Lassen – Modoc Unit

2008

Fire Management Plan

FIRE MANAGEMENT PLAN 2008
Lassen-Modoc Unit

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I. Executive Summary

The Lassen Modoc Unit includes Lassen, Modoc and Plumas Counties and portions of Shasta and Siskiyou Counties. The Unit's Fire Management Plan is intended to provide information to Cal Fire personnel, the various County Boards of Supervisors, Fire Safe Councils and other stakeholders focused on identifying specific problem areas and solving the mutually agreed upon fire issues.

The Lassen Modoc Unit Fire Management Plan documents the assessment of the fire situation in the Unit. It includes stakeholder contributions and priorities which identify strategic targets for proactive approaches and project based solutions.

While the Unit Fire Management Plan addresses local needs, the State Board of Forestry and Fire Protection also has legislative mandates dating back to 1945 requiring it to determine the "intensity" or appropriate level of fire protection for all state responsibility areas in California *(Public Resources Code §4130).* The Unit Fire Management Plan is the means of focusing efforts on local needs while working within the framework of the California Fire Plan as adopted by the Board of Forestry and Fire Protection.

It is intended to be an ever-evolving working document which can be used to identify potentially hazardous areas or communities at risk, provide guidelines for fire prevention and protection projects and to assist the Fire Safe Councils and community groups with useful information in making their communities fire safe. This document should be used as a foundation that can be amended over the years as necessary and as a general guide for fire prevention projects within the Lassen Modoc Unit.

The *California Fire Plan (1996)* is outlined within this document. It is the goal of the Unit to apply the California Fire Plan to accomplish a systematic assessment of the fire problem. Through this assessment, the Unit strives to develop "fire safe" communities and reduce the potential occurrence of devastating wildfires. In the efforts to implement the California Fire Plan, the Lassen Modoc Unit utilizes computer based data and Geographic Information System (GIS) to comprehensively analyze fire hazards, assets at risk and the level of service, all of which are included in the Unit Fire Management Plan.

The Unit Fire Management Plan systematically assesses the existing levels of wildland protection services, identifies high-risk and high value areas that are potential locations for costly and damaging wildfires, ranks the areas in terms of priority needs, and prescribes actions that can be taken to reduce future losses. The assessment system has four basic components, which are discussed in greater detail later in this document. These components are:

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Level of Service (LOS)
Assets at Risk (AAR)
Hazardous Forest Fuels
Historic Fire Weather

Unit Fire Plan Assessment Process

The Lassen Modoc Unit Pre Fire Management Program has been in place since 1997. During the past eleven years, data has been validated and processed in order to assess vegetative fuels, assets at risk, fire weather, and level of service calculations. The assessments now include changes in the dynamics of the actual on-the-ground work that has been accomplished. This is an ongoing process.

The development of a method for incorporating the current and past Timber Harvest Plans, Emergency Notices, Exemptions, and Non-Industrial Timber Management Plans into a GIS format is under way. The data to be collected and utilized will include the locations and types of fuels treatments in areas containing assets having the greatest value. This information can be utilized in many aspects by the unit and cooperating agencies.

Unit Fire Plan Data Layers

The Unit Fire Management Plan Data layers, which consist of fuels, weather, fire history, emergency activity reporting, assets at risk and level of service have been completed to date, however, conditions are dynamic in nature and must be re-validated on a regular basis.

Unit Fire Management Plan Integration into Daily Operations

Over the years, many of our managers and supervisors have had priorities and goals to reduce fuels around many of the communities within the Unit. The development of the Unit Fire Management Plan was based on the strong support and assistance from the Fire Safe Councils. Many of the ideas from these collective influences are now coming to fruition.

FIRE MANAGEMENT PLAN 2008
Lassen-Modoc Unit
Key Fire Plan Players

The Lassen-Modoc Unit's Pre Fire Engineer is instrumental in working with the Fire Safe Councils and Cal Fire personnel in the development and implementation of many of the current and proposed projects within Unit. The Battalion Chiefs, Foresters, and Fire Station personnel also work closely with the councils to assist in grant writing, grant administration and preparation and project monitoring.

In closing, the intent of the Lassen-Modoc Unit Fire Management Plan is to document the findings of the assessments, identify and document fuels management goals and to communicate priorities toward solving mutually agreed upon fire problems within the Unit. This Fire Management Plan examines data from over a ten year span (1997 to 2007) to analyze what took place during 2007. Our fire activity for 2007 was above the ten year average.

This Unit Fire Management Plan will be especially helpful to our Fire Safe Councils in supporting their future requests for grant funding and in providing a basis for many of their ongoing and proposed projects and providing the justification needed for these projects. It is the intent of this document to provide a simple, easy to understand report and working guide that will be used and remain as a dynamic document driven by local community needs.

Brad Lutts, Chief
Cal Fire, Lassen Modoc Unit

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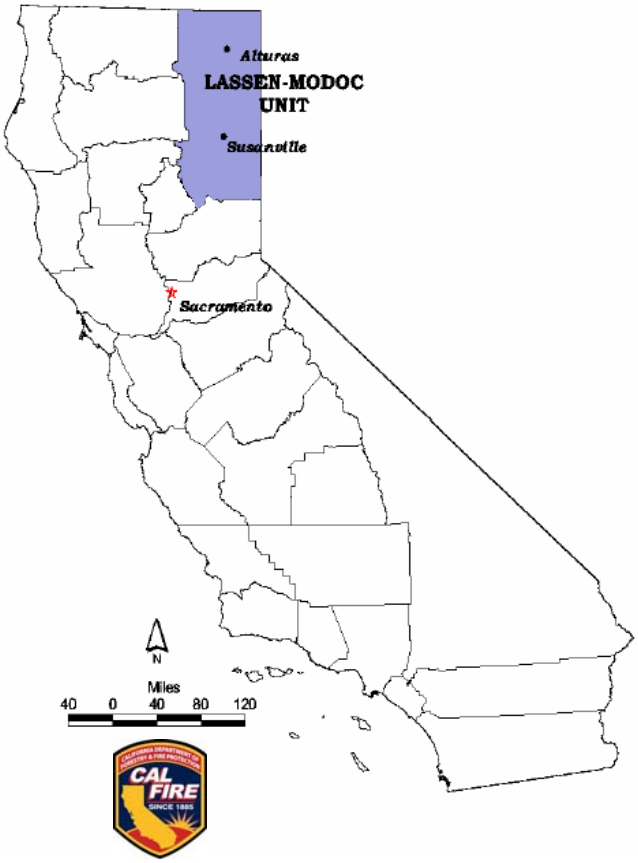
Lassen-Modoc Unit
Lassen Modoc Unit Description

Lassen-Modoc Unit is located in the northeastern corner of the State. It consists of Lassen, Modoc, Plumas and portions of Shasta, Sierra and Siskiyou Counties. A total of 1.6 million acres are within the Direct Protection Area of the Unit.



The Cascade Mountain Range ends near the Almanor Basin. The Sierra Nevada Range begins and runs to the South along the Diamond Mountains on the Southwest edge of the Honey Lake Valley. The unit encompasses the Northeastern Plateau of California with an average elevation of 5000 feet above sea level.

Vegetation types range from mixed conifer and ponderosa and lodgepole pines along the West side of the Unit, to sage brush, oaks, and annual grasses mixed with juniper in the desert to the East. The Eastern boundary of the Unit is the beginning of the Great Basin, which continues East to the Great Salt Lake of Utah.

The majority of the populated areas are located in the Honey Lake Valley, Lake Almanor Basin, Big Valley and Alturas. The Honey Lake Valley is home to the City of Susanville, and the communities of Janesville, Standish, Litchfield, Wendel, Milford, Herlong, and Doyle.

The Almanor Basin consists of the City of Chester, Almanor, Almanor West, Prattville, Peninsula, Hamilton Branch, Canyon Dam, Clear Creek and Westwood. The Big Valley area includes the communities of Bieber, Nubieber, Lookout, and Adin. The Alturas area consists of the City of Alturas and the towns of Likely, Canby, Cedarville, Davis Creek and the community of Cal Pines.

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Lassen-Modoc Unit

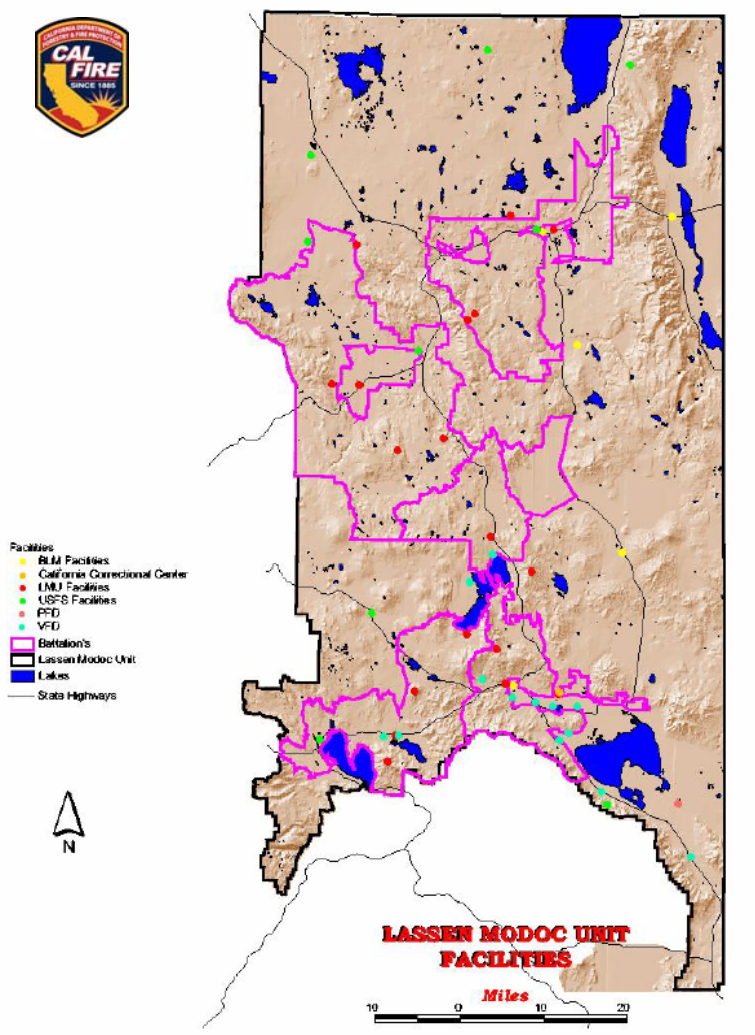
U.S. Highway 395 runs North to South along the East side of the Unit, from Lakeview, Oregon to Reno, Nevada. State Highways 70, 139, 299, 44 and 36 transect the Unit West to East and State Highway 89 runs North to South along the West side of the Unit traveling through Lassen National Park. Numerous visitors and transients travel these routes throughout the year, as well as interstate commerce from the Sacramento Valley and Oregon in search of a shorter way to the East bound interstate highways.

Logging, correctional institutions and recreation are the major industrial economic factors to the region. Over the past few years, logging has diminished due to environmental concerns and regulations from the Federal and State governments. Recreation, although very seasonal, flourishes during the spring and summer months. Watershed from Lassen-Modoc Unit flows to the Feather River and the Sacramento River. Most of these watersheds are the head waters to these major rivers in the state.

The Lassen-Modoc Unit resources and facilities include:

Susanville Interagency Fire Center
8 Fire Stations,
13 front line fire engines,
2 reserve fire engines,
5 Lookouts,
3 Conservation Camps,
14 Inmate Fire Crews
Susanville Inmate Training Center
3 medium fire bulldozers,
1 medium helicopter with crew.

Volunteer fire departments provide structure fire protection within the unit, with paid fire departments in Susanville City, Janesville, Westwood, West Almanor, Peninsula, Hamilton Branch and Chester. During the winters of 2001 through 2003, the Unit had Cooperative Fire Protection Agreements (Amador Plan) in the communities of the Standish-Litchfield, Westwood, Stones – Bogard, Bieber and Janesville Fire Protection Districts.



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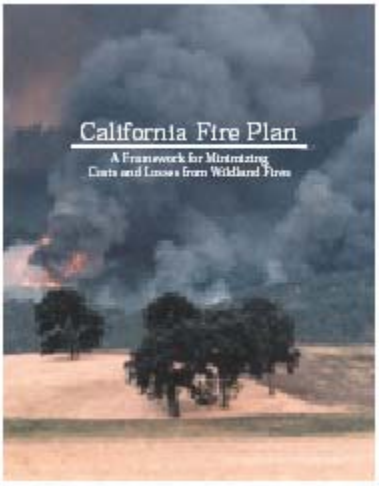
Lassen-Modoc Unit

The Susanville Interagency Fire Center provides emergency dispatch services for all of the Federal, State and local government fire agencies in Lassen County and the Almanor Basin. The Modoc County Sheriffs office dispatches the local government fire agencies in Modoc County.

Cooperating government agencies within the Lassen-Modoc Unit include:

USDA - Lassen National Forest
USDA - Plumas National Forest
USDA - Modoc National Forest
USDI - Lassen Volcanic National Park
USDI - Lava Beds National Monument
USDI - Bureau of Land Management
USDI - Bureau of Indian Affairs
Natural Resource Conservation Service
California Department of Fish and Game
California Department of Transportation
California Highway Patrol
Department of Defense, Herlong Army Depot
Lassen County Sheriffs Office
Plumas County Sheriffs Office
Modoc County Sheriffs Office
Public Works and County offices of Lassen, Modoc and Plumas County

THE CALIFORNIA FIRE PLAN (1996)



The *State Board of Forestry (BOF) and the California Department of Forestry and Fire Protection (Cal Fire) drafted the California Fire Plan (1996).* This document is a comprehensive fire plan for the wildland fire protection in California. The fire plan consists of a planning process which considers: level of service measurements, assets at risk assessments, incorporates the cooperative interdependent relationships of wildland fire protection providers, provides for public stakeholder involvement, and creates a fiscal framework for policy analysis.

Goals and Objectives

The overall goal of the *California Fire Plan* is to reduce the total losses and ever increasing costs from wildland fires in California by protecting the assets at risk through focused pre-fire management prescriptions and improving the potential of initial attack success.

The *California Fire Plan* has five strategic objectives:

- To create wildfire protection zones that reduces the risks to citizens and firefighters.
- To assess all wildlands, not just the state responsibility areas. Analyses will include all wildland fire service providers – federal, state, local government and private. The analysis will identify high risk, high value areas, and develop information on and determine who is responsible, who is responding, and who is paying for wildland fire emergencies.
- To identify and analyze key policy issues and develop recommendations for changes in public policy. Analysis will include alternatives to reduce total cost and losses by increasing the fire protection system effectiveness.
- To have a strong fiscal policy focus and monitor the wildland fire protection system in fiscal terms. This will include all public and private expenditures and economic losses.
- To translate the analyses into public policy.

Fire Plan Framework

Five major components will form the basis of an ongoing fire planning process to monitor and assess California's wildland fire environment.

WILDFIRE PROTECTION ZONES A key product of this Fire Plan is the development of wildfire safety zones to reduce citizen and firefighter risk from future large wildfires.

INITIAL ATTACK SUCCESS The fire plan defines an assessment protection system for wildland fire. This measure can be used to assess the department's ability to provide an equal level of protection to lands of similar type, as required by Public Resources Code 4130. This measurement is the percentage of fires that are successfully controlled before unacceptable costs are incurred. Knowledge of the level of service will help define the risk to wildfire damage faced by public and private assets in the wildland areas.

ASSETS PROTECTED The plan will establish a methodology for defining assets protected and their degree of risk from wildfire. The assets addressed in the plan are citizen and firefighter safety, watersheds and water, timber, wildlife and habitat (including rare and endangered species), unique areas (scenic, cultural, and historic), recreation, range, structures, and air quality. Stakeholders-national, state, local, and private agencies, interest groups, etc., will be identified for each asset at risk. The assessment will define the areas where assets are at risk from wildfire, enabling fire service managers and stakeholders to set priorities for pre fire management project work.

PRE FIRE MANAGEMENT This aspect focuses on system analysis methods that assess alternatives to protect assets from unacceptable risk of wildland fire damage. Projects include a combination of fuels reduction, ignition management, fire-safe engineering activities, and forest health to protect public and private assets.
The priority for projects will be based on asset owners and other stakeholders' input and support. Pre fire management prescriptions designed to protect these assets will also identify who benefits and who should share in the project cost.

FISCAL FRAMEWORK The Board of Forestry (BOF) and Cal Fire are developing a fiscal framework for assessing and monitoring annual and long-term changes in California's wildland fire protection system. State, local and Federal wildland fire protection agencies, along with the private sector, have evolved into an interdependent system of pre fire management and suppression forces. As a result, changes to budgeted levels of service to any of the entities directly affect the others and the services delivered to the public. Monitoring system changes through this fiscal framework will allow the BOF and Cal Fire to address public policy issues that maximize the efficiency of local, state, and federal firefighting resources.

Fire Plan Framework Applications

- Identify for state, federal, and local officials and for the public those areas of concentrated assets and high risk.
- Allow Cal Fire to create a more efficient fire protection system focused on meaningful solutions for identified problem areas.
- Give citizens an opportunity to identify public and private assets to design and carry out projects to protect those assets.
- Identify, before fires start, where cost-effective pre fire management investments can be made to reduce taxpayer cost and citizen losses from wildfire.
- Encourage an integrated intergovernmental approach to reducing cost and losses.

Enable policy makers and the public to focus on what can be done to reduce future cost and losses from wildfire.

II. Collaboration

A. Stakeholders: What are they?

Stakeholders are defined as any person, agency or organizations with a particular interest "a stake" in fire management and the protection of assets from wildfires. The Lassen–Modoc Unit utilizes the Unit Chief, Division Chiefs, Battalion Chiefs, Fires Station personnel, and Fire Prevention Officers, including Volunteers in Prevention (VIP), through active participation in Fire Safe Council Meetings, and other fire prevention workshops and Public Education presentations. The Lassen–Modoc Unit Chief has made a considerable attempt at involving stakeholders and many of their interests in the planning of the Lassen–Modoc Fire Management Plan. It is the goal of the Lassen–Modoc Unit to encourage the participation of as many stakeholders as possible and to continually update planning efforts involving stakeholder input.

The Lassen and Modoc Fire Safe Councils have been instrumental in bringing a diverse group of stakeholders to the table. The Unit is able to respond and adapt activities to address many of the concerns from the different stakeholders involved with the fire safe council. Through the council's diversity, agencies have been able to develop fire management and hazardous fuel reduction projects that otherwise may never have developed. More information about fire safe councils is available at the web site www.firesafecouncil.org.

B. Stakeholders: Who are they?

Fire Safe Councils

Battalion 1

Within Battalion 1 there are two active Fire Safe Councils: The Janesville Fire Safe Council and the Lassen County Fire Safe Council. Both of these councils are working on fuels reduction projects and education and outreach to the community. In 1997, the Honey Lake Valley Resource Conservation District (HLVRCD), Janesville Fire Protection District and Cal Fire applied for a Forest Stewardship Grant for the development of a fire hazard reduction and forest health project in and around the community of Janesville, California. The grant was approved and shortly there after an

advisory group made up of the HLVRCD, Janesville FPD, Cal Fire, Lassen County Sheriffs Office, Lassen National Forest, Plumas National Forest, and homeowners from the community, formed a Fire Safe Council for this project.

This Fire Safe Council has continued to work on and develop other projects within the community of Janesville. A Wildland Urban Interface (WUI) grant was secured to develop an evacuation plan pamphlet for the community. This project has been completed and the pamphlets handed out by the Boy Scout troop and Fire Safe Council members within the Janesville community.

The Council has taken the initiative to identify many potential projects for the Janesville area. These projects fit in to the Lassen County Fire Safe Council's project plan.

During 2001 and beginning of 2002, the Lassen County Fire Safe Council was formally developed. The council assisted the County of Lassen and their consultant, in the development of the Lassen County Fire Safe Plan. This plan is being funded by a grant from the National Fire Plan Grant and was completed in January 2004.

This fire plan identifies treatment areas in close proximity to 22 of the communities within Lassen County. The plan also suggests protective measures that could improve the survivability of one's home or business in the various fuel types located within the Lassen Modoc Unit.

The Council has taken the initiative to identify many locations for potential projects that would improve the fire safety of the communities within Lassen County. The following is an overview of current projects and list of proposed projects. The projects are listed by geographical area and the closest Cal Fire Battalion is referenced.

Battalion 2

Within Battalion 2 there is three active Fire Safe Councils: The Lassen County Fire Safe Council which was discussed above, the Almanor Fire Safe Council and the Plumas County Fire Safe Council. In November of 2000, the Almanor Basin Fire Safe Council was formed to deal with wildfire prevention and loss mitigation issues in the western portion of the Lassen-Modoc Unit Battalion 2 region. This unincorporated group is actually an adjunct to the formal Plumas County Fire Safe Council, and focuses on approximately 600 square miles of public and private lands in northern Plumas County, western Lassen County and very small segments of Tehama and Shasta Counties. Principal stakeholders participating in the group include Cal Fire, USFS, National Park Service, local fire protection districts, timber industry and the general public.

As an informal organization, the Almanor Basin Fire Safe Council has adopted a low-key approach that emphasizes voluntary cooperation between stakeholders in the Lake Almanor basin.

The Plumas Fire Safe Council originated in 1998 – Meets 2nd Thursday of each month at the Plumas County Planning & Building Services Office -555 Main Street Quincy, CA

- 501.c.3 organization – 2002 – 11 Board members, average attendance - 20 members per meeting.
- www.plumasfiresafe.org
- County organization – Other FSC's and focus
  - Almanor Basin FSC – Community HFR, Def Space, Education
  - Gold Mountain Fire Safe Committee- Education, Defensible Space, Community HFR
  - Valley Ranch & Mohawk Valley considering forming a local FSC
- Plumas Corporation, A County Economic Development Organization is our fiscal sponsor

- ***Mission***- Protect natural & manmade resources caused by wildfire through pre-fire mitigation activities.

- ***PC FSC Focus of Efforts include:***
  A. Information, Education, and Planning
  B. Reducing Structure Ignitability
  C. Enhancing Suppression Capabilities and Public Safety
  D. Hazardous Fuel Reduction

- ***2008 Annual Goals:***
  - Implement and amend as necessary the Plumas County Community Wildfire Protection Plan (CWPP),
  - Increase public knowledge and awareness of the wildland fire hazard and efforts they can make to reduce their threat,
  - Develop more community-based involvement,
  - Implement community hazardous fuel reduction projects,
  - Continue to pursue grant funds,
  - Develop a strategy to provide for sustainable and renewable project funding and reduce the Council's dependence on grant funding.
  - Explore green waste disposal options and community chipping options.

- ***CWPP*** – Approved 5/04
  - Vehicle to be eligible for State & Federal (NFP) Funds to assist with mitigation activities.
  - Complies with DEMA 2000 for FEMA assistance following a federally declared disaster.
  - Provides a comprehensive overview of the wildfire risk, hazards, and fire behavior factors in Plumas County
  - Provides Mitigation recommendations for the four focus areas.
  - http://plumasfiresafe.org/fire_plan.htm

- ***Countywide Hazardous Fuel Assessment & Strategy*** – The general scope of the plan provides fuel profile and fire behavior assessment, and recommended treatment strategies for thirty-six identified "at risk communities" in Plumas County
  - http://plumasfiresafe.org/assessment.htm

- In ***2004 PC FSC Received the National Community Leadership Award*** from the US Forest Service Chief: Citation reads "PC FSC is recognized for outstanding accomplishments through their exceptional leadership, vision, and perseverance in working collaboratively to reduce the risk of catastrophic wildland fire in Plumas County"

- ***PC FSC Accomplishments*** include:
  - County Evacuation Plan with 13 Community Evacuation Maps.
  - Countywide Seamless, internet accessible GIS map.
  - Approved CWPP
  - Home Ignition Zone Workshops for community's
  - Living With Fire insert to the local paper
  - Elderly/Disabled Defensible Space Program
  - Community educational programs
  - Treating 2500 acres of Hazardous Fuels in & around 20 + communities on private & public lands
  - 35 Active Grants for $1,330,000 + to meet our goals & accomplish projects

Battalion 3

There are three Fire Safe Councils in the operating area of Battalion 3: the Modoc County Fire Safe Council, the Lassen County Fire Safe Council, and the Day Lassen Bench Fire Safe Council. Cal Fire personnel attend these council meetings and are active in assisting in the decision processes. Projects are being developed to create "fire safe" communities within this Battalion.

The Day Lassen Bench Fire Safe Council was formed in the summer of 2001. Cal Fire, Bureau of Land Management and the Lassen National Forest developed this Council in concert with the grant application to the National Fire Plan. This council's area consists of Day Bench and Day Road area. The Day Road Community extends through Lassen, Modoc, Shasta, and Siskiyou Counties.

Day Road is administered by two Cal Fire administrative Units, The Shasta-Trinity Unit (SHU) and the Lassen-Modoc Unit (LMU). The east side of Day Road is in battalion 3 of LMU while the west side is Battalion 1 of SHU. The Day road area is within the Northwest Lassen Fire Protection District (LMU) as well as the McArthur Fire Protection District (SHU). This plan was developed to streamline any suppression effort in the Day Road area no matter the location of the incident origin.

CAL FIRE has primary suppression responsibility and authority for all State Responsibility Area lands (SRA) located in the Day Road area as well as all other state and federal lands within Cal Fire's Direct Protection Area (DPA) in that area. Local fire districts have statutory authority for all non-wild fire incidents and structure protection within their jurisdictions.

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Lassen-Modoc Unit

OBJECTIVES:

1. Fire fighter and public safety.
2. Orderly civilian evacuations or sheltering in place until the threat is mitigated.
3. A coordinated response utilizing the Incident Command System (ICS) establishing Unified Command when appropriate and establishing one central ordering point for all resources ordered for an incident.
4. For fires originating west of Day Road in SHU, keep the fire from crossing Day Road.
5. Keep the fire from spreading east to Widow Mountain and Big Valley Mountain.
6. Keep the fire south and west of the Whitehorse Mountains.
7. Keep the fire south of Modoc County Road 94.
8. Keep the fire north of State Highway 299.
9. Keep the fire east of the McArthur valley.
10. Protect structures located in the fire impact zone.
11. Establish perimeter control lines utilizing existing roadways and natural barriers where feasible and prudent.
12. Take aggressive action to stop fire spread utilizing engines, dozers, hand crews and fixed/rotary wing aircraft.

STAGING AREAS:

1. Oiler Staging: Located approximately 1 mile west of Day Road at the bottom of the Lassen Bench grade. Two turnout lanes are located off of Highway 299. Oiler staging should be used by all resources arriving from the west.
2. Old Highway Staging: Located at the intersection of State Highway 299 and Old Highway Road approximately 1 mile east of Day Road. A large turnout is adjacent to Old Highway Road. Old Highway Staging should be used by all resources arriving from the east.

Every attempt will be made to provide a qualified Staging Area Manager at both staging areas in a timely manner. It is incumbent on all resources to contact the Incident Commander ***AS THEY APPROACH EITHER STAGING AREA*** to determine if they should stage or continue to the incident. Resources assigned to a staging area are on a 3 minute response timetable.

CONTACTS:

1. CHP – road closure
2. Lassen County Sheriff - evacuation
3. Modoc County Sheriff - evacuation
4. Cal Trans – traffic control and advisory signs
5. USFS Agency Representative – possible unified command
6. BLM Resource Adviser – sensitive cultural and resource values
7. PG&E
8. Surprise Valley Electrification Corporation
9. Mayers Hospital

Battalion 4

Battalion 4 has the Modoc Fire Safe Council within its operating area. The Modoc Fire Safe Council (MFSC) was formed in October, 2000, in response to an identified need by residents who live in the Wildland Urban Interface (WUI) to be informed of the risk of potentially serious wildfires with tragic results including loss of lives and property.

The MFSC is a voluntary organization formed to enhance the effectiveness of fire prevention and protection. The cooperative nature and educational and outreach efforts of this group are critical components for wildland pre-fire planning and mitigation.

The MFSC 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. In 2007, the MFSC acquired its 501(c)(3) non-profit organization status. The geographic area of the Council covers Modoc County. Also, it covers 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 Modoc Fire Safe Council consists of representatives from the town of Alturas and rural communities of Modoc County, as well as non-voting representatives from County, State and Federal agencies. The Council works closely with the County Board of Supervisors both in meetings and planning sessions as well as obtaining grant funding.

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.

In 2005, the first Community Wildfire Protection Plan (CWPP) was completed, and was approved by the Modoc County Board of Supervisors in 2006. The CWPP was the result of the collaborative efforts of the MFSC, BLM, USFS, North Cal-Neva R.C.& D, OES and CDF representatives, who organized a series of information gathering meetings for the residents, agency representatives and the general public. A series of meetings in a period of two months were held at four locations in the county: Surprise Valley, Alturas, Adin, and Lookout. The purpose of the meetings was to identify Values at Risk and Natural Resources and adjust Wildland Urban Interface (WUI) boundaries based on local knowledge. Comments were documented and maps showing the modified WUI areas were developed. In the spring of 2008, major revisions to the CWPP were completed and presented to the Modoc County Board of Supervisors for approval.

As of 2007, the MFSC has completed the following projects: Lake City Fuel Break, CalPines Hills Fuel Breaks, Phase 1, II, & III (with Evacuation Plan), The Community Wildfire Protection Plan, and the Modoc Recreational Estates Fire Hazard Mitigation Plan. The current ongoing projects are the Landowner Assistance Program (assistance for the elderly/disabled residents to clear their 100-ft. defensible space) and the Residential Chipping Program. Both programs are geared towards helping the residents of Modoc County living in rural areas, to comply with the 100-foot defensible space state regulation. The California Fire Safe Council Clearinghouse recently approved the Summerland Fire Hazard Mitigation Plan project for funding.

The MFSC continues to have a strong working relationship with Modoc County Board of Supervisors, the local volunteer fire departments and chiefs, California Department of Forestry and Fire Protection, BLM and Modoc National Forest staff.

(Fire Safe Council locations can be found on Appendix A)

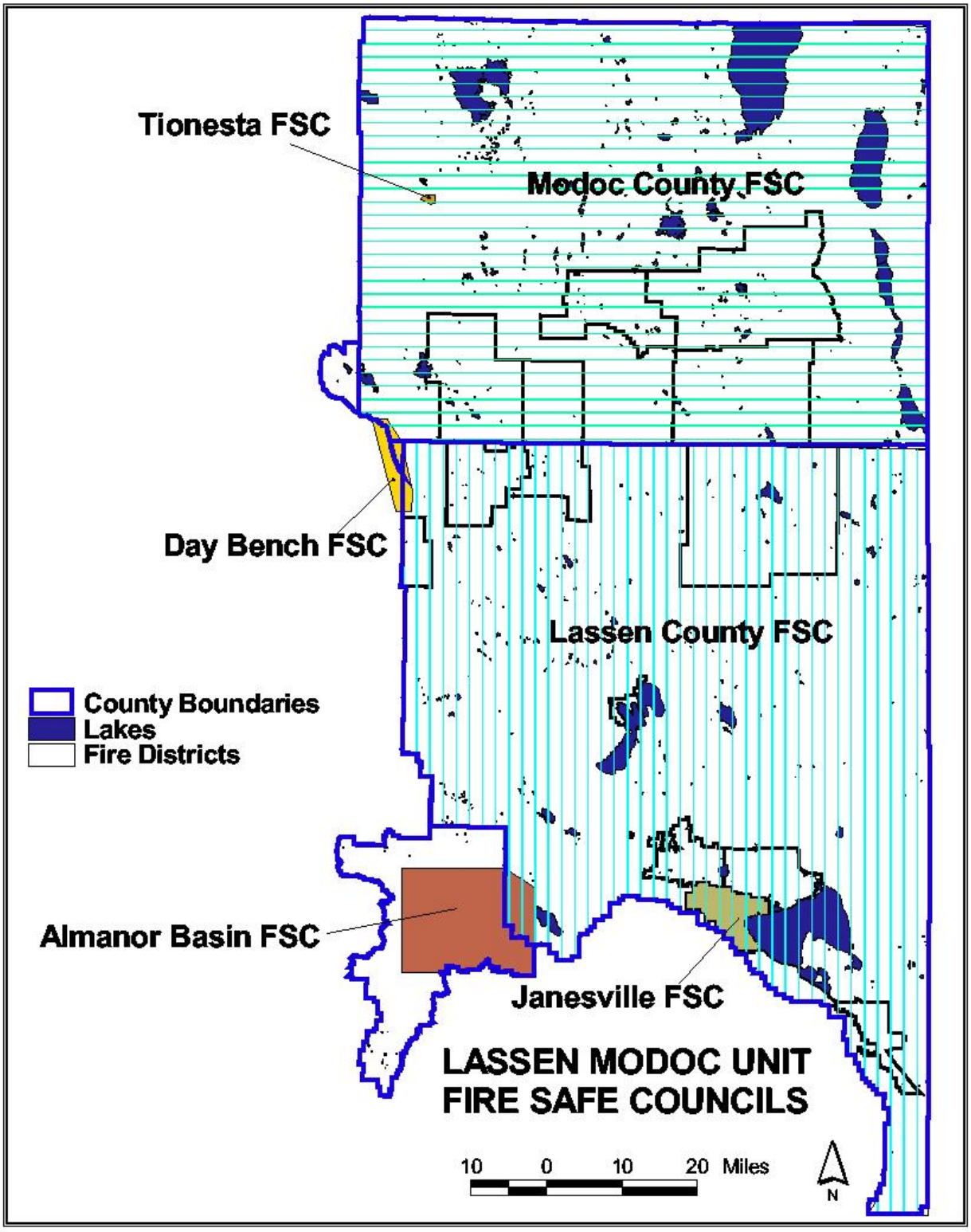
Industrial Groups

Sierra Pacific Industries
Roseburg
W.M. Beatty and Associates
Collins Pine
Pacific Gas and Electric

Governmental Agencies

Department of Interior - Bureau of Land Management
United States Forest Service
Susanville City Fire Department
Almanor Fire Department

Appendix A


Tionesta FSC
Modoc County FSC
Day Bench FSC
Lassen County FSC
County Boundaries
Lakes
Fire Districts
Almanor Basin FSC
Janesville FSC
LASSEN MODOC UNIT
FIRE SAFE COUNCILS
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III. Assets at Risk

The primary goal of wildland fire protection in the Lassen-Modoc Unit is to safeguard the wide range of assets found within the unit from the effects of wildfire. The assets at risk, both public and private, are to be protected. The following have been identified as assets at risk to wildfires and include both economic and non-economic assets: people, structures, timber, watershed, wildlife, unique scenic and recreation areas, range, and air quality. The table below provides a description of the evaluated assets.

Asset at Risk	Public Issue Category	Location and ranking methodology
Hydroelectric power	Public welfare	1) Watersheds that feed into river power plants, ranked based on plant capacity; 2) cells adjacent to reservoir based plants (Low rank); and 3) cells containing canals and flumes (High rank)
Fire-flood watersheds	Public safety Public welfare	Watersheds with a history of problems or potential for future problems, ranked based on affected downstream population
Soil erosion	Environment	Watersheds ranked based on erosion potential
Water storage	Public welfare	Watershed area up to 20 miles upstream from water storage facility, ranked based on water value and dead storage capacity of facility
Water supply	Public health	1) Watershed area up to 20 miles upstream from water supply facility (High rank); 2) grid cells containing domestic water diversions, ranked based on number of connections; and 3) cells containing ditches that contribute to the water supply system (High rank)
Scenic	Public welfare	Four mile view-shed around Scenic Highways and 1/4 mile view-shed around Wild and Scenic Rivers, ranked based on potential impacts to vegetation types (tree versus non-tree types)
Timber	Public welfare	Timberlands ranked based on value and susceptibility to damage
Range	Public welfare	Rangeland ranked based on potential replacement feed cost by region/owner/vegetation type
Air quality	Public health Environment Public welfare	Potential damages to health, materials, vegetation, and visibility; ranked based on vegetation type and air basin
Historic buildings	Public welfare	Historic buildings ranked based on fire susceptibility
Recreation	Public welfare	Unique recreation areas or areas with potential damage to facilities, ranked based on fire susceptibility
Structures	Public safety Public welfare	Ranked based on housing density and fire susceptibility

Non-game wildlife	Environment Public welfare	Critical habitats and species locations based on input from California Department of Fish and Game and other stakeholders
Game wildlife	Public welfare Environment	Critical habitats and species locations based on input from California Department of Fish and Game and other stakeholders
Infrastructure	Public safety Public welfare	Infrastructure for delivery of emergency and other critical services (e.g. repeater sites, transmission lines)
Ecosystem Health	Environment	Ranking based on vegetation type/fuel characteristics

The assets at risk are evaluated to the 450 acre scale within the Lassen-Modoc Unit. This scale has been designated by the Department for purposes of manageability. These 450 acre cells have been designated as Quad 81st. This designation is based on the sectioning of a USGS 7.5 minute quadrangle map broken down into a 9x9 grid pattern; this process results in squares of 450 acres. Fire plan assessments have been made at the Q81st level. For instance, each Q81st in LMU has a ranking applied to it for Level of Service (LOS), Assets at Risk (AAR), fuel hazards, etc.

Each asset is validated by the unit personnel, stakeholders and interested parties, as to the weight and value placed on the Q81 for that asset. Once this process is completed, the LOS calculation is run and the value for that cell is applied, thus giving that cell its weighted value, and producing the aggregated relationship for that area. (For more information regarding the evaluation of asset susceptibility, refer to the California Fire Plan.)

http://www.fire.ca.gov/FireEmergencyReponse/FirePlan/FirePlan.asp

The ranking is scaled to the Q81st and transferred to GIS maps. Map overlays will be evaluated by unit staff for identification of the areas with the highest combined asset values and fire risk to be targeted for fire management activities. The scores for the various assets at risk are given a 1 (low) score out of a possible 9.999 (high). Infrastructure, non-game wildlife, and range scores were given a score of 2. Timber was given a 3 and structures were given a 5. Many factors are involved in target area identification, including political climate of the region and suppression cost reductions.

The process of explicitly enumerating assets at risk also helps to identify who benefits from those assets. It is a premise of the California Fire Plan, on which this plan is structured, that those who benefit from the protection of an asset should pay for that protection. The Lassen Modoc Unit personnel will continuously evaluate these assets during planning stages.

FIRE MANAGEMENT PLAN 2008

Lassen-Modoc Unit

A. Fire-Threatened Communities in Lassen, Modoc and Plumas County

Community Name	County	Federal Threat[1]	Federally Regulated
Adin	Lassen	X	X
Bieber	Lassen	X	X
Cal Pines Lower Units	Modoc	X	X
Cal Pines Upper Units	Modoc	X	X
Canby	Modoc		X
Cederville	Modoc	X	X
Clear Creek	Lassen		X
Copic	Modoc	X	X
Davis Creek	Modoc	X	X
Doyle	Lassen	X	X
Eagleville	Modoc	X	X
Fort Bidwell	Modoc	X	X
Hallelujah Junction	Lassen	X	X
Hurlong	Lassen	X	X
Janesville	Lassen	X	X
Johnstonville	Lassen		X
Lake City	Modoc	X	X
Levitt	Lassen		X
Likely	Modoc	X	X
Litchfield	Lassen	X	X
Little Valley	Lassen	X	X
Lookout	Modoc	X	X
Madeline	Lassen	X	X
Milford	Lassen	X	X
New Bieber	Lassen		
New Pine Creek	Modoc	X	X
Newell	Modoc	X	X
Pinetown	Lassen		
Pittville	Lassen	X	X
Ravendale	Lassen	X	X
Spaulding	Lassen	X	X
Standish	Lassen	X	X
Stones Landing	Lassen	X	X
Susanville	Lassen	X	X
Tulelake	Modoc	X	X
Wendel	Lassen	X	X
Willow Ranch	Modoc	X	X

1. Federal Threat code of [X] indicates some or all of the wildland fire threat to that community comes from federal (e.g., US Forest Service, BLM, Dept. of Defense) lands.
2. Hazard Level code indicates the fire threat level, where two denotes moderate threat and three denotes high threat.

