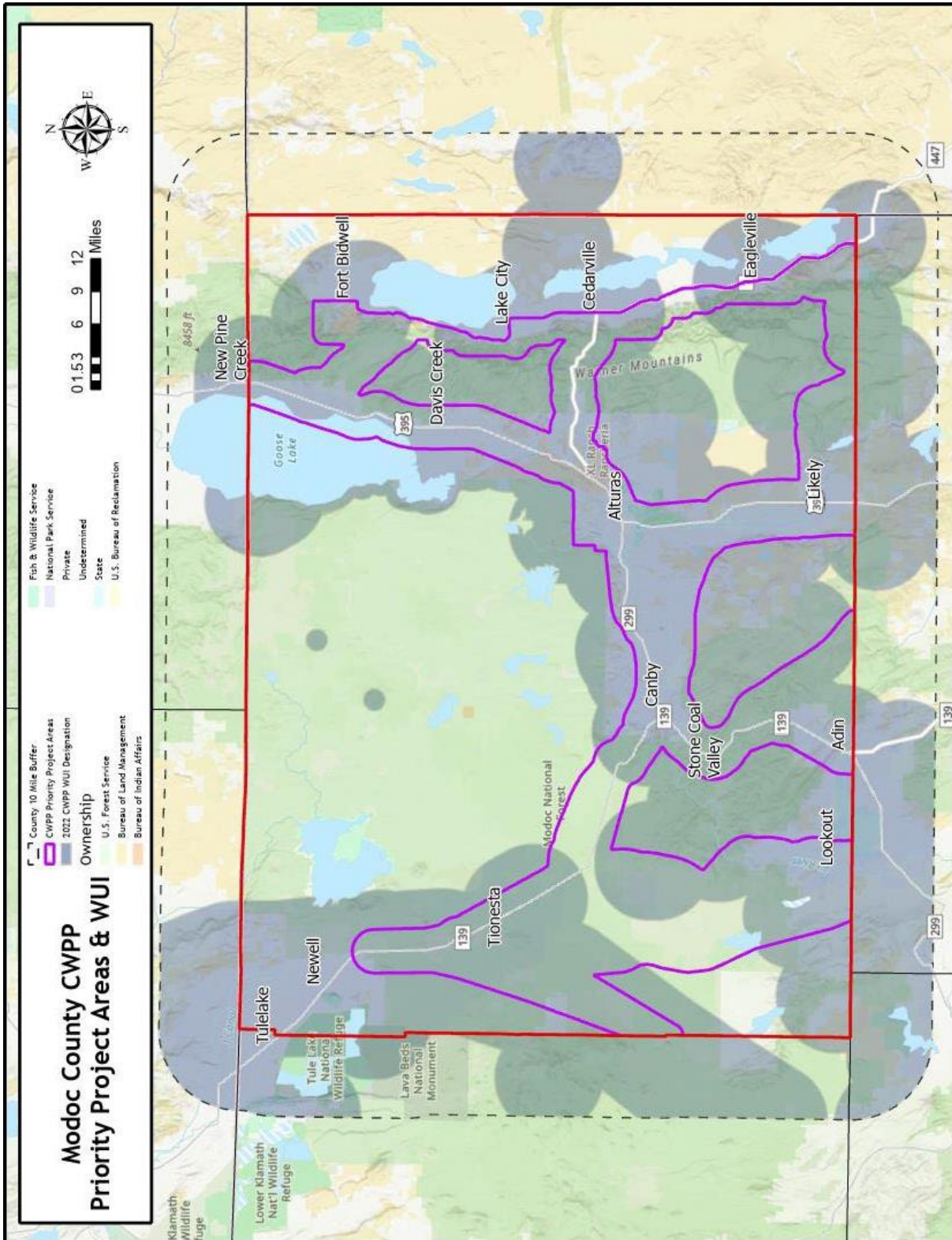
## 4. Modoc County Communities & SILVIS Labs WUI Designation