Fire-Threatened Communities in Plumas County

FIRE THREATENED COMMUNITIES IN PLUMAS COUNTY

Community Name	County	Federal Threat[1]	Federally Regulated
Almanor	Plumas	X	X
Beckworth	Plumas	X	X
Belden	Plumas	X	X
Blairsden	Plumas	X	X
Bucks Lake	Plumas	X	X
Canyon Dam	Plumas	X	X
Caribou	Plumas	X	X
Chester	Plumas	X	X
Clio	Plumas	X	X
Crescent Mills	Plumas	X	X
Cromberg	Plumas	X	X
Dellecker	Plumas	X	X
Genesee	Plumas	X	X
Graeagle	Plumas	X	X
Greenville	Plumas	X	X
Hamilton Branch	Plumas	X	X
Indian Falls	Plumas	X	X
Johnsville	Plumas	X	X
Keddie	Plumas	X	X
La Porte	Plumas	X	X
Meadow Valley	Plumas	X	X
Mohawk	Plumas	X	X
Paxton	Plumas	X	X
Portola	Plumas	X	X
Prattville	Plumas	X	X
Quincy-E. Quincy	Plumas	X	X
Seneca	Plumas	X	X
Taylorsville	Plumas	X	X
Twain	Plumas	X	X

1. Federal Threat code of [X] indicates some or all of the wildland fire threat to that community comes from federal (e.g., US Forest Service, BLM, Dept. of Defense) lands.
2. Hazard Level code indicates the fire threat level, where two denotes moderate threat and three denotes high threat.

The “Communities at Risk” in Lassen, Modoc and Plumas Counties listed in the table above are on the National Registry available at the following site:
Http://cafirealliance.org/communities_at_risk_a-d.php

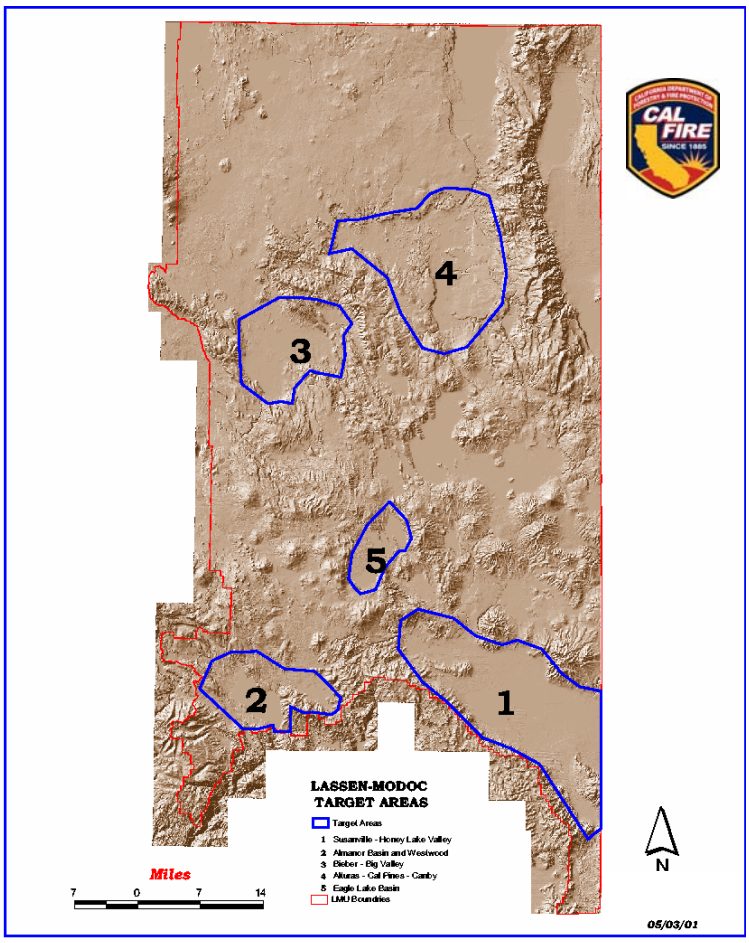
FIRE MANAGEMENT PLAN 2008
Lassen-Modoc Unit
B. Priority Areas

General Description of the Target Areas

Within the Lassen Modoc Unit, the greatest potential for loss and initial Attack failures are located near the populated areas. These areas are located in and around the following communities:

Susanville – Honey Lake Valley
Almanor Basin and Westwood
Bieber – Big Valley
Alturas - Cal Pines
Eagle Lake Basin

These areas have been identified by Battalion Chiefs as the most logical areas to begin fuel mitigation projects and the education of the public to the potential fire problems, and general implementation of fire safe practices.



Most of the population within Lassen County is found in Battalion 1. Of these homes, most are located in the wildland urban interface, which provides for an interesting firefighting challenge. Many of these homes are in a bitterbrush/sage and juniper vegetation belt. However in Janesville there is a large concentration of homes found in the timber.

Timber lands make up a large portion of Battalion 1. This asset is found along the entire west side of the Battalion along its west side. Sierra Pacific Industries and W.M. Beatty and Associates own much of the timbered land. Most of this land also borders the Plumas and Lassen National Forest on the south and west and the Modoc National Forest in the north.

The Grasshopper Valley at the north end of the Battalion is not only a large portion of the grazing and rangeland, but also host's large herds of antelope. During the summer months, one can find many antelope grazing along with the cattle here. Most of the timbered lands are also leased as grazing range.

Eagle Lake is found just south of Grasshopper fire station, and is a popular fishing and boating resource. . The wildland of the Battalion provides an excellent recreation asset. Many people travel from all over the state to spend their summer vacation here. All throughout the woods of the Battalion one can find people hiking, fishing, and snowmobiling during the winter

The watershed is also an important asset. Although most of the mountains and the high plains are flat, what water that is collected from the snow and rainfall during the winter, finds its way into the rivers and lakes and is utilized to produce hydro-electric power. That same water continues down into the Sacramento River or Carson (in Nevada) drainage where it becomes part of the domestic supply.

Many of the homes in Battalion 2 are located in the standing timber (also called the wildland urban interface) providing an interesting firefighting challenge due to the heavy fuels.

Collins Pine, Roseburg Lumber, Sierra Pacific Industries, and W. M. Beatty and Associates own the timber lands in the Battalion. The Plumas National Forest borders the Battalion on the southeast, and the Lassen National Forest touches the battalion at points on the North, West and East.

Much of the National Forest land is leased out during the summer and fall for cattle grazing.

Eagle Lake is also in this Battalion, which is a popular location for fishing and boating. The Battalion has many recreational attractions such as hiking, fishing, and snowmobiling during the winter.

The development of the Dyer Mountain, a four season resort is underway. When completed the resort area will attract large numbers of people and will include both permanent and seasonal occupants.

The watershed in Battalion 2 is also an important asset. The water from this watershed supplies the Sacramento and Carson Rivers and is then used as the domestic water supply in several communities.

Many of the homes in Battalion 3 are located in the wildland urban interface area. The area has experienced some growth over the last year. The Lookout ranchettes and

the homes along Day Road are prime examples. These homes are within standing timber with an understory of grass/sage forest fuels. Several new homes have been built within the Battalion mostly in the Day Road area.

Sierra Pacific Industries and W. M. Beatty and Associates own the timber lands in the Battalion. The Modoc National Forest and the Lassen National Forest have common borders with the Battalion. Much of the National Forest land is leased out during the summer and fall for grazing of cattle.

The Lava Beds National Monument and Lassen Volcanic National Park are close by and many people travel through this area en-route to these locations. The entire area is well known for its hunting and fishing.

This is an important watershed area. The water that is collected from the snow and rainfall during the winter finds its way into the rivers and lakes, which provide hydro-electric plants along the Pitt River and is a source for domestic water for several communities along the Sacramento River.

Many of the homes in Battalion 4 are located in the wildland urban interface area in Cal Pines south of Alturas and in the Modoc Estates, just north of town. These homes are within standing timber and/or juniper with an under story of grass/sage forest fuels.

The Modoc National Forest and the Warner Wilderness Area have common borders with the Battalion. In the southeast portion of the Battalion the Bureau of Land Management manages much of the land. Much of the National Forest and BLM land is leased out during the summer and fall for grazing of cattle.

The Warner Wilderness Area is a popular area for hikers and explorers and holds a wealth of natural resources for the area. The entire area is well known for its hunting and fishing.

This is an important watershed area. The water that is collected from the snow and rainfall during the winter finds its way into the rivers and lakes, which provide hydro-electric plants along the Pitt River and is a source for domestic water for several communities along the Sacramento River.

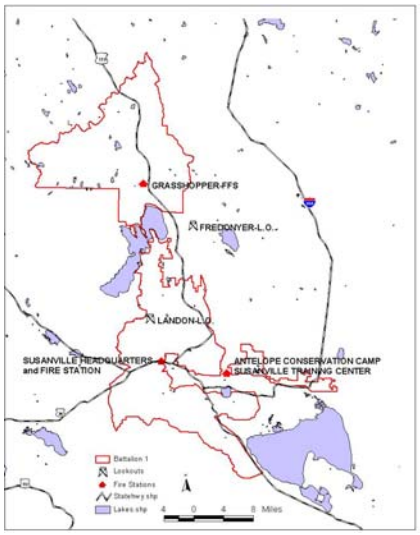
FIRE MANAGEMENT PLAN 2008
Lassen-Modoc Unit

IV. The Fire Situation

A. General Description

The Lassen-Modoc Unit has a strong cooperative relationship with federal and local government firefighting agencies in addition to the Governor's Office of Emergency Services. This cooperation is formally defined and authorized in interagency agreements. This includes the four-party agreement with the federal agencies, and the Master Mutual Aid Agreement, with local government. Mutual aid agreements and cooperative agreements with all fire departments and fire protection districts are also in place within the Unit. The cooperative efforts of fire service providers comprise the entire fire protection delivery system within the Unit.

BATTALION 1



Battalion 1 (Susanville Battalion) is located in the central and southeastern portion of Lassen County, with the communities of Susanville, Johnstonville, Janesville, Standish, Litchfield, Lake Forest Estates, Stones Landing and Spaulding. The City of Susanville is an incorporated City, which is in the center of the Battalion.

U. S. Highway 395 travels through the Battalion on its east side. State Highways 44, 139 and 36 also travel through the Battalion and intersect with U.S. 395. The elevation of the Battalion is approximately 4500' in the Honey Lake Valley to 7700' on Diamond Mountain, with an average elevation of approximately 5800' on the northeastern plateau of California.

Approximately 32,000 acres of this Battalion are State Responsibility Lands; the only Local Responsibility Land is located within the Honey Lake Valley area, in Susanville City, and portions of the communities of Standish, Janesville and Johnstonville. The highest housing and population concentration in the Unit is located in Battalion 1.

Fuels

The vegetative cover in Battalion 1 is comprised of standing timber on the west and northwest sides of the Battalion and high desert sage, bitterbrush and juniper on the mid and east side of the Battalion. Most of the large fires in Lassen Modoc Unit over the years have occurred in Battalion 1 in the timbered areas.

Fire Weather

Fire weather in Battalion 1 can be extreme because of its location and elevation. Most of the 32,000 acres are in a very dry climate due to being in the rain shadow of the Sierra Nevada/Cascade Range. The rainfall for 2007, Susanville Station had 7.64 inches and Grasshopper receiving 11.24 inches for a battalion total of 18.88 inches. Single digit relative humidity during the summer months is not uncommon and many of the forest fuels remain ready to burn in the late spring – early summer, prior to the finer fuels drying.

Battalion 1 Resources

Susanville Station	Grasshopper Station
2- Fire Engines	2 – Fire Engines
1- Bull Dozer	
1- Reserve Fire Engine	
Landon Lookout	Fredonyer Lookout

Fire Protection Districts and Volunteer Departments include:

- California Correctional Center
- Susanville City Fire Department
- Susan River Fire Protection District
- Janesville Fire Protection District
- Standish-Litchfield Fire Protection District
- Doyle Fire Protection District
- Eagle Lake Fire Protection District
- Stones-Bengard Fire Protection District
- Lake Forest Fire Protection District
- Milford Fire Protection District
- Sierra Army Depot Fire Department
- Ravendale Volunteer Fire Department

FIRE MANAGEMENT PLAN 2008
Lassen-Modoc Unit
Battalion 1 Response Report (2007)

State Responsibility Area-SRA Local Responsibility Area- LRA

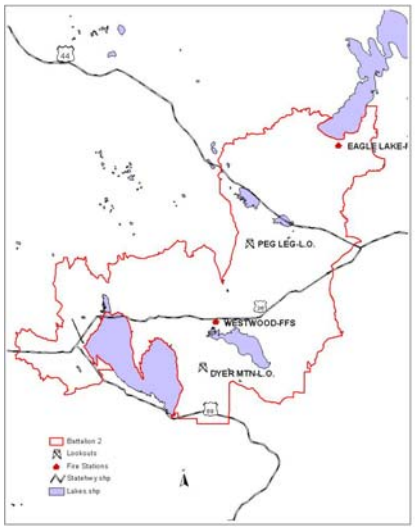
WILDLAND	**LRA**	15	**SRA**	52
STRUCTURE	**LRA**	24	**SRA**	0
OTHER/FALSE ALARM	**LRA**	64	**SRA**	19
TRAFFIC COLLISION	**LRA**	44	**SRA**	0
MEDICAL AIDS	**LRA**	59	**SRA**	0
HAZARDS	**LRA**	6	**SRA**	0
PUBLIC ASSIST	**LRA**	7	**SRA**	0
MISCILLANEOUS	**LRA**	10	**SRA**	0

Ignitions

There were 68 known ignitions in Battalion 1 in 2007. The largest cause of these fires was lightning for a total of 35 fires. The following is a break down of the ignitions within the Battalion:

UNDETERMINED	2
LIGHTNING	35
CAMP FIRE	4
SMOKING	0
DEBRIS BURN	20
ARSON	1
EQUIPMENT	5
VEHICLE	1
PLAYING WITH FIRE	0

BATTALION 2



Battalion 2 (Westwood Battalion) is located on the west side of Lassen County and includes the Almanor Basin, in Plumas County. The communities of Westwood, Pinetown, Clear Creek, Hamilton Branch, Canyon Dam, Prattville, Almanor West and Chester are all within this Battalion. State Highways 36, 147, 89 and 44 traverse through Battalion 2.

In Battalion 2 approximately 13,000 acres are State Responsibility Lands; Local Responsibility Land is located in the town of

Chester and the community of Westwood. The population is concentrated in Westwood and all around the Lake Almanor Basin. Approximately 3600 people make the communities of Battalion 2 their home.

Fuels

The vegetative cover in Battalion 2 is predominately standing timber, with grass and sage cover.

Fire Weather

Fire weather in Battalion 2 is typically wetter than that of Battalions 1 and 4, which are both located on the eastern slopes of the Sierra/Cascade mountain range. The 2007 rainfall totals have Battalion 1 receiving just over 3.70 inches more rainfall than Battalion 2. During 2007, Westwood received 6.39 inches of rainfall**.** Eagle Lake received 8.76 inches for a battalion total of 15.15 inches.

Battalion 2 Resources

Westwood Station	Eagle Lake Station
2- Fire Engines	1 – Fire Engine
Peg Leg Lookout	
Dyer Mountain. Lookout	

Fire Protection Districts and Volunteer Departments include:

Westwood Community Services District and Volunteer Fire Department
Chester Fire Department
Almanor West Fire Department
Hamilton Branch Fire Department
Clear Creek Volunteer Fire Department
Prattville Fire Protection District
Peninsula Fire Protection District

Battalion 2 Response Report (2007)

State Responsibility Area-SRA Local Responsibility Area- LRA

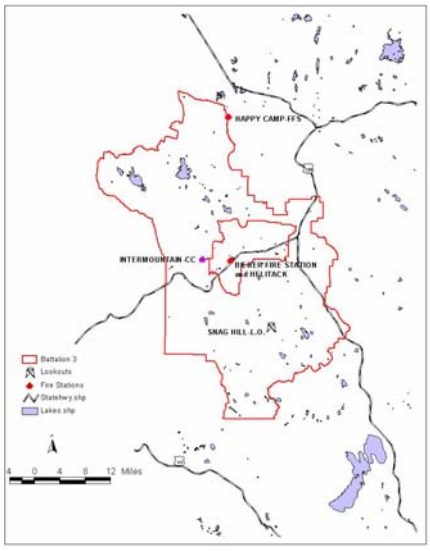
WILDLAND	**LRA**	1	**SRA**	20
STRUCTURE	**LRA**	16	**SRA**	0
OTHER/FALSE ALARM	**LRA**	36	**SRA**	9
TRAFFIC COLLISION	**LRA**	28	**SRA**	0
MEDICAL AIDS	**LRA**	122	**SRA**	0
HAZARDS	**LRA**	4	**SRA**	0
PUBLIC ASSIST	**LRA**	12	**SRA**	0
MISCILLANEOUS	**LRA**	6	**SRA**	0

Ignitions

In 2007, Battalion 2 had a total of 48 ignitions, which resulted in fires. The leading cause of these fires was debris burns for a total of 18 fires. The following is a break down of the ignitions within the Battalion:

UNDETERMINED	1
LIGHTNING	17
CAMP FIRE	2
SMOKING	2
DEBRIS BURN	18
ARSON	1
EQUIPMENT	2
VEHICLE	4
PLAYING WITH FIRE	1

BATTALION 3



Battalion 3 (Bieber Battalion) is located in the northwest portion of Lassen County, southwest corner of Modoc County and borders to the west along Shasta – Trinity and Siskiyou Units. The communities of Bieber, Nubieber, Day, Lookout, Little Valley and Adin are located within its boundaries.

State Highway 299 and 139 traverse the Battalion. Approximately 17,260 acres of this Battalion are State Responsibility Lands; Local Responsibility Land is located in the Big Valley area around the towns of Bieber, Nubieber and in the Pittville. The population within the Battalion is found in Bieber, Nubieber, Lookout, Day, Little Valley and Adin. Approximately 1400 people make the communities of Battalion 3 their home.

Fuels

The vegetative cover in the Battalion 3 is predominately standing timber with grass/sage cover. The Big Valley area of the Battalion is agricultural with much of the land committed to the production of hay. Many fires in this Battalion grow quite

quickly, due to its remoteness of and the lack of roads.

Fire Weather

Fire weather in Battalion 3 is typically wetter than that of Battalions 1 and 4 which are located in the rain shadow of the Sierra/Cascade Mountains however Battalions 1 and 2 received more rainfall in 2007 than did Battalion 3. Rainfall totals for Happy Camp unavailable. The precipitation total in 2007 for Battalion 3 was 4.27 inches.

Battalion 3 Resources

Bieber Station	Happy Camp Station
2- Fire Engines	1 – Fire Engine
1- Helicopter and crew	
Snag Hill Lookout	

Intermountain Conservation Camp is located just outside of Nubieber and has 4 Fire Crews, one Dozer and one Camp Fire Protection Engine.

Fire Protection Districts and Volunteer Departments include:

Big Valley Fire Protection District
Lookout Volunteer Fire Department
Adin Volunteer Fire Department
McArthur Volunteer Fire Department (Day Bench)
Little Valley Community Services District
Newall Fire Protection District

Battalion 3 Response Report (2007)

State Responsibility Area-SRA Local Responsibility Area- LRA

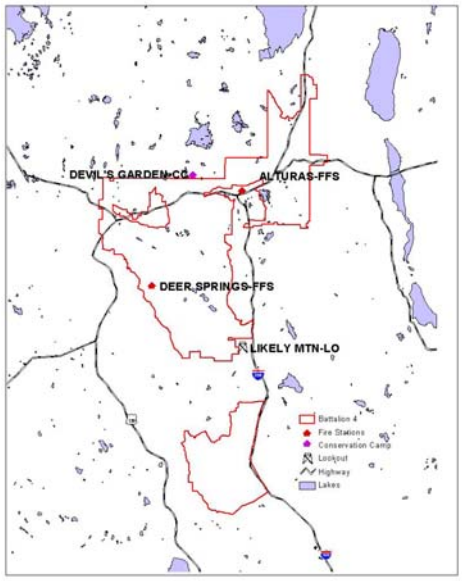
WILDLAND	**LRA**	4	**SRA**	37
STRUCTURE	**LRA**	4	**SRA**	0
OTHER/FALSE ALARM	**LRA**	15	**SRA**	3
TRAFFIC COLLISION	**LRA**	17	**SRA**	0
MEDICAL AIDS	**LRA**	35	**SRA**	0
HAZARDS	**LRA**	1	**SRA**	0
PUBLIC ASSIST	**LRA**	0	**SRA**	0
MISCILLANEOUS	**LRA**	3	**SRA**	0

Ignitions

During 2007, Battalion 3 had a total of 35 ignitions, which resulted in fires. The leading cause of these fires was lightning for a total of 24 fires. The following is a break down of the ignitions within the Battalion:

UNDETERMINED	2
LIGHTNING	24
CAMP FIRE	0
SMOKING	0
DEBRIS BURN	9
ARSON	0
EQUIPMENT	0
VEHICLE	0
PLAYING WITH FIRE	0

BATTALION 4



Battalion 4(Alturas Battalion) is located in the northeastern portion of the Lassen – Modoc Unit. It is located on the east half of Modoc County with Oregon to the north and Nevada to the east. The most southern end of the Battalion is within the northeastern part of Lassen County. The communities of Alturas, Canby, Likely, and Madeline are located within its boundaries. Battalion 4 also services the communities of Davis Creek, New Pine Creek, Willow Ranch, Cedarville, Eagleville, Lake City and Fort Bidwell.

U. S. Highways 395, 299 and 139 travels through the Battalion. Approximately 21,500 acres of this Battalion are State Responsibility Lands; Local Responsibility Land surrounds the community of Alturas and runs south to Likely. Approximately 1800 people live within the boundaries of Battalion 4.

Fuels

The vegetative cover in the Battalion is predominately standing timber in the mountains, with juniper grass/sage cover in the eastern half of the battalion where the

terrain is at a lower elevation. Many fires in this Battalion grow quite quickly due to the remoteness of the area and lack of roads.

Fire Weather

Fire weather in Battalion 4 is drier on average than Battalion 2 and 3 with Battalion 4 being in the rain shadow of the Sierra Cascade/Mountains. During 2007, Alturas received 8.60 inches of rainfall. Deer Springs Station rainfall totals were unavailable.

Battalion 4 Resources

Alturas Station	Deer Springs Station
2- Fire Engines	1 – Fire Engine
Likely Mountain. Lookout	

Devils Garden Conservation Camp is located to the west of Alturas just outside of town and has 5 Fire Crews, one Dozer and one Camp Fire Protection Engine.

Fire Protection Districts and Volunteer Departments include:
Alturas City Fire Department
Alturas Rural Fire Protection District
Cal Pines Community Service District
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
Madeline Fire Protection District
Willow Ranch Fire Protection District
New Pine Fire Protection District

Battalion 4 Response Report (2007)

State Responsibility Area-SRA Local Responsibility Area- LRA

WILDLAND	**LRA**	2	**SRA**	17
STRUCTURE	**LRA**	3	**SRA**	0
OTHER/FALSE ALARM	**LRA**	34	**SRA**	6
TRAFFIC COLLISION	**LRA**	22	**SRA**	0
MEDICAL AIDS	**LRA**	86	**SRA**	0
HAZARDS	**LRA**	2	**SRA**	0
PUBLIC ASSIST	**LRA**	0	**SRA**	0
MISCILLANEOUS	**LRA**	5	**SRA**	0

Ignitions

In 2007, Battalion 4 had a total of 18 ignitions, which resulted in a fire. The leading cause of these fires was debris burns for a total of 7 fires. The following is a break down of the ignitions within the Battalion:

UNDETERMINED	1
LIGHTNING	6
CAMP FIRE	0
SMOKING	1
DEBRIS BURN	7
ARSON	0
EQUIPMENT	2
VEHICLE	1
PLAYING WITH FIRE	0

B. General Description of the Desired Future Condition

Fire History

Wildfire history is a significant factor of the pre-fire management planning process. The fire plan assessment framework incorporates detailed information for determining the most beneficial locations for pre-fire management projects, an idea of the level of service in SRA for the unit, and various assets at risk information. Fire history is a piece of the puzzle that allows unit personnel to learn from our past and make an attempt to prepare for future fire behavior. Having knowledge of fire history provides an account of historic fire travel in a particular area. Armed with knowledge of historic fire spreads, fire suppression forces are better equipped to predict fire spread potentials. Identifying where the largest and most damaging fires have occurred is a necessary step in preparing for future wildfire. The most significant aspect of fire history in Lassen-Modoc Unit is that personnel are able to compare the relationship between identified assets at risk and the historic burning patterns of wildfire which allows for more informed decision making processes when preparing fire planning documents and procedures.

Appendix B shows fire history just for 2007. Appendix C shows the Fire History from 1998 to 2007. Appendix D includes fire history from 1900 through 2007. Appendix E shows the fuels diversity. The maps display significant patterns that are used in pre-fire planning processes.

Ignition Workload Assessment (Level of Service)

The legislature has charged the Board of Forestry and Cal Fire with delivering a fire protection system that provides an equal level of protection to lands of similar type and is based in *Public Resources Code 4130*. In order to do this, Cal Fire needed an analysis process that would define a level of service rating that could be applied to the

wildland areas in California to provide a comparison of the level of fire protection being provided. The rating is expressed as the percentage of fires that are successfully attacked.

California has a complex fire environment, and Cal Fire data on assets at risk to damage from wildfire is incomplete. These factors combine to make it very difficult to develop a true performance-based fire protection planning system. Cal Fire has resorted to prescription-based fire protection planning (travel times of firefighting resources to incidents, report times for the detection system, the same acreage goal statewide, etc.) as a way to overcome the complexity of the issues. Prescription-based planning is possible but tends to oversimplify some issues. Prescription standards also make it difficult to integrate the interrelationships of various fire protection programs, such as the value of fuel-reduction programs in reducing the level of fire protection effort required.

The following approximation method is proposed to overcome these shortcomings and allow the Unit to proceed with a damage-plus-cost analysis of fire protection performance. This is a relative system, attempting to measure the impact of fire on the various assets at risk. At the same time, this process produces a level of service rating (LOS). The rating can be used to describe fire protection services to civilian stakeholders. The level of service rating also provides a way to integrate the contribution of various program components (fire prevention, fuels management, engineering and suppression) toward the goal of keeping damage and cost within acceptable limits. It is important to reiterate that this system is a relative system and that the ratings are only approximations. In this system, a fire may be considered a failure, based on the firefighting resource draw and size of fire; however, the final fire size and assets protected may have been a true success based on firefighting activities in extreme fire weather conditions.

The Level of Service (LOS) rating is a ratio of successful fire suppression efforts to the total fire starts, a method to measure initial attack success and failure rates throughout the Unit and is based on fire sizes. The LOS uses a Geographic Information System (GIS) that overlays a 10 year history of wildfires onto a map and derives the average annual number of fires by size, severity of burning and assets lost. This data provides an LOS rating, in terms of a success and failure calculation.

$$\text{Success Rate} = \frac{\text{Annual number of fires that were small and extinguished by initial attack}}{\text{total number of fires}} * 100 = \text{Success rate in percent}$$

The result is an initial attack success rate in percentage of fires by vegetation type and area. “Success” is defined as those fires that are controlled before unacceptable damage and cost are incurred and where initial attack resources are sufficient to control wildfires. “Failure” is not meant pejoratively; it just means that, for whatever reasons (access, lack of resources, etc.) the ignition was not contained before it became a more dangerous and damaging fire.

The Fire Plan Ignition Workload Assessment is designed to show effectiveness of the suppression organization in meeting the initial attack fire workload. The attempt at

controlling fires before they become large and costly is evaluated in this assessment. The underlying assumption is that fires, successfully contained in the initial attack stages, are not the primary problem. Problem fires are the few that are costly to control or exceed suppression organization capabilities and cause damage.

Fires are grouped into "success" and "failure" categories based on various factors. The assessment groups fires by general vegetation or fuel types (planning belts). Within the fuel type, fires are further classified based on final fire size and weather conditions at the time of ignition. Each fire is classified and labeled as either a successful initial attack or a failure.

Initial attack Success and Failures:

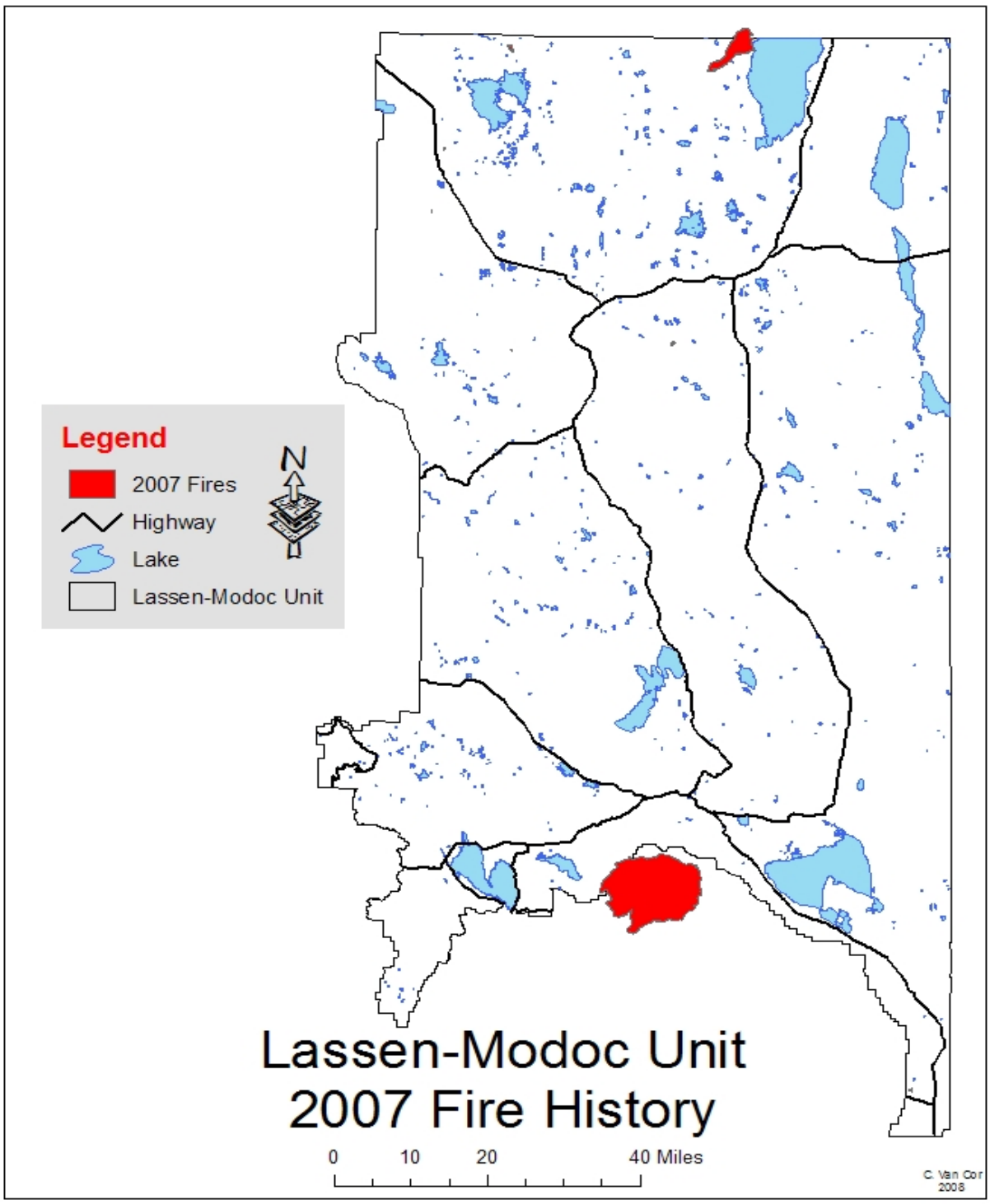
Represents a ten year period for analyses May thru September 2005; planning belt vegetation types were analyzed.

Planning Belt	**Success Rate**	**Successful I.A.**	**I.A. Failure**
Grass	100%	54	0
Brush	95%	370	20
Interior	98%	1920	34
Woodland	98%	3523	80
Agricultural or Urban	96%	248	9

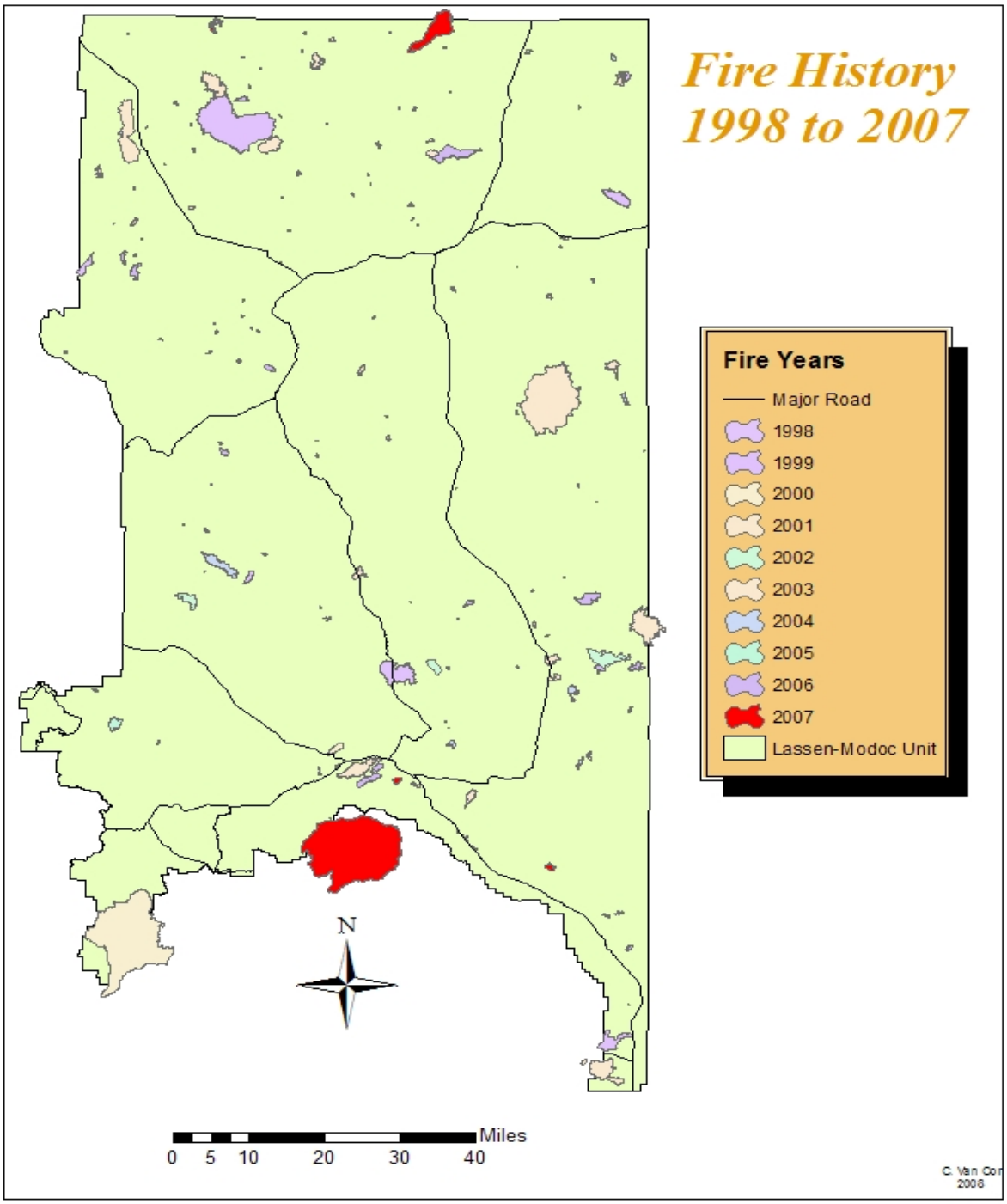
Failures were defined as:

Grass: Fires = 10 acres and above
Brush: Fires = 5 acres and above
Interior: Fires = 3 acres and above
Woodland: Fires = 5 acres and above
Agricultural or Urban: Fires = 10 acres and above

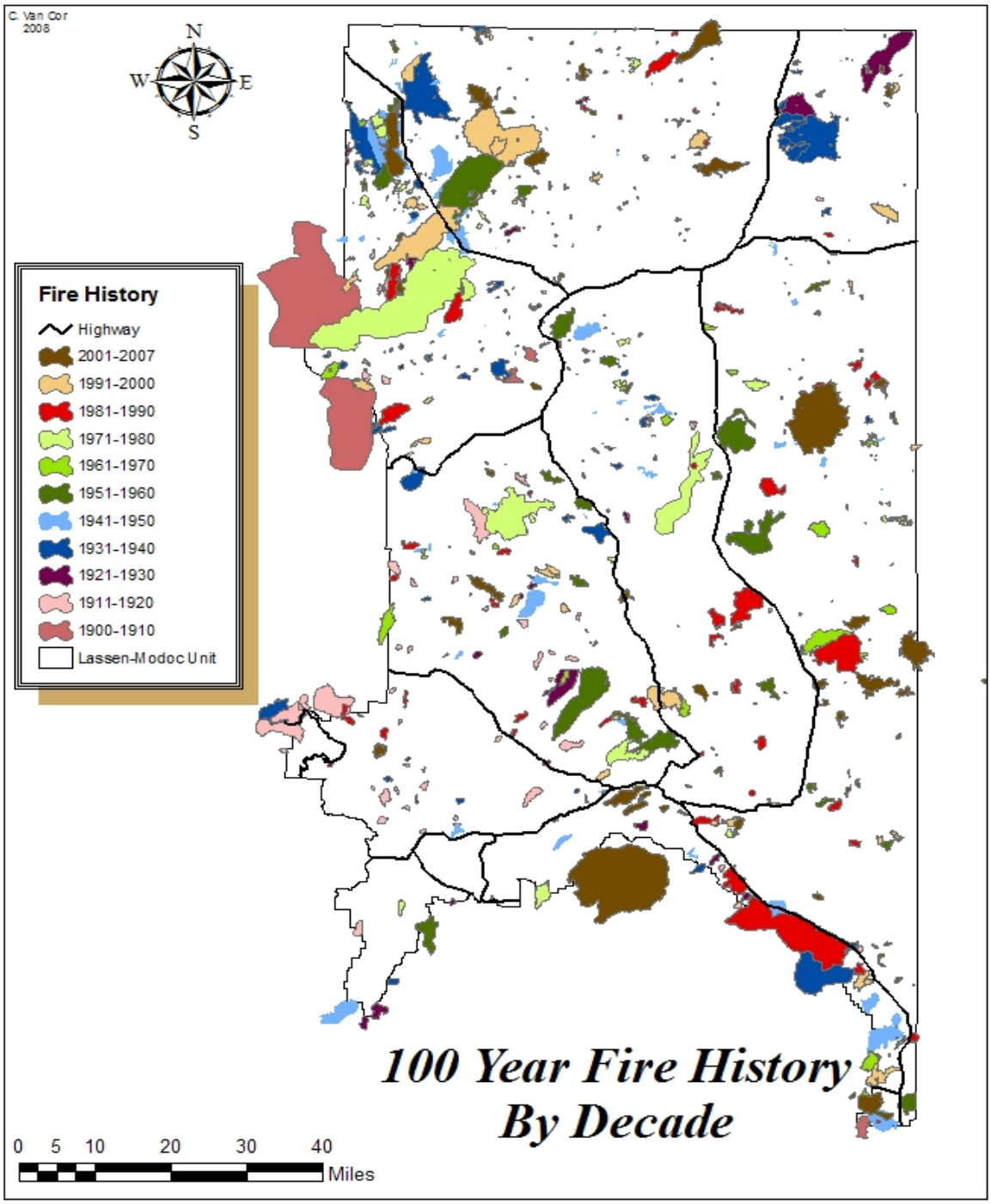
Appendix B


Legend
2007 Fires
Highway
Lake
Lassen-Modoc Unit
N
Lassen-Modoc Unit
2007 Fire History
0
10
20
40 Miles
C. Van Cor
2008

Appendix C


Fire History
1998 to 2007
Fire Years
Major Road
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
Lassen-Modoc Unit
N
Miles
0 5 10 20 30 40
C. Van Cor
2008

Appendix D


C. Van Cor
2008
N
W
E
S
Fire History
Highway
2001-2007
1991-2000
1981-1990
1971-1980
1961-1970
1951-1960
1941-1950
1931-1940
1921-1930
1911-1920
1900-1910
Lassen-Modoc Unit
100 Year Fire History
By Decade
0 5 10 20 30 40
Miles

C. Vegetative Wildfire Fuels

The fuels assessment is used to explain the local fire situation. This can help focus attention on fuels management related solutions. These fuels are identified as defined in the "Aids to Determining Fuel Models for Estimating Fire Behavior" NEFS 1574 by Hal E. Anderson.