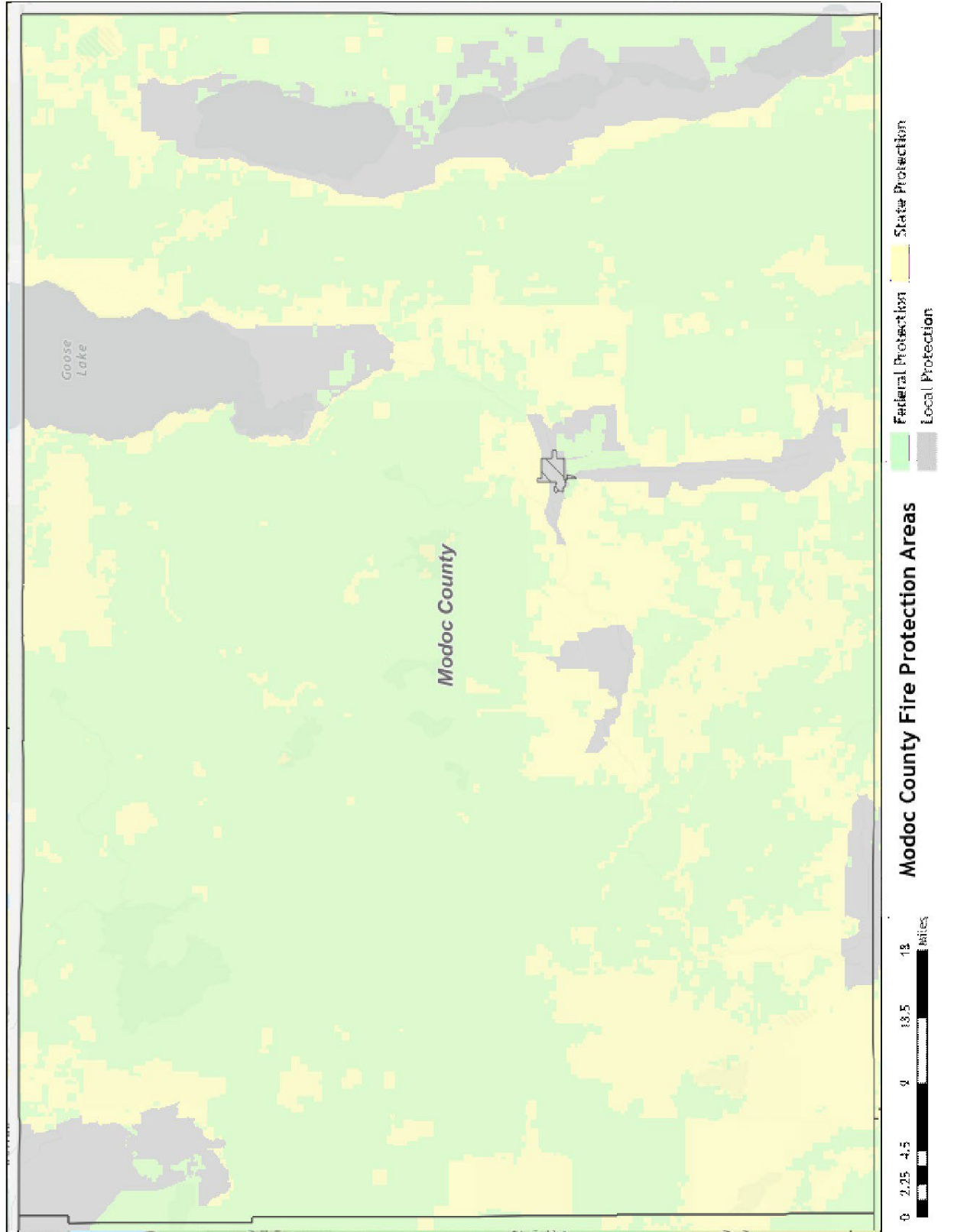
## 5. Modoc County Communities in High to Extreme Fire Threat Zones