Fuel models for the National Fire Danger Rating System (NFDRS) have increased to 20, while fire predictions and applications have utilized the 13 fuel models tabulated by Rothermal (1972) and Albini (1976). These fuels have been classified into four groups- grasses, brush, timber and slash.

In the fire plan, we use these fuel models to develop assessments considering the current flammability of wildland fuels, given the location on the slope, the average fire weather severity conditions, ladder fuels and crown density. Each fuel has its own burning characteristic based on various inherent factors, such as fuel moisture content, arrangement and volume. All of these contribute to how a fire will spread in intensity, and ultimately, threaten assets.

Fuel loading is measured in tons per acre; grass is considered a light fuel with approximately ¾ tons per acre. Conversely, thick heavy brush, a heavy fuel, can have a volume of over 21 tons per acre. Fire intensity is directly related to the fuel loading over the landscape. Grass will burn rapidly with short periods of intense and maximum heat output and brush will produce greater heat output for a longer period of time, thus increasing the difficultly to control.

The arrangement of these wildland fuels is critical to how the fuel behaves during a wildfire. Un-compacted fuels, such as grass, will allow for rapid fire spread since more of its surface can be heated at one time. Compacted fuels, such as pine litter, burn slower because heat and air reach only the top of the fuel.

Fuel Types

Vertical arrangement refers to a fuel's ability to spread upward into the treetops. These are called ladder fuels and are influential factors in fire spread. The ignition of ladder fuels allows the fire to spread from the ground into the treetops. Crown or canopy refers to the tops of trees or the limb cover of the vegetation. It is very important during a timber fire, as fire has the potential of using ladder fuels to gain access to the tops of the trees and become a moving crown fire. These fires can spread as fast as a grass fire from treetop to treetop.

(Note: See Appendix E for Fuels Map)

FIRE MANAGEMENT PLAN 2008

Lassen-Modoc Unit

Common Fuel Models within Lassen-Modoc Unit

Fuel Model 1

Grass

The fine, very porous, and continuous herbaceous fuels that have cured or are nearly cured govern fire spread. Fires are surface fires that move rapidly thought the cured grass and associated material. Very little shrub or timber is present, generally less than one third of the area.

- Total fuel load, <3" dead and live, tons/acre = .74
- Dead fuel load, ¼", tons/acre=. 74
- Live fuel load, foliage tons/acre = 0
- Fuel bed depth, feet = 1.0

Fuel Model 2

Grass and Pine

Fire spread is primarily through the fine herbaceous fuels, either curing or dead. These are surface fires where the herbaceous material, in addition to litter and dead-down stem wood from the open shrub or timber over story, pine stands may include clumps of fuels that generate higher intensities and that may produce firebrands.

- Total fuel load, greater than 3" dead and live, tons/acre = 4.0
- Dead fuel load, ¼", tons/acre = 2.0
- Live fuel load, foliage, tons/acre = 0.5
- Fuel bed depth, feet = 1.0

Fuel Model 4

Brush

Fire intensity and fast-spreading fires involve the foliage and live and dead fine woody material in the crowns of a nearly continuous secondary over story. Stands of mature shrubs, 6 or more feet tall, such as California mixed chaparral. Besides flammable foliage, dead woody materials in the stands significantly contribute to the fire intensity. Height of stands qualifying for this model depends on local conditions. A deep litter layer may also hamper suppression efforts.

- Total fuel load, < 3" dead and live, tons/acre = 13.0
- Dead fuel load, ¼", tons/acre = 5.0
- Live fuel load, foliage, tons/acre = 5.0
- Fuel bed depth, feet = 6.0

Fuel Model 5
Brush

Litter cast by shrubs in the understory carries fire in this brush model. The fires do not burn intensely (4 foot flame lengths), or rapidly since the young shrubs are green and the foliage does not burn. Usually shrubs are short and almost totally cover the area. Young green stands with no dead wood would qualify.

- Total fuel load, < 3" dead and live, tons/acre = 3.5
- Dead fuel load, ¼" tons/acre = 1.0
- Live fuel load, foliage, tons/acre = 2.0
- Fuel bed depth, feet = 2.0

Fuel Model 6
Brush

Unlike the fuel model 5, fires in this model will burn in the foliage of standing vegetation, but only when wind speeds are greater than 8 mph. Fires burn with an average flame length of 6 feet and spread at a rate of 2,112 feet feet/hour. Interior live oak, young chamise and Pinyon-juniper with sagebrush are all associated with this fuel model. In many instances a fuel model 5 will evolve into this model by the latter part of the summer.

- Total fuel load, <3" dead and live, tons/acre = 6.0
- Dead fuel load, ¼", tons/acre = 1.5
- Live fuel load, foliage, tons/acre = 0
- Fuel bed depth, feet = 2.5

Fuel Model 8
Timber

Slow burning ground fires with low flame lengths are generally the case, although the fire may encounter an occasional "jackpot" or heavy fuel concentration that can flare up. Only under severe weather conditions involving high temperature, low humidity, and high wind do the fuels pose fire hazards. Closed canopy stands of short – needle conifers or hardwoods that have leafed out support fire in the compact litter layer. This layer is mainly needles, leaves, and occasionally twigs because little undergrowth is present in the stand. Representative conifer types are white pines and lodgepole pine.

- Total fuel load, <3" dead and live, tons/acre = 5.0
- Dead fuel load, ¼", tons/acre = 1.5
- Live fuel load, foliage, tons/acre = 0
- Fuel bed depth, feet = 0.2

Fuel Model 9
Timber

Fires in this model also burn in needle or leaf fall under a conifer or hardwood canopy, but at a faster rate than in a fuel model 8 and more intensely. Concentrations of heavier dead material add to the possibility of the fire spreading to the crowns of trees. This model is found in a wide range of areas under timber stands which have been treated for fuel reduction, or have seen low intensity fires over the last decade. Concentrations of dead-down woody material will contribute to possible torching out of trees, spotting, and crowing.

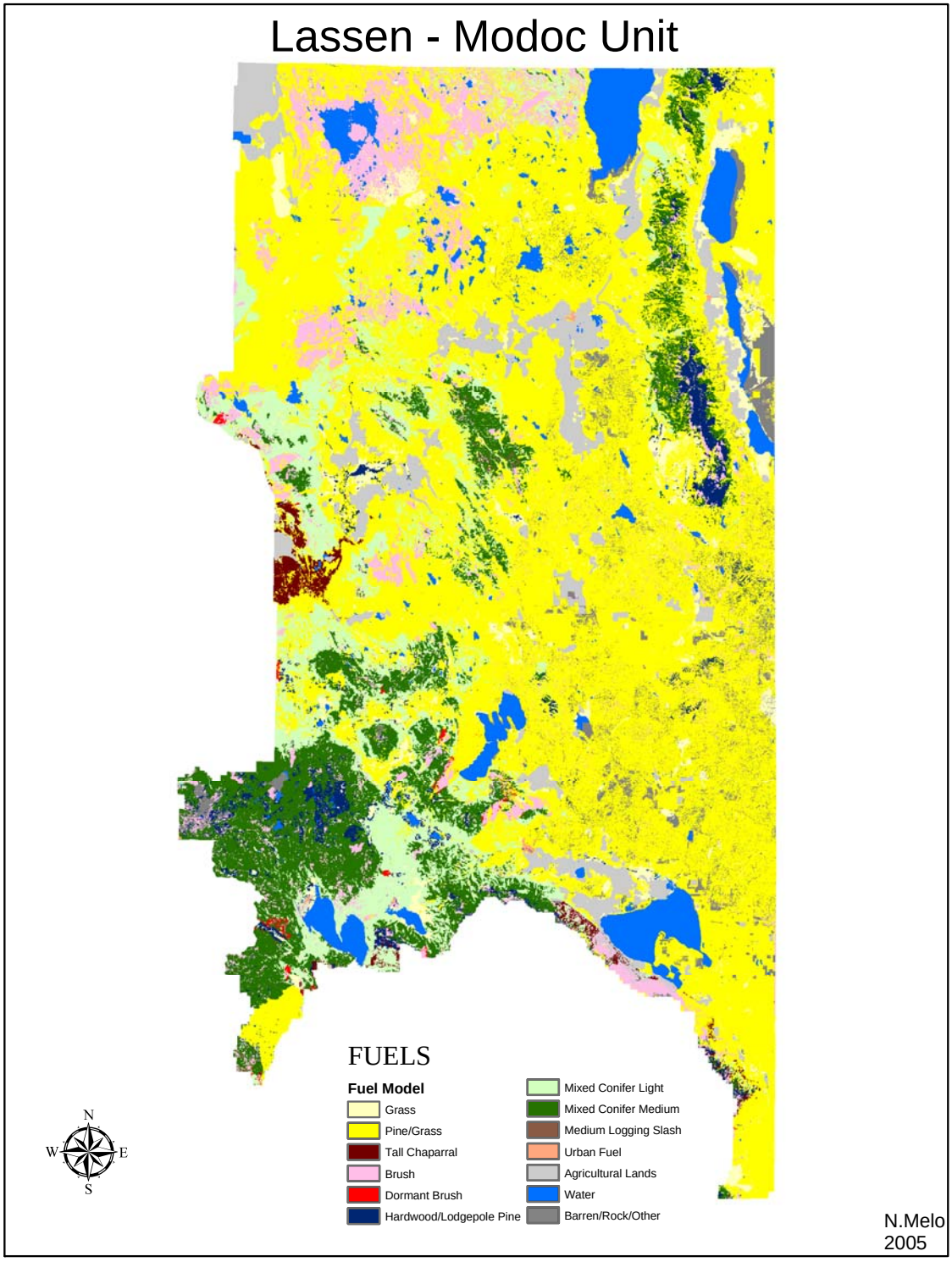
- Total fuel load, < 3" dead and live tons/acre = 3.5
- Dead fuel load, ¼" tons/acre = 2.9
- Live fuel load, foliage, tons/acre = 0
- Fuel bed depth, feet = 0.2

Fuel Model 10
Timber

Fires burn in the surface and ground fuels with greater fire intensity than the other timber litter models. Dead-down fuels include greater quantities of 3-inch or larger limb wood resulting from over maturity or on the forest floor. Crowning out, spotting, and torching lead to potential fire control difficulties. Any forest type may be considered if heavy down material is present; examples are insect- or disease-ridden stands, wind thrown stands, over mature situations with deadfall, and aged light thinning or partial-cut slash.

- Total fuel load, < 3" dead and live tons/acre = 12.0
- Dead fuel load, ¼", tons/acre = 3.0
- Live fuel load, foliage, tons/acre = 2.0
- Fuel bed depth, feet = 1.0

Appendix E

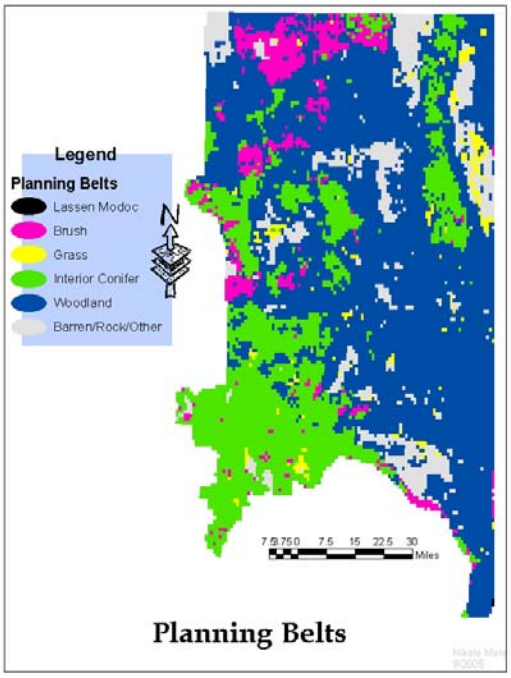

Lassen - Modoc Unit
FUELS
Fuel Model
Grass
Pine/Grass
Tall Chaparral
Brush
Dormant Brush
Hardwood/Lodgepole Pine
Mixed Conifer Light
Mixed Conifer Medium
Medium Logging Slash
Urban Fuel
Agricultural Lands
Water
Barren/Rock/Other
N
W
E
S
N.Melo
2005

FIRE MANAGEMENT PLAN 2008

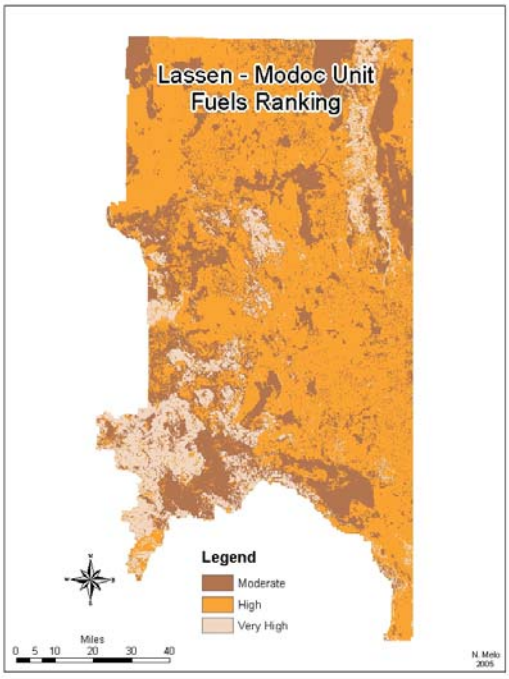
Lassen-Modoc Unit

Determining and Defining Hazardous Fuels

The first step in defining hazardous fuels is the development of vegetation coverage for Lassen Modoc Unit in GIS. Vegetation coverage's are described as planning belts which are areas consisting of similar vegetation types. These zones have similar fire behavior characteristics that impact fire suppression activities and are based on the Fire Behavior Prediction System (FBPS) fuel modeling. The Unit has four planning belt types: Grass, Brush, Conifer and Woodland.



The vegetation types within the planning belts are categorized into the FPBS fuel model coverage as shown in the National Wildfire Coordinating Group Fuel Model as described above. After vegetation coverage's were identified, the past fire history for the unit was overlain on the vegetation coverage. Through analysis, surface fuel characteristics that result from past fires were factored into the creation of a final map, which displays a more accurate account of vegetation coverage, and thus, FPBS fuel characteristics.



The final phases of determining fuel hazard ratings for the Lassen -Modoc Unit involves the combining of crown fuel characteristics and surface fuel characteristics. The method describes additional ladder and crown fuel indices to surface fuels on a given area. If the vegetation data provides sufficient structural detail, the method imputes these additional indices from the data. If the vegetation data lacks structural detail, the method imputes indices based on the fuel model. The majority of indices are based on the FPBS fuel models.

In areas where applicable, the ladder and crown fuel indices convey the relative abundance of the fuel types. The indices take values ranging from 0 to 2, with 0 indicating absent, 1 representing present but spatially limited, and 2 indicating widespread. These indices indicate the probability that torching and crown fires would occur if the stand were subjected to a wildfire under adverse environmental conditions.

The assessment method calculates fire behavior that can be expected for unique combinations of topography and fuels under given weather condition. BEHAVE (Andrews 1986) provides estimates of fire behavior under severe fire weather conditions for FPBS fuel models located on six slope classes. Each fuel model combined with each slope class receives a surface hazard rank.

The total hazard rating includes not only hazards posed by surface fire, but also hazards by involvement of canopy fuels. The hazard ranking method includes this additional hazard component by adjusting the surface hazard rank according to the value of the ladder and crown fuel indices. Specifically, the surface hazard rank increases a maximum of one class in all situations where the sum of the ladder and crown fuel indices is greater than or equal to two.

The potential fire behavior drives the hazard ranking. A rank is attributed to each Q81st in SRA within the unit. The ranking method portrays hazard ratings as moderate, high or very high. The final map displays the fuel hazard ranks within the Unit used as another factor for determining pre-fire management target areas, fire size potentials and information for stakeholders with interests in ecosystem management, fuels management, and pre-fire management.

Knowledge of fire behavior in a given fuel type is essential for designing a defense plan against wildfire. Fires in brush often burn with an intensity that prevents fire crews from safely applying water to the flame front. Timber fires can ignite new fires (called spot fires) miles ahead of the main blaze, making control efforts nearly useless. Only wide scale pre-fire management programs can prevent a potential wildfire catastrophe.

National Wildfire Coordinating Group Fuel Models
Lassen - Modoc Unit Description

Fuel Model #	Fuel bed depth (feet)	Tons per Acre (live)	Tons per Acre (dead)	Flame Length (feet)	Spread Rate (feet/hour)	Comments
1	1	0	.74	4	5195	Dry grass. Not a common fuel found in the unit as found in the foothills and valleys of the Sacramento Valley

2	1	.5	4	6	2331	Dry grass with 1/3 to 2/3 brush or tree canopy. Very common throughout the unit.
3	2.5	2.5	3.01	12	6926	Grass model, not found locally.
4	6	5.01	16.03	19	4995	Thick brush with heavy dead component.
5	2	2	3.5	4	1199	Young or green brush with fire in the litter only.
6	2.5	2.5	6	6	2131	Mature or dry brush with foliage that will burn when exposed to wind.
7	2.5	2.5	4.87	5	1332	Brush model, not found locally.
8	.2	.2	5	1	107	Timber or hardwood with fire burning in light litter underneath.
9	.2	.2	3.48	2.6	499	Timber with fire in slightly heavier litter then model 8
10	1	1	12.02	4.8	526	Timber with heavy dead material underneath.
11	1	1	11.52	3.5	400	Light logging slash from a partial thinning operation
12	2.3	2.3	34.57	8	866	Moderate logging slash
13	3	3	58.1	10.5	899	Heavy logging slash

The local distribution of the fuel models is illustrated in the above map. Model 2 (grass) is found throughout the unit at various elevations; brush is found interspersed among the grass and then migrates into the timbered areas. The average elevation in the unit is approximately 5000 with higher mountain peaks. The entire unit is located on the northeastern plateau of California and the rainfall varies throughout. The Westwood and Bieber area, where predominately heavy timber is found, receives larger amounts of precipitation as compared to the balance of the unit. On the eastern portion of the unit the climate is more arid and the fuels consist primarily of sage and grass, interspersed with pine and juniper.

D. Description of Severe Weather Analysis

Severe fire weather is defined using the Fire Weather Index (FWI) developed by the USDA Forest Service Riverside Fire Lab. The FWI combines air temperature, relative humidity, and wind speed into a one number score. The FWI gives wildland fire managers an index that indicates relative changes in fire behavior due to the weather (fuel and topography conditions are not included in the calculation). Severe fire weather occurs when the FWI, calculated from the hourly weather measurement, exceeds a predetermined threshold.

The threshold FWI is derived from average bad fire weather of (approximately) 95° F, 20% relative humidity, and a 7 mph eye-level wind speed. Frequency of Severe Fire Weather is defined as the percent of time during the budgeted fire season that the weather station records severe fire weather. Individual weather stations are ranked as low, medium, or high frequency of severe fire weather. This ranking can then be applied to the area on the ground represented by the weather station.

Severe Weather Analysis Parameters

FWI CUTOFF	START LOW RANK	START MED RANK	START HIGH RANK
29.725	0%	5%	20%

STATION	OWNER	LAT	LONG	ELEV	WXSCORE	RANK
Ladder Butte	USFS	40.80722	-121.29667	5644	3	L
Ravendale	BLM	40.75417	-120.33333	5491	6	M
Rush Creek	USFS	41.2844444	-120.8524999	4720	3	L
Summit (Hat Mtn.)	NPS	40.50167	-121.423	6850	1	L
Ash Valley	BLM	41.05194	-120.6861	5100	10	M
Bogard RS	USFS	40.59805	-121.08304	5686	1	L
Bull Flat	BLM	40.48083	-120.11388	4395	10	M
Canby	USFS	41.43417	-120.86778	4312	18	M
Chester	USFS	40.28972	-121.08721	4530	3	L
Devils Garden	CDF	41.521	-120.668	5000	9	M
Doyle	USFS	40.02222	-120.10555	4240	5	M
Juniper Creek	BLM	41.33222	-120.47249	4372	11	M
Buffalo Creek	BLM	40.58194	-119.79	4894	16	M
MDF05	USFS	41.4961111	-120.5502777	4370	0	L
MDF03	USFS	41.2844444	-120.8524999	4720	0	L
R504 Portable	USFS	40.46167	-121.35611	7000	1	L
LN3	USFS	40.28333	-121.2	0	0	L
Timber Mountain	USFS	41.63472	-121.30083	5140	10	M
Surprise Portable	BLM	41.17083	-120.05833	5200	5	L
Alturas Portable	BLM	40.9745	-120.72499	6000	0	L
MDF04	USFS	41.49583	-120.55027	4737	0	L
MDF06	USFS	41.49611	-120.55027	4370	0	L
Laufman	USFS	41.13667	-120.345	4858	0	L
Grasshopper	CDF	40.78	-120.77833	6050	1	L
Blue Door	BLM	41.05472	-120.33749	5615	1	L
Horse Lake	BLM	40.63055	-120.50277	5100	9	M
Gordon	USFS	40.7586111	-120.8961111	6200	0	L
LN4	USFS	40.25	-121.08333	0	0	L
Barrell Springs	BLM	41.91111	-119.93889	5835	10	M
Westwood	CDF	40.29889	-120.89167	5800	1	L

WxSCORE

[Severe Wx]/[Wx In Season]. The percent of time a weather station is experiencing severe weather. Non-fire season data is thrown out at this point. The assumption is that during winter the fuels aren't ready to burn regardless of the weather. There are exceptions to this, but trying to count every possible contingency would weaken the result we are trying to achieve.

WxRANK

The Wx SCORE intensity rating is lumped into three categories to create a severe fire weather frequency ranking.

E. Present Projects

BATTALION 1

Battalion 1 has an active LE 38 inspection program in the communities. The goal is to gain *PRC 4291* compliance. During the summer months, the engines from both Susanville and Grasshopper are involved in the program as well as working with the schools and community groups in fire prevention programs.

Burning permits are issued to the public beginning on May 1 of every year and are valid until the 30th of June when all burning is suspended in the unit. LE 5's are issued in conjunction with the local fire protection districts for agricultural burning.

Cal Fire in conjunction with the Lassen County Fire Safe Council and Janesville Fire Safe Council are currently working on several ongoing fuels reduction projects.

Susanville Area

2008 Susanville Fuel Reduction Project Update

Approximately 528 acres were treated in first year of the Lassen County Fire Safe Council's Susanville Fuel Reduction and Watershed Restoration Project. The project was cleared to proceed in July of 2007 and will eventually cover 6,800 acres. 2007 treatments consisted of thinning of small suppressed and dead and dying trees through biomass utilization and mastication of brush.

Timbco thinning trees in the Golden Lane section of the Project

The private side of the project is being implemented by the fire safe council with support from Cal Fire, BLM, US Forest Service, Lassen County, Lassen County Resource Advisory Committee, Pit Resource Conservation District, NRCS, Sierra Nevada Conservancy and the Susanville Indian Rancheria. Each landowner consultation includes *Risk Assessments in the Home Ignition Zone*.

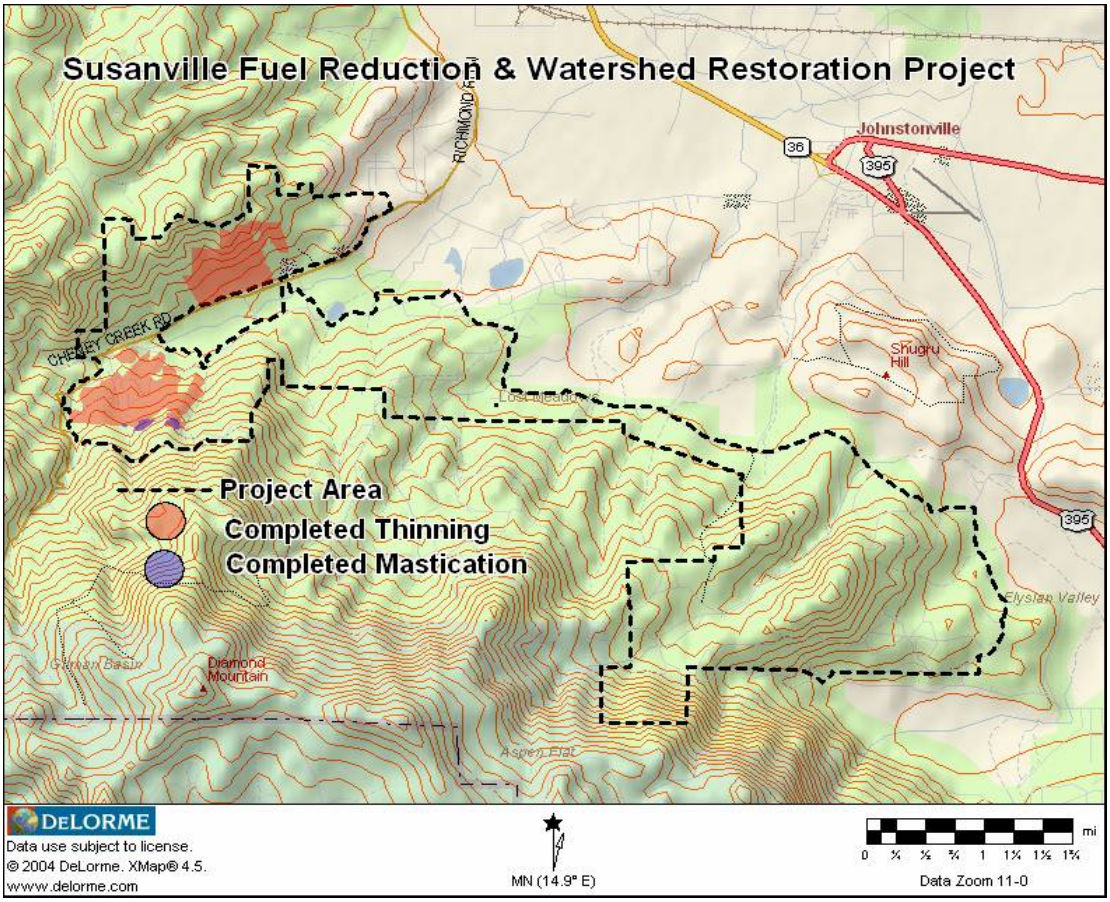
In May of 2007 Lassen County's Project Manager received certification to perform these inspections after attending a Firewise Communities course in Portland, Oregon. These assessments include pointing out areas of ignition risk with individual property owners such as debris accumulation near structures, unscreened vents, potentially flammable items on or under decks and anything else that might ignite if subjected to embers from a nearby wildfire. All treatment work includes helping landowners meet 4291 clearance requirements

US Forest Service is in the initial planning stage of a fuel treatment project along the Diamond Mountain rim adjoining the project to the south that will complement the project. The fire safe council expects to treat up to 1,000 acres in 2008.

Sheared material being processed in the Golden Lane section of the project

Typical fuel load in the project area

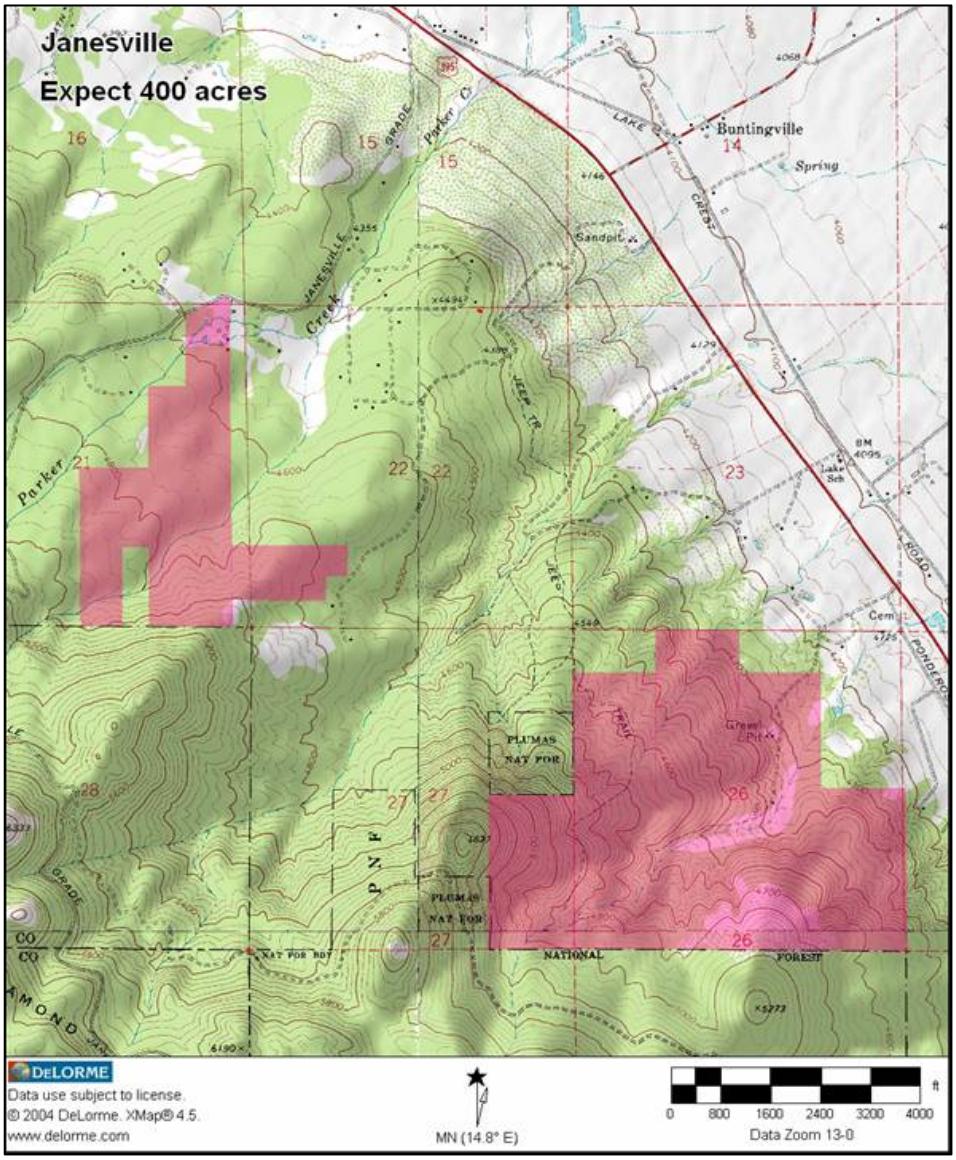
Susanville Project Map



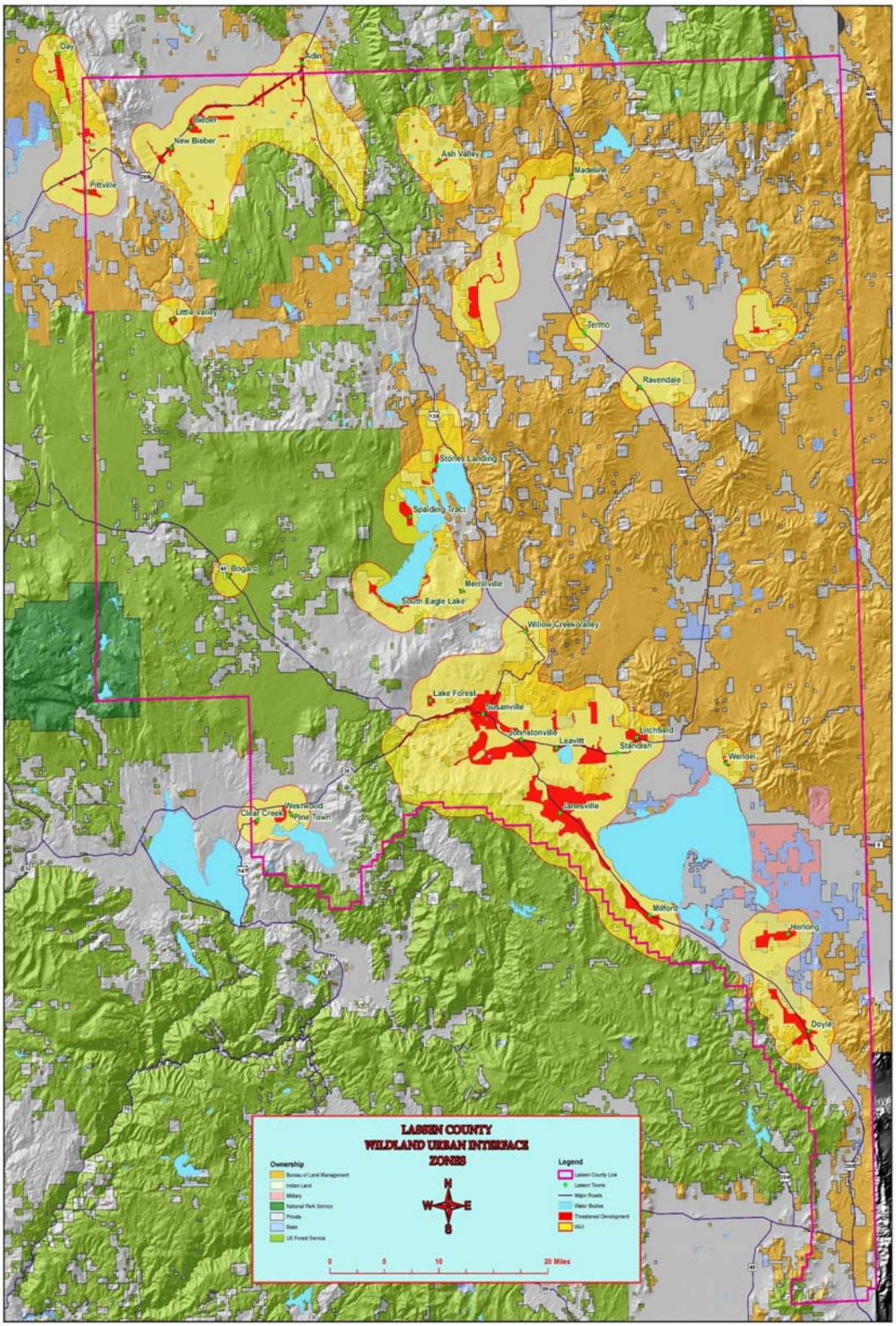
2008 Janesville Project Report

In early 2008 the Janesville Town Council entered into a cooperative agreement with the Lassen County Fire Safe Council, Inc (LCFSC) to implement and manage fuel reduction projects in the Janesville area. LCFSC awarded a 400+ acre landscape scale fuel reduction contract in April and clearance to proceed was issued in May. This biomass utilization contract was awarded for $275 per acre, a substantial reduction in costs from previous Janesville hand treatments. Treatments will include the thinning of overstocked eastside pine forest and the removal of dead and dying trees. Work is expected to begin in June, 2008 with completion scheduled before the end of the year. It is being funded with California Fire Safe Council/BLM funds, a Lassen County Resource Advisory Committee grant, and supported by Lassen County, Cal Fire and the US Forest Service.

Janesville Project Map



Lassen County WUI Zones



Susanville City Water Project There are various project locations around the Susanville area with Cady Springs and Piute Creek the priority. The goal is to remove brush that inhibits water flow at the many creeks and drainages surrounding the City of Susanville and improve the cities flood protection.

Susan Ranch Project The ongoing trail reconstruction around Hobo Camp will prevent further erosion and increase the publics safety. Fuels reduction will also benefit the local habitat and improve the aesthetics of the surrounding area.

Fish and Game Project The project involves constructing fuel brakes around buildings and pumps at the Fleming and Dakin Units as well as removing weeds from the parking areas and general maintenance which includes fence repair, painting and brush removal.

Fish Trap Project Loading, unloading and installing an Alaskan fish weir at Pine Creek near Eagle Lake. The weir will be placed downstream from the California Department of Fish and Games (DFG) trapping facility. The Pine Creek weir will allow (DFG) to control the number of trout that enter the trap each spring and effectively collect eggs for future rearing. This artificial spawning and rearing program is facilitated by the Eagle Lake Fishery.

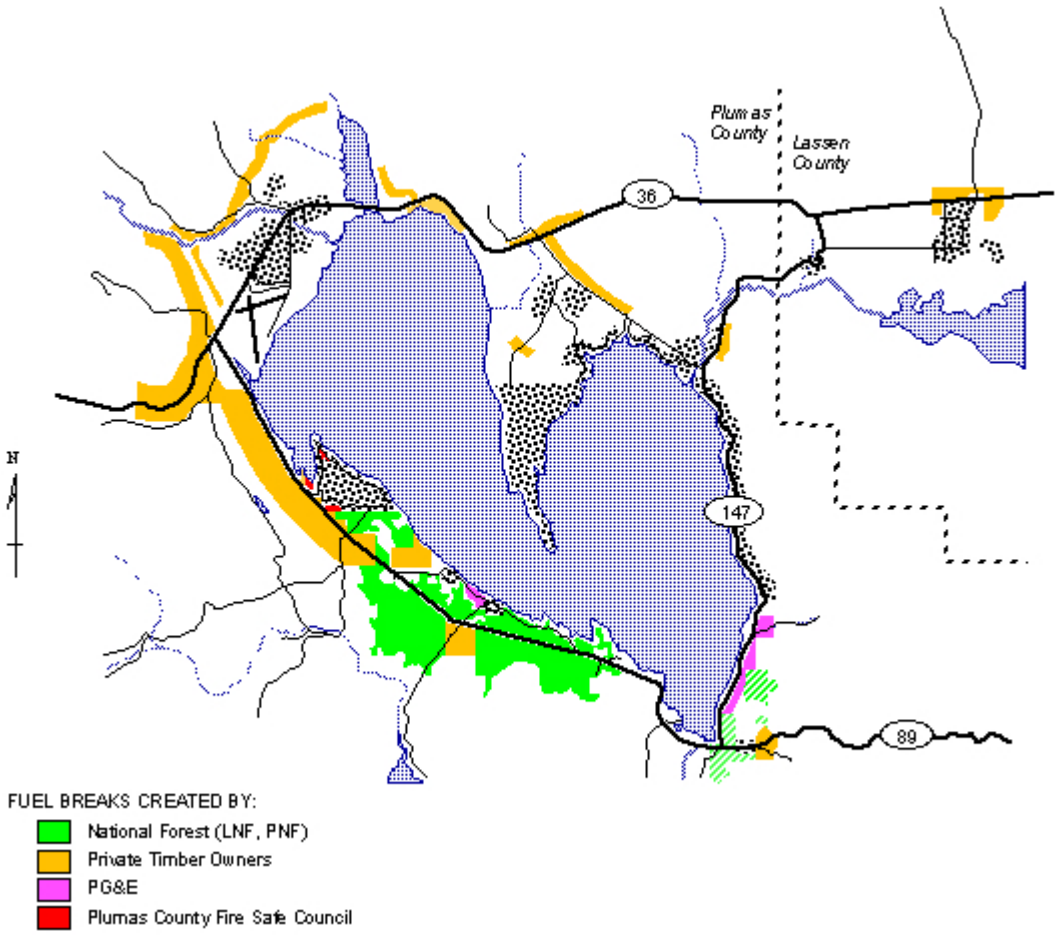
Battalion 2

Battalion 2 has an active LE-38 inspection program in the communities. The goal is to gain *PRC* 4291 compliance in all of the communities within the basin. Eagle Lake Station will continue to patrol and provide fire prevention programs during the summer at the campgrounds around the south end of Eagle Lake.

Westwood Area

Both public and private timberland projects have been favorably influenced in this process, leading to a significant expansion in the coverage of shaded fuel breaks around the Lake Almanor basin. Thanks to this collaborative and proactive approach, most of these added fuel breaks and hazardous fuels reduction (HFR) efforts were accomplished without the need for grant funding. Grant requests were successfully pursued for a few HFR efforts within community areas.

Almanor Basin Fuel Brakes

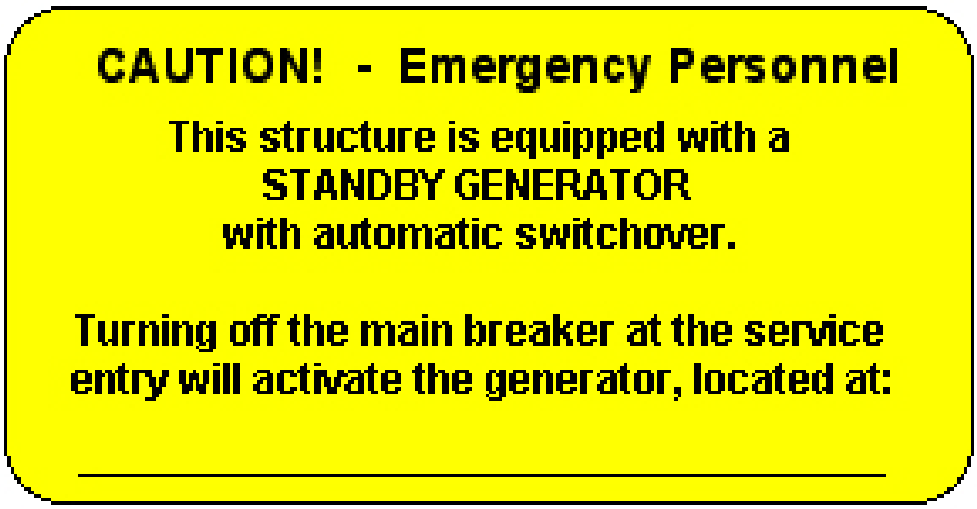


Documentation and public education efforts have included the publication of a number of specific items:

- Local wildland fire evacuation plan, 2001
- Almanor Basin Fire Safe Plan, 2002
- Fire Safe in the Almanor Forest brochure, 2003
- Inputs to:
    - Plumas County Hazardous Fuels Assessment and Strategy, 2004
    - Plumas County Community Wildfire Mitigation Plan (CWPP), 2005
    - Lake Almanor Basin Emergency Preparedness Plan, 2006

Modest amounts of grant funding were obtained and used for printing costs of the locally-produced documents. Public education efforts have included setup assistance to establish an informative website for one of the local fire protection districts http://www.citlink.net/~westalmanorfd, periodic news releases, and the preparation of homeowner materials tailored to the area regarding yard cleanup and tree removal. The Council also created a special safety warning sticker for homeowners to place on their

main electrical service entrance panel in those cases where the residence has a backup electrical generator with an automatic switchover feature. The purpose of the sticker is to alert firefighters to a possible electrocution hazard and the need to disable the generator in the event of a structure fire.



Ongoing projects under the Almanor Basin Fire Safe Council include the following:

- Completion of the alternate (emergency) access route into Warner Valley. This is a joint effort supported by Sierra Pacific Industries and Lassen National Forest.

- Completion of a shaded fuel break around Canyon Dam. This is a project under the auspices of Plumas National Forest.

The Council continues its support of HFR/fuel break creation and maintenance around the basin, as well as support of pre-fire planning and general public education efforts.

Awarded Grants 2002				
PC FSC #	**Project Name/ Funding Source**	**Amount**	**Grant Description**	***Status***
02-09	**NSAQMD – Chipping in lieu of Burning** NS AQMD	**$15,000**	To put towards HFR and community defense projects where chipping will occur in lieu of open burning.	**Funds continue to be used for chipping of piles on projects in lieu of burning.**

Grants Awarded 2003				
PC FSC #	**Project Name/ Funding Source**	**Amount**	**Grant Description**	***Status***
03-1	Delleker/Portola HFR HR 2389 Title III	**$15,000**	Community outreach and project development to treat 125 acres of Hazardous Fuels between Delleker & Portola, and to hire a Registered Professional Forester to design the project. (Shared w/05-5)	**Project is part of Eastern Plumas HFR RAC project**

Grants Awarded 2004				
PC FSC #	**Project Name/ Funding Source**	**Amount**	**Grant Description**	***Status***
04-4	**Canyon Dam HFR Planning** **HR 2389 Title III**	**$40,000**	Provide for the planning and treatment of 550 acres of HFR on public lands administered by the Plumas NF (Shared w/ 04-12)	**Contract is awarded. Work to be delayed for salvage of Moonlight fire**
04-12	**Canyon Dam HFR** **HR 2389 Title II**	**$84,000**	Provide for the treatment of 550 acres of HFR on public lands administered by the Plumas NF (Shared w/ 04-4)	
04-6	**Stewardship Contract Development** **HR 2389 Title III**	**$15,000**	To provide training, outreach and development towards a Stewardship contract on public lands using HR 2389 Title II funds.	**No suitable project found yet**

Grants Awarded 2005				
PC FSC #	**Project Name/ Funding Source**	**Amount**	**Grant Description**	***Status***
05-3	**Greenhorn, HFR Planning-RFP HR 2389 Title III**	**$10,000**	Hire A RPF for planning to treat up to 30 acres of Hazardous Fuels on CSD lands within the Greenhorn community.	**Contract proposals being evaluated.**
05-7	**Greenhorn, HFR Treatment HR 2389 Title II**	**$23,380**	Treat up to 30 acres of Hazardous Fuels on CSD lands within the Greenhorn community (Shared with 07-8)	

07-8	**Greenhorn, HFR Treatment HR 2389 Title II**	**$47,000**	Treat up to 25 acres of Hazardous Fuels on CSD lands within the Greenhorn community (Shared with 05-3 & 05-7)	
05-4	**Grizzly Creek HFR Planning HR 2389 Title III**	**$15,000**	Hire A RPF for planning and managing the treatment of 121 acres of HFR of private lands along Grizzly Creek Road.	**Working with 1 remaining landowner to treat another 6-7 acres. Additional funds being sought**
05-8	**Grizzly Creek HFR Treatment HR 2389 Title II**	**$78,955**	Hire A RPF for planning to treat up to 121 acres of HFR of private lands along Grizzly Creek Road.	
05-5	**Mohawk Vista HFR Project Development HR 2389 Title III**	**$15,000**	For education and organization of property owners and planning a community fuels reduction project.(Shared w/03-1, 06-2 & 06-5)	**Bid prospectus for contractors in development.**
Grants Awarded 2006				
PC FSC #	**Project Name/ Funding Source**	**Amount**	**Grant Description**	**Status**
06-2	**Eastern Plumas HFR CA FSC – USFS Community Protection**	**$86,150**	Treat up to 125 acres of Hazardous Fuels on private parcels in Mohawk Vista, C Road & Portola/Delleker communities. (Shared w/ 03-1, 05-5 & 06-5)	**Due to higher than expected bids on other projects, additional funds are being sought.**
06-5	**Eastern Plumas HFR HR 2389 Title II**	**$36,260**	Treat up to 50 acres of Hazardous Fuels on private lands in Mohawk Vista, C Road & Portola/Delleker communities. (Shared w/ 03-1, 05-5 & 06-2)	
06-3	**Massack HFR\ CDF Prop 40**	**$114,300**	Treat up to 125 acres of Hazardous Fuels on private lands in the Massack area.	**Operations resumed and completion expected by 5/30/08**
06-9	**Massack HFR Planning – RPF HR 2389 Title III**	**$15,000**	Hire A RPF for planning and managing the treatment of 125 acres of HFR of private lands in the Massack area.	
06-4	**Little Grass Valley HFR HR 2389 Title II**	**$64,176**	Treat up to 111 acres of Hazardous Fuels on private parcels in Little Grass Valley (Shared w/06-10)	**Contractor working to find a LTO for biomass.**
06-10	**Little Grass Valley HFR Planning HR 2389 Title II**	**$5,000**	Work with Little Grass Valley communities on wildfire mitigation & evacuation planning (Shared w/06-4)	

PC FSC #	**Project Name/ Funding Source**	**Amount**	**Grant Description**	**Status**
06-6	**La Porte Pines HR 2389 Title II**	**$43,050**	Treat up to 75 acres of Hazardous Fuels on public lands in La Porte Community	**Mastication expected to begin in Spring 2008**

		Grants Awarded 2007		
07-1	**Indian Valley HFR CA FSC – USFS Community Protection**	**$191,560**	Treat up to 200 acres of Hazardous Fuels on private parcels in the Indian Valley Area. (Shared w/07-4)	**RPF contacting landowners & assessing treatments & product values**
07-4	**Indian Valley HFR Planning** **HR 2389 Title III**	**$15,300**	Hiring a RPF for the planning associated with treating up to 200 acres of Hazardous Fuels on private parcels in the Indian Valley Area. (Shared w/07-1)	
07-2	**La Porte Rd. HFR** **CDF Prop 40**	**$116,362**	Hire A RPF for planning and managing the treatment of 100 acres of Hazardous Fuels on private lands within the community.	**Treatments identified. RPF will put out prospectus next month**
07-3	**PC FSC Coordination** **HR 2389 Title III**	**$64,659**	Coordination of the Fire Safe Council and community outreach and education with some HFR project development in 2007.	**Coordination activities ongoing.**
07-5	**C Road Right-of-Way Planning HR 2389 Title III**	**$8,500**	For the planning associated with fuel reduction along C Road.	**RPF working with the CSD on property lines.**
07-6	**Taylorsville Campground HR 2389 Title II**	**$35,000**	Treat 35 acre of private land above the Taylorsville Campground	**Contractor selected and operations to start soon.**
07-7	**C Road HFR** **HR 2389 Title II**	**$44,000**	Treat up to 40 acres of Hazardous Fuels on private lands in the C Road community. Complements prior work with projects 04-1, 2, & 8.	**17 acre hand work completed Mastication to begin in June.**
07-9	Elderly/Disabled Defensible Space Assistance **HR 2389 Title II**	$**35,000**	Provide assistance to elderly or disabled citizens who lack the physical or economic capacity to perform their defensible space to meet PRC 4291	**Project coordinator selected. Outreach to begin. Awaiting a contract with PNF.**
07-10	Countywide Educational Workshops SNC- Prop 84	**$27,000**	Provide 6-8 Educational workshops and supporting publication material to residents, businesses & organizations in Plumas County. Uses $28,000 of PC FSC Coordination funds as match.	**Firesafe tabloid & workshops being developed.**
		Grants Awarded 2008		
08-1	**Gold Mtn. HFR CA FSC – USFS Community Protection**	**$86,750**	Treat up to 120 acres of Hazardous Fuels on private parcels adjacent to the Gold Mtn. Community	**Awaiting a contract with PNF**

Grants Awarded 2008				
PC FSC #	**Project Name/ Funding Source**	**Amount**	**Grant Description**	**Status**
08-2	**PC FSC Coordination** **HR 2389 Title III**	**$100,000**	Coordination of the Fire Safe Council and community outreach and education with some HFR project development in 2008 & 2009.	**Awaiting Funds**
08-3	**PC FSC Coordination** **HR 2389 Title III**	**$40,000**	To provide project level planning and supervision for community-level HFR projects. Technical and professional staff will be hired by PCFSC to carry out those tasks in at least 8 communities.	**Awaiting Funds**

BATTALION 3

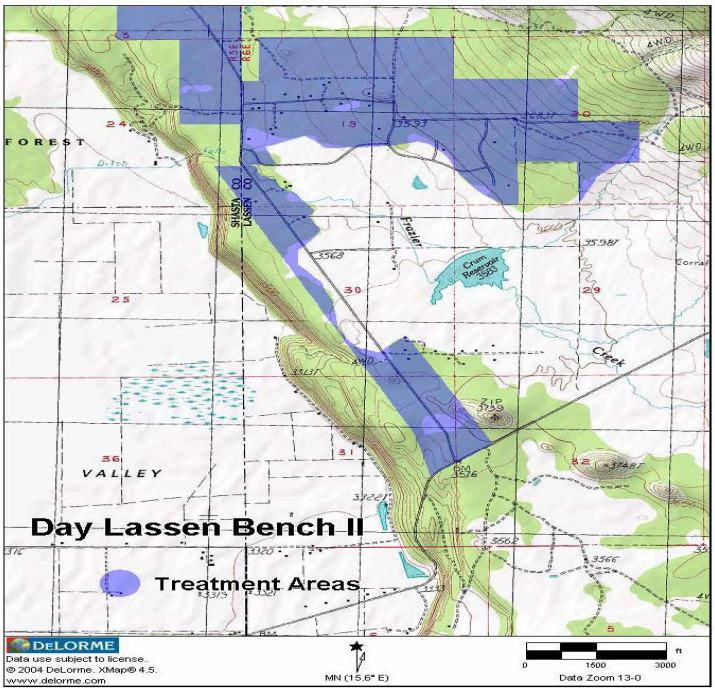
Battalion 3 has an active LE-38 and *PRC* 4291 inspection program. Cal Fire is working with the Lassen Fire Safe Council on several projects in the Day Bench and Adin Area.

Day Bench Area

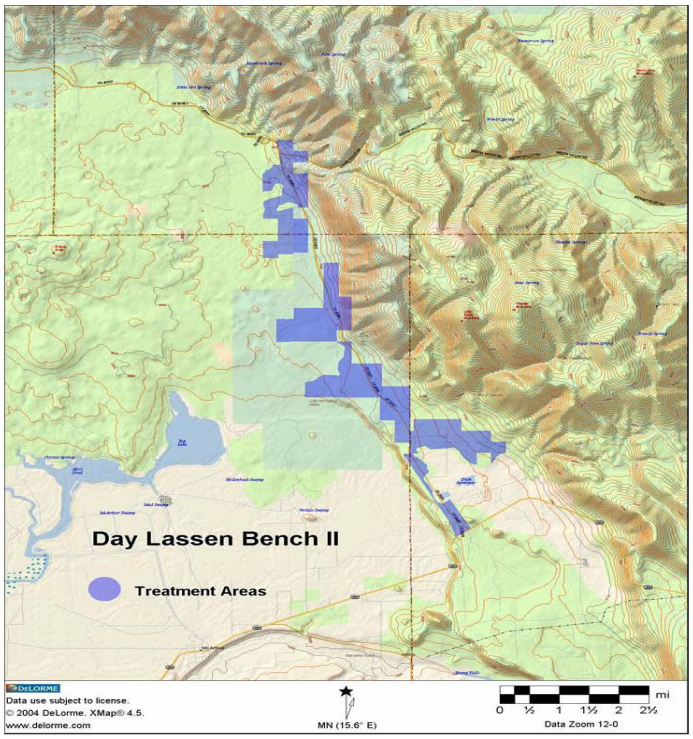
Day Lassen Bench Wildland Urban Interface Fuel Reduction and Watershed Restoration Project

The project began in 2003 when the partners developed a Fire Safe/Community Wildfire Protection Plan and NEPA/CEQA document covering 3,150 acres. Fuel reduction activities began in 2004 and 1,500 acres have been treated to date, 300+ more will be treated this year.

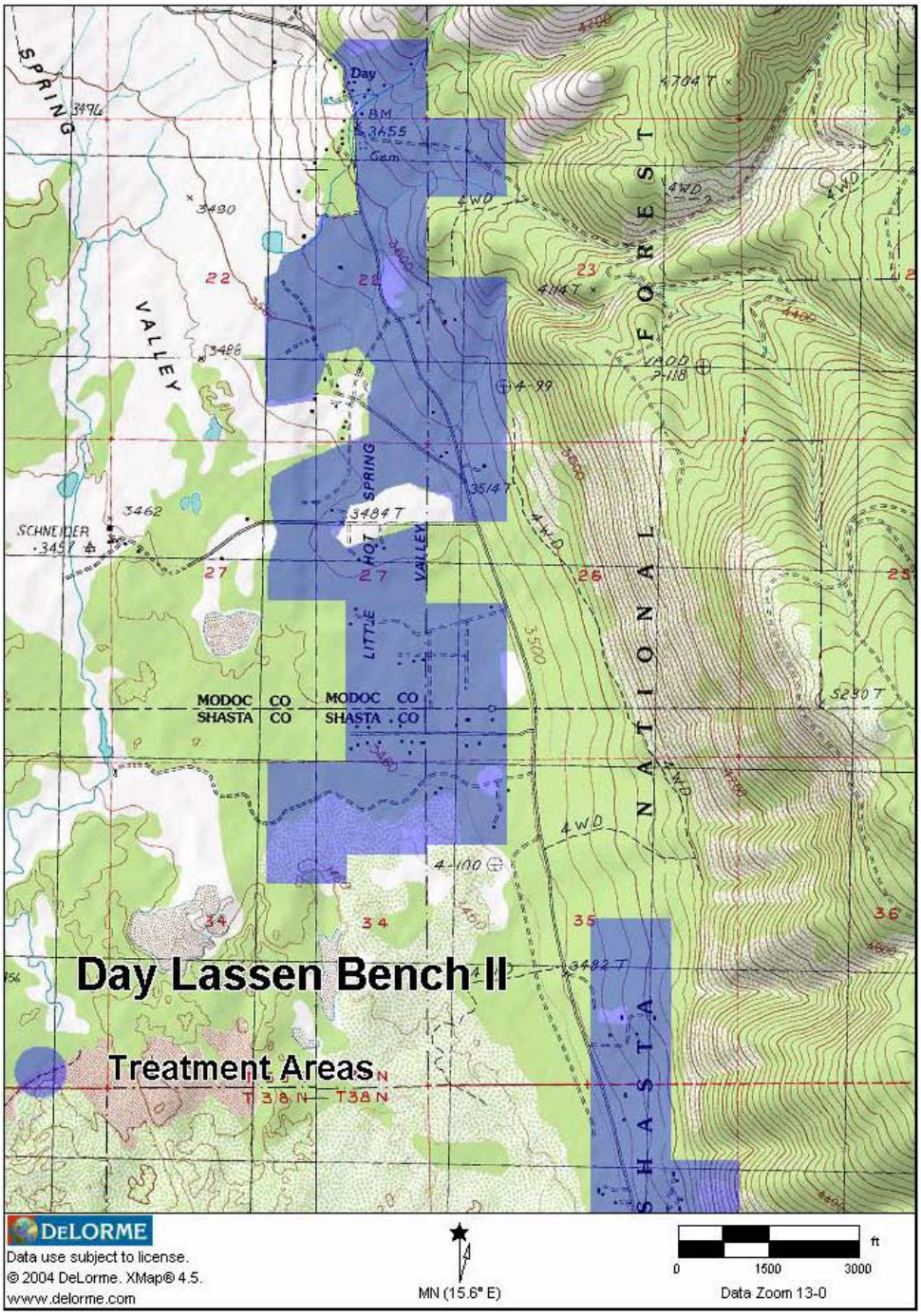
Treatments include thinning of mixed conifer forest using conventional logging equipment with biomass utilization of the removed material as fuel for clean renewable energy. Mastication treatments are also done in brush fuels. Currently, shearing and chipping is in progress at the project. The work will improve and then protect watershed function by reducing over stocking and hazardous fuel loads. Protect the community and wildlife habitat from catastrophic fire.



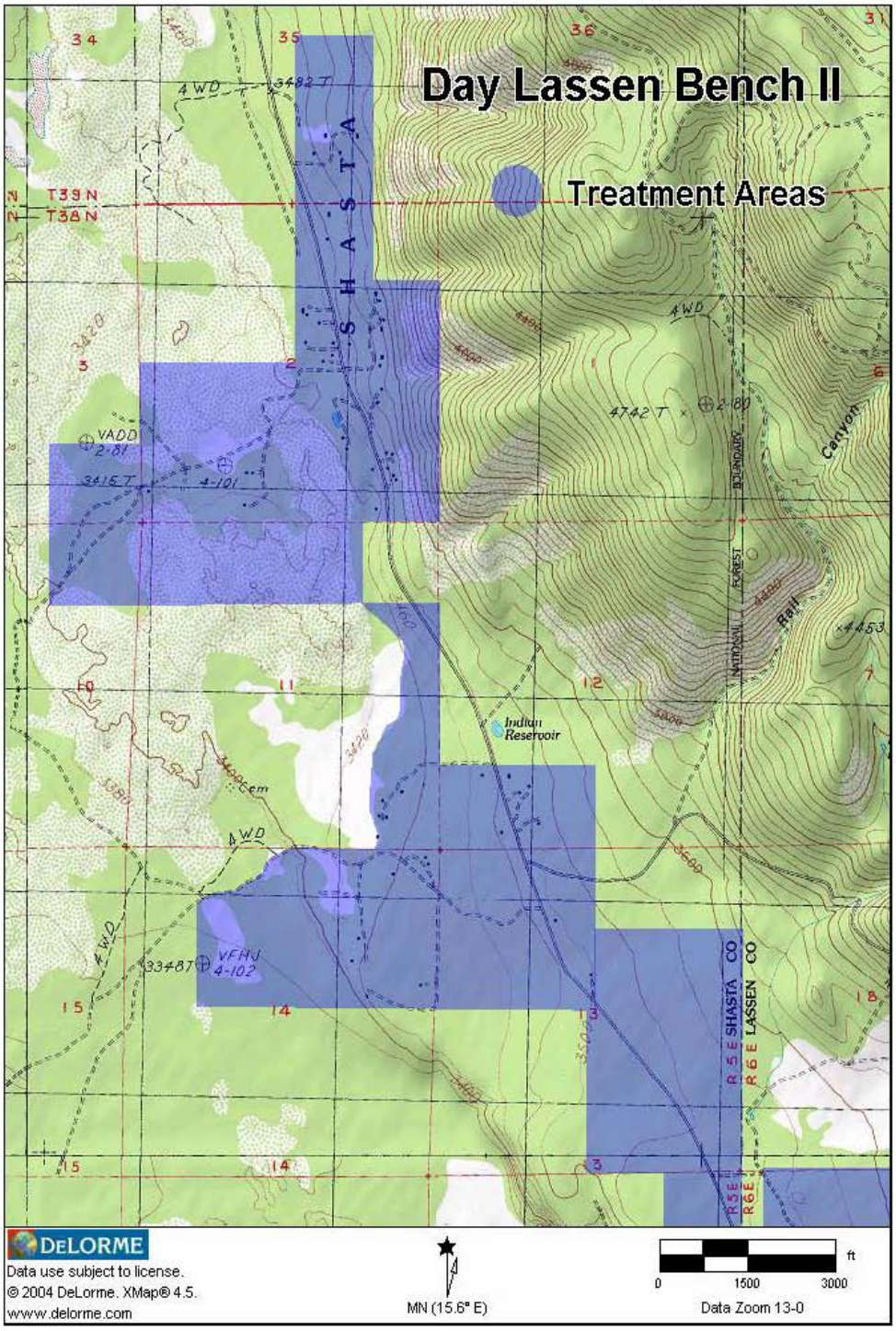
Lassen Day Bench II Project (Map 1)



Day Lassen Bench II Project (Map 2)



Day Lassen Bench II Project (Map 3)



Day Lassen Bench II Project (Map 4)

2008 Butte Creek Project Report

Approximately 550 acres were treated in the Lassen County Fire Safe Council/ Cooperative Sagebrush Steppe Restoration Initiative Butte Creek Fuel Reduction and Watershed Restoration Project. The Project was cleared to proceed in July of 2007. Treatments included the removal of invasive western juniper, dead and dying trees and the thinning of overstocked eastside pine forest. A biomass utilization process produced over 7,000 bone dry tons of chips that were used for fuel in the production of clean renewable energy. Cal Fire Intermountain Camp Conservation Crews preformed hand treatments along stream courses and in aspen groves.

Butte Creek Project

Cal Fire crews at work in the Butte Creek project

The project was implemented on private and BLM managed lands with support from Cal Fire, BLM, US Forest Service, Lassen County, Lassen County Resource Advisory Committee, Pit Resource Conservation District, NRCS and the Susanville Indian Rancheria. Each homeowner consultation included *Risk Assessments in the Home Ignition Zone*. In May of 2007 Lassen County's Project Manager received certification to perform these inspections after attending a Firewise Communities course in Portland, Oregon.
These assessments include pointing out areas of ignition risk with individual property owners such as debris accumulation near structures, unscreened vents, potentially flammable items on or under decks and anything else that might ignite if subjected to

embers from a nearby wildfire. All treatment work includes helping landowners meet 4291 clearance requirements.

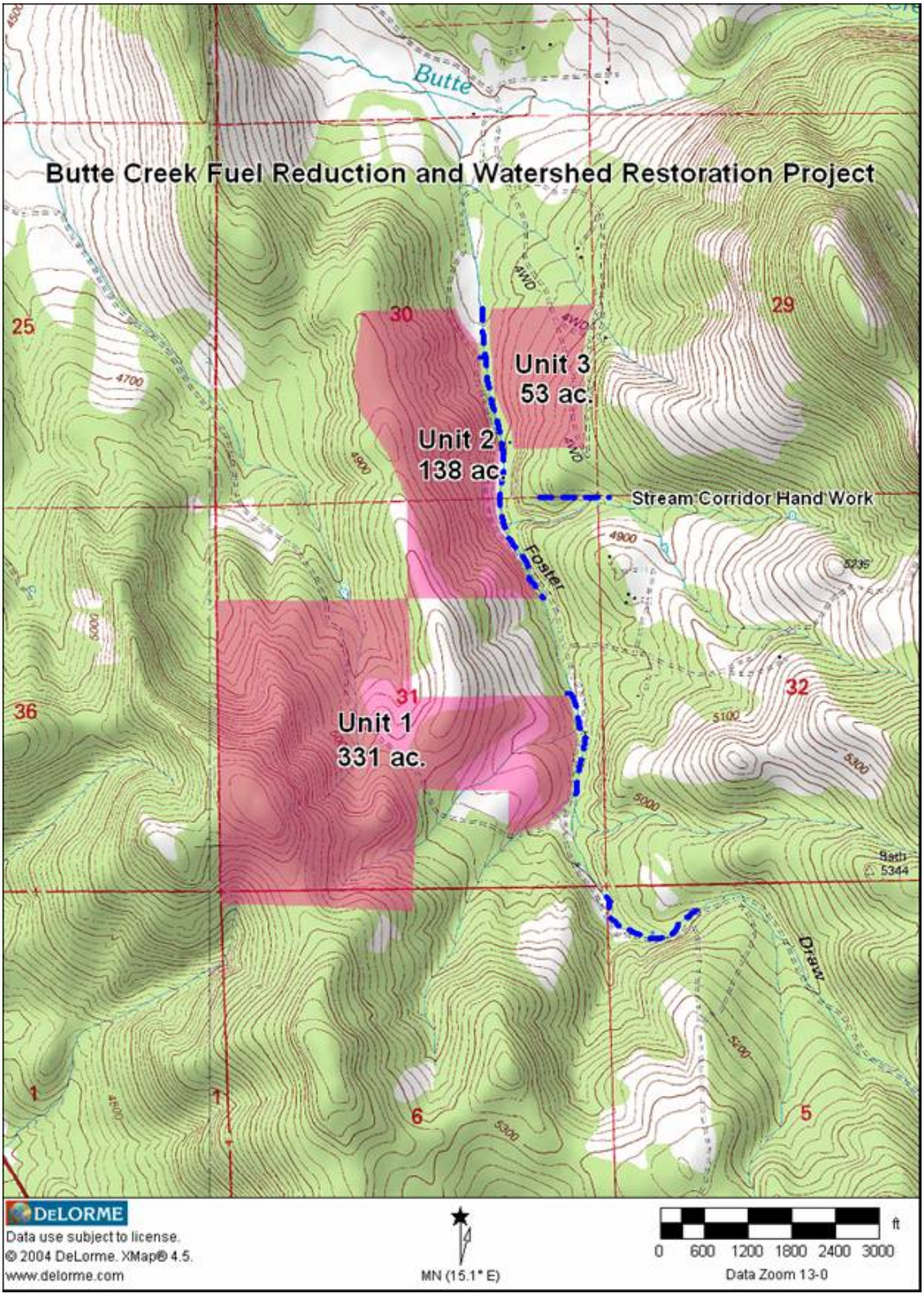
Timbco cutting invasive western juniper in the Butte Creek project

Processing removed fuel in the Butte Creek project

Butte Creek vista before treatment

Butte Creek vista after treatment

Butte Creek Map



Cal Fire Battalion 3 Projects

Butte Creek Estates Fuel Brake This project involves removing junipers around homes in an effort to reduce the fuel load available to a wildfire. Intermountain Camp began the project in 2007.

Day Road Fuel Brake This project consists of removing small trees and brush around the town of Day, which will provide the defensible space needed in the event that a wildfire occurs.

Highway 139 Shaded Fuel Brake An ongoing process as small trees and brush are removed and larger more mature growth is limbed to establish a viable fuel break

Highway 299 Adin Pass Shaded Fuel Brake This project involves removing brush, thinning smaller trees and liming larger growth. This project is ongoing as is several of Intermountain Camps projects are.

Tionesta Fuel Brake In cooperation with the United States Forest Service (USFS) Intermountain Crews have been removing forest fuels including juniper in the Wildland Urban Interface around the community of Tionesta.

BATTALION 4

Battalion 4 has an active LE-38 inspection program in the communities. The goal is to gain PRC 4291 compliance in all of the communities. Along with the LE-38 inspections, Battalion 4 staff are using GPS units to maintain better accuracy when attempting to access roads and driveways into residences.

As of 2007, the Modoc Fire Safe Council has completed the following projects: Lake City Fuel Break, Cal Pines Hills Fuel Breaks, Phase 1, II, & III (with Evacuation Plan), The Community Wildfire Protection Plan, and the Modoc Recreational Estates Fire Hazard Mitigation Plan. The current ongoing projects are the Landowner Assistance Program (assistance for the elderly/disabled residents to clear their 100-ft. defensible space) and the Residential Chipping Program. Both programs are geared towards helping the residents of Modoc County living in rural areas, to comply with the 100-foot defensible space state regulation. The California Fire Safe Council Clearinghouse recently approved the Summerland Fire Hazard Mitigation Plan project for funding.

Cal Fire Battalion 4 Projects

County Road 9 Fuel Brake This project has Devil's Garden crews removing small trees and brush, liming larger trees along the road to create a more defensible fuel brake.

Cal Pines Fuel Brake The project involves removing all dead vegetation and shrub species that have 50% or more dead material. Snags within the project will be removed if

they are less than 24 inches in diameter, Manzanita, Snowbrush and small trees les than 10 feet tall will also be removed.

Ft. Bidwell Fuel Brake The project consists of removing small trees and brush, liming larger trees around homes in the community which will provide a defensible space for Ft. Bidwell in the event of a wildfire.

Lake City Fuel Brake Small trees and brush will be removed and larger trees will be limed around homes similar to the Ft. Bidwell Project to reduce the amount of available fuel to a wildfire.

Tionesta Fuel Brake In cooperation with the United States Forest Service (USFS) and Intermountain Conservation Camp, Devil's Garden Crews have been working to remove forest fuels including Juniper in the Wildand Urban Interface around the community of Tionesta.

V. INSTITUTIONAL ISSUES

A. Vegetation Management in Fire Management

Attainment of the fuels reduction goals of the Lassen–Modoc Unit Fire Plan will require on-the-ground effort. The use of Cal Fire and CDCR crews and equipment will likely be necessary in many areas where stakeholders do not have the finances or resources to do an effective job individually or as a group. The Vegetation Management program (VMP) is currently the primary vehicle by which Cal Fire resources may be used on privately owned lands. In place since 1981, the program has been an effective fuels reduction / rangeland improvement tool. Because of increasing competition for smoke allotments, Cal Fire's use of fire to reduce fuel load is in jeopardy and because of this, chipping will likely become the primary disposal method in the future.

VMP is a cost-share program; the State's share of a project's cost may range from zero to ninety percent. This is based on a public benefits formula --the greater the benefit to the public, the greater the share of the cost of the project Cal Fire may assume. Fuels reduction projects in critical areas within the Unit as identified in this plan have a high public to private benefits ratio therefore the unit's efforts should be concentrated in these areas. For example, the project in the Janesville area that will reduce fuels around the community has a high public/private benefit and lower landowner participation is then justified. Conversely, projects that are essentially range improvement burns that are not near population concentrations will require a higher degree of landowner effort and proportional costs.

This is not to say that rangeland burning is of minor importance. Through this century, range improvement burns have been vital in managing wildland fuels on a landscape basis. However, increasing population in the rural areas has brought constraints such as smoke management and liability concerns. Such constraints have made the LE-7, range improvement project less attractive and has put VMP projects in higher demand with managers from the timber industry and ranchers.

The unit has experienced a sharp decline in VMP projects due to a series of factors including a non-existent burn window in the fall of 2003 and 2004 and a lack of available resources in the spring of 2004. In addition, the Scarface projects neared completion of the original planned 20,000 acres with 18,383 acres completed when the ownership changed from Beaty and Associates to Sierra Pacific Industries and word from Sacramento that the extensive herbicide use as prep work for a burn is not covered under the current Chaparral Management Program EIR. The loss of the new VMP Program EIR in a court challenge forced the unit to reconsider several planned projects allowing only a few to go the Negative Declaration route. The unit has hired a new VMP Coordinator in August of 2005 and the unit is now fully staffed. Unit emphasis will now be placed on community fire protection projects as well as some wildlife habitat improvement projects. Plans are also being developed to implement the revised VMP Program EIR on rangeland improvement projects as well as under burning of numerous eastside pine stands that have been biomassed over the last 10 years.

FIRE MANAGEMENT PLAN 2008

Lassen-Modoc Unit

Battalion 1

Willow VMP 50 Acres 2008

This approximate 50 acre project is largely a reforestation project on SPI property. The method of treatment will largely involve utilizing dozer(s) to pile and/or windrow brush fields currently present in the project area. At some point in time after the bull dozer work, the piles/windrows will be burned. The area will be planted with a mixture of conifer tree species in an attempt to get the land back into productive timberland. Physical work on the project has yet to take place. Future VMP projects may take place in the immediate area in an effort to get the land back into productive timberland.

Battalion 2

Hog Flat Fuel Break

This approximate 490 acre project is a road side shaded fuel brake located along both sides of Highway 44 between Gomez Road and the old Goat Fire. Cal Trans and SPI are the project participants. The method of treatment will largely involve the use of Cal Fire inmate crews to hand cut and pile burn the material. Physical work on the project has yet to take place.

Battalion 3

Ash Creek Wildlife Area (DFG):

This 3,180 acre wildlife habitat improvement project is split between the counties of Modoc and Lassen requiring two Negative Declarations. These have been developed but not submitted pending approval of the new Department of Fish and Game (DFG) manager. The project consists of burning the 3,000 acre tulle swamp at the west end of the 7,000 acre DFG wildlife area. The town of Adin is east of the project and may be impacted by smoke. The swamp has not been burned since the 1960's and the community strongly supports this project.

Battalion 4

Currently no projects are planned. This battalion is primarily sagebrush steppe with eastside pine stands. Juniper encroachment is a major concern of all of the federal and private land managers. It is expected that once the new Vegetation Treatment Plan (VTP) EIR is approved in early 2009 there will be considerable interest in the VMP program.

VI. ATTACHMENTS

A . Modoc County Fire Safe Council-Community Wildfire Protection Plan

B. Plumas County Fire Safe Council-Community Wild Fire Protection Plan

C. Lassen County Fire Safe Council-Community Wild Fire Protection Plan

COMMUNITY WILDFIRE PROTECTION PLAN

Modoc County
California

COUNTY OF MODOC

BOARD OF SUPERVISORS

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- **DISTRICT II**
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  Alturas, CA 96101
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  (530)294-5314

*(Supervisors that approved this document)

Prepared by
Modoc County Fire Safe Council

in cooperation with
California Department of Forestry and Fire Protection
USDA Modoc National Forest, Modoc County Rural Fire Departments
North Cal Neva RC&D, Modoc County Office of Emergency Services,
USDI Bureau
Of Land Management: Surprise Field office and Alturas Field Office
Funded by
USDA Modoc National Forest, Alturas, California
Agreement #04-DG-11050950-039
September 2005

FIRE MANAGEMENT PLAN 2008
Lassen-Modoc Unit

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APPENDICES:

INTRODUCTION

This Community Wildfire Protection Plan (CWPP) is prepared for the Modoc County Board of Supervisors, California Department of Forestry and Fire, the local county fire protection districts, the agency representatives and residents of Modoc County to mitigate losses from wildland fires. It is a planning tool to help concerned citizens, planning professionals, Fire Safe Councils, responsible Federal, State and local fire agencies, and other interested parties to assess the threat level and to identify measures that may be taken to reduce the danger that wildland fire poses to the communities in Modoc County.

The Community Wildfire Protection Plan is a dynamic document. As such it should be reviewed periodically, with facilitation from the Modoc County Fire Safe Council, and amended as needed by the Board of Supervisors. Historically, in pre-settlement and settlement years through the early 1900's, wildland fire was a naturally occurring event throughout much of California. Now, due in part to nearly 100 years of fire suppression resulting in increased levels of wildland fuel loading, the risk of uncontrollable and catastrophic fire has intensified. As a consequence, these fuel conditions coupled with the expansion of rural development in the wildland-urban interface zone, has led to a significantly increased risk for potential loss of life and property.

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 Wildland Urban Interface is a dangerous mix. Indeed, all or portions of each of the communities in Modoc County are within designated high or very high fire hazard severity zones.

The purpose of this project is to help reduce the potential loss of human life and damage to property and natural resources within Modoc County. More specifically, the objective is to protect assets at risk through focused pre-fire management prescriptions (such as fuel reduction) which will increase success of initial fire attack. A critical component is to encourage individual citizens to be involved in the coordinated effort of pre-fire planning and fire prevention and protection within his or her respective community.

This document is organized to include all of Modoc County. The maps included are divided into regions of the county: Surprise Valley, Central Modoc, southwest and the northwest.

The 2005 edition of the Modoc County Community Wildfire Protection Plan will be reviewed yearly as an agenda item for the MFSC. The fire chiefs and Board of Supervisors will review it when changes are needed.

OVERVIEW

Modoc County is located in northeastern California. Both residents and visitors alike enjoy the rural character and many benefits. It is rich in both scenic and recreational areas, natural, cultural, and historical resources, clean air, water, and wildlife habitat.

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 21 unincorporated, smaller communities comprise the remainder of the population centers in Modoc County. Modoc County's government structure is typical of counties in California and is governed by a Board of Supervisors consisting of five elected members.

There are numerous wildland fire protection agencies that have responsibility within the county, including the USDA Forest Service (FS), the Bureau of Land Management (BLM), Bureau of Indian Affairs (BIA) and the California Department of Forestry and Fire Protection (CDF). 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 many assets at risk in Modoc County include the various residential, commercial, governmental, and other structures and property that exist within the county. Many of these structures and properties are located close to or within the flammable natural vegetation of the area. Utilities and associated infrastructure such as electric, telephone, gas, water lines, telecommunication sites and rail lines are also at risk.

Other important assets that are in jeopardy from wildfires include the many scenic and recreational areas, wildlife and watershed, timber, livestock forage, agricultural crops, and prehistoric and historic archaeological sites and artifacts.

Areas and Transportation

There are 1,419,840 acres, about 4000 square miles in Modoc County. Lake County and Klamath County, Oregon are to the north, Shasta and Siskiyou County to the southwest and west, Lassen County is south, and Washoe County, Nevada, to the east of Modoc County, California.

The County is accessed from the 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.

The nearest major metropolitan areas from Alturas are Reno, Nevada, located approximately 186 miles southeast and Redding, California, approximately 142 miles southwest. Klamath Falls, Oregon, is 100 miles northwest. The California State Capitol, Sacramento, is approximately 285 highway miles southwest of Alturas.

Modoc County has railroad traffic passing through periodically. One line running north-south along the west side of the county accommodates several trains per week. The railroad traffic from Oregon to Alturas to Newell runs a couple of times per week. There are airports in Modoc County located at Alturas, Cal Pines, Cedarville, Ft. Bidwell, Newell and Adin. The Sage Stage is operated by Modoc Transportation Agency, P.O. Box 999, Alturas, California 96101, (530) 233-6410. The bus service provides both fixed route service and dial-a-ride. The Fixed Routes serve Alturas, Likely, Madeline, Termo, Susanville, Reno, Canby, Adin, Bieber, Burney, Redding, Klamath Falls, Newell, Tulelake and Cedarville. Seniors, disabled persons and youth pay discounted fares.