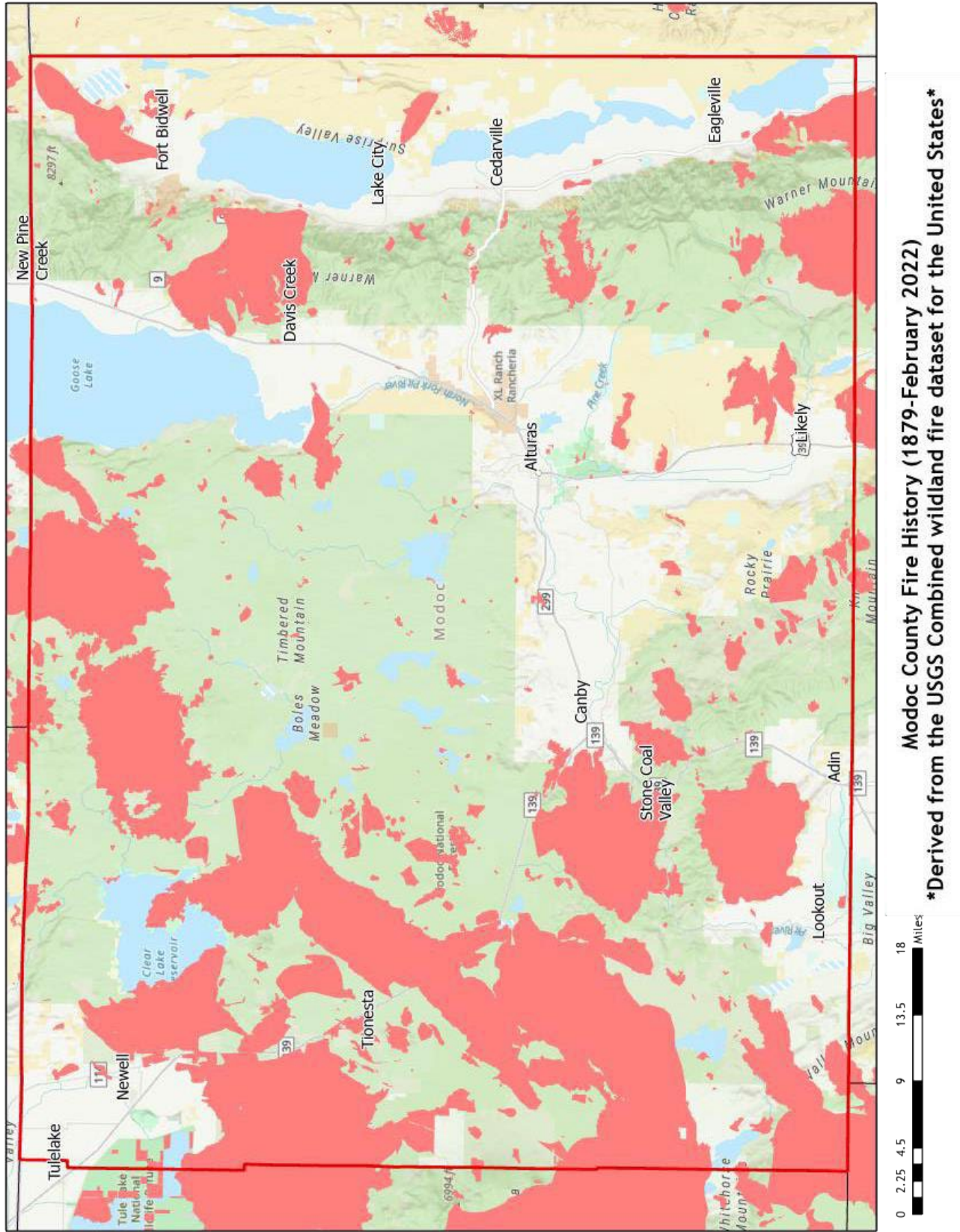
## 6. Modoc County Designated Wildland Urban Interface (WUI) & Priority Project Areas