Topography

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, it's two forks come together at Alturas, and it flows 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 that have 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.

Population

As of January 1, 2004, the population of Modoc County was estimated to be approximately 9,550. Approximately 2,930 residents live in the greater Alturas area. The population balance is distributed in the smaller communities around the county. As of 2002, there were 4,785 housing units, of which 68% are occupied full-time.

Native American people have resided in Modoc County for an estimated 12,000 to 14,000 years. The Ajumawi (Pit River) and Atsugewi, Modoc and Northern Paiute tribes have a historical presence within Modoc County. The 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 settlement started in the 1860's in Surprise Valley, the eastern side of the county.

Community Government Structure

Levels of local government are Modoc County, the City of Alturas, and special districts, including fire protection districts, community services districts, water districts, the Surprise Valley Health Care District, Modoc Parks and Recreation District, and Resource Conservation Districts. The tribal communities of Ft. Bidwell, Cedarville Rancheria, Alturas Rancheria and the Pit River Tribe are governed by tribal councils.

Media

The Modoc County Record is a weekly (Thursday) newspaper of general circulation, published in Alturas, California. Deadline for displays and legal is Tuesday at noon, and Wednesday at noon for classified ads. They may be

contacted at (530) 233-2632; fax number is (530) 233-5113; e-mail address is record1@modocrecord.com.

The Modoc Independent News is a monthly newspaper, published in Cedarville, California. Deadline for advertising and news is the 15th of each month. Their phone number is (530) 279-2099; fax number is (530) 233-2006; e-mail address is bmarch@frontiernet.net.

The Mountain Echo is a weekly (Tuesday) newspaper, published in Fall River Mills, California. Deadline for advertising and news is Friday at 4 p.m.. Their phone and fax number is (530) 336-6262; e-mail address is mtecho@shasta.com.

The Intermountain News is a weekly (Wednesday) newspaper, published in Burney, California. Deadline for advertising and news is Friday at 4 p.m.. Their phone number is (530) 335-4533; e-mail address is intermountain.news@mac.com.

The most frequently read daily newspaper is the Herald and News, published in Klamath Falls, Oregon. Deadline for public announcements is at 4 p.m.; 3 days prior for display ads, and 1 p.m. the day prior for classified ads. They may be contacted at P.O. Box 788, Klamath Falls, Oregon 97601-0320, phone number is (541) 885-4410; fax number is (541) 885-4456/or 4432; e-mail address is heraldandnews@heraldandnews.com.

The Pioneer Press, East Edition is a weekly (Wednesday) newspaper, covering Klamath Falls, Tulelake and Butte Valley. Deadline for advertising and news is Friday at noon. The phone number is (530) 273-0999 and fax number is (530) 273-0498; mailing address is P.O. Box 400, Fort Jones, CA 96032; e-mail address is pioneerp@sisqtel.net.

Radio stations headquartered in Modoc County include:

KCNO FM 94.5/KCFJ, AM 570, P.O. Box 570, Alturas, California 96101, Deadline for advertising is a day ahead, and for public service announcements is at least two days ahead. Phone number is (530) 233-3570, fax number is (530) 233-5470; e-mail address is kcno@frontiernet.net or kcfj@frontiernet.net

KALT FM 106.5, P.O. Box 106, Alturas, California 96101. Deadline for both advertising and public service announcements is two days ahead. Phone number is (530) 233-4842, fax number is (530) 233-4173; e-mail address is kalt@hdo.net

Television:

Surprise Valley PBS TV Station, Cedarville, California, operated by a non-profit Surprise Valley community organization. For further information contact Edie Asrow at (530) 279-2123.

Schools

Modoc Joint Unified School District, MJUSD, 906 W 4TH Street, Alturas, California, (530) 233-7101, four elementary, one middle school and one high school, enrollment for the district as of October 2004 was 1,399 students. County Community Day School, Alturas, California (530) 233-7146, K-12.

Modoc County Stronghold School, (530) 233-5212, Canby, California, K-12.

Surprise Valley Joint Unified School District, SVJUSD, 470 Lincoln Street, Cedarville, California, (530) 279-6141, one elementary and two high Schools, enrollment for the district as of October 2004 is 197 students.

Big Valley Joint Unified School District, Bieber, California, one primary, intermediate, and high school.

Tulelake Basin Joint Unified School District, Tulelake/Newell, California, (530) 667-2295, one primary, one middle and one high school, enrollment for the district as of October 2004 is 565 students.

The Modoc Office of Education operates State preschool programs, Community Schools, Special Education and Court Schools. Modoc Office of Education Schools student enrollment as of October 2004 is 161 students including Stronghold and County Community Day School.

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, and 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 the openings.

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 country, 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 build-ups 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, grass 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 low value cheat grass and rabbit brush and restoration efforts on these arid vegetation types are particularly difficult and expensive after the devastating effects of wildfire.

Land Use

Federal, State and local agencies administer about 66 percent of the land area. The United States government is 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 growing as well as harvesting, 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 government lands in the county include US Fish and Wildlife Refuges, and portions of Lava Beds National Monument. The Ft. Bidwell Indian Tribe Reservation, located in the most northeast corner of the county and state, manage the forest land in and adjacent to the reservation. The Pit River Tribe, including the Alturas Rancheria, XL Reservation, and scattered parcels of land, has farm, ranch and commercial properties. The Cedarville Rancheria lies at the foot of the Warner Mountains west of Cedarville. The Rancheria members own and manage the commercial truck scales on Hwy 299.

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, rice, and hay. Livestock products include beef and some sheep. Fish farming is becoming more common.

Modoc County Climate

Modoc County is over approximately 250-300 miles inland from the Pacific Ocean and separated from the coast by rugged mountain ranges. Winter storms moving inland lose much of their moisture over the Marble and Trinity Mountains before reaching Modoc County.

Most precipitation will come as rain, sleet, hail, and snow between November and May. About 35% of the year's precipitation falls in April through September. Total precipitation ranges from 11 inches in the Tulelake Basin to 20 inches in the Warner Mountains. In the higher elevations most of the precipitation is snow. Snow in the plateau areas of the county will commonly come and go throughout the winter.

Humidity in the summer will range between 15% and 20% 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 below 10%, creating a serious fire hazard.

Summers in the county are described as warm days with cool nights. July temperatures are generally in the 80's during the day and 40's at night. Temperatures can reach the low 100's for a time in the summer but are usually in the low 60's and 70's. Winters average around freezing during the day. Low's have been recorded in the minus 30's. Daily differences of 50 degrees are common.

Modoc Fire Safe Council

The Modoc Fire Safe Council (MFSC) was formed in October, 2000, in response to an identified need by residents who live in the Wildland Urban Interface (WUI) to be informed of the risk of potentially serious wildfires with tragic results including loss of lives and property.

The MFSC is a voluntary organization formed to enhance the effectiveness of fire prevention and protection. The cooperative nature and educational and outreach efforts of this group are critical components for wildland pre-fire planning and mitigation.

The MFSC 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. In 2007, the MFSC acquired its 501(c)(3) non-profit organization status. The geographic area of the Council covers Modoc County. Also, it covers 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 Modoc Fire Safe Council consists of representatives from the town of Alturas and rural communities of Modoc County, as well as non-voting representatives from County, State and Federal agencies. The Council works closely with the County Board of Supervisors both in meetings and planning sessions as well as obtaining grant funding.

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.

In 2005, the first Community Wildfire Protection Plan (CWPP) was completed, and was approved by the Modoc County Board of Supervisors in 2006. The CWPP was the result of the collaborative efforts of the MFSC, BLM, USFS, North Cal-Neva R.C.& D, OES and CDF representatives, who organized a series of information gathering meetings for the residents, agency representatives and the general public. A series of meetings in a period of two months were held at four locations in the county: Surprise Valley, Alturas, Adin, and Lookout. The purpose of the meetings was to identify Values at Risk and Natural Resources and adjust Wildland Urban Interface (WUI) boundaries based on local knowledge. Comments were documented and maps showing the modified WUI areas were developed. In the spring of 2008, major revisions to the CWPP were completed and presented to the Modoc County Board of Supervisors for approval.

As of 2007, the MFSC has completed the following projects: Lake City Fuel Break, CalPines Hills Fuel Breaks, Phase 1, II, & III (with Evacuation Plan), The Community Wildfire Protection Plan, and the Modoc Recreational Estates Fire Hazard Mitigation Plan. The current ongoing projects are the Landowner Assistance Program (assistance for the elderly/disabled residents to clear 100-ft. defensible space) and the Residential Chipping Program.
Both programs are geared towards helping the residents of Modoc County living in rural areas, to comply with the 100-foot defensible space state regulation. The California Fire Safe Council Clearinghouse recently approved the Summerland Fire Hazard Mitigation Plan project for funding.

The MFSC continues to have a strong working relationship with Modoc County Board of Supervisors, the local volunteer fire departments and chiefs, California Department of Forestry and Fire, BLM and Modoc National Forest staff.

Values at Risk

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

- existing residences
- churches
- small businesses such as stores, restaurants, and motels
- schools
- railroads
- infrastructure for delivery of emergency and other critical services (including bridges, repeater sites, transmission lines, power lines and water systems)
- scenic highways
- most importantly, the residents themselves.

Other more intrinsic, though possibly less tangible values at risk include air quality, visual impacts, aesthetics, security, critical habitat and animals. 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.

Natural Resources at Risk

All communities are surrounded by a variety of diverse natural resources including forestland, croplands, rangelands, rivers, 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 nurtures the soil and reduces erosion and resulting sedimentation into nearby creeks

and rivers. Protecting the natural resources surrounding these communities is essential to maintain and enhance the communities' economic stability.

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.

The county has several important watersheds to protect from wildfire. They include the Pit River, Tulelake Basin and Surprise Valley watersheds. The Pit River watershed is in the process of being restored from impaired status.

ACTION PLAN AND ASSESSMENT STRATEGY

These are suggested issues brought forward by community members and the projects directly related to protection of the community and essential structures. The issues and recommendations identified in the public meetings have been incorporated in this CWPP to provide guidance to the MFSC. The MFSC has ranked these projects with equal status and targeted a phased implementation by 2015. As funds become available the Fire Safe Council and other parties will accomplish the recommendations suggested. These projects will be reviewed and updated annually.

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. This will include fuels treatment priorities, preferred methods for fuels treatment projects, and location of the wildland-urban interface, structural ignitability recommendations, and information and action identified. This plan will be reviewed and updated annually.

FIRE SAFE COUNCIL STRATEGIC PLAN AND CRITICAL ISSUES

The section below outlines those fire safe concerns that landowners and community members voiced at Modoc Fire Safe Council meetings held throughout the Modoc region in 2002. These issues will serve as a basis for prioritizing and developing projects to reduce wildfire risk to lives and property. The order in which these issues and concerns appear in this section does not represent their priority. As new concerns are raised they will be added to both the Strategic Plan and the Community Wildfire Protection Plan.

Critical Issues, Listed by Community/Subdivision

Modoc Recreational Estates:

- Pursue grant funding to improve Mallard Road from Pintail Road to the corner of Mallard and Hilltop for the purpose of annexation to the county road system. The road is listed on the Fire Plan as the alternative escape route for residents and access for emergency vehicles.
- Clear brush from the right-of-way on both sides of roads maintained by MREA; as well as Pencil and Pintail roads, which are county maintained roads. The Association is currently responsible to maintain six miles of road.
- Trim juniper trees on private property so branches are at least six feet off the ground to prevent the laddering effect of a fire moving into the forest crown and remove brush from directly under juniper that would cause a ladder effect.
- Purchase a chipper, which would be available to property owners to mulch the waste from clearing operations named above.

Big Valley (Lookout) Ranchettes:

- Reduce fuel loads in Big Valley Ranchettes on absentee landowner's properties.
- Provide information about private contractors that do defensible space work.
- Assist in the acquisition of equipment, i.e. chipper/shredding machines, to process bio-mass produced by fuels reduction projects.
- Secure grant funding to support fuels reduction/ space cost share programs on private property.

Butte Creek (Big Valley):

- Develop an alternative evacuation route by improving an existing "four wheel drive" road.

Thoms Creek Unit II Property Owners Association:

- Clear brush on both sides of Association maintained roads. Currently, the Association maintains approximately 2.5 miles of road.
- Trim juniper trees so limbs are six feet off the ground to prevent the laddering effect of a brush fire moving into the forest crown.
- Remove bitter brush and sage from directly under junipers that might create fire ladder effect.
- Purchase a community chipper so residents could use tree limbs/brush for mulch.
- Work with Modoc County to annex 1.5 miles of South Warner Mountain Drive into the county road system. This would allow the road to be better maintained in summer and winter improving access for emergency vehicles.

Surprise Valley-Lake City:

- Develop a community outreach and education program to alert Lake City residents about the danger of wildfire to the town.
- Develop projects to mitigate wild-fire risk including fuel breaks on adjacent public lands and defensible space projects on private property.
- Design an evacuation plan. Ensure that current and new residents are provided with the evacuation plan. Facilitate the development of a strategic mutual-aid response plan
  specific to threats of wildfire to Lake City: including approach routes,
- identifying water resources, and defining tactical roles of mutual aid responding agencies, i.e., Cedarville Fire Department and Fort Bidwell resources.

Surprise Valley-Eagleville/Emerson Creek:

- Ensure that water tanker re-filling standpipes are along established roads and accessible year round.
- Construct and maintain a fuel break adjacent to residential areas on Emerson Creek.

Likely:

- Provide assistance to landowners in removing debris and dilapidated buildings that may carry wildfire into the community.
- Evaluate wildfire risk to properties along County Road # 60.

Likely-Juniper Acres:

- Educate the residents as to the fire dangers.
- Promote and insist on a defensible space around residences.
- Clear a firebreak perimeter.
- Install a water line from the Pit River across Jess Valley Road to a standpipe at the entrance to Juniper Acres.

Likely-Pine Shadow Village:

- Establish a fuel Break on Modoc National Forest Service adjacent lands within the WUI.
- Coordinate with Modoc National Forest on an area fire prevention plan.
- Assist with defensible space projects for senior and disabled citizens on private lands.

Cal Pines:

- Establish a fuel break around the Hill Units subdivision.
- Encourage safety by requesting and assisting private landowners to reduce fuel loads on their property including cleaning up slash piles from logging operations.

- **CRITICAL FIRE ISSUES and RECOMMENDATIONS FROM CWPP COMMUNITY MEETINGS**

(List arranged according to CWPP Priority Ranking)

The following projects are the results of the community meetings held in Alturas, Adin, Tulelake and Surprise Valley-Cedarville between January and February, 2005. These have been re-prioritized during a special CWPP Update Committee Meeting held on November 29, 2007. The Completed Projects are shown at the end of this list.

#1 - Rush Creek Estates consists of many absentee owners in an area of limited egress and no water source. They requested that County Road 213, Caldwell Pit be added to the WUI. ***Recommendation: Develop water resources and sources for firefighting. An evacuation plan needs to be developed and distributed to the residents including the Butte Creek Subdivision.***

#2 - Cedar Pass Summerland, a residential development located north and east of Alturas, contains dense sections of diseased and insect infected trees throughout the area. There is limited egress in case of evacuation or emergency. The one main road goes across an old bridge. At this time they do not have an evacuation plan available. ***Recommendation: Obtain funding to create a Summerland subdivision fuel break along the WUI to protect the residences and properties. The subdivision needs an evacuation plan to include an alternative route out in case the main way to Hwy 299 is blocked.***

#3 - The Ft. Bidwell power sub-station just south of the Ft. Bidwell Reservation has heavy fuels surrounding the facility. The station could emit arcs, which could be a fire danger. ***Recommendation: Fuels reduction project west, east and north of sub-station. The BLM Surprise Field Office states a need for fuels reduction work on the slopes south of Ft. Bidwell.***

#4 – Residents of the Modoc Recreational Estates (MRE) stated a concern about road access because the northern part of the subdivision has only one maintained, paved road for both ingress and egress in case of a wildfire. MRE is a residential subdivision lying northeast of Alturas. It consists of 1933 parcels. As of 2007, 259 had structures on them (MRE Fire Mitigation Plan, 2007). At least half of the occupied residences lie in the Section with only Co Rd 55, better known as Pencil Road, for access. Co Rd 270 - Mallard Lane, offers an alternate route but is not an all season road. Co Rd 269 - Bobcat Lane, while not truly an evacuation route, does give access to the road to Mud Lake and to possible safety zones. (For details, see the Modoc Recreational Estates Fire Mitigation Plan Road Map, Figure 2,

on page WUI designation is needed in MRE on land bordering USFS Devil's Garden, where heavy, woody vegetation is combined with light, flashy fuels. At this time MRE has no firefighting water source, because their pond is filled with silt and vegetation. There still are unmarked roads which need names and/or number designation for emergency services. At this time MRE has a basic Evacuation Plan, given the one main road. All the subdivisions around the county have a large proportion of absentee owners. There is a need to work with these owners to educate them on the need for defensible space and fuels reduction on all potential residential land. ***Recommendation: Develop an alternative road out of subdivision, a usable water source and complete evacuation plan including meeting areas. Also, utilize a chipper to decrease ignitable fuels on properties.***

#5 - The Likely area, south of Alturas, needs to extend the WUI. The Likely Rural Fire Protection District has limited resources. Likely is a gateway to the Warner Mountains with high use by hikers, anglers, and tourist. There is a golf course and RV park close to town also. ***Recommendation: A fuel break should be created to protect the residents and properties southeast and east of Likely and around the Pine Shadows Subdivision at the north end of Jess Valley. An evacuation plan for Jess Valley and surrounding area leading into and around Likely.***

#6 - The community members identified the need for fuel breaks both east of Adin and south of Ash Creek to protect the community of Adin, the wildlife areas and historic barns and structures. ***Recommendation: Fuel break east of Adin and south of Ash Creek.***

#7 - The participants requested an extended WUI in Widow Mountain area to protect on Electronic Site and the Strategic Telecommunication (Cell Phone) towers in the Adin-Big Valley area. The Butte Creek Subdivision residents expressed the need for an evacuation fire plan, roads, and fuels reduction work and water resources. ***Recommendation: Water resources for fire fighting, extended WUI and evacuation plan for all subdivisions.***

#8 - The Perez area, just south of Newell had three power line fires in 2004. The lack of bitterbrush and habitat is part of the reason the Interstate Mule Deer Herd has left. ***Recommendation: Fuels reduction especially in WUI areas and around power lines should be done to encourage wildlife health.***

#9 - The Lava Beds National Monument includes petroglyphs, historic Indian battle-grounds, homes, park buildings and monuments are surrounded by grass, brush and juniper. ***Recommendation: Fuels reduction and fire break projects in the extended WUI.***

#10 - The Medicine Lake area, which is well into Siskiyou County in northwest Modoc County, has many absentee owners. The frequent fire

activity, (up to ten-acre fires) fuel loading and limited ingress and egress are a concern. An extended WUI is needed to include four major power lines, two gas lines, two railroads, Hwy. 139 with human impact, grinding, debris and exhaust. ***Recommendation: Education outreach to absentee landowners on defensible space practices for fire prevention and extend the WUI as requested.***

#11 - Volunteer fire department representatives voiced concerns with liability and training for fire fighters. In some stations equipment and resources are outdated. Effective and efficient fire suppression is sometimes limited. ***Recommendation: Pursue funding to continue training and suppression equipment.***

#12 - 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. ***Recommendation: That Modoc County adopts Local Responsibility Area (LRA) regulations compatible to State Responsibility Area (SRA) regulations.***

Additional Recommendation for the entire county: That all area fire protection districts, with assistance from the Modoc Fire Safe Council, be responsible to create and distribute evacuation plans for their areas of responsibility. Timeline: 2008-2009

COMPLETED PROJECTS

Lake City Fuel Break

Work started in spring 2005 on a multi-phase fuel break near Lake City. The fuel break is 22 acres, ranging from 75-300 feet wide. It is a joint project funded by the Modoc Fire Safe Council and the BLM, Surprise Field Office. The fuel break is an important first step in clearing fuels in Lake City Canyon, which borders several residences. 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 of the Lake City area. ***Recommendation: Fuel Breaks and Fuels reduction projects: 1.) West going up Lake City canyon 2.) South to north just west of area residences.*** *(Originally, Ranked #2 in the Critical Fire Issues and Recommendations from CWPP Community Meetings; Completed in 2005).*

Cal Pines Subdivision Fuel Breaks

The California Department of Corrections from Devil's Garden Conservation camp worked on the Cal Pines fuel break. The three phases of the fuel break extend ten miles with the cost projected to be $201,234. It was designed to protect Cal Pines from wildfires originating outside the subdivision and to protect National Forest lands from fires originating in the subdivision.

Phase I is a shaded fuel break 350 feet wide and four miles long at the upper, or southern end, of the subdivision. The crews burned slash and thinned trees and brush. Cost of the Phase I is $30,614, which was funded by Modoc National Forest.

Phase II of the Cal Pines fuel break consisted of three miles of thinning. Cost of the phase was $45,000 and was funded by Modoc County RAC with Title II funds.

A portion of the funds for Phase I & 2 was used for the evacuation project.

Phase III of the Cal Pines project has been awarded $125,620 from the California Fire Safe Council. The work on Phase III began in 2006.
Cal Pines Development also has heavy fuels loading and unmarked or incorrectly marked roads. The upper units receive afternoon down slope winds and many lightning strikes. A large number of the lots were purchased by absentee owners and contain HEAVY downed and dying vegetation. ***Recommendation: Have the Cal Pines Property Owners Association and Community Service Districts work to identify roads correctly and post numbers at all residences and parcels. Continue fire break projects in Cal Pines and maintain cleared areas of Phase I, II and III work done through MFSC's fire break projects Fall 2004-2007.*** *(Originally, Ranked #1 in the Critical Fire Issues and Recommendations from CWPP Community Meetings; Completed in Fall 2007).*

Defensible Space Demonstration Site

The Modoc Fire Safe Council received funds from the Modoc County Title III and the Modoc National Forest to clear properties to show defensible space fuel break practices. The project includes using the cleared trees and vegetation in a product development component of posts, boards, and landscaping wood chips. The demonstration project was completed in January of 2006, on the Parnow property west of Alturas.

Community Wildfire Protection Plan (CWPP)

The Modoc Fire Safe Council is the lead agency in compiling the county-wide CWPP. It was finished in September, 2005, and was revised in Spring of 2008.

Modoc Recreational Estates
The Modoc Recreational Estates is a residential development just north of Alturas. The Modoc Fire Safe Council acquired a grant to prepare an area fire mitigation plan for the subdivision. Work on the plan was begun in 2006.
(This is a portion of a project under the Critical Fire Issues & Recommendations from CWPP Community Meetings, Priority Rank #4, per Spring 2008 revisions. Completed in July, 2007).

Modoc Fire Safe Council
The MFSC has received a grant through the California Fire Safe Council to purchase a brush chipper to use throughout the county.
(This is a portion of the CalPines Phase III Fuel Break project. Originally, Ranked #1 in the Critical Fire Issues and Recommendations from CWPP Community Meetings; Completed in Fall 2007).

MONITORING, EVALUATION, AND MAINTENANCE

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.

Other more long-term projects such as community fuel breaks, if constructed, will require periodic inspections to evaluate vegetation re-growth and to plan for maintenance needs. A three to five-year minimum re-inspection interval is recommended depending upon vegetation type, sprouting and seeding characteristics, growth rates, and litter buildup. Other factors that influence monitoring and maintenance needs and frequency may include equipment and manpower availability, access considerations, topography, past and current fire activity, storm events, and funding.

A monitoring program may simply require periodic or cursory spot checks or drive-by inspections. The responsible parties will be identified. The monitoring process should include an inspection form to track inspection dates, condition, compliance, and to document maintenance needs. This process will also identify specific areas or properties with recurring compliance and/or maintenance needs for future reference when time, budget, or manpower is limited in order to better focus and utilize available resources.

The Modoc County Community Wildfire Protection Plan will be reviewed and updated each year.

COMMUNITY EDUCATION, OUTREACH, AND INVOLVEMENT RECOMMENDATIONS

Wildfires constitute a significant threat to the communities of Modoc County. However, some of the outlying homes and ranches, both within and outside the defined community areas of Fire Protection Districts, which are located in the sage/annual grass and/or the pine/mixed conifer fuel types are at risk from wildland fire. The Modoc County CWPP has been prepared to assist the communities in Modoc County. The goal is to achieve a greater level of protection from wildfires. When fires occur, most people rely on the fire department for their protection.

This approach to safety is perilous in the urban/wild land interface. The individual property owner cannot rely solely on fire-fighting agencies to protect his or her property. The primary and initial burden for protection rests with the property owner. Residents, business owners, and local officials must take the necessary measures to prepare themselves and their communities in the event of fire and make it easier for firefighters to successfully do their jobs. Effective community education and outreach can mitigate the risk of wildfires to the community if initiated and maintained by citizens within the community.

This Plan is specifically prepared assuming that the Fire Protection Districts, the communities and Modoc Fire Safe Council will take the leadership role to act on recommendations included in the plan. The Council has already been instrumental in gaining cost-share assistance to work on fuel reduction projects in Modoc County.

It is recommended that the MFSC continue to use the services of the California Department of Corrections, Devil's Garden Conservation Camp Fire crews to work on fuel breaks, such as CalPines Phase I, II and III. One CDC crew costs $160.00 per day for 16 workers and one captain. This is a great service provided by the CDC. It is also recommended that communities around the county be encouraged to develop their own Fire Safe Councils.

WILDFIRE THREAT EVALUATION

Area Fire History

The "Fire History 1910-2003" Map shows fire hazard and fire history of Modoc County. 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, several over 300 acres. 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. These communities are Adin, Alturas, Cal-Pines Lower Units, Cal-Pines Upper Units, Canby, Cedarville, Eagleville, Davis Creek, Fort Bidwell, Lake City, Likely, Lookout, New Pine Creek, Newell, and Tulelake, California.

Expected Fire Behavior

The climate is Great Basin high desert type 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. Normal afternoon high temperatures in the summer fire season average 80-85 degrees F. Annual precipitation is

approximately 15 inches with most rain and snowfall occurring in the late fall and winter. Little precipitation can be expected during the summer months, June through October.

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 on the slopes outside of town, wind-driven wildfires can threaten ranch buildings and outlying homes.

Existing fire hazards within the communities primarily consist of the natural vegetation and forested lands not thinned. 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.

VEGETATION CONDITIONS WITHIN AND SURROUNDING THE COMMUNITY

Vegetation Fuel Types, Condition, & Fuel Models

The county is a mosaic of natural fuels and irrigated agriculture land. The "Vegetation Types" map in the Appendix A shows the major vegetation fuel types, Modoc County boundary, volunteer fire districts and Modoc National Forest south Warner Wilderness. The five primary vegetative types are: **Agriculture**, **Herbaceous**, **Shrub**, **Hardwood**, and **Conifer**.

Agriculture: The irrigated lands in the Modoc County communities of Alturas and Surprise Valley and along the Pit River are important economic components for this area. These areas include irrigated hay fields as well as pastureland and they occupy most of the valley floor. Little hazard or risk of catastrophic wildfire exists in this vegetation type. Some areas of dry annual grass and weeds located typically along fence lines that may burn; however, they are generally isolated small areas and corridors where fires should be easily controlled.

Herbaceous: The riparian areas are scattered in the county and are depicted in medium blue on the map (see "Vegetation Type Map"). These areas are the remnant swamps, sloughs, and creeks which in some areas support riparian vegetation including, sedges, cattails, willow, alder, cottonwood, and water grasses. These areas are very important in providing wildlife habitat. Little fire hazard exists within these areas during the summer fire season.

Sagebrush/Grass: From a wildfire threat standpoint the most significant fuel type, depicted in orange/flesh on the map (see "Vegetation Type Map"), is indicated as pine/grass. The vegetation type in this area is actually composed primarily of sagebrush, annual grass, and junipers. This fuel type is typically found on the upland slopes in and around the county. The fuel is a mixture of sagebrush and annual grass with scattered pine and juniper trees. This fuel type most closely approximates Fire Behavior Fuel Model 2 and has the following characteristics important for estimating fire behavior:

Total fuel load, < 3-inch, dead and live	4.0	Tons per acre
Dead fuel load, ¼ inch	2.0	Tons per acre

Live fuel load, foliage,	0.5	Tons per acre
Fuel bed depth	1.0	Feet

This fuel type ignites easily and once ignited, can spread rapidly under normal summer burning conditions. With a 5-mile per hour wind and a fuel moisture content of 8%, fires in this fuel type can spread at the rate of 0.4 miles per hour with flame heights of 6 feet.

High winds and extremely low humidity will dramatically increase the rate of spread. Creating and maintaining adequate clearing and defensible space around buildings best mitigates the threat of life and property loss from fires occurring in this fuel type. Treatment options for fuels reduction projects are a combination of mechanical, burning slash and removal as firewood.

Fuel Model #2: Sagebrush/Grass

Shrub: Conditions within the brush type vary considerably based on size and density of the brush. It best equates with Fire Behavior Fuel Model 6 with the following characteristics:

Total fuel load, < 3-inch, dead and live	6.0	tons per acre
Dead fuel load, ¼ inch	1.5	tons per acre
Live fuel load, foliage,	0.0	tons per acre
Fuel bed depth	2.5	feet

Under a 5-mile per hour wind and a fuel moisture content of 8%, fires in this fuel type can spread at the rate of 0.4 miles per hour with flame heights of 6 feet.

Fuel Model #6: Brush

Hardwood and Mixed Conifer Forest

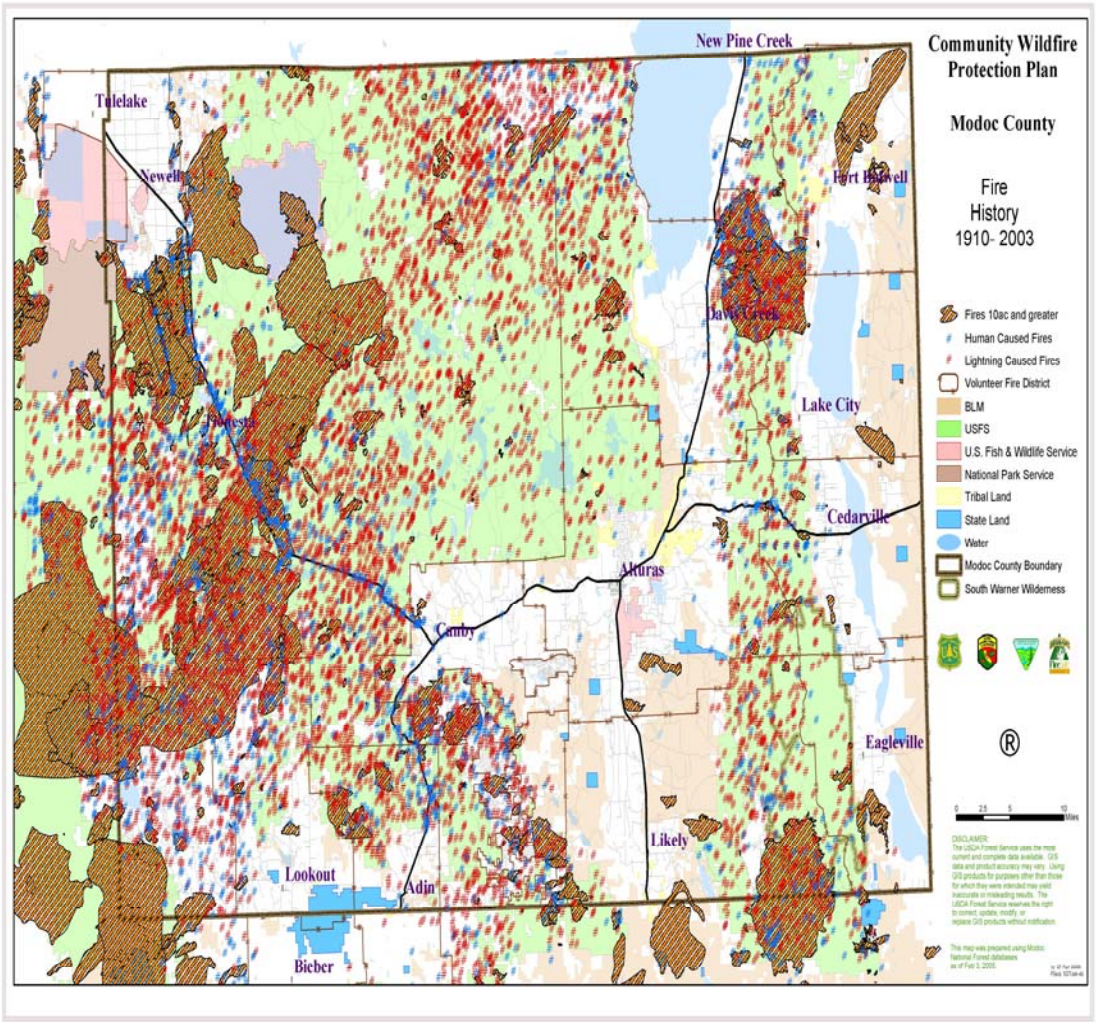
This vegetation type is located throughout the county. It encroaches onto the valley floor at the base of the Warner Mountains. This fuel type is depicted in green on the Vegetation Type map. This vegetation type is mainly young growth ponderosa pine, with a minor amount of other conifer species including, incense cedar, white fir, and Douglas-fir, with annual grass and brush under story. This fuel type most closely approximates Fire Behavior Fuel Model 10 and has the following characteristics important for estimating fire behavior:

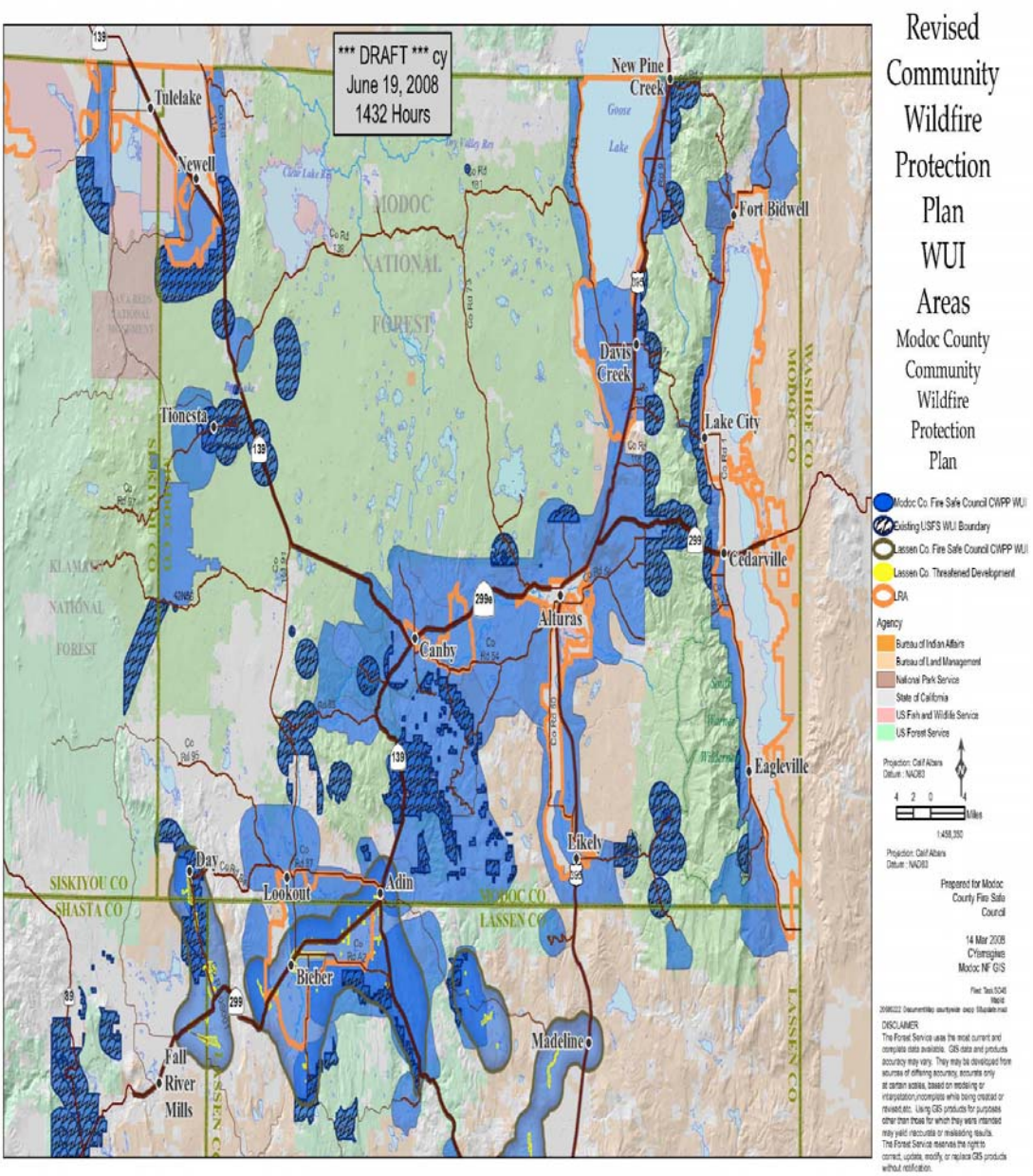
Total fuel load, < 3-inch, dead and live	12.0	Tons per acre
Dead fuel load, ¼ inch	3.0	Tons per acre
Live fuel load, foliage,	2.0	Tons per acre
Fuel bed depth	1.0	Feet

Under a 5 mile per hour wind and dead fuel moisture content of 8%, fires in this fuel type can spread at a rate of 0.1 mile per hour with flame heights of 4.8 feet. High winds and extremely low humidity will increase the rate of spread. The typical conditions for Fuel Model 10, as described in the above table, do not reflect past management activities that have taken place in this vegetation type. Most of the area has been logged which has increased the down (dead) fuel load on the ground as well as ladder fuels due to brush and reproduction. Conversely, several hundred acres have burned, been clear-cut, or thinned for biomass in the past 15 years in this fuel type, which may assist in fire management activities by providing breaks in the continuity of tree crown heights, ladder fuels, and fuel loads. However, other sections of this vegetation type remain in a hazardous state and require treatment.

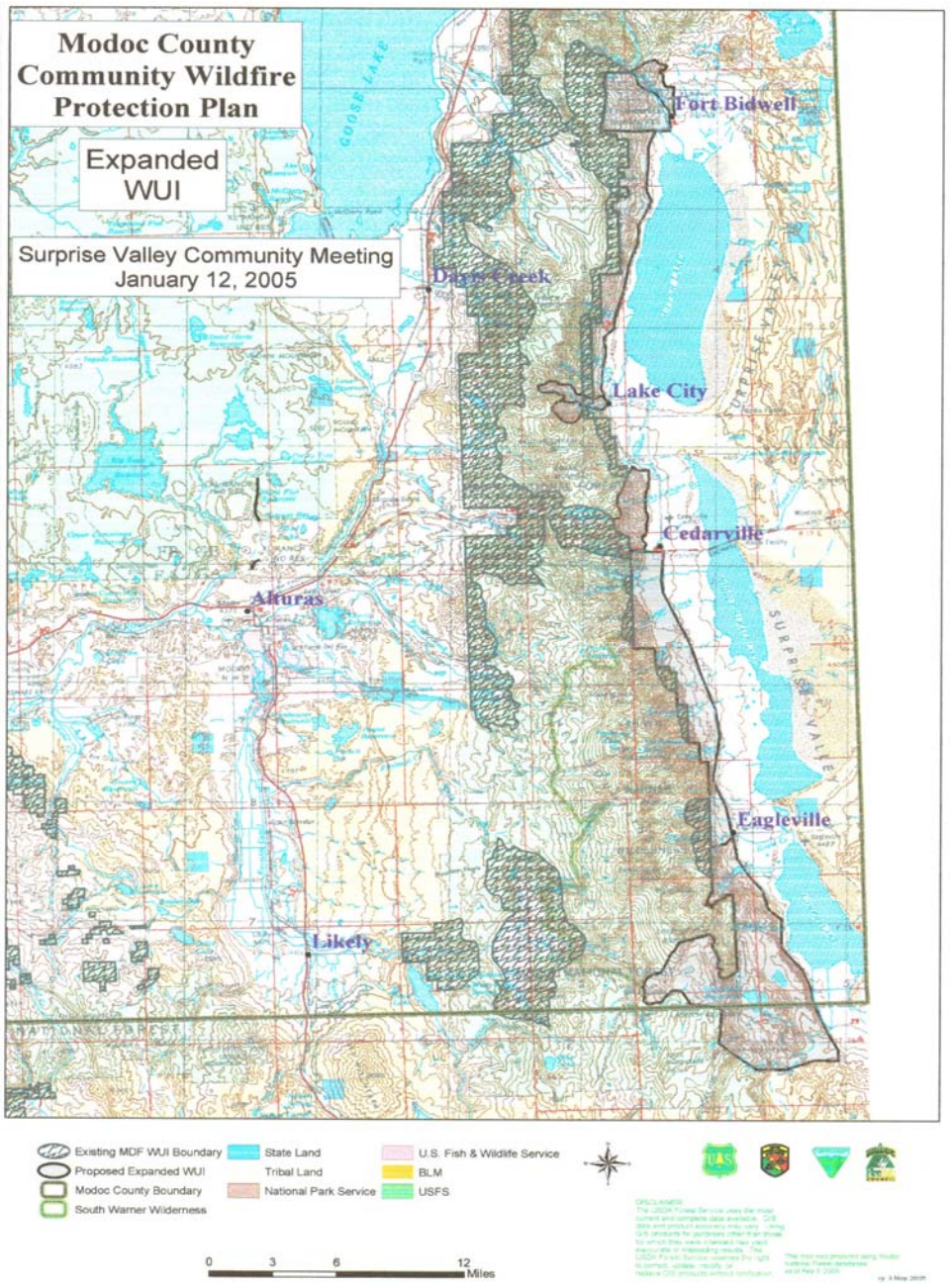
Fuel Model #10

Appendix A
Maps of Fire History and Expanded Wildland Urban Interface

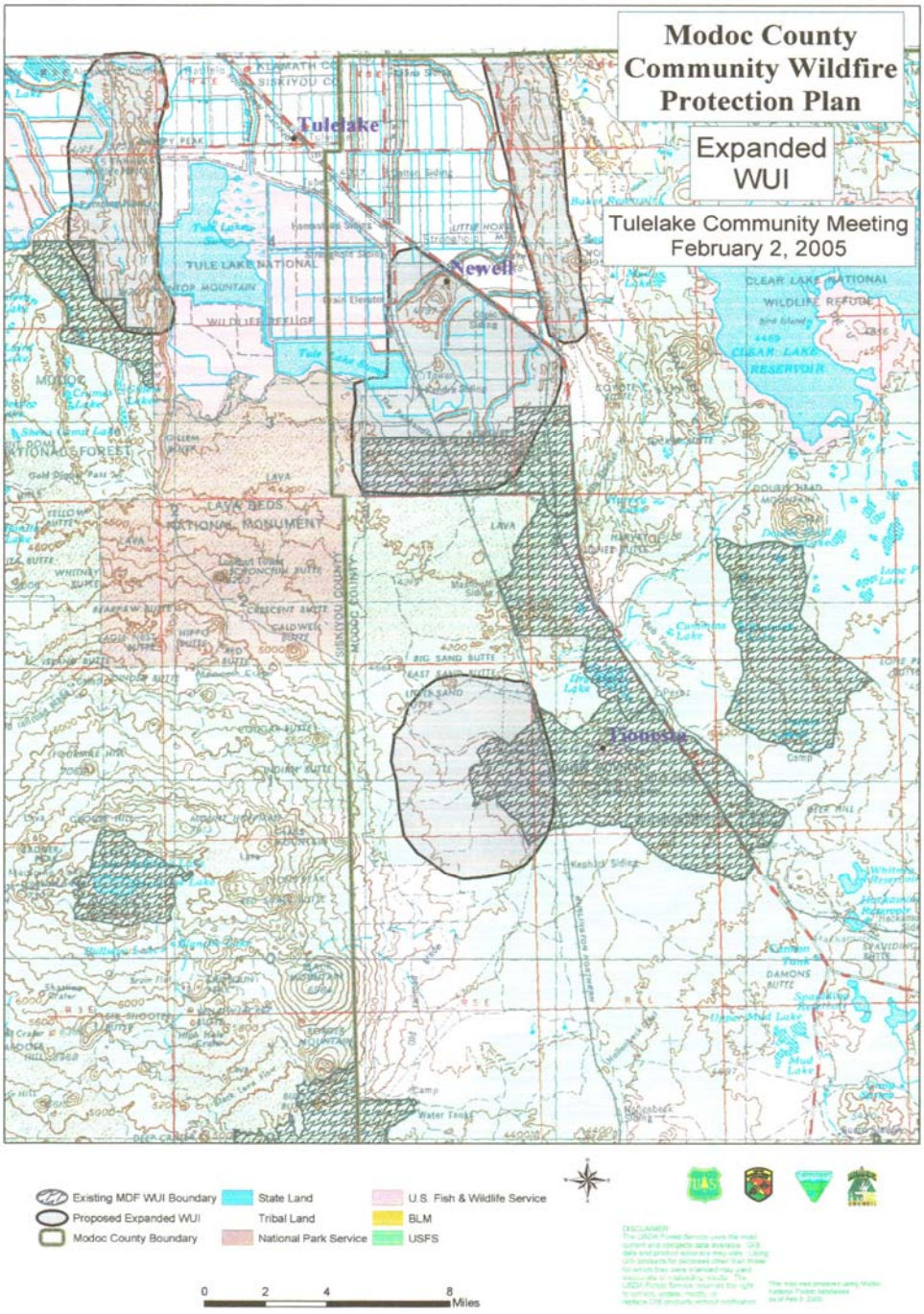




WUI Map pending approval



Surprise Valley Expanded WUI



Tulelake Expanded WUI

Appendix B

Glossary of Terms

Afforestation: Establishment of a tree crop on an area from which it has always or very long been absent.

Age Class: One of the intervals, commonly 10 years, into which the age range of trees is divided for classification.

Biomass: The conversion of woody material, i.e., limbs, trunks, into wood chips to be used for electrical generation or forest products.

Board Foot: Normally a board 1inch thick x 12 inches wide x 1 foot in length used in measuring logs and lumber.

Butt: Base of a tree, or larger end of a log.

Canopy: More or less continuous cover of branches and foliage formed collectively by the crowns of adjacent trees or other woody growth.

Catface: Defect on the surface of a tree or log resulting from a fire or other wound where healing has not re-established the normal cross section.

Chaparral: Spanish word meaning "where the scrub oak grow." A diverse plant (shrub) community with some of the more common species being chamise, manzanita, Christmasberry, California scrub oak, mountain mahogany, and many species of ceanothus.

Codominant Tree: Forms a general level of crown canopy receiving full light from above but very little from the sides – generally have medium-sized crowns more or less crowded on the sides.

Conifer: Tree that bears cones and in most cases has needle or scale-like leaves. Also collectively called softwoods. Sugar pine, ponderosa pine, Jeffery pine, incense cedar, white fire, and Douglas fir.

Crown: Upper part of a tree or other woody plant, carrying the main branch system and foliage.

Crown Closure: The proportion of the total land area covered by the vertical projection of the tree crowns.

Crown Fire: Intense forest fire burning and spreading in the crown of trees.

Decadent: In regards to vegetation, it refers to plants of declining vigor and deteriorating health.

Defensible/Survivable Space: That area which lies between a residence and an oncoming wildfire where the vegetation has been modified to reduce the wildfire threat and which provides an opportunity for firefighters (and the homeowner) to safely defend the residence.

Dominant Tree: Has a crown extending above the general level of crown cover and receives full light from above and partly from sides – larger than average tree with well developed crown.

East-Side Pine Forest: A forest type found on the eastern slopes of the Sierra-Nevada Mountain Range consisting primarily of ponderosa and Jeffrey pine.

Even-Aged: A forest composed of no, or relatively small, differences in age.

Federal Responsibility Area (FRA): Area that is the appropriate Federal agency's financial responsibility of preventing and suppressing fires (e.g. National Forest, National Park Service, Department of Defense, etc.).

Firebrand: Any burning material such as leaves, twigs, glowing embers that is carried aloft by the convective heat in a smoke column and falls some distance away from the main fire front that could start another fire.

Firebreak: An existing barrier, or one constructed before a fire occurs, from which all of the flammable materials have been removed; designed to stop or check creeping or running but not spotting fires.

Fire Hazard: Fuel complex, defined by volume, type, condition, arrangement, and location, that determines the degree of both ease of ignition and of fire suppression difficulty.

Fire Season: The period of mid-May through October when vegetation cures, dries out and is most flammable.

Flame Length: From the base of the flame to the average flame tip.

Flash Fuels: Small sized fuels (1/2 inch in diameter or smaller) loosely arranged such as grass, pine needles, etc.

Foehn Wind: Warm, dry wind that occurs on the leeward slopes of a ridge of mountains.

Forb: A herbaceous plant other than grass.

Forest: A plant association predominantly of trees and other woody vegetation growing more or less close together.

Forest Stand: An aggregation of trees or other growth occupying a specific area and sufficiently uniform in composition (species), age arrangement, and condition as to be distinguishable from the forest or other growth in adjoining areas.

Forest Type: Category of forest defined by its vegetation, particularly its species composition.

Fuel: Any combustible material. In regards to wildfire, fuel typically refers to living and dead vegetation.

Fuelbreak: A strategically located wide block, or strip, on which a cover of dense, heavy or flammable vegetation has been permanently changed to one of lower fuel volume of reduced flammability, allowing for safe access by firefighters.

Fuel Loading: Refers to the amount of vegetation, both living and dead, available for burning, commonly measured in tons (dry weight) per acre.

Hardwood: Trees or shrubs of a botanical group, usually having conventional leaves, in contrast to needle-leafed, cone-bearing trees (conifers). Alder, willow, cottonwood, quaking aspen, maple and oaks are examples.

Healthy Forest (Ecosystem): Is a balanced and dynamic plant association of trees and other woody vegetation that is not structurally damaged or overly at risk from fire, disease, insects, wind, drought, or human activities and is capable of natural reproduction. (A system formed by the interaction of living organisms, including people, with their environment.)

Herb: Any seed-producing plant that does not develop persistent woody tissue above the ground, including both forbs and grasses. See Also Forb.

Horizontal Continuity: The degree at which fuels form a continuous layer on a particular horizontal plane (e.g., a brush field, contiguous tree crowns, a grassy field or bed of leaves).

Intermediate Tree: Shorter than dominants or codominants, but crowns extend partially into crown canopy. Receives little direct light from above and none at all from sides – has small crown and is considerably crowded on sides.

Ladder Fuels: Fuels that provide vertical continuity between strata. Fire is able to move from the surface fuels into shrubs and into brush and tree crowns with relative ease.

Licensed Timber Operator (LTO): One who is licensed by the State to harvest trees.

Litter: A surface layer of loose organic debris in forests, consisting of freshly fallen or slightly decomposed organic materials such as leaves, pine needles, and twigs.

Local Responsibility Area (LRA): Land which is not under State or Federal financial responsibility for preventing and suppressing fires such as the incorporated area of a city.

Mortality: The loss to a population of trees or other plants from all lethal causes.

Native Plant Species: Plants regenerated from seed sources indigenous to the same geographic place.

Overstory: That portion of the trees in a forest stand forming the upper tree crown cover.

Prescribed Burning: A controlled application of fire to wildland fuels, in either their natural or modified state, under such conditions of weather, fuel moisture, soil moisture, etc., as to allow the fire to be confined to a predetermined area and, at the same time, to produce results to meet planned objectives of management.

Property Improvement: Any man made modification to real property (Fences, Structures, Vehicles, etc.)

Registered Professional Forester (RPF): One who is licensed by the State of California to manage and apply the principles of forestry for fees paid by a landowner.

Riparian Vegetation: Trees – alder, willow, cottonwood – shrubs, grasses and forbs growing along river banks and stream sides whose roots are in, or close to, the zone of saturation due to the proximity of surface or underground water.

Riparian Zone: The area adjacent to streams and rivers characterized by the presence of riparian vegetation.

Sawlog: Log considered suitable in size and quality for producing sawn timber or lumber.

Second Growth: A term for young trees, left or grown since the first harvest.

Sierrian Mixed Conifer Forest: A forest type found throughout the Sierra-Nevada Mountain Range consisting of a wide variety of tree species, including ponderosa pine, Jeffrey pine, sugar pine, white fire, Douglas-fir, California red fire and incense cedar.

Site: Productive capacity of an area to produce forests or other vegetation, related to climatic, biotic, and soil factors. For forest crops, it is expressed by a site index based on height of dominant trees in a stand at a certain age. Site indices are sometimes grouped into site classes.

Slash: Debris such as tree tops, branches, leaves and bark generated from tree cutting or other vegetation manipulation practices.

Snag: Standing dead tree or section thereof.

Soil Series: Basic unit of soil classification, consisting of soils that are alike in all major profile characteristics, same texture of the surface layer, and having similar horizons.

Spotting: Behavior of a fire producing sparks or embers that are carried by the updraft and wind and start new fires beyond the main fire. Spotting usually occurs with low humidity.

State Responsibility Area (SRA): Areas of the State in which the financial responsibility of preventing and suppressing fires has been determined by the State Board of Forestry and Fire Protection to be primarily the responsibility of the State.

Stand: Community of trees or brush possessing sufficient uniformity in composition, structure, age, arrangement, or condition to be distinguishable from adjacent forest communities.

Stocking: Term for an amount of anything on a given area, particularly in relation to what is considered the optimum, used in forest, range and wildlife management.

Suppressed Tree: Crown entirely below crown canopy. Receives no direct light from either above or below. Tree smaller than average and crown poorly developed.

Sustainability: A collection of methods to create economic growth, which protects the environment, relieves poverty, and does not destroy natural capital in the short term at the expense of the long term. Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Timber Harvest Plan (THP): An environmental review document under the Functional Equivalency provision of the California Environmental Quality Act (CEQA). It has an operational element to

implement commercial timber harvest, an analysis component to assist state agency review of a proposed harvest, and requires CDF approval for all commercial harvests on private timberlands in California.

Uneven Aged: A forest, crop, or stand, composed of intermingling trees that differ markedly in age. Also called All-aged. See Even Aged.

Urban Intermix: An intermingling of structures and natural forest fuels within a forest setting.

Wetlands: Land containing much soil moisture for definite periods of time. Bogs and swamps, wet meadows, and lowland seasonal pools.

Wildfire: Any unwanted fire occurring in a wildland setting.

Wildland: Uncultivated land, other than fallow, neglected or maintained for such purposes as wood or range-forage production, wildlife, recreation protective watershed cover, wilderness.

Wildlife Habitat: Vegetation, climate and other natural conditions suited to the life needs for an animal species to survive and reproduce.

Wildland-Urban Interface (WUI): The area where structures and other human development meet or intermingle with undeveloped wildland. The expansion of the WUI in recent decades has significant implications for wildfire management and impact. The WUI creates an environment in which fire can move readily between structural and vegetation fuels. Its expansion has increased the likelihood that wildfires will threaten structures and people.

Wolf Tree: Vigorous tree generally of bad growth form with a dominantly wide crown, that occupies more growing space than it warrants, so harming potentially better neighbors.

ACRONYMS

BIA	-	Bureau of India Affairs
BLM	-	Bureau of Land Management
CDF	-	California Department of Forestry and Fire Protection
CEQA	-	California Environmental Quality Act
CFPA	-	California Forest Practice Act
CWPP	-	Community Wildfire Protection Plan
EA	-	Environmental Assessment
FRA	-	Federal Responsibility Area
FEMA	-	Federal Emergency Management Agency
GC	-	Government Code
GIS	-	Geographic Information Systems
HSC	-	Health and Safety Code
ISO	-	Insurance Service Office
LTO	-	Licensed Timber Operator
LRA	-	Local Responsibility Area
MFSC	-	Modoc Fire Safe Council
MJUSD	-	Modoc Joint Unified School District
MRE	-	Modoc Recreational Estates
NFC	-	National Fire Code
NEPA	-	National Environmental Protection Act
NFPA	-	National Fire Protection Association
PRC	-	Public Resources Code

PUC - Public Utilities Commission of California
RAC - Resource Advisory Committee
RPF - Registered Professional
SPI - Sierra Pacific Industries
SVJUSD- Surprise Valley Joint Unified School District
THP - Timber Harvest Plan State Responsibility Areas (SRA)
SBOF - State Board of Forestry
USFA - U.S. Fire Administration
USFS - United States Forest Service
WUI - Wildland/Urban Interface

Appendix C

Modoc County Map and Fire Suppression Resources

Fire District Resources

Department	Call Sign	Owner	Manufacturer	Year	Vehicle Description
Cal Pines	4121	CPF	International	1997	Model 14 4X4; 500 gal; Jaws
Cal Pines	4122	CPF	Ford	1974	500 gal pumper
Cal Pines	4123	CPF	International	1972	Wildland 4X4; 500 gal
Cal Pines	4124	CPF	Dodge	1979	125 gal; medical
Cal Pines	4131	CPF	K.W.	1981	4000 gal tender
Canby	4221	Canby	International	1975	300 gal
Canby	4222	Canby	Chev	1978	1000 gal
Canby	4223	Canby	International	1968	4X4; 250 gal
Canby	4250	Canby	Chevy	1986	200 gal w/ foam; medical
Alturas Rural	4320	ARFPD	G.M.	1977	850 water; 1000 gpm foam
Alturas Rural	4321	ARFPD	International	1971	1000 water; 1000 gpm
Alturas Rural	4323	ARFPD	International	1971	500 gal w/ foam
Alturas Rural	4324	Excess	GMC	1978	300 gal w/ foam
Alturas Rural	4330	ARFPD	International	1981	2000 gal
Alturas Rural	4332	ARFPD	K.W.	1967	4000 gal
Alturas Rural	4340	ARFPD	Ford	1990	250 gal w/ foam; rescue unit
Likely	4421	LFPD	Ford	1949	300 gal; 500 gpm
Likely	4422	LFPD	LaFrance	1969	500 gal; 1250 gpm
Likely	4423	LFPD	LaFrance	1970	500 gal w/ portable foam
Likely	4424	LFPD	International	1952	1700 gal; 250 gpm
Likely	4430	LFPD	Kenworth	1975	Tractor w/ 2500 gal tanker
Likely	4450	LFPD	Dodge	1976	Medical equipment; 2 SCBA; 2 float pumps
Davis Creek	4520	DCFPD	Chevy	1972	1300 gal
Davis Creek	4521	DCFPD	GMC	1969	750 gal
Davis Creek	4540	DCFPD	Dodge	1985	300 gal; pro/pak foam
Adin	4720	AFPD	Van Pelt	1968	1000 gal engine; 1000 gpm pump
Adin	4721	AFPD	Van Pelt	1947	500 gal engine; 250 gpm pump
Adin	4722	AFPD	IHC	1962	500 gal engine; 500 gpm pump
Adin	4730	AFPD	White	1980	4000 gal tender
Adin	4731	AFPD	GMC	1955	2000 gal; 6X6 5-ton
Adin	4740	AFPD	Dodge	1976	250 gal slip-on on 1 T; at Rush Creek
Adin	4741	AFPD	Dodge	1976	250 gal slip-on on 1 T; at Butte Creek
Lookout	4820	LFPD	International	1968	700 gal
Lookout	4821	LFPD	Ford	1976	500 gal

Department	Call Sign	Owner	Manufacturer	Year	Vehicle Description
Lookout	4830	LFPD	Utica	1966	1000 gal
Lookout	4831	LFPD	GMC	1968	1000 gal
Lookout	4840	LFPD	International	1965	500 gal
Lookout	4841	LFPD	Dodge	1978	250 gal Quick Response
Tulelake	4911	TUFD	International	1964	750 gal pumper
Tulelake	4912	TUFD	FMC/GMC	1985	1200 gal foam pumper
Tulelake	4921	TUFD	International	1973	750 gal pumper
Tulelake	4940	TUFD	Ford	1982	rescue w/ light medical, Jaws, lift bags
Tulelake	4941	TUFD	Ford	1974	utility w/ porta power
Tulelake	4951	TUFD	Ford	1982	250 gal w/ foam
Tulelake	4952	TUFD	International	1970	250 gal; Jaws
Tulelake	4961	TUFD	K.W.	1973	4000 gal tender
Tulelake	4962	TUFD	Pete	1971	4000 gal tender
Cedarville	5020 (E-85)	CFPD	Ford	1964	750 gal; fully equipped
Cedarville	5021 (E-144)	CFPD	IH	1969	1000 gal; fully equipped
Cedarville	5022 (E-29)	CFPD	White	1954	750 gal; fully equipped
Cedarville	5023 (E-89)	CFPD	GMC	1954	500 gal; fully equipped
Cedarville	5030 (WT-1)	CFPD	Freight	1978	5000 gal tender
Cedarville	5031 (WT-2)	Federal Excess	GMC	1968	5000 gal tender
Cedarville	5040 (C-6)	CFPD	Chevy	1974	200 gal; generator
Cedarville	5041 (E-1)	CFPD	IWH	1974	300 gal; fully equipped
Cedarville	5042 (C-3)	CFPD	IWH	1959	200 gal; generator
Lake City	5120	Modoc County	Ford	1947	engine w/ 350 gal & foam; no radio
Lake City	5130	Federal Excess	Ford	1968	1500 gal tender
Lake City	5131	Federal Excess	GMC	1966	1500 gal tender; 4X4
Lake City	5132	Federal Excess	IHC	1962	2000 gal tender (semi)
Lake City	5133	State Excess	Ford	1964	1500 gal tender
Lake City	5140	LCFPD	Chevy	1979	pickup w/ 50 gal slip-on pumper
Eagleville	5222	EFPD		?	750-1000 gal engine

Department	Call Sign	Owner	Manufacturer	Year	Vehicle Description
Eagleville	5230	EFPD	Chevy	1977	2000 gal tender w/ foam
Eagleville	5240	EFPD	International	1975	250 gal
Eagleville	5244	EFPD	Dodge	1970	150 gal
Fort Bidwell	5320	FBFPD	GMC	1980	330 gal
Fort Bidwell	5321	FBFPD	International	1967	500 gal
Fort Bidwell	5330	FBFPD	GMC	1962	3200 gal
Alturas City	E5	City	Pierce	1988	Type 1; doesn't leave city
Alturas City	E50	City	Van Pelt	1953	Type 1
Alturas City	E6	City	Van Pelt	1976	Type 1; doesn't leave city
Alturas City	E7	City	Curtis	1973	Type 3
Alturas City	E9	City	Van Pelt	1969	Ladder; doesn't leave city
Alturas City	R8	City		1996	Light Rescue

- Willow Ranch, 5520, WRFD, Van Pelt, 1977, 1000 gal
- Willow Ranch, 5510, WRFD, Van Pelt, 1955, 1000 gal
- Willow Ranch, 5540, WRFD, Chevy, 1986, 4x4, 150 gal, type 6
- Willow Ranch, 5541, WRFD, Chevy, 1980, 4x4, sm brush/medical response

CDF Resources
Modoc County

Deer Springs Engine	**E-2265**	**Model 5**	**Wildland**
Happy Camp	E-2266	Model 5	Wildland Engine
Alturas	E-2268	Model 14	Wildland Engine
	E-2269	Model 14	Wildland Engine

Devils Garden:
Five Hand Crews
Dozer 2241 D-6

Mobile Food Unit-Prepared at camp then brought to incident, steam table.

Modoc National Forest Resources

Buck Creek	1 Type III Wildland Engine with 5 person crew
Cedarville	1 Type III Wildland Engine with 5 person crew
Alturas	1 Type III Wildland Engine with 5 person crew
Canby	1 Type III Wildland Engine with 5 person crew
Crowder Flat	1 Type III Wildland Engine with 5 person crew

Dry Lake	1 Type III Wildland Engine with 5 person crew
Lava Beds NM (Coordinated with Dept. of Interior Nat'l Park Svc.)	1 Type III Wildland Engine with 5 person crew
Adin	1 Type III Wildland Engine with 5 person crew
Long Bell	2 Type III Wildland Engines with 5 person crews

BLM Resources
West Valley

Fire Station	2 Type III Wildland Engines 1 Prevention Patrol Vehicle
Surprise Valley Fire Station	2 Type III Wildland Engines 1 BIA Brush Truck 1 Prevention Patrol Vehicle

LASSEN MODOC UNIT 2004
FIRE MANAGEMENT PLAN

Battalion 3

Battalion 3 (Bieber Battalion) is located in the northwest portion of Lassen County, southwest corner of Modoc County and borders to the west along Shasta-Trinity and Siskiyou Units. The communities of Bieber, Nubieber, Day, Lookout and Adin are located within its boundaries.

State Highway 299 and 139 traverse the Battalion. Approximately 17,260 acres of this Battalion are State Responsibility Lands; Local Responsibility
Land is located in the Big Valley area around the towns of Bieber, Nubieber
and in the Pittville area. The population within the Battalion is found in Bieber, Nubieber, Lookout, Day, Little Valley and Adin. Approximately 1400 people make the communities of Battalion 3 their home.

Fuels

The vegetative cover in the Battalion 3 is predominately standing timber with grass/sage cover. The Big Valley area of the Battalion is agricultural with much of the land committed to the production of hay. Many fires in this Battalion grow quite quickly, due to its remoteness of and the lack of roads.

Fire Weather

Fire weather in Battalion 3 is wetter than that of Battalions 1 and 4, which are located in the rain shadow of the Sierra/Cascade Mountains. The precipitation total for 2003 was 16.66 inches, which was 113.3% of normal.

Assets at Risk

Many of the homes in Battalion 3 are located in the wild land urban interface area. The Lookout ranchettes and homes along Day Road are prime examples. These homes are within standing timber with an under story of grass/sage forest fuels.

The timber lands in the Battalion are owned by Sierra Pacific Industries and W. M. Beatty and Associates. The Modoc National Forest and the Lassen National Forest have common borders with the Battalion. Much of the National Forest land is leased out during the summer and fall for grazing of cattle.

The Lava Beds National Monument and Lassen Volcanic National Park are close by and many people travel through this area en-route to these locations. The entire area is well known for its hunting and fishing.

This is an important watershed area. The water that is collected from the snow and rainfall during the winter finds its way into the rivers and lakes, which provide hydro-electric plants along the Pitt River and is a source for domestic water for several communities along the Sacramento River.

Battalion 3 Resources

Bieber Station	Happy Camp Station
2-Fire Engines	1-Fire Engine
1-Helicopter and crew	

Intermountain Conservation Camp is located just outside of Nubieber and has four Fire Crews available.

Fire Protection Districts and Volunteer Departments include:

- Big Valley Fire Protection District
- Lookout Volunteer Fire Department
- Adin Volunteer Fire Department
- McArthur Volunteer Fire Department (Day Bench)
- Little Valley Community Services District
- Northwest Lassen County Fire Protection District
- Newall Fire Protection District

ADD: USFS, BLM & BIA

Battalion 4

Battalion 4 (Alturas Battalion) is located in the northeastern portion of Lassen-Modoc Unit. It is located on the east half of Modoc County with Oregon to the north and Nevada to the east. The most southern end of the Battalion is within the northeastern part of Lassen County. The communities of Alturas, Canby, Likely, and Madeline are located within its boundaries.
U.S. Highway 395, 299 and 139 travels through the Battalion.
Approximately 21,500 acres of this Battalion and State Responsibility Lands; Local Responsibility Land surrounds the community of Alturas and runs south to Likely. Approximately 1800 people live within the boundaries of Battalion 4.

Fuels

The vegetative cover in the Battalion is predominately standing timber in the mountains, with juniper grass/sage cover in the eastern half of the battalion where the terrain is at a lower elevation. Many fires in this Battalion grow quite quickly due to the remoteness of the area and lack of roads.

Fire Weather

Fire weather in Battalion 4 is drier, being in the rain shadow, than that of Battalion 2 and 3, which are located to the west and near the top of the Sierra/Cascade mountain range. During 2003, Alturas received 10.35 inches of rain, which is 83.3% of the norm.

Assets at Risk

Many of the homes in Battalion 4 are located in the wild land urban interface area in the Cal Pines development south of Alturas and in the Modoc Estates subdivision which is located within Alturas. These homes are surrounded by standing timber and/or juniper with an under story of grass/sage forest fuels.

The Modoc National Forest and the Warner Wilderness Area have common borders with the Battalion. In the southeast portion of the Battalion much of
the land is managed by the Bureau of Land Management. Much of the National Forest and BLM land is leased out during summer and fall for grazing of cattle.

The Warner Wilderness Area is a popular area for hikers and explorers and holds a wealth of natural resources for the area. The entire area is well known for its hunting and fishing. Its trails have not been maintained for some time and access may be difficult.

This is an important watershed area. The water that is collected from the snow and rainfall during the winter finds its way into the rivers and lakes, which provide hydro-electric along the Pitt River and is a source for domestic water for several communities along the Sacramento River.

Battalion 4 Resources

Alturas Station	Deer Springs Station
2-Fire Engines	1-Fire Engine
Likely Mountain Lookout	
Bulldozer and service unit	

FIRE PROTECTION DISTRICTS AND VOLUNTEER DEPARTMENTS include:

- Adin Fire Protection District
- Alturas City Fire Department
- Alturas Rancheria Fire dept.
- Alturas Rural Fire Protection District
- Cal Pines Community Service District 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

APPENDIX D

FUNDING SOURCES

The following includes general pre-fire funding information including a list of potential funding sources listed at the National Fire Plan web site: http://www.fireplan.gov/.

Community Assistance Program Elements

Under the wing of the National Fire Plan, various community assistance programs focus on building state and community capacity to develop and implement citizen-driven solutions that will lessen local vulnerability to risks associated with wild land fires.

Funding allocations that recognize risk and need are established through a cooperative process with the National Association of State Foresters. States are requested to focus on communities with the greatest risk of severe wild land fire. For more information contact your state representative, or the National Association of State Foresters (http://www.stateforesters.org/).

Program elements are as follows:

- Preparedness - Increases the ability of local, rural, and state organizations to provide coordinated fire protection and mobilization for fire suppression on both federal and non-federal lands.
- Hazard Mitigation - Supports state-led hazard mitigation activities in the wild land urban interface, focused on reducing property loss, decreasing fuels hazards, and increasing public awareness and citizen-driven solutions in rural communities. Currently, hazard mitigation projects are funded through a competitive process and fall into three categories: hazardous fuels reduction, information and education programs targeting mitigation and prevention, and risk reduction and hazard mitigation for homeowners and their communities.
- Fire Prevention - Delivers a nationwide fire prevention program through public service advertising, educational activities, product licensing, and corporate partnerships. The Smokey Bear program is part of this component, and FIREWISE is another prevention component. FIREWISE is a program that promotes wild land fire safety and fosters community-based responsibility through adult education, community action planning, fuels treatments, and landscaping. Currently, occasional FIREWISE workshops for community and business leaders are conducted to help participants work to establish local FIREWISE standards to ensure a safer place for people to live.

Community Assistance Programs

Rural Fire Assistance (Department of the Interior)

Department of the Interior funding will be used to provide technical assistance, training, supplies, equipment, and public education support to rural fire departments, thus enhancing firefighter safety and strengthening wild land fire protection capabilities. Assistance program Information: http://www.fireplan.gov/step1.cfm

State Fire Assistance (USDA Forest Service)

An important element of the National Fire Plan is the coordination of federal, state, tribal, and local fire organizations to prevent, prepare for, and manage wild land fire across the landscape. The State Fire Assistance program provides financial and technical support directly to the state forest fire protection organizations to enhance fire-fighting capacity. The Program also supports community based hazard mitigation and an expanded national public service fire prevention program. State and local matching funds leverage the federal investment for cost-effective results. The Forest Service has an allocation of over $81 million in National Fire Plan and base program funding for the State Fire Assistance program.

Volunteer Fire Assistance (USDA Forest Service)

The Volunteer Fire Assistance Program provides funds through States to volunteer fire departments serving communities to improve communication capabilities, provide critical wild land fire management training, and purchase protective fire clothing and equipment. These departments provide, at no cost, wildfire and emergency protection service to communities with populations of less than 10,000. Volunteer Fire Departments provide services that reach 43% of the population, at an estimated value of $36 billion per year. Of the more than 32,000 local fire agencies nationwide, 75% are volunteer fire departments.

The National Fire Plan Budget provides $13,315,000 in National Fire Plan and base program funding for the Volunteer Fire Assistance Program.

Economic Action Programs (USDA Forest Service)

USDA Forest Service funding will provide for Economic Action Programs that work with local communities to identify, develop, and expand economic opportunities related to traditionally underutilize wood products and to expand the utilization of wood removed through hazardous fuel reduction treatments. Information, demonstrations, application development, and training will be made available to participating communities. For more information contact a Forest Service Regional Representative at: http://www.fs.fed.us/spf/coop/eap_coord's.

The Modoc County representative is, TBA, Modoc National Forest, 800 W. 12th Street, Alturas, CA 96101, (530) 233-8713.Assistance to Firefighters (FEMA)
The Federal Emergency Management Agency's (FEMA) United States Fire Administration has Assistance to Firefighter's Grant Program designed to improve the safety and health of the nation's fire service and the communities they serve.
Further information is available online at the U.S. Fire Administration (USFA) web site at: http://www.usfa.fema.gov/dhtml/inside-usfa/grants.cfm. For more information on the grant program, or problems with the application

process, visit the website, or call the toll-free information line at (866) 274
0960 or send e-mail to: usfagrants@fema.gov.

APPENDIX E. DEFENSIBLE SPACE

CALIFORNIA CODE OF REGULATIONS
TITLE 14. NATURAL RESOURCES
DIVISION 1.5. DEPARTMENT OF FORESTRY AND FIRE PROTECTION [FNA1]
CHAPTER 7. FIRE PROTECTION [FNA2]
SUBCHAPTER 3. FIRE HAZARD
ARTICLE 3. FIRE HAZARD REDUCTION AROUND BUILDINGS AND STRUCTURES

<<CHAPTER 7. FIRE PROTECTION [FNA2]**>>**

[FNa2] Formerly Subchapter 7 of Chapter 2, Division 2, Title 14, Cal. Adm. Code.

This database is current through 4/18/08, Register 2008, No. 16

1299. Defensible Space.

The intent of this regulation is to provide guidance for implementation of Public Resources Code 4291(a) and (b), and minimize the spread of fire within a 100 foot zone around a building or structure.

(a) A person that owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, and is within State Responsibility Area, shall do the following:

(1) Within 30 feet from each building or structure maintain a firebreak by removing and clearing away all flammable vegetation and other combustible growth pursuant to PRC s 4291(a). Single specimens of trees or other vegetation may be retained provided they are well-spaced, well-pruned, and create a condition that avoids spread of fire to other vegetation or to a building or structure.

(2) Within the 30 feet to 100 feet zone (Reduced Fuel Zone) from each building or structure (or to the property line, whichever is nearer to the structure), provide a fuel break by disrupting the vertical and/or horizontal
continuity of flammable and combustible vegetation with the

goal of reducing fire intensity, inhibiting fire in the crowns of trees, reducing the rate of fire spread, and providing a safer environment for firefighters to suppress wildfire pursuant to PRC s 4291(b).

(b) Any vegetation fuels identified as a fire hazard by the fire inspection official of the authority having jurisdiction shall be removed or modified provided it is required by subsection (a)(1) & (a)(2).

(c) Within the intent of the regulations, the fire inspection official of the authority having jurisdiction may approve alternative practices which provide for the same practical effects as the stated guidelines.

(d) Guidance for implementation of this regulation is contained in the publication: "General Guidelines for Creating Defensible Space" as published by the Board of Forestry and Fire Protection by resolution adopted on February 8, 2006.

For General Guidelines for Creating Defensible Space, go to:

http://www.fire.ca.gov/cdfbofdb/PDFS/4291finalguidelines2_23_06.pdf

Note: Authority cited: Sections 4102, 4125-4128 and 4291, Public Resources Code. Reference: Section 4291, Public Resources Code.

PUBLIC RESOURCE CODES

4290. (a) The board shall adopt regulations implementing minimum fire safety standards related to defensible space which are applicable to state responsibility area lands under the authority of the department. These regulations apply to the perimeters and access to all residential, commercial, and industrial building construction within state responsibility areas approved after January 1, 1991. The board may not adopt building standards, as defined in Section 18909 of the Health and Safety Code, under the authority of this section. As an integral part of fire safety standards, the State Fire Marshal has the authority to adopt regulations for roof coverings and openings into the attic areas of buildings specified in Section 13108.5 of the Health and Safety Code. The regulations apply to the placement of mobile homes as defined by National Fire Protection

Association standards. These regulations do not apply where an application for a building permit was filed prior to January 1, 1991, or to parcel or tentative maps or other developments approved prior to January 1, 1991, if the final map for the tentative map is approved within the time prescribed by the local ordinance. The regulations shall include all of the following:

(1) Road standards for fire equipment access.

(2) Standards for signs identifying streets, roads, and buildings.

(3) Minimum private water supply reserves for emergency fire use.

(4) Fuel breaks and greenbelts.

(b) These regulations do not supersede local regulations which equal or exceed minimum regulations adopted by the state.

4291. A person that owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, shall at all times do all of the following:

(a) Maintain around and adjacent to the building or structure a firebreak made by removing and clearing away, for a distance of not less than 30 feet on each side of the building or structure or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This subdivision does not apply to single specimens of trees or other vegetation that is well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to any building or structure.

(b) Maintain around and adjacent to the building or structure additional fire protection or firebreak made by removing all brush, flammable vegetation, or combustible growth that is located within 100 feet from the building or structure or to the property line or at a greater distance if required by state law, or local ordinance, rule, or regulation. This section does not prevent an insurance company that insures a building or structure from requiring the owner of the building or structure to maintain a firebreak of more than 100 feet around the building or structure. Grass and other vegetation located more than 30 feet from the building or structure and less than 18 inches in height above the ground may be maintained where necessary to stabilize the soil and prevent erosion. This subdivision does not apply to single specimens of trees or other vegetation that is well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to a dwelling or structure.

(c) Remove that portion of any tree that extends within 10 feet of the outlet of a chimney or stovepipe.

(d) Maintain any tree adjacent to or overhanging a building free of dead or dying wood. Grass and other vegetation located more than

30 feet from the building or structure and less than 18 inches in height above the ground may be maintained where necessary to stabilize the
soil and prevent erosion. This subdivision does not apply to single specimens of trees or other vegetation that is well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to a dwelling or structure.

(e) Remove that portion of any tree that extends within 10 feet of the outlet of a chimney or stovepipe.

(f) Maintain any tree adjacent to or overhanging a building free of dead or dying wood.

(g) Maintain the roof of a structure free of leaves, needles, or other dead vegetative growth.

(h) Prior to constructing a new building or structure or rebuilding a building or structure damaged by a fire in such an area, the construction or rebuilding of which requires a building permit, the owner shall obtain a certification from the local building official that the dwelling or structure, as proposed to be built, complies with all applicable state and local building standards, including those described in subdivision (b) of Section 51189 of the Government Code, and shall provide a copy of the certification, upon request, to the insurer providing course of construction insurance coverage for the building or structure. Upon completion of the construction or rebuilding, the owner shall obtain from the local building official, a copy of the final inspection report that demonstrates that the dwelling or structure was constructed in compliance with all applicable state and local building standards, including those described in subdivision (b) of Section 51189 of the Government Code, and shall provide a copy of the report, upon request, to the property insurance carrier that insures the dwelling or structure.

(i) Except as provided in Section 18930 of the Health and Safety Code, the director may adopt regulations exempting structures with exteriors constructed entirely of nonflammable materials, or conditioned upon the contents and composition of same, he or she may vary the requirements respecting the removing or clearing away of flammable vegetation or other combustible growth with respect to the area surrounding those structures.

No exemption or variance shall apply unless and until the occupant thereof, or if there is not an occupant, the owner thereof, files with the department, in a form as the director shall prescribe, a written consent to the inspection of the interior and contents of the structure to ascertain whether this section and the regulations adopted under this section are complied with at all times.