## 7. Modoc County Fire Protection Areas (FRA, SRA, LRA)

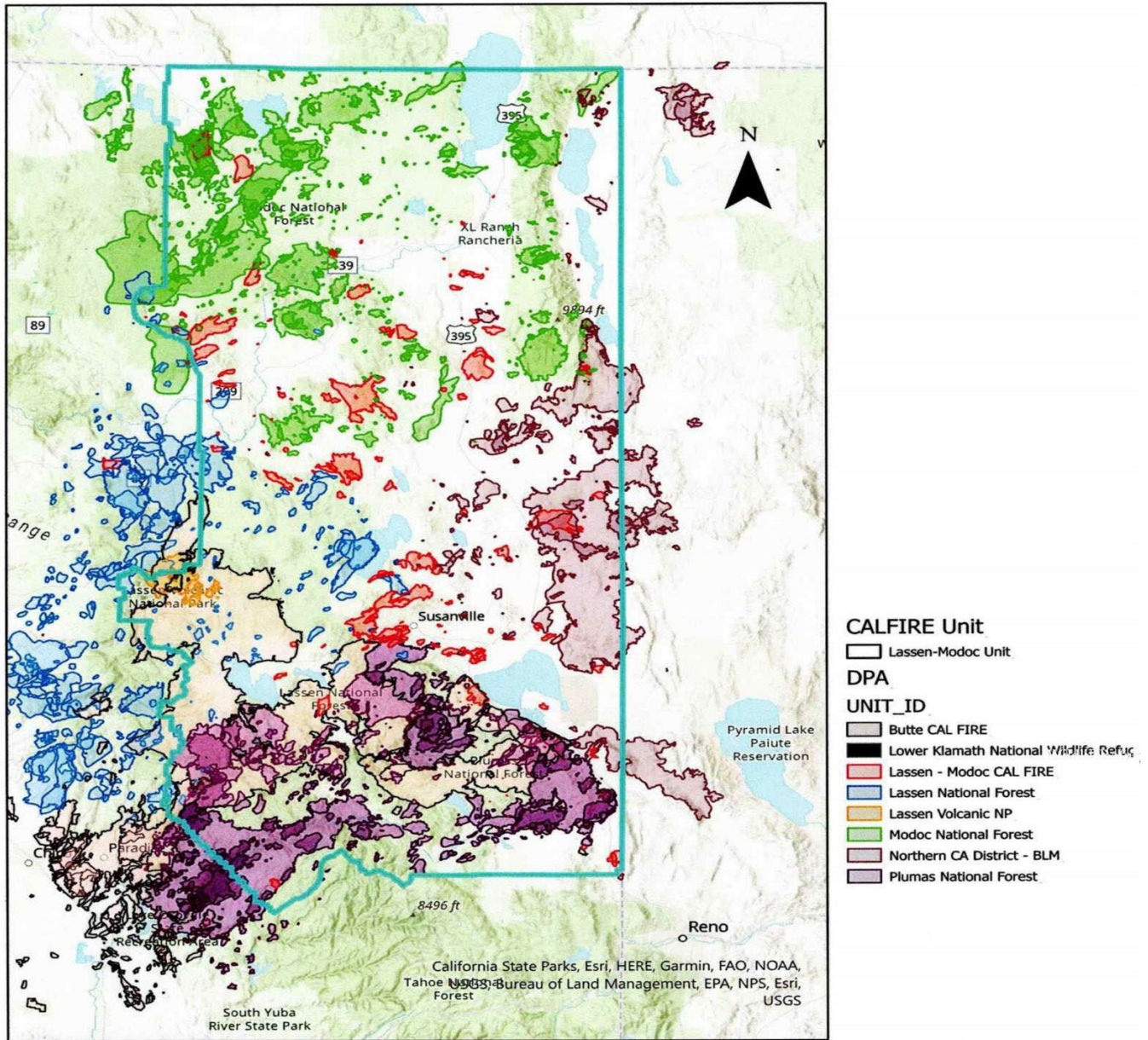


## 8. Fire History in Modoc County



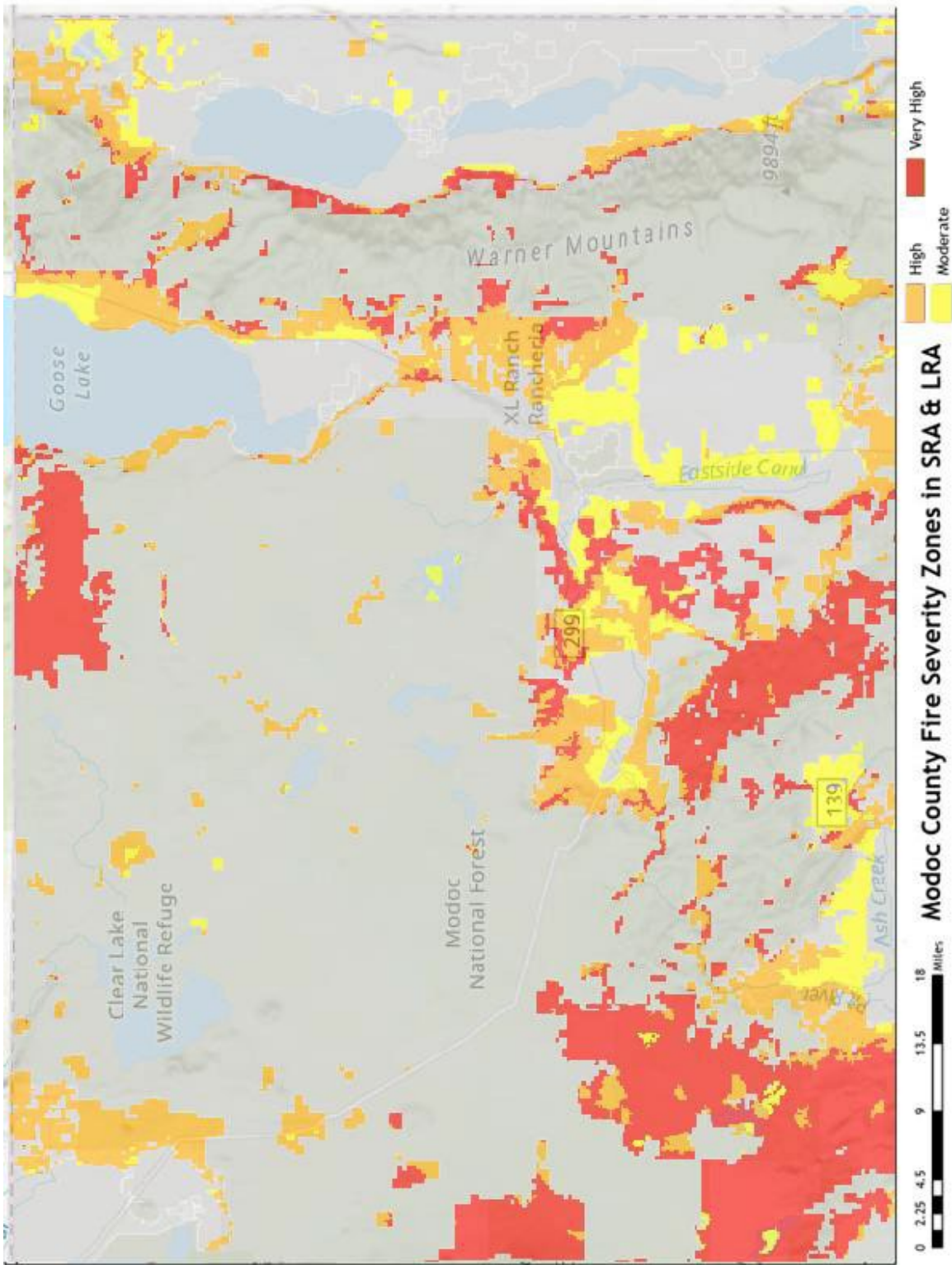
**Modoc County Fire History (1879-February 2022)**  
 \*Derived from the USGS Combined wildland fire dataset for the United States\*