(h) The director may authorize the removal of vegetation that is not consistent with the standards of this section. The director may prescribe a procedure for the removal of that vegetation and make the expense a lien upon the building, structure, or grounds, in the same manner that is applicable to a legislative body under Section 51186 of the Government Code.

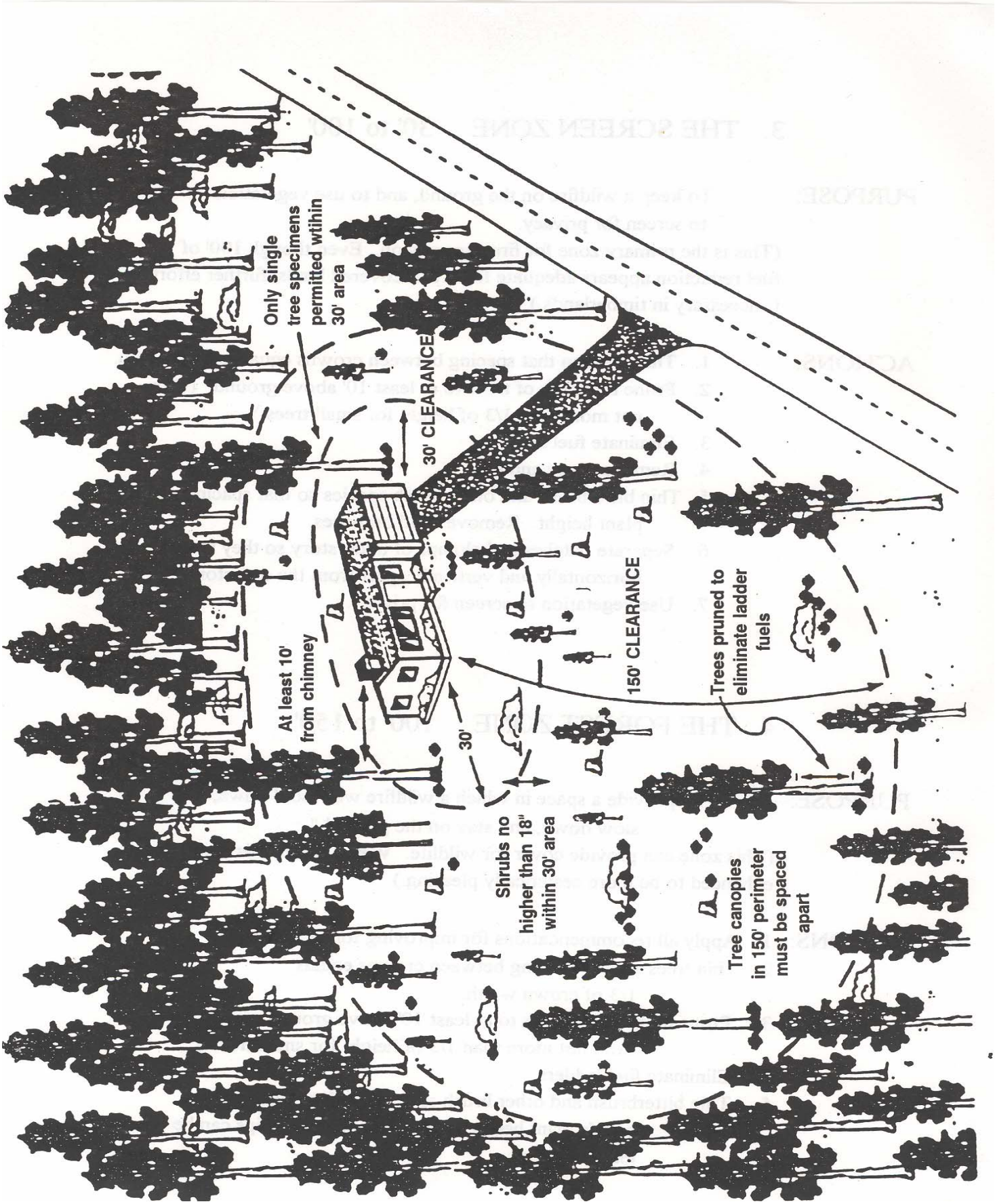
(i) As used in this section, "person" means a private individual, organization, partnership, limited liability company, or corporation.

4291.1. (a) Notwithstanding Section 4021, a violation of Section **4291** is an infraction punishable by a fine of not less than one hundred dollars ($100), nor more than five hundred dollars ($500) . If a person is convicted of a second violation of Section **4291** within five years, that

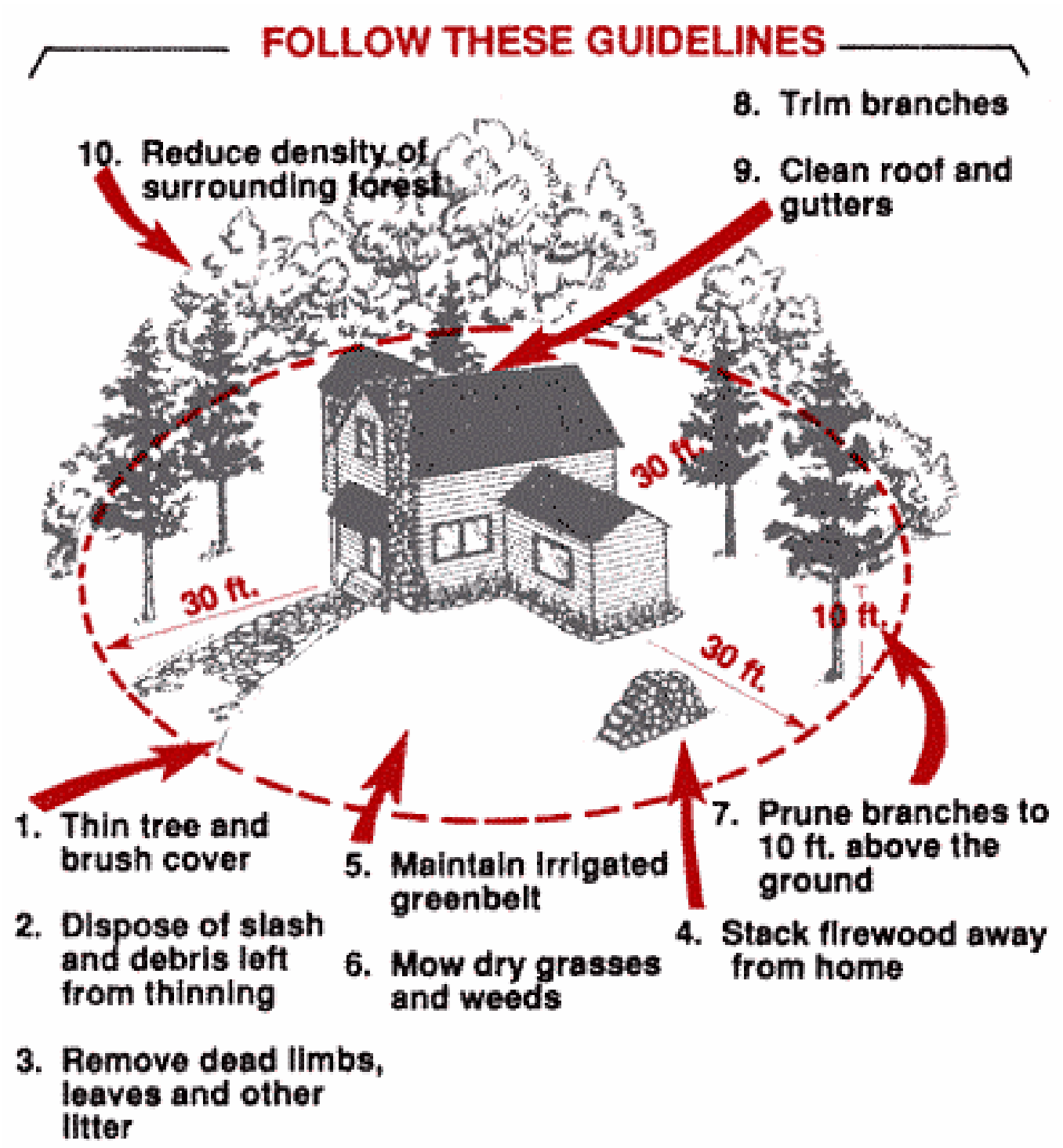
person shall be punished by a fine of not less than two hundred fifty dollars ($250), nor more than five hundred dollars($500). If a person is convicted of a third violation of Section 4291 within five years, that person is guilty of a misdemeanor and shall be punished by a fine of not less than five hundred dollars ($500) . If a person is convicted of a third violation of Section 4291 within five years, the department may perform or contract for the performance of work necessary to comply with Section 4291 and may bill the person convicted for the costs incurred, in which case the person convicted, upon payment of those costs, shall not be required to pay the fine. If a person convicted of a violation of Section 4291 is granted probation, the court shall impose as a term or condition of probation, in addition to any other term or condition of probation, that the person pay at least the minimum fine prescribed in this section.

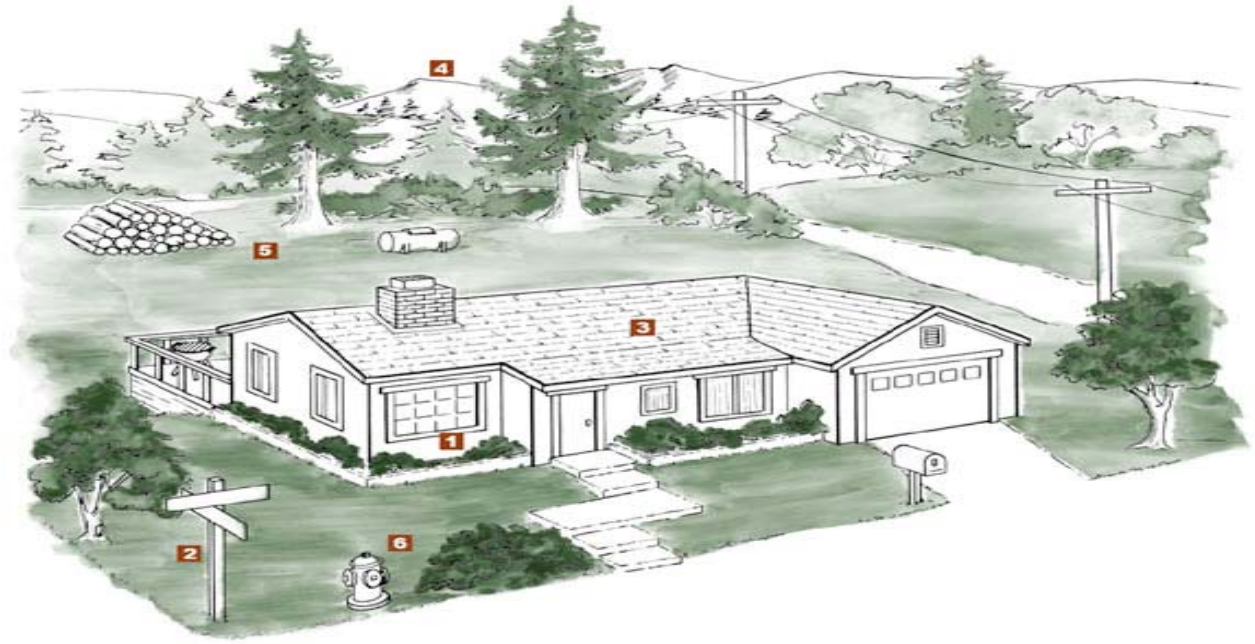
(b) If a person convicted of a violation of Section 4291 produces in court verification prior to imposition of a fine by the court, that the condition resulting in the citation no longer exists, the court may reduce the fine imposed for the violation of Section 4291 to fifty dollars ($50) .

4291.3. Subject to any other applicable provision of law, a state or local fire official, at his or her discretion, may authorize an owner of property, or his or her agent, to construct a firebreak, or implement appropriate vegetation management techniques, to ensure that defensible space is adequate for the protection of a hospital, adult residential care facility, school, aboveground storage tank, hazardous materials facility, or similar facility on the property. The firebreak may be for a radius of up to 300 feet from the facility, or to the property line, whichever distance is shorter.


Only single tree specimens permitted wtihin 30' area
30' CLEARANCE
At least 10' from chimney
30'
Shrubs no higher than 18" within 30' area
150' CLEARANCE
Trees pruned to eliminate ladder fuels
Tree canopies in 150' perimeter must be spaced apart

OUTSIDE


FOLLOW THESE GUIDELINES
8. Trim branches
10. Reduce density of surrounding forest
9. Clean roof and gutters
30 ft.
30 ft.
10 ft.
30 ft.
1. Thin tree and brush cover
2. Dispose of slash and debris left from thinning
3. Remove dead limbs, leaves and other litter
5. Maintain irrigated greenbelt
6. Mow dry grasses and weeds
7. Prune branches to 10 ft. above the ground
4. Stack firewood away from home



1 Design/Construction

__ Consider installing residential sprinklers

__ Build your home away from ridge tops, canyons and areas between high points on a ridge

__ Build your home at least 30-100 feet from your property line

__ Use fire resistant materials

__ Enclose the underside of eaves, balconies and above ground decks with fire resistant materials

__ Try to limit the size and number of windows in your home that face large areas of vegetation

__ Install only dual-paned or triple-paned windows

__ Make sure that electric service lines, fuse boxes and circuit breaker panels are installed and maintained as prescribed by code

__ Contact qualified individuals to perform electrical maintenance and repairs

2 Access

__ Identify at least two exit routes from your neighborhood

__ Construct roads that allow two-way traffic

__ Design road width, grade and curves to allow access for large emergency vehicles

__ Construct driveways to allow large emergency equipment to reach your house

__ Design bridges to carry heavy emergency vehicles, including bulldozers carried on large trucks

__ Post clear road signs to show traffic restrictions such as dead-end roads, and weight and height limitations

__ Make sure dead-end roads, and long driveways have turn-around areas wide enough for emergency vehicles

__ Construct turnouts along one-way roads58

__ Clear flammable vegetation at least 10 feet from roads and five feet from driveways

__ Cut back overhanging tree branches above roads

__ Construct fire barriers such as greenbelts

__ Make sure that your street is named or numbered, and a sign is visibly posted at each street intersection

__ Make sure that your street name and house number are not duplicated elsewhere in the county

__ Post your house address at the beginning of your driveway, or on your house if it is easily visible from the road

3 Roof

__ Remove branches within 10 feet of your chimney and dead branches overhanging your roof

__ Remove dead leaves and needles from your roof and gutters

__ Install a fire resistant roof. Contact your local fire department for current roofing requirements

__ Cover your chimney outlet and stovepipe with a nonflammable screen of ½ inch or smaller mesh

4 Landscape

__ Create a “defensible space” by removing all flammable vegetation at least 30 feet from all structures

__ Never prune near power lines. Call your local utility company first

__ Landscape with fire resistant plants

__ On slopes or in high fire hazard areas remove flammable vegetation out to 100 feet or more

__ Space native trees and shrubs at least 10 feet apart

__ For trees taller than 18 feet, remove lower branches within six feet of the ground

__ Maintain all plants by regularly watering, and by removing dead branches, leaves and needles

__ Before planting trees close to any power line contact your local utility company to confirm the maximum tree height allowable for that location

5 Yard

__ Stack woodpiles at least 30 feet from all structures and remove vegetation within 10 feet of woodpiles

__ Locate LPG tanks (butane and propane) at least 30 feet from any structure and maintain 10 feet of clearance

__ Remove all stacks of construction materials, pine needles, leaves and other debris from your yard

__ Contact your local fire department to see if open burning is allowed in your area; if so, obtain a burning permit

__ Where burn barrels are allowed, clear flammable materials at least 10 feet around the barrel; cover the open top with a non-flammable screen with mesh no larger than ¼ inch

6 Emergency Water Supply

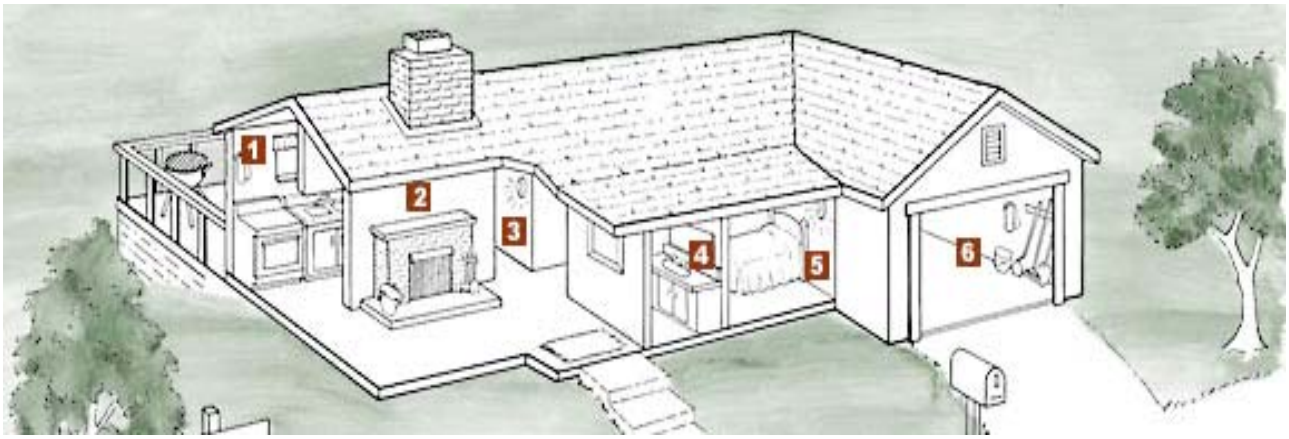
__ Maintain an emergency water supply that meets fire department standards through one of the following:
- a community water/hydrant system
- a cooperative emergency storage tank with neighbors
- a minimum storage supply of 2,500 gallons on your property

__ Clearly mark all emergency water sources

__ Create easy firefighter access to your closest emergency water source

__ If your water comes from a well, consider an emergency generator to operate the pump during a power failure

INSIDE



1 Kitchen

__ Keep a working fire extinguisher in the kitchen

__ Maintain electric and gas stoves in good operating condition

__ Keep baking soda on hand to extinguish stove-top grease fires

__ Turn the handles of pots and pans containing hot liquids away from the front of the stove

__ Install curtains and towel holders away from burners on the stove

__ Store matches and lighters out of the reach of children

__ Make sure that electrical outlets are designed to handle appliance loads

2 Living Room

__ Install a screen in front of fireplace or wood stove

__ Store the ashes from your fireplace (and barbecue) in a metal container and dispose of only when cold

__ Clean fireplace chimneys and flues at least once a year

3 Hallway

__ Install smoke detectors between living and sleeping areas

__ Test smoke detectors monthly and replace batteries twice a year, when clocks are changed in the spring and fall

__ Install child safety plugs (caps) on all electrical outlets

__ Replace electrical cords that do not work properly, have loose connections, or are frayed

4 Bedroom

__ If you sleep with the door closed, install a smoke detector in the bedroom
__ Turn off electric blankets and other electrical appliances when not in use
__ Do not smoke in bed
__ If you have security bars on your windows or doors, be sure they have an approved quick-release mechanism so you and your family can get out in the event of a fire

5 Bathroom

__ Disconnect appliances such as curling irons and hair dryers when done; store in a safe location until cool
__ Keep items such as towels away from wall and floor heaters

6 Garage

__ Mount a working fire extinguisher in the garage
__ Have tools such as a shovel, hoe, rake and bucket available for use in a wildfire emergency
__ Install a solid door with self-closing hinges between living areas and the garage
__ Dispose of oily rags in (Underwriters Laboratories) approved metal containers
__ Store all combustibles away from ignition sources such as water heaters
__ Disconnect electrical tools and appliances when not in use
__ Allow hot tools such as glue guns and soldering irons to cool before storing
__ Properly store flammable liquids in approved containers and away from ignition sources such as pilot lights

Disaster Preparedness

__ Maintain at least a three-day supply of drinking water, and food that does not require refrigeration and generally does not need cooking
__ Maintain a portable radio, flashlight, emergency cooking equipment, portable lanterns and batteries
__ Maintain first aid supplies to treat the injured until help arrives
__ Keep a list of valuables to take with you in an emergency; if possible, store these valuables together
__ Make sure that all family members are ready to
protect themselves with STOP, DROP AND ROLL
__ For safety, securely attach all water heaters and furniture such as cabinets and bookshelves to walls
__ Have a contingency plan to enable family members to contact each other. Establish a family/friend phone tree
__ Designate an emergency meeting place outside your home
__ Practice emergency exit drills in the house (EDITH) regularly
__ Outdoor cooking appliances such as barbecues should never be taken indoors for use as heaters

Appendix F
Sample Risk Assessment[1]

Hazard Assessment

The Hazard Assessment Process is presented in step functions that are descriptive, not prescriptive in nature. The methods recommended describe an overall approach that combines approaches taken by several jurisdictions throughout the United States. In reviewing each step, consider the extent each step contributes to a realistic assessment of the fire hazard in your area.

Step 1: Select the area to be evaluated

Identify the interface boundary or boundaries on a map. Use a map (preferably a topographic map) of the jurisdictional area and define the known interface areas. After identifying the interface areas on the map, give each area a name or number. Consider naming the areas after related geographic names or land marks for easy reference.

Step 2: Select the hazard components to be considered

The hazard components discussed are divided into three categories—structure hazards, vegetative fuel hazards, and other miscellaneous hazards. The structure hazards include the structure's location, building materials and design. The vegetative fuel hazards include the vegetative cover both within and beyond the vicinity of the structure. Miscellaneous hazards included are the structure density (i.e., the number of structures in an area), slope, and weather and fire occurrence.

Structure hazards: The building materials, design and location and the fuels within the area will all contribute to the ability or inability of the structure to survive a Wildland fire situation. By considering the following structural hazards, new developments can be built with an increased chance of surviving a Wildland/urban fire. Homeowners should be educated on how to reduce the fire risk of existing structures.

Structure location: The structure should be built in a location that will minimize vulnerable design features and maximize its survivability. Structures should be set back at least 30 feet from property lines so that the owners will have control of the adjacent areas. Structures should be located away from dangerous topographic features such as the top of slopes or adjacent to chimneys (draws and canyons).

Building Materials and Design: Should a building come in contact with heat, flames or firebrands, the building materials and design should prevent or retard the penetration of the fire beyond the exterior of the structure.

[1] Adapted from the NFPA Assessment Guide

1) Roof

Roofs are less vulnerable to radiation and convection because of their slope but are more susceptible to ignition by firebrands. Roofs should be covered with nonflammable materials and should be inspected for gaps which could expose ignitable sub roofing or roof supports. A major cause of home loss in Wildland areas is flammable wood shake roofs.

2) Walls

Walls are most susceptible to ignition by radiation and convection. The edges of flammable wall materials, such as trim materials on casings and facing, will ignite before flat surfaces. The walls should be constructed of fire resistant materials compatible with the surrounding fuels. Wall materials which resist heat and flames include cement, plaster, stucco and concrete masonry such as stone, brick or block. Though some materials will not burn, such as vinyl, they may lose their integrity when exposed to high temperature and fall away or melt, exposing interior materials.

3) Windows

Exposure to heat can cause windows to fracture and collapse leaving an opening for flames or firebrands to enter and ignite the interior of a structure. Using glass products that can withstand the potential convective and radiant heat will reduce this risk. Tempered glass will withstand much higher temperatures than plate glass and should be used for large windows‹particularly windows overlooking slopes or vegetation. Double pane glass is slightly more resistant to heat than single pane glass.

4) Eaves and Overhangs

Eaves and overhanging features—room pushouts, bay windows, and extensions over slopes—are very vulnerable to convective exposures and have a design that can sustain ignition. Fuels should be eliminated from contact with eaves and overhangs. Eaves and overhangs should be boxed or enclosed with nonflammable materials to reduce the surface area and eliminate the edges that can trap firebrands.

5) Vents

Vents are a necessary feature of a structure for preventing condensation and subsequent wood decay. However, openings should be screened to prevent firebrands from entering the structure. The screens should prevent passage of objects larger than ¼ inch (6.0mm). Both vents and screens should be constructed of materials that will not burn or melt when exposed to heat or firebrands.

6) Attachments

Attachments include any structures connected to the residence such as

decks, porches and fences. When assessing the ignition potential of a structure, attachments are considered part of the structure. For example, if the ignition potential of the attachment is high, the ignition potential of the entire structure is considered high.

Additional Considerations

Access/Egress
Bridges
Building Construction
Density and Spacing
Pre-attack Plan
Resources
Response Times
Utilities
Water Supply

Vegetative Fuel Hazards: Vegetative fuels include living and dead vegetation materials. The amount of heat energy released during a Wildland fire is defined by the amount, arrangement and rate of combustion of the vegetative fuels. Vegetative fuel flame lengths can exceed 100 feet and the radiated heat can ignite combustible materials from distances of 100 feet or more. Winds can carry live firebrands for several miles. Fuels *within the immediate vicinity* can have a significant impact on the potential of a structure to ignite. The size of the "immediate vicinity" will vary depending on the vegetation and characteristics of the land. Fuels within the immediate vicinity of the structure should be fire resistant and maintained in fire resistant condition.

Fuels *beyond the immediate vicinity* are those that surround the structure but are not immediately adjacent to it. The concern with these fuels is primarily their ability to produce firebrands, which can indirectly cause ignition of the structure, and their ability to produce long flame lengths and intense radiant energy. Fuels beyond the immediate vicinity of the structure should consist of fire resistant ground cover and trees that are thinned and pruned to prevent ground fires from igniting the crowns, or tops of trees.

Additional Considerations

Building Construction
Defensible Space
Fuel Breaks
Fuel Continuity
Fuel Loading
Fuel type/Models

Miscellaneous Hazards:

1) Structure Density

The density of structures is determined by lot size, structure

arrangement and number of structures per lot. This density affects the overall exposure, spread and intensity of wildfires.

Additional Considerations

Endangered Species
Endangered Plants
Environmental Impact
Visual Impact

2) Slope

Slope is defined as the upward or downward incline or slant of the terrain. All other variables being equal, a fire traveling up a slope will move faster and have longer flames than a fire traveling on flat terrain—a fire on a 30 percent slope can produce flames twice the length and travel as much as one and one half times as fast, as a fire on flat ground.

Additional Considerations

Aspect
Dangerous Terrain
Position by Slope
Percent Slope

3) Weather

All aspects of weather can affect the fire assessment. Temperature, humidity and winds will affect the probability of ignition and the ability to control and extinguish the fire. Weather patterns such as long and short-term droughts need to be considered.

Additional Considerations

Drought Factor/Index
Historic Climatological Data
National Fire Danger Rating System

4) Fire Occurrence

The history of wildfires can provide a valuable dimension for the assessment. There will be an increase in the probability of a fire occurring in environments where they have occurred in the past. The severity and frequency of fires enable authorities to determine the resources required.

Step 3: Rank the hazard components

Develop or use an existing system to define the significance of each hazard component. The system, though subjective in nature, should be specific and consistent.

For example NFPA 299 Standard for the Protection of Life and Property (the system used in this web site), 1997 Edition, uses a numerical rating system to define the relative contributions of several components. To

obtain an overall rating for the interface, the NFPA 299 system requires simply adding the points from the individual components.

The numerical rating will be significant only considering the system from which it was derived. For example, under NFPA 299, 69 to 83 points indicates a high hazard property.

The Following Wildfire Hazard Severity Checklist is adapted from the Volusia County Florida Fire Chief's Association "Wildland/Urban Interface Wildfire Assessment Guide".

WILDFIRE HAZARD SEVERITY CHECKLIST

SUBDIVISION NAME - _____

DATE - _____

LOCATION - _____

TYPE – ( ) RESIDENTIAL ( ) COMMERCIAL ( ) INDUSTRIAL ELEMENT

POINTS

A. Subdivision Design

1. Ingress and egress

Two or more primary roads	1___
One primary road plus one or more emergency roads	3 ___
One way in and out	5 ___

2. Primary road width

Minimum of 20 ft	1 ___
Less than 20 ft	3 ___

3. Road accessibility

All weather road (oiled, paved and ploughed)	1 ___
Dirt road (gravel)	3 ___

4. Dead end roads (skip if none)

<800' long	1 ___

>800' long 3 ___

5. Average lot size

More than 5 acres 1 ___

1 to five acres 3 ___

Less than 1 acre 5 ___

6. Street signs

Present 1 ___

Not present 3 ___

B. Vegetation

1. Fuel hazard

Low, light fuels (Grass, Weeds, Shrubs, manicured garden) 1 ___

Moderate, Medium fuels (Brush, Large Shrubs, Small Trees 5 ___

High, Heavy fuels (Timber, Woodland, Large Brush, or Heavy Planting of Ornamentals) 10 ___

Extreme, Extreme fuels (Dense crown cover, with heavy ground fuels) 15 ___

2. Defensible Space

more than 60' 1 ___

30-60 ' 5 ___

Less than 30', intermix interface 15 ___

C. Buildings – If more than 25% of the buildings within 300' of the interface or within the intermix exhibit these characteristics:

1. Roofing

Class A, B, or C Roofing 1 ___

Non-rated (wood Shingles) 5 ___

2. Soffit vents

1. Noncombustible screening or metal soffits 1 ___

2. Combustible screening or plastic soffits 5 ___

Note: If mobile home community add 5 points if no skirting 5 ___

D. Water Supply

1. Water available within assessment area

Hydrants w/ min. 500 gpm less than 1000' from structures 1 ___

Hydrants greater than 1000' from structures 2 ___

Dry hydrants or draft sites available 3 ___

none available 4 ___

2. Water sources off-site (skip if water is available on-site)

<20 min. round trip 1 ___

20-45 min. round trip 5 ___

45 min. round trip 9 ___

E. Risk

1. Area has history of higher than average fire occurrence or history of large fires burning in to area 3 ___

TOTAL ____

Rating Class :
Low <30 Moderate 30-40 High 41-50 Extreme >50

Step 4: Present the hazard rankings in a usable format

Compile the component hazard rankings in a format that will reveal the relationships between the individual hazards and categories of hazards. Three methods are often used to analyze the data collected.

1. A geographic information system (GIS) can define the hazards components on a map of the assessment area. Displaying each hazard on clear overlays, rather than on a single map, allows you to study various combinations of data.
2. A grid index system references specific points of interest on a map. The coordinates of the grid define the hazard rating of a specific property or area.
3. A matrix system describes the severity of each hazard for each area within the assessment.

Any or all of these data analysis methods can be used to understand the relationships between the various hazard components and can also help to develop an overall hazard ranking of each area within the assessment.

Step 5: Develop future Actions

The information developed from the assessment can be used to develop strategies to reduce fire hazards in the Wildland/Urban Interface. Suggestions on how to use the information follows:

- Develop mitigation strategies
- Develop fire response/evacuation plans
- Provide reference tools for planners, insurers, bankers and local code adoption
- Develop region-wide cooperative fire protection agreements
- Use as a basic fire protection evaluation tool in conjunction with the Insurance Service Office (ISO) fire suppression rating schedule
- Distribute along with public fire safety education information
- Improve fire fighter and public safety
- Perform cost/benefit analyses
- Implement or evaluate existing programs
- Adopt a more sophisticated fire modeling program
- Strategically focus fuel reduction projects
  Educate property owners, local and state governments and fire-service agencies.

APPENDIX G

FIRE SAFE REGULATIONS FOR STATE RESPONSIBILITY AREAS

CALIFORNIA CODE OF REGULATIONS
TITLE 14. NATURAL RESOURCES
DIVISION 1.5. DEPARTMENT OF FORESTRY AND FIRE PROTECTION [FNA1]
CHAPTER 7. FIRE PROTECTION [FNA2]
SUBCHAPTER 2. SRA FIRE SAFE REGULATIONS

ARTICLE 1. ADMINISTRATION

[FNa2] Formerly Subchapter 7 of Chapter 2, Division 2, Title 14, Cal. Adm. Code.

This database is current through 4/18/08, Register 2008, No. 16
1270. Title.

These regulations shall be known as the "SRA" Fire Safe Regulations," and shall constitute the basic wildland fire protection standards of the California Board of Forestry.

Note: Authority cited: Section 4290, Public Resources Code. Reference: Sections 4102, 4126, 4127 and 4290, Public Resources Code.

1270.01. Purpose.

These regulations have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction and development in SRA. A local jurisdiction may petition the Board for certification pursuant to section 1270.03. Where Board certification has not been granted, these regulations shall become effective September 1, 1991. The future design and construction of structures, subdivisions and developments in State Responsibility Area (SRA) shall provide for basic emergency access and perimeter wildfire protection measures as specified in the following articles. These measures shall provide for emergency access; signing and building numbering; private water supply reserves for emergency fire use; and vegetation modification. The fire protection standards which follow shall specify the minimums for such measures.

1270.02. Scope.

These regulations do not apply to existing structures, roads, streets and private lanes or facilities. These regulations shall apply as appropriate to all construction within SRA approved after January 1, 1991. Affected activities include but are not limited to:
(a) Permitting or approval of new parcels, excluding lot line adjustments as specified in Government Code (GC) section 66412(d),

(b) application for a building permit for new construction, not relating to an existing structure,

(c) application for a use permit,

(d) the siting of manufactured homes (manufactured homes are as defined by the National Fire Protection Association, National Fire Code, section 501A, Standard for Fire Safety Criteria for Manufactured Home Installations, Sites and Communities, chapter 1, section 1-2, Definitions, page 4, 1987 edition and Health and Safety Code sections 18007, 18008, and 19971).

(e) road construction, including construction of a road that does not currently exist, or extension of an existing road.

Exemption: Roads required as a condition of tentative parcel maps prior to the effective date of these regulations; roads for agricultural or mining use solely on one ownership; and roads used solely for the management and harvesting of wood products.

1270.03. Local Ordinances.

Nothing contained in these regulations shall be considered as abrogating the provisions of any ordinance, rule or regulation of any state or local jurisdiction providing such ordinance, rule, regulation or general plan element is equal to or more stringent than these minimum standards. The Board may certify local ordinances as equaling or exceeding these regulations when they provide the same practical effect.

1270.04. Provisions for Application of These Regulations.

This subchapter shall be applied as follows:
(a) local jurisdictions shall provide the Director with notice of applications for building permits, tentative parcel maps, tentative

maps, and use permits for construction or development within SRA.

(b) the Director shall review and make fire protection recommendations on applicable construction or development permits or maps provided by the local jurisdiction.

(c) the local jurisdiction shall ensure that the applicable sections of this subchapter become a condition of approval of any applicable construction or development permit or map.

1270.05. Inspection Authority.

(a) Inspection shall be made pursuant to section 1270.06 by:

(1) the Director, or
(2) local jurisdictions that have assumed state fire protection responsibility on SRA lands, or
(3) local jurisdictions where these regulations have been implemented through that jurisdiction's building permit or subdivision approval process.

(b) Reports of violations shall be provided to the CDF Ranger Unit headquarters that administers SRA fire protection in that county.

1270.06. Inspections.

The inspection authority may inspect for compliance with these regulations. When inspections are conducted, they should occur prior to: the issuance of the use permit; certificate of occupancy; the recordation of the parcel map or final map; the filing of a notice of completion; or the final inspection of any project or building permit.

1270.07. Exceptions to Standards.

Upon request by the applicant, exceptions to standards within this subchapter and mitigated practices may be allowed by the inspection authority, where the exception provides the same overall practical effect as these regulations towards providing defensible space.

1270.08. Requests for Exceptions.
Requests for an exception shall be made in writing to the inspection

authority by the applicant or the applicant's authorized representative. The request shall state the specific section(s) for which an exception is requested, material facts supporting the contention of the applicant, the details of the exception or mitigating measure proposed, and a map showing the proposed location and siting of the exception or mitigation measure.

1270.09. Appeals.

Where an exception is not granted by the inspection authority, the applicant may appeal such denial to the local jurisdiction. The local jurisdiction may establish or utilize an appeal process consistent with existing local building or planning department appeal processes.
Before the local jurisdiction makes a determination on an appeal, the inspection authority shall be consulted and shall provide to that local jurisdiction documentation outlining the effects of the requested exception on wildland fire protection.
If an appeal is granted, the local jurisdiction shall make findings that the decision meets the intent of providing defensible space consistent with these regulations. Such findings shall include a statement of reasons for the decision. A written copy of these findings shall be provided to the CDF Ranger Unit headquarters that administers SRA fire protection in that county.

1271.00. Definitions.

Accessory building: Any building used as an accessory to residential, commercial, recreational, industrial, or educational purposes as defined in the California Building Code, 1989 Amendments, chapter 11, group M, division 1, Occupancy that requires a building permit.
Agriculture: Land used for agricultural purposes as defined in a local jurisdiction's zoning ordinances.
Building: Any structure used or intended for supporting or sheltering any use or occupancy that is defined in the California Building Code, 1989 Amendments, chapter 11, except group M, division 1, Occupancy. For the purposes of this subchapter, building includes mobile homes and manufactured homes, churches, and day care facilities.
CDF: California Department of Forestry and Fire Protection.
Dead-end road: A road that has only one point of vehicular ingress/egress, including cul-de-sacs and looped roads.
Defensible space: The area within the perimeter of a parcel, development, neighborhood or community where basic wildland fire

protection practices and measures are implemented, providing the key point of defense from an approaching wildfire or defense against encroaching wildfires or escaping structure fires. The perimeter as used in this regulation is the area encompassing the parcel or parcels proposed for construction and/or development, excluding the physical structure itself. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, and fuel modification measures.

Development: As defined in section 66418.1 of the California Government Code.

Director: Director of the Department of Forestry and Fire Protection or his/her designee.

Driveway: A vehicular access that serves no more than two buildings, with no more than 3 dwelling units on a single parcel, and any number of accessory buildings.

Dwelling unit: Any building or portion thereof which contains living facilities, including provisions for sleeping, eating, cooking and/or sanitation for not more than one family.

Exception: An alternative to the specified standard requested by the applicant that may be necessary due to health, safety, environmental conditions, physical site limitations or other limiting conditions such as recorded historical sites, that provides mitigation of the problem.

Fire valve: see hydrant.

Fuel modification area: An area where the volume of flammable vegetation has been reduced, providing reduced fire intensity and duration.

Greenbelts: A facility or land-use, designed for a use other than fire protection, which will slow or resist the spread of a wildfire. Includes parking lots, irrigated or landscaped areas, golf courses, parks, playgrounds, maintained vineyards, orchards or annual crops that do not cure in the field.

Hammerhead/T: A roadway that provides a "T" shaped, three-point turnaround space for emergency equipment, being no narrower than the road that serves it.

Hydrant: A valved connection on a water supply/storage system, having at least one 2 1/2 inch outlet, with male American National Fire Hose Screw Threads (NH) used to supply fire apparatus and hoses with water.

Local Jurisdiction: Any county, city/county agency or department, or any locally authorized district that issues or approves building permits, use permits, tentative maps or tentative parcel maps, or has authority to regulate development and construction activity.

Occupancy: The purpose for which a building, or part thereof, is

used or intended to be used.

One-way road: A minimum of one traffic lane width designed for traffic flow in one direction only.
Roads, streets, private lanes: Vehicular access to more than one parcel; access to any industrial or commercial occupancy; or vehicular access to a single parcel with more than two buildings or four or more dwelling units.
Roadway: Any surface designed, improved, or ordinarily used for vehicle travel.
Roadway structures: Bridges, culverts, and other appurtenant structures which supplement the roadway bed or shoulders.
Same Practical Effect: As used in this subchapter, means an exception or alternative with the capability of applying accepted wildland fire suppression strategies and tactics, and provisions for fire fighter safety, including;
(a) access for emergency wildland fire equipment,

(b) safe civilian evacuation,

(c) signing that avoids delays in emergency equipment response,

(d) available and accessible water to effectively attack wildfire or defend a structure from wildfire, and

(e) fuel modification sufficient for civilian and fire fighter safety.

Shoulder: Roadbed or surface adjacent to the traffic lane.

State Board of Forestry (SBOF): A nine member board, appointed by the Governor, which is responsible for developing the general forest policy of the state, for determining the guidance policies of the Department of Forestry and Fire Protection, and for representing the state's interest in federal land in California.