## 9. Cal Fire Lassen-Modoc Unit Fire History

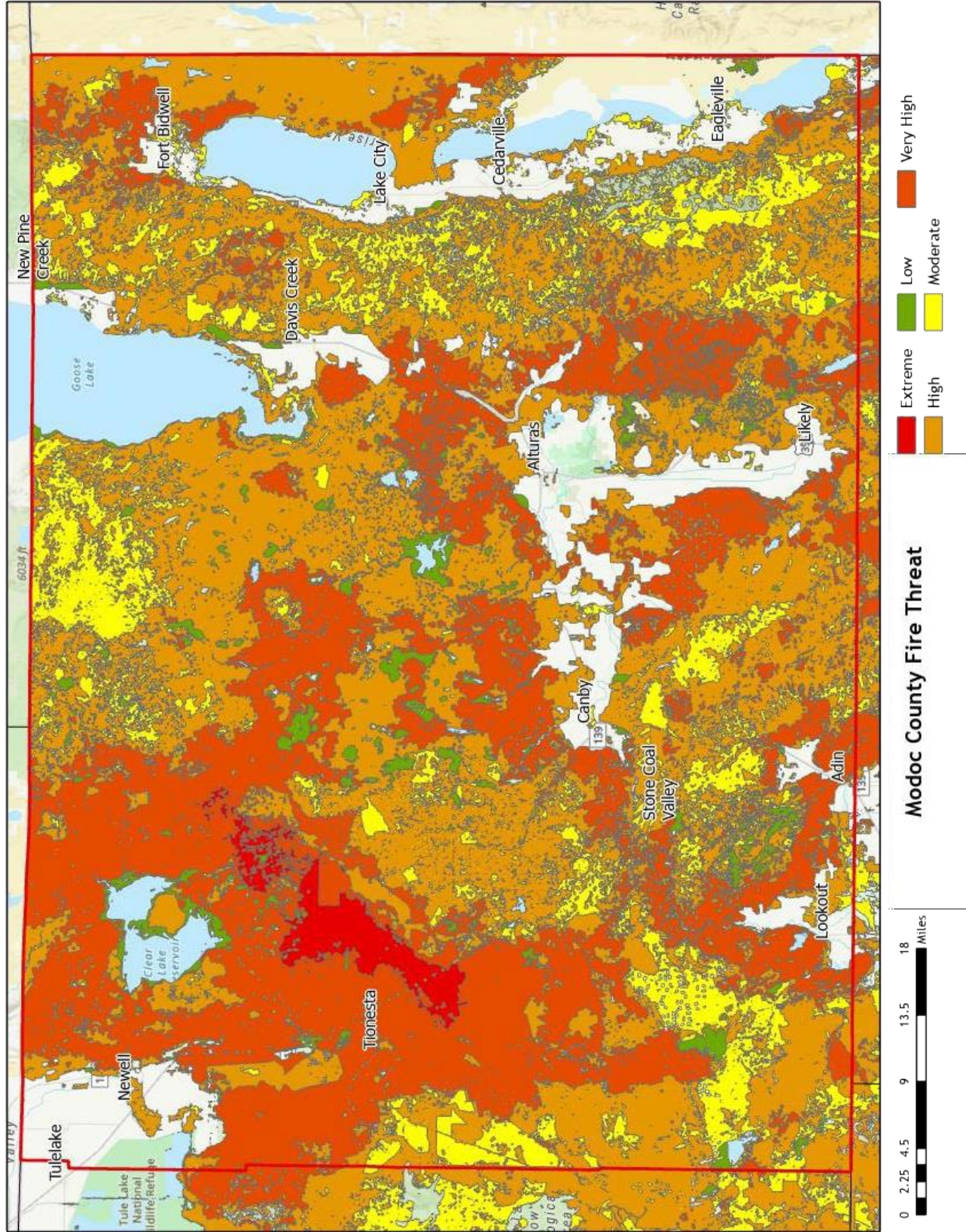


# Lassen Modoc Unit Fire History 1878-2021

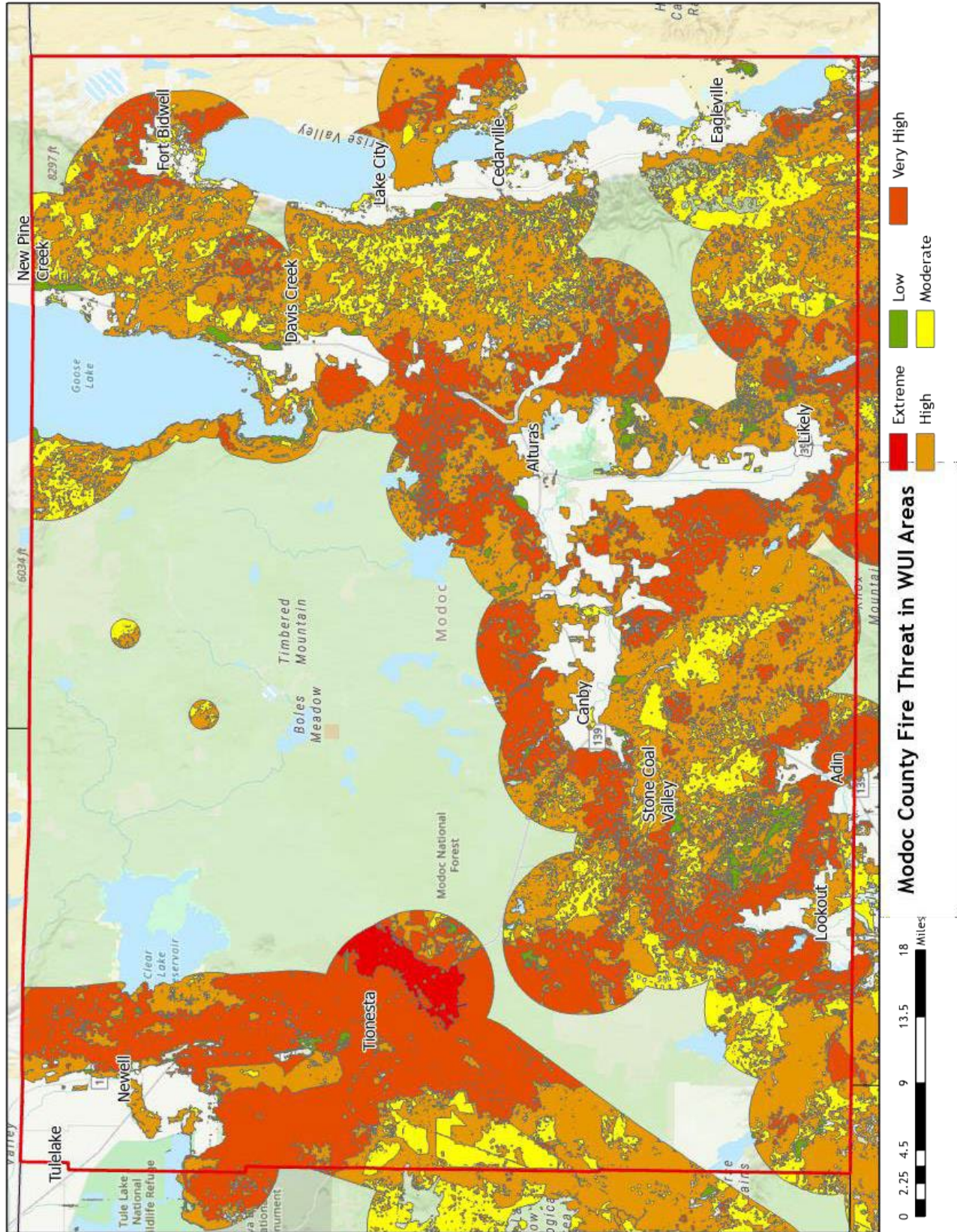
# 10. Fire Hazard Severity in Modoc County State Responsibility Areas



# 11. Modoc County Fire Threat



## 12. Modoc County Fire Threat in the WUI



## Appendix B: Modoc County CWPP Working Group – 2024 Project Ranking

PROJECT	PROJECT TYPE	PROJECT AREA	RANK/ PRIORITY
<i>Continue to seek annual funding for the MFSC Residential Chipping and Landowner Assistance Program.</i>	Fuel Reduction	County Wide	<b>#1</b>
<i>Maintain MFSC fire break projects across the county, educate landowners and absentee landowners regarding dangers of catastrophic wildfire, Firewise USA, and improve road signage.</i>	Emergency Planning/ Fuel Reduction	County Wide	<b>#2</b>
<i>Develop a fuel reduction project to create fire break in the WUI on the upper end of Summerland to protect residences.</i>	Fuel Reduction	Cedar Pass	<b>#3</b>
<i>Seek annual funding to start a County Public Road Chipping Program to reduce fuel loads along public roads to improve access for the public and emergency personnel.</i>	Fuel Reduction/ Emergency Planning	County Wide	<b>#4</b>
<i>Develop an alternative evacuation route, evacuation plan, and emergency fire suppression water source for the Modoc Recreational Estates (MRE) and Rush Creek subdivisions.</i>	Emergency Planning	Alturas/ Adin	<b>#5</b>
<i>Work with the Modoc National Forest, Bureau of Land Management (BLM) – Applegate Field Office, and Sierra Nevada Conservancy to develop a Fire Prevention Plan for Modoc National Forest and BLM managed lands within the WUI and obtain funding to implement landscape level fuel reduction projects in high priority areas.</i>	Emergency Planning/ Fuel Reduction	County Wide	<b>#6</b>
<i>Periodic outreach in English and Spanish, including workshops, newsletters, web posts, Firewise USA Program, regarding defensible space, fire safe landscaping, and the MFSC's chipper program.</i>	Outreach	County Wide	<b>High</b>
<i>Develop Modoc County FSC website. Utilize social media to share fire prevention information and resources.</i>	Outreach	County Wide	<b>High</b>

<b>PROJECT</b>	<b>PROJECT TYPE</b>	<b>PROJECT AREA</b>	<b>RANK/PRIORITY</b>
<i>Conduct outreach to landowners to identify properties that pose a fire risk to neighbors and the community.</i>	Outreach/ Fuel Reduction	County Wide	<b>High</b>
<i>Identify critical areas along easements and right-of-ways that would benefit from roadside chipping.</i>	Emergency Planning/ Fuel Reduction	County Wide	<b>High</b>
<i>Evaluate existing fuel breaks including CalPines, Rush Creek, Emerson Canyon, MRE, Granger Canyon, Lake City, Franklin Canyon and obtain funding to maintain them.</i>	Monitoring/ Fuel Reduction	County Wide	<b>High</b>
<i>Continue to develop and maintain a contiguous fuel break from Fort Bidwell to south of Eagleville.</i>	Fuel Reduction	Surprise Valley	<b>High</b>
<i>Develop alternative evacuation route for the Summerland subdivision.</i>	Emergency Planning	Cedar Pass /Alturas	<b>High</b>
<i>Create an evacuation plan for the Summerland subdivision.</i>	Emergency Planning	Cedar Pass/ Alturas	<b>High</b>
<i>Reach out to absentee owners regarding fire hazard issues and conduct fuel reduction project in the Thoms Creek Estate.</i>	Outreach/ Fuel Reduction	Alturas	<b>High</b>
<i>Encourage Modoc County to adopt Local Response Area (LRA) regulations equivalent to State Response Area (SRA) regulations.</i>	Policy	County Wide	<b>High</b>
<i>Clear brush from the right-of-way on both sides of roads maintained by MREA; as well as Pencil and Pintail roads.</i>	Fuel Reduction	Alturas	<b>Medium</b>
<i>Evaluate wildfire risk to properties along County Road # 60</i>	Emergency Planning	Alturas/ Likely	<b>Medium</b>
<i>Develop a fuel reduction project on the eastside of Adin</i>	Fuel Reduction	Adin	<b>Medium</b>
<i>Fuel reduction project around two pumping stations in the Perez area</i>	Fuel Reduction	Tule Lake/ Newell	<b>Medium</b>
<i>Formation of a Prescribed Burn Association with personnel training and education for landowners and community members requesting prescribed burns.</i>	Outreach/ Fuel Reduction	County Wide	<b>Medium</b>
<i>Develop a monitoring plan that identifies responsible parties to annually evaluate existing fuel break.</i>	Monitoring	County Wide	<b>Low</b>

<b>PROJECT</b>	<b>PROJECT TYPE</b>	<b>PROJECT AREA</b>	<b>RANK/PRIORITY</b>
<i>Pursue funding to continue training and obtain suppression equipment for volunteer fire stations.</i>	Training	County Wide	<b>Low</b>
<i>Create a fuel break to protect residents and properties southeast and east of Likely</i>	Fuel Reduction	Likely	<b>Low</b>
<i>Reduce fuel loads in Big Valley Ranchettes on absentee landowner's properties.</i>	Fuel Reduction	Adin	<b>Low</b>
<i>Develop an evacuation plan, improve evacuation routes, and develop emergency fire suppression water source for the Butte Creek subdivision</i>	Emergency Planning	Adin	<b>Low</b>
<i>Implement fuel reduction project around the Butte Creek subdivision.</i>	Fuel Reduction	Adin	<b>Low</b>