State Responsibility Area (SRA): As defined in Public Resources Code sections 4126-4127; and the California Code of Regulations, title 14, division 1.5, chapter 7, article 1, sections 1220-1220.5.

Structure: That which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner.

Subdivision: As defined in section 66424 of the Government Code.

Traffic lane: The portion of a roadway that provides a single line of vehicle travel.

Turnaround: A roadway, unobstructed by parking, which allows for a safe opposite change of direction for emergency equipment. Design of such area may be a hammerhead/T or terminus bulb.

Turnouts: A widening in a roadway to allow vehicles to pass.

Vertical clearance: The minimum specified height of a bridge or overhead projection above the roadway.

Wildfire: As defined in Public Resources Code sections 4103 and 4104.

1271.05. Distance Measurements.

All specified or referenced distances are measured along the ground, unless otherwise stated.

1272.00. Maintenance of Defensible Space Measures.

To ensure continued maintenance of properties in conformance with these standards and measures and to assure continued availability, access, and utilization of the defensible space provided for in these standards during a wildfire, provisions for annual maintenance shall be included in the development plans and/or shall be provided as a condition of the permit, parcel or map approval.

ARTICLE 2. EMERGENCY ACCESS

1273.00. Intent.

Road and street networks, whether public or private, unless exempted under section 1270.02(e), shall provide for safe access for emergency wildland fire equipment and civilian evacuation concurrently, and shall provide unobstructed traffic circulation during a wildfire emergency consistent with sections 1273.00 through 1273.11.

1273.01. Road Width.

All roads shall be constructed to provide a minimum of two nine-

foot traffic lanes providing two-way traffic flow, unless other standards are provided in

this article, or additional requirements are mandated by local jurisdictions or local subdivision requirements.

1273.02. Roadway Surface.

The surface shall provide unobstructed access to conventional drive vehicles, including sedans and fire engines. Surfaces should be established in conformance with local ordinances, and be capable of supporting a 40,000 pound load.

1273.03. Roadway Grades.

The grade for all roads, streets, private lanes and driveways shall not exceed 16 percent.

1273.04. Roadway Radius.

(a) No roadway shall have a horizontal inside radius of curvature of less than 50 feet and additional surface width of 4 feet shall be added to curves of 50- 100 feet radius; 2 feet to those from 100-200 feet.

(b) The length of vertical curves in roadways, exclusive of gutters, ditches, and drainage structures designed to hold or divert water, shall be not less than 100 feet.

1273.05. Roadway Turnarounds.

Turnarounds are required on driveways and dead-end roads as specified in this article. The minimum turning radius for a turnaround shall be 40 feet from the center line of the road. If a hammerhead/T is used, the top of the "T" shall be a minimum of 60 feet in length.

1273.06. Roadway Turnouts.

Turnouts shall be a minimum of 10 feet wide and 30 feet long with a minimum 25 foot taper on each end.

1273.07. Roadway Structures.

(a) All driveway, road, street, and private lane roadway structures shall be

constructed to carry at least the maximum load and provide the minimum vertical clearance as required by Vehicle Code sections 35550, 35750, and 35250.

(b) Appropriate signing, including but not limited to weight or vertical clearance limitations, one-way road or single lane conditions, shall reflect the capability of each bridge.

(c) A bridge with only one traffic lane may be authorized by the local jurisdiction; however, it shall provide for unobstructed visibility from one end to the other and turnouts at both ends.

1273.08. One-Way Roads.

All one-way roads shall be constructed to provide a minimum of one 10-foot traffic lane. The local jurisdiction may approve one-way roads. All one-way roads shall connect to a two-lane roadway at both ends, and shall provide access to an area currently zoned for no more than 10 dwelling units. In no case shall it exceed 2640 feet in length. A turnout shall be placed and constructed at approximately the midpoint of each one-way road.

1273.09. Dead-End Roads.

(a) The maximum length of a dead-end road, including all dead-end roads accessed from that dead-end road, shall not exceed the following cumulative lengths, regardless of the number of parcels served:

parcels zoned for less than one acre - 800 feet

parcels zoned for 1 acre to 4.99 acres - 1320 feet

parcels zoned for 5 acres to 19.99 acres - 2640 feet

parcels zoned for 20 acres or larger - 5280 feet

All lengths shall be measured from the edge of the roadway surface at the intersection that begins the road to the end of the road surface at its farthest point. Where a dead-end road crosses areas of differing zoned parcel sizes, requiring different length limits, the

shortest allowable length shall apply.

(b) Where parcels are zoned 5 acres or larger, turnarounds shall be provided at a maximum of 1320 foot intervals.

(c) Each dead-end road shall have a turnaround constructed at its terminus.

1273.10. Driveways.

All driveways shall provide a minimum 10 foot traffic lane and unobstructed vertical clearance of 15 feet along its entire length.
(a) Driveways exceeding 150 feet in length, but less than 800 feet in length, shall provide a turnout near the midpoint of the driveway. Where the driveway exceeds 800 feet, turnouts shall be provided no more than 400 feet apart.

(b) A turnaround shall be provided at all building sites on driveways over 300 feet in length, and shall be within 50 feet of the building.

1273.11. Gate Entrances.

(a) Gate entrances shall be at least two feet wider than the width of the traffic lane(s) serving that gate.

(b) All gates providing access from a road to a driveway shall be located at least 30 feet from the roadway and shall open to allow a vehicle to stop without obstructing traffic on that road.

(c) Where a one-way road with a single traffic lane provides access to a gated entrance, a 40 foot turning radius shall be used.

ARTICLE 3. SIGNING & BUILDING NUMBERING

1274.00. Intent.

To facilitate locating a fire and to avoid delays in response, all newly constructed or approved roads, street, and buildings shall be designated by names or numbers, posted on signs clearly visible and legible from the roadway. This section shall not restrict the size of letters or numbers appearing on street signs for other purposes.

1274.01. Size of Letters, Numbers and Symbols for Street and Road Signs.

Size of letters, numbers, and symbols for street and road signs shall be a minimum 3 inch letter height, 3/8 inch stroke, reflectorized, contrasting with the background color of the sign.

1274.02. Visibility and Legibility of Street and Road Signs.

Street and road signs shall be visible and legible from both directions of vehicle travel for a distance of at least 100 feet.

1274.03. Height of Street and Road Signs.

Height of street and road signs shall be uniform county wide, and meet the visibility and legibility standards of this article.

1274.04. Names and Numbers on Street and Road Signs.

Newly constructed or approved public and private roads and streets must be identified by a name or number through a consistent countywide system that provides for sequenced or patterned numbering and/or non-duplicating naming within each county. All signs shall be mounted and oriented in a uniform manner. This section does not require any entity to rename or renumber existing roads or streets, nor shall a roadway providing access only to a single commercial or industrial occupancy require naming or numbering.

1274.05. Intersecting Roads, Streets and Private Lanes.

Signs required by this article identifying intersecting roads, streets and private lanes shall be placed at the intersection of those roads, streets, and/or private lanes.

1274.06. Signs Identifying Traffic Access Limitations.

A sign identifying traffic access or flow limitations, including but not limited to weight or vertical clearance limitations, dead-end road, one-way road or single lane conditions, shall be placed:

(a) at the intersection preceding the traffic access limitation, and
(b) no more than 100 feet before such traffic access limitation.

1274.07. Installation of Road, Street and Private Lane Signs.

Road, street and private lane signs required by this article shall be installed prior to final acceptance by the local jurisdiction of road improvements.

1274.08. Addresses for Buildings.

All buildings shall be issued an address by the local jurisdiction which conforms to that jurisdiction's overall address system. Accessory buildings will not be required to have a separate address; however, each dwelling unit within a building shall be separately identified.

1274.09. Size of Letters, Numbers and Symbols for Addresses.

Size of letters, numbers and symbols for addresses shall be a minimum 3 inch letter height, 3/8 inch stroke, reflectorized, contrasting with the background color of the sign.

1274.10. Installation, Location and Visibility of Addresses.

(a) All buildings shall have a permanently posted address, which shall be placed at each driveway entrance and visible from both directions of travel along the road. In all cases, the address shall be posted at the beginning of construction and shall be maintained thereafter, and the address shall be visible and legible from the road on which the address is located.

(b) Address signs along one-way roads shall be visible from both the intended direction of travel and the opposite direction.

(c) Where multiple addresses are required at a single driveway, they shall be mounted on a single post.

(d) Where a roadway provides access solely to a single commercial or industrial business, the address sign shall be placed at the nearest road intersection providing access to that site.

ARTICLE 4. EMERGENCY WATER STANDARDS

1275.00. Intent.

Emergency water for wildfire protection shall be available and accessible in quantities and locations specified in the statute and these regulations, in order to attack a wildfire or defend property from a wildfire.
Such emergency water may be provided in a fire agency mobile water tender, or naturally occurring or manmade containment structure, as long as the specified quantity is immediately available.

1275.01. Application.

The provisions of this article shall apply when new parcels are approved by a local jurisdiction. The emergency water system shall be available on-site prior to the completion of road construction, where a community water system is approved, or prior to the completion of building construction, where an individual system is approved.

1275.10. General Standards.

Water systems that meet or exceed the standards specified in Public Utilities Commission of California (PUC) revised General Order #103, Adopted June 12, 1956 (Corrected September 7, 1983, Decision 83-09-001), section VIII Fire Protection Standards and other applicable sections relating to fire protection water delivery systems, static water systems equaling or exceeding the National Fire Protection Association (NFPA) Standard 1231, "Standard on Water Supplies for Suburban and Rural Fire Fighting," 1989 Edition, or mobile water systems that meet the Insurance Services Office (ISO) Rural Class 8, 2nd Edition 3-80, standard shall be accepted as meeting the requirements of this article. These documents are available at CDF Ranger Unit Headquarters.
Nothing in this article prohibits the combined storage of emergency wildfire and structural firefighting water supplies unless so prohibited by local ordinance or specified by the local fire agency.
Where freeze protection is required by local jurisdictions, such protection measures shall be provided.

1275.15. Hydrant/Fire Valve.

(a) The hydrant or fire valve shall be 18 inches above grade, 8 feet from flammable vegetation, no closer than 4 feet nor farther than 12 feet from a roadway, and in a location where fire apparatus using it will not block the roadway.

The hydrant serving any building shall:

(1) be not less than 50 feet nor more than 1/2 mile by road from the building it is to serve, and

(2) be located at a turnout or turnaround, along the driveway to that building or along the road that intersects with that driveway.

(b) The hydrant head shall be brass with 2 1/2 inch National Hose male thread with cap for pressure and gravity flow systems and 4 1/2 inch draft systems. Such hydrants shall be wet or dry barrel as required by the delivery system. They shall have suitable crash protection as required by the local jurisdiction.

1275.20. Signing of Water Sources.

Each hydrant/fire valve or access to water shall be identified as follows:
(a) if located along a driveway, a reflectorized blue marker, with a minimum dimension of 3 inches shall be located on the driveway address sign and mounted on a fire retardant post, or

(b) if located along a street or road,

(1) a reflectorized blue marker, with a minimum dimension of 3 inches, shall be mounted on a fire retardant post. The sign post shall be within 3 feet of said hydrant/fire valve, with the sign no less than 3 feet nor greater than 5 feet above ground, in a horizontal position and visible from the driveway, or

(2) as specified in the State Fire Marshal's Guidelines for Fire Hydrant Markings Along State Highways and Freeways, May 1988.

ARTICLE 5. FUEL MODIFICATION STANDARDS

1276.00. Intent.

To reduce the intensity of a wildfire by reducing the volume and density of flammable vegetation, the strategic siting of fuel modification and greenbelts shall provide
(1) increased safety for emergency fire equipment and evacuating civilians; and

(2) a point of attack or defense from a wildfire.

1276.01. Setback for Structure Defensible Space.

(a) All parcels 1 acre and larger shall provide a minimum 30 foot setback for buildings and accessory buildings from all property lines and/or the center of a road.

(b) For parcels less than 1 acre, local jurisdictions shall provide for the same practical effect.

1276.02. Disposal of Flammable Vegetation and Fuels.

Disposal, including chipping, burying, burning or removal to a landfill site approved by the local jurisdiction, of flammable vegetation and fuels caused by site development and construction, road and driveway construction, and fuel modification shall be completed prior to completion of road construction or final inspection of a building permit.

1276.03. Greenbelts.

Subdivisions and other developments, which propose greenbelts as a part of the development plan, shall locate said greenbelts strategically, as a separation between wildland fuels and structures. The locations shall be approved by the inspection authority.

AN ORDINANCE BY THE MODOC COUNTY BOARD OF SUPERVISORS REPEALING TITLE 8.30 MODOC COUNTY FIRE SAFE REGULATIONS AND ADOPTING TITLE 8.31 MODOC COUNTY HAZARD SEVERITY ZONE DESIGNATIONS

The Board of Supervisors of the County of Modoc ordains as follows:

TITLE 831

MODOC COUNTY HAZARD SEVERITY ZONE DESIGNATIONS

Modoc County adopts the fire hazard severity maps and future maps pursuant to the Public Resources Code § 4201, 4202, 4203, 4204 as amended from time-to-time by the Director of the Department of Forestry and Fire Protection. The fire hazard severity maps designate fire hazard severity zones and implement the requirements pursuant to PRC § 4290 and 4291as follows:

California Code of Regulations (CCR) Title 1 4, Division 1.5, Chapter 7, Subchapter 2, Articles 1 through *5* in State Responsibility Area (SRA) lands.

Defensible space vegetation clearance requirements of PRC § 4291 in Local Responsibility Area (LRA) lands designated Very High (VH) severity.

This ordinance is adopted pursuant to Government Code (GC) § 51175 through 51179.

PASSED AND ADOPTED this_____ day of _____ by the
following vote:
AYES:
NOES:
ABSTAIN:
ABSENT:

MODOC COUNTY BOARD OF SUPERVISORS

By: _____
Chairman

ATTEST:

_____
JUDI STEVENS, County Clerk

APPROVED:

_____
JOHN KENNY, Modoc County Counsel

APPENDIX H

CWPP PROJECT MATRIX

The purpose of this matrix is to prioritize the projects for the CWPP. According to the requirements set, a prioritized list of projects must be included in the CWPP.

Recommendations from CWPP community meetings	Wildfire History	Fuel Loading	Fuel Type	Egress/ Ingress	Resources Available	WUI Level	Size of Project	Strategic Plan
1) Increases WUI for Modoc County	0	0	0	0	2	0	4	0
2) Lake City Fuel Break	4	2	3	2	2	3	3	4
3) Pursue Funding for Equipment in Cedarville	1	0	0	0	4	2	3	0
4) Fr. Bidwell Fuels Reduction	3	3	2	0	3	1	3	4
5) Fuel Reduction/ Break @ Summerland	3	2	3	0	2	4	2	0
6) MRE water, egress, etc.	2	3	3	4	1	4	1	4
7) CalPines roads ID and Fuel Break Projects	4	4	3	2	2	3	3	4
8) Summerland alternative route	2	3	4	4	1	4	2	0
9) Fuel Break east of Likely	2	1	2	3	2	2	2	4
10) County adopts State Regulations	0	0	0	0	1	0	4	0

Recommendations from CWPP community meetings	Wildfire History	Fuel Loading	Fuel Type	Egress/ Ingress	Resources Available	WUI Level	Size of Project	Strategic Plan
11) Fuel Break East of Adin, and South of Ash Creek	4	4	2	0	3	2	2	0
12) Water for Adin Subdivision	3	3	2	4	1	2	1	0
13) Butte Creek evacuation fire	3	3	1	3	4	4	3	4

plan								
14) Absentee landowners in Tulelake	2	1	1	0	1	2	4	
15) Perez Fuel reduction	3	2	3	0	2	2	1	0
16) Lava Beds Fuel Break	0	0	3	0	4	2	4	0

LEGEND:

Wildfire History (# of starts) 0-1 (low) 2 (moderate) 3-4 (high) ***WUI Level*** 0-1 (low interface density) 2 (moderate) 3-4 (high interface density)

Fuel Loading 0-1 (low) 2 (moderate) 3-4 (heavy) ***Size of Project*** 0-1 (small acreage &/or time commitment)

2 (moderate)

3-4 (large acreage &/or time commitment)

Fuel Type 1 (grass) 2 (shrub) 3 (timber) 4 (timber/slash) ***Strategic Plan*** 0 (no plan)

4 (plan exists)

Egress/Ingress 0-1 (good routes) 2 (moderate) 3-4 (poor routes) ***Agency Agenda*** 0-1 (Federal agencies not working adjacent)

2 (on Federal agency agenda but not started)

Resources Available 0-1 (greater # available w/ short response times) 3-4 (Federal agency is currently working adjacent or will

2 (moderate) 3-4 (small # available with long response times) in near future)

Appendix I
Evacuation Plans

CALIFORNIA PINES VOLUNTEER FIRE DEPARTMENT EMERGENCY EVACUATION PLAN-HILL UNITS
EVACUATION ROUTES
Revised June, 2002

Route 1: North-Follow Cal-Pines Bl. (County Road 71) north to approximately 200 ft. past the Red School House to Diamond"C" Ranch Rd. Turn left and got to Honker Cove Campground (meeting place). This is the preferred route and should be used if at all possible.

Route 2: West-Units 1, 2, 3, ONLY

Take Bonanza or Laramie to Acoma. Turn left and go to South Fork Rd. Turn right and go to Hunters Ridge Rd. (Forest Service route 22). Turn right and go to Lower Rush Creek Campground, which is near State Rt. 299 (meeting place) Note: South Fork Rd. is rough and not graveled but is okay for cars. Forest Service road between Faver and Acoma north of Cal-Pines Bl. (outside of Cal-Pines is also rough).

Route 2A: UNIT 3 SOUTHWEST CORNER-From Gatling Rd. go to Acoma and turn right. Go to South Fork Rd. Turn left and follow route 2 above to Lower Rush Creek Campground (meeting place).

Route 2B: UNIT 4- Take CalPines Bl. South then west. Turn right on Faver (old name Alpine) which becomes Acoma (Forest Service road connects Faver with Acoma). Turn left at South Fork Rd. and follow route 2 above on to Lower Rush Creek Campground (meeting place).

Route 2C: UNIT 5-Take Hilton to Faver (old name Alpine) which becomes Acoma (Forest Service road connects Faver with Acoma). Turn left at South Fork Rd. and follow route 2 above on to Lower Rush Creek Campground (meeting place).

Route 3: SOUTH-Take Cal-Pines Bl. South and west to Faver (old name Alpine) in Unit 4. Turn left which becomes Acoma (Forest Service road connects Faver with Acoma). Turn left at South Fork Rd. and follow route 2 above on to Lower Rush Creek Campground (meeting place).

Route 3A: UNITS 1, 2, 3, ONLY-Take Bonanza or Laramie to Acoma. Turn left and go to Hunters Ridge Rd. (Forest Service route 22) then turn left. From Gatling, turn left on Acoma and left on South Fork Rd. Turn left on Forest Service road 22 and continue on to Ash Creek Campground (meeting place). Note: South Fork Rd. is rough and not graveled but is okay for cars.

Route 4: NORTHWEST-CalPines Bl. North to Carlsberg Rd. Bear left on Carlsberg and turn left at the second intersection (immediately before Pike). Follow the most traveled way which becomes Cooley Gulch Rd.. You will come to a three-way intersection with a Forest Service road sign showing mileage to Manzanita L.O. and Hilton Fire Protection Station to the left, and Alturas to the right. Here you have two choices (DO NOT TURN LEFT).

If you continue straight past the sign, the road then becomes County Road 175. Continue on to County Road 54 (Centerville Rd.). Turn right and go east to County Road 71 (CalPines Bl.)

If you turn right toward Alturas, the road then becomes County Road 77. Continue on to County Road 54 (Centerville Rd.). Turn right and go east to County Road 71 (CalPines Bl.).

Turn right on County Rd. 71 (CalPines Bl.) and continue to Diamond "C" Ranch Rd. Turn right and go to Honker Cove Campground (meeting place).

MEETING PLACES:

In any organized evacuation it is necessary that all people be accounted for. After you are informed of the order to evacuate, it is assumed you will depart and follow the directions of the messenger. Remember that if the order be from the Sheriff, it has the effect of law and compliance will be expected.

Each route designates a "meeting place". When arriving at the meeting place you should "check in" with the person who is keeping an account of residents. This person will have a badge or other identification.

If you need to get to a telephone, you may proceed on your way after "checking in". There are public telephones available at Canby, Adin, Alturas, Likely and CalPines Lodge.

If you choose a different route or should you decide not to leave, it is possible that no one will know where you are until after the emergency (usually a fire) has been brought under control and the sheriff has given the okay to return to the hill. An effort will be made to contact you but this may not be successful. To prevent this type of problem we ask for your cooperation if ordered to evacuate.

The Fire Department certainly hopes that implementation of this plan will never be necessary, but we feel that to have such a plan will help everyone to remain calm and better able to cope with the possibility of fire danger or other problems.

Plumas County Communities Wildfire Mitigation Plan

Plumas County Fire Safe Council

February 2005


Greenhorn 1990


Portola 1988

Executive Summary

1) Purpose & Background

A. Purpose

The purpose of this plan it to outline the risks and hazards associated with a wildland fire threat to Plumas County communities and to identify potential mitigation measures. The Plumas County Communities Wildland Fire Mitigation Plan is intended to provide documentation of implementing actions designed to reduce risk to homes and communities from wildfire through education and outreach programs, the development of partnerships, and implementation of preventative activities such as hazardous fuel reduction, defensible space, land use, or building codes. The emphasis of this plan is to work from the home outward into the forests so that man-made and natural resources survive the eventual intrusion of a wildfire.

This plan intended to meet the requirements of the Healthy Forest Restoration Act (HFRA) of 2003, make the County eligible for National Fire Plan (NFP) funding assistance, provide information to assist communities in recommending fuel reduction projects on public and (or as well as) private lands, and also serve as the wildfire hazard mitigation portion of Plumas County's Multi-Hazard Mitigation Plan (DMA 2000).

This Community Wildland Fire Mitigation Plan is a collaborative effort by the Plumas County Fire Safe Council, County of Plumas, Plumas County Fire Chiefs Association, California Department of Forestry and Fire Protection, US Forest Service, and community members. This project was funded in part by the United States Department of the Interior, Bureau of Land Management, as part of the National Fire Plan from the Community-Based Wildfire Prevention Grants Program of the Sacramento Regional Foundation.

B. Background

Wildfire Threat - Fire Frequency and History

Wildfire is a frequent and often natural process throughout much of the Sierras. Where fires once frequently and lightly burned the forest floor, they now have become catastrophic stand-replacing events, often threatening communities.

Wildfire Threat - To Communities

While wildland fire is a component of the ecosystem, urbanization of forested lands has placed people, communities, and the natural resources at risk for loss. In Plumas County there have been numerous fires, small and large, that have threatened county residents and communities in the recent past creating both evacuation preparation and, on rare occasions, an actual evacuation.

Wildfire Threat - To Homes

Wildland fire research indicates that the characteristics of home construction and its immediate surroundings determine a home's ignition potential during wildland fires.

Roofing material and the presence of defensible space play key roles in determining whether or not structures will survive. Defensible space can also affect the safety of firefighters.

Wildland Fire Behavior Factors, Influences, and Elements Affecting Property and Resource Damage

Factors that influence wildland fire behavior are: *Fuel*, *Weather*, and *Topography*. Interaction of these three factors affect the direction of travel, how fast a fire spreads, how intensely it burns, and, consequently, how much effort it takes to control.

Fuel is the common denominator between the fire and fire behavior triangles; it is the only element we can manage. Unfortunately, the fuels in and around our communities and outlying developments continue to build up and increase.

Successful fuel management to reduce fire intensity, extent, and, consequently, damage requires efforts be spent on decreasing the volume and increasing the separation of forest fuel available to burn. There is a substantial amount of research on the effectiveness of treating forest fuels to modify fire behavior.

Wildfire Priorities for Resource Commitment

In wildland fire suppression, resources are allocated on a priority basis and usually are: 1) public and firefighter safety; 2) protection of developed resources, such as homes; and 3) protection of land features such as trees, views, and habitats. These priorities of commitment can obligate limited resources to protect structures rather than stop fire growth.

2) Risk

Risk is considered the potential for wildfires to start and threaten communities. Inherent to that is a display of where those communities are, including a buffer around them defined as "Wildland Urban Interface". Additional information is displayed as to population density, key infrastructures, fire department capabilities, and communities with evacuation plans and assembly areas.

3) Fire Behavior Factors

Fire behavior factors **are considered to be the factors which contribute to how fast and intensely a fire burns. They are: *Topography* (slope, aspect, elevation, and features); *Fuel* (type, volume, species, space between layers, surface, ladder & crown fuels, and compactness of the fuel bed); and *Weather* (temperature, humidity, wind, and precipitation). These three factors result in expected fire behavior following an ignition. Fire behavior models are used to predict how fast a fire will burn, how intensively it will burn, and its potential for crowning and spotting.**

A key fire behavior output is flame length. Flame length correlations are used in planning for suppression resource capability and can be related to firebrand production, spotting, and resource damage. The Plumas County Fire Safe Council has set a target flame length of 1 to 4 feet in stands where hazardous fuels are treated. While 4 feet is the upper limit, every effort should be made to reduce it to 2 feet, especially closer in to structures and communities.

4) Fire Risk Mitigation Strategies

The goal of this section is to:

- Identify situations and factors which place residences or communities at risk from wildfire, and suggest appropriate mitigation measure(s) to reduce that risk.

The objectives of this section are to:

- Identify mitigation measures by focus area and prioritize by zone. Focus is on public safety, firefighter safety, reducing structure ignitability, and reducing damage to other manmade and natural resources.

- Identify areas where collaborative efforts of local, state, and federal agencies can mitigate risks of structure ignitability and reduce hazardous fuels and wildfire threats to communities.

- Support efforts of Plumas County, the County Fire Warden, County Fire Chiefs, County Fire Safe Councils, CDF, US Forest Service, and other federal agencies to collaboratively implement mitigation measures and obtain funding assistance.

Fire Risk Mitigation Strategies - This section is divided into four areas of focus. Mitigation strategies are prioritized by zone, with the highest priority being the structure ignition zone and working outward to the Extended WUI.

- **Mitigation strategies areas of focus:**
    A. Information, Education, and Planning
    B. Reducing Structure Ignitability
    C. Enhancing Suppression Capabilities and Public Safety
    D. Hazardous Fuel Reduction

- **Mitigation strategies prioritization by zone:**
    1. Home Ignition Zone: 0-150 feet
    2. Community at Risk Zone: (Plumas County Communities at Risk map)
    3. Adjacent Wildland Urban Interface (WUI) Zone: .5 mile around communities
    4. Extended Wildland Urban Interface (WUI) Zone: 1 mile around adjacent WUI.

Fire Risk Mitigation Strategies – This section is divided into four areas of focus. Mitigation strategies are prioritized by zone, with the highest priority being the structure ignition zone and working outward to the Extended Wildland Urban Interface (WUI). There are numerous factors which contribute to homes and communities being at risk to loss from wildfires, including hazardous fuel conditions. Many factors are under the control of the resident, property owner, community, or County.

- **Mitigation strategies areas of focus:**
  - **A. Information, Education, and Planning**
  - **B. Reducing Structure Ignitability**
  - **C. Enhancing Suppression Capabilities and Public Safety**
    1. Fire Protection
    2. Access & Signage
    3. Water Systems

D. Hazardous Fuel Reduction

- **Mitigation strategies prioritization by zone:**
  1. Home Ignition Zone – 0-150 feet
     - Home Zone 0-6 feet
     - Yard Zone 6-30 feet
     - Screen Zone 30-75 feet
     - Forest Zone 75-150 feet
  2. Community at Risk Zone – (Plumas County Communities at Risk map)
  3. Adjacent Wildland Urban Interface (WUI) Zone - .5 mile around Community (Plumas County Communities Adjacent WUI map)
  4. Extended Wildland Urban Interface (WUI) Zone- 1 mile around adjacent WUI. (Plumas County Extended WUI map)

The goal of this section is to:

- Identify situations and factors which place residences or communities at risk from wildfire, and suggest appropriate mitigation measure(s) to reduce that risk.

The objectives of this section are to:

- Identify mitigation measures by focus area and prioritize by zone. Focus is on public safety, firefighter safety, reducing structure ignitability, and reducing damage to other manmade and natural resources.
- Identify areas where collaborative efforts of local, state, and federal agencies can mitigate risks of structure ignitability, reduce hazardous fuels, and wildfire threats to communities.
- Support efforts of Plumas County, the County Fire Warden, county fire chiefs, county fire safe councils, California Department of Forestry & Fire Protection (CDF), US Forest Service, and other agencies to collaboratively implement mitigation measures and obtain funding assistance.

MITIGATION MEASURES BY FOCUS AREAS:

Focus areas are broken down into elements which contribute to the risk of homes and communities being lost to wildfire. A statement of the situation or issue has been presented, followed with a mitigation recommendation(s).

Item	***Focus Area***
A.	**Information, Education, and Planning**
	Risk Condition:
	The Plumas County residents and communities have benefited from activities of fire safe councils, local fire departments, and local, state, and federal agencies. Funding for the councils has been provided by the National Fire Plan and the Secure Rural Schools and Community Self-Determination Act, Title II and Title III. With this funding there have been a number of successful programs to the benefit of county residents. Some examples are: • Homeowner consultations • Evacuation planning • Elderly and disabled defensible space cleanup • Educational information and displays • Wildfire safety information provided and community meetings • Firewise workshops • Hazardous fuel reduction projects
Item	***Mitigation Measures:***
A. 1.	**Fire Safe Council (FSC) growth -** Continue to seek participation and funding to support fire safe council growth in Plumas County.
A. 2.	**Expand information & education - residents -** Fire safe councils, Plumas County, fire departments, and state and federal agencies should continue to provide and expand informational and educational programs for residents, property owners, and communities on what causes homes to ignite and burn in a wildland fire. Programs should also address: the need for safe access and signage, the importance of available water, adequate fire protection, and the critical role vegetation plays in wildland fire.
A.3.	**Expand information & education - growth industry -** Fire safe councils, Plumas County, fire departments, and state and federal agencies should provide educational information for developers, realtors, contractors, home builders, and building inspectors on methods to ensure structural and forest survival following a wildfire. Educational programs should focus on PRC 4290 and the State Fire Marshall WUI Standards, with focus on what causes homes to ignite and burn in a wildland fire. Programs should also address: the need for good home site location, safe access, and signage; and the importance of available water, adequate fire protection, and the critical role vegetation plays in wildland fire including how to make forests fire-resilient.
A. 4.	**Evacuation planning -** Many of the County's communities have evacuation plans and identified evacuation assembly areas. Efforts by the County and fire safe councils should continue to work towards providing plans to those communities without one.
A. 5.	**Periodic updating of fire plan -** Completion of the Community Fire Plan is only the first step in planning mitigation for wildland fire threat to homes and

	communities. This plan is a starting, not ending point. This plan should be considered a living document to be collaboratively reviewed and amended.	
Item	***Focus Area***	
B.	**Reducing Structure Ignitability**	
	Risk Condition:	
	First priority for mitigation actions are immediately around structures, the home ignition zone, usually up to 150 feet from the building. Research shows roofing, defensible space, and fire prevention measures within the home ignition zone play the largest role in home survival. This zone is critical to firefighter safety, as suppression resources may be providing structure protection to a residence in a wildland fire. The level of attention given to a residence in terms of its vulnerability to ignitions is controlled by the owners, often days, weeks, months & years before a fire event. Information & technology is available to keep homes in the wildland urban interface from igniting, burning up, and placing firefighters at risk. There is no need to wait until the fire occurs. In fact, history has shown that those who wait will lose.	
B.1.	**Existing structures & attachments -** Strengthen building standards for construction, replacement activities, and enforcement of compliance for existing residences and properties to make them less prone to loss from a wildfire due to embers, radiated heat, or surface fire spread.	
Item	***Risk Condition:***	***Mitigation Measures:***
B.1.a.	**Roofing -** Efforts should be made to eliminate all wood shake roofs in Plumas County. **Shake roofs are a leading cause of home loss in wildfires.** Presently homeowners in Plumas County are allowed to replace up to 50% (as repair) of an existing roof per year. This has allowed a continuation of wood shake roofs in the county. Research show that homes with non-combustible roofs and clearance of at least 30-60 feet have a 95% chance of survival in a wildfire. Currently county & city codes do not allow wood shake roof for new construction.	1) **Educate resident on importance of replacing wood shake roofs -** Educational efforts should be made to eliminate shake roofing. 2) **Consider modifying county & city code measures which may include, but not be limited to:** a) **Limit replacement of shake roofs -** It may be possible to stop this practice by reducing replacement standards (e.g. from 50% to not exceed 10-15%). b) **"Reduced or No Fee" permits for replacement of shake roofs -** investigate a "reduced or no fee" permit for residents that change from a wood shake to a non-combustible roof. c) **Replacement of shake roofs upon sale of a home -** Expedite the elimination of wood shake roofs by requiring replacement upon sale. 3) **Financial assistance program for wood shake roof replacement -** Continue Plumas County's financial assistance program for wood shake roof replacement through Plumas County

		Housing Authority and Community Development Commission for qualifying individuals.
Item	***Risk Condition:***	***Mitigation Measures:***
B.1.b.	**Vent openings -** Provided adequate defensible space is maintained, screening of vent openings with steel screens will prevent embers (during the ember blizzard that comes with a wildfire) from entering into attics and crawl spaces. Currently standards exist in the county and city for new construction, but not older structures.	1) **Educate resident on importance of steel vent screening -** Educational efforts should be made to insure steel screening of all vent openings. 2) **Explore incentives for screening -** Explore incentives for homeowners to encourage steel screening of vent openings. 3) **Consider modifying county & city code measures which may include, but not be limited to, requiring steel screening of vent openings upon sale -** Expedite the replacement by requiring steel vent screening upon sale.
B.1.c.	**Decks -** Provided adequate defensible space is maintained, most solid wood siding is fire resistant enough to withstand the short term heat load. Then next greatest threat from decks is firefighter safety. Many new materials (synthetics) ignite more easily than wood and have a rapid structural collapse when subjected to high heat loads, creating a situation where firefighters could fall through. Currently no standard exists in the county or city.	1) **Educate resident on importance of fire safe decking -** Educational efforts of the need for use of safe decking materials. **2) Consider modifying county & city code measures which may include, but not be limited to, prohibiting unsafe synthetic decking -** Prohibit synthetic decking which has a significantly higher flammability, and significantly lower structural rating, than wood of comparable dimension.
B.1.d.	**Outbuildings -** Structures (e.g. storage, wood & tool sheds) with less than 30-feet separation from outbuildings place homes at a high risk of loss.	1) **Educate residents on need for separation of heat loads -** Efforts should be made to educate residents on the need to have separation of heat loads from their residence. 2) **Enforce clearance requirements -** Enforce clearing of at least 100 feet around structures, a requirement of PRC 4291.
Item	***Risk Condition:***	***Mitigation Measures:***
B.1.e.	**Woodpiles -** Woodpiles with less than 30 feet separation from outbuildings often place homes at a high risk of loss.	1) **Educate residents on need for separation of heat loads -** Efforts should be made to educate residents on the need to have separation of firewood piles from their residence.
B.1.f.	**Propane tanks -** Tanks with less than 10	1) **Educate residents on need for**

	feet of clearance may place homes at a risk of loss.	**separation of heat loads -** Efforts should be made to educate residents on the need to have vegetative & flammable material clearance around propane tanks near their residence.
B.1.g.	**Immediate structure landscaping - (0-6')** Certain plants (e.g. junipers) immediately adjacent to a structure can increase a home's susceptibility to ignition if they burn freely.	1) **Information and education on fire safe landscaping -** Continue to provide information and education to residents on creating fire resistant landscaping adjacent to structures. Emphasis should be on vegetation and landscaping materials that do not readily accept embers and perpetuate fire spread. 2) **Explore incentives for fire safe landscaping -** Explore incentives for homeowners to make firesafe landscapes adjacent to homes.
B.1.h.	**Defensible space clearance zone - (6-30')** Enforcement of PRC 4291 (Defensible Space) in communities and the county is often difficult to obtain. While Public Resources Code 4291 requires that residents maintain at least 100 feet of defensible space, there are no mechanisms in place for uniform inspection obtaining compliance.	1) **Enforce clearance requirements -** Develop processes to aid communities, fire districts, or other agencies in the enforcement of PRC 4291. 2) **Consider encouraging development of fire safe clearance standards in the City of Portola. -** City of Portola to work on developing clearance standards. 3) **Explore incentives for fire safe landscaping -** Explore incentives for homeowners to make firesafe landscapes adjacent to homes.
Item	***Focus Area***	
C.	***Enhancing Suppression Capabilities and Public Safety***	
	Risk Condition:	***Mitigation Measures:***
C.1	**Fire protection -** Approximately 20% of the privately held lands in the county outside of a fire district. For those communities within fire districts most are having severe budget problems. Additionally, for developments zoned with a minimum 3-acre parcel size (S-3) there is no requirement for fire protection regardless of the projected number of homes to be developed.	**Fire districts and consolidation -** Plumas County should consider developing a fire district for **all** communities and proposed subdivisions presently without local fire protection. It may also be advantageous in the future if adjacent departments pooled their energies and resources to be more effective and efficient. Efforts should be made to adequately fund fire protection in the county. **2) Consider modification of the County General Plan to require less dense zones have fire protection -**

		Residential zoning should consider the expected density and number of homes in addition to the parcel size when requiring fire protection.
Item	***Risk Condition:***	***Mitigation Measures:***
C.2.	**Signage -** This factor is critical to agencies providing emergency services, not only for wildland fire purposes, but all emergency vehicle access. Plumas County should strive to have all residences and communities meet Fire Safe Standards (PRC 4290) for road and address signage. Currently a standard exists in the county & city for new construction, but not older structures.	1) **Explore incentives for fire safe house signing -** Explore incentives for homeowners to meet Fire Safe Standards (PRC 4290) for signing of their homes. 2) **Consider modifying county & city codes measures which may include, but not be limited to, requiring proper signage upon sale -** Expedite house and road signage by requiring it upon sale. 3) **Enforce signage requirements -** Enforce road and address signage similar to what is required for new development.
C.3.	**Driveways and private roads -** This factor is critical to agencies providing emergency services, not only for wildland fire purposes, but all emergency vehicle access.	
C.3.a.	**Driveway length -** While many current driveways are less than 150 feet of line sight distance from a road, the driving distance exceeds 150 feet with no way to turn apparatus around or allow for passing of vehicles.	1) **Revise Plumas County's fire safe driveway standards interpretation -** Revising Plumas County's fire safe driveway standards could go a long way in resolving this issue. By requiring all new driveways greater than **150** feet in driving distance length (not line of sight distance from the road to the corner of the structure) conform to Fire Safe Standards (PRC 4290).

Item	*Risk Condition:*	*Mitigation Measures:*
C.3.b.	**Gates -** Emergency responders have come across either narrow gates, or gates that don't open during power outages.	1) **Consider modification of county and city codes to require gates open without power -** Require that roads and driveways with gates meet Fire Safe Standards (PRC 4290) for width, and allow emergency vehicle access even during power outages. 2) **Educate resident on importance of emergency access through gates -** Educational efforts should be made to insure all gates conform to Fire Safe Standards (PRC 4290) and open during power outages. 3) **Explore incentives for fire safe gates -** Explore incentives for homeowners to make their gates conform to Fire Safe Standards (PRC 4290).
C.3.c.	**Vegetative clearances -** Emergency responders have come across existing private roads and driveways too overgrown for their apparatus. Fire Safe Standards (PRC 4290) currently require that vegetation be cleared for 10 feet in width and 15 feet in height along driveways.	1) **Enforce vegetative clearance standard -** Enforce driveway vegetative clearance requirements for Fire Safe Standards (PRC 4290). 2) **Explore incentives for fire safe driveways, vegetation -** Explore incentives for homeowners to make their driveways conform to Fire Safe Standards (PRC 4290) for vegetation clearances. 3) **Consider modification of county and local codes to require non-compliant driveways conform to current standards when receiving any new building permit -** Require residential driveways and roads that are out of compliance with vegetation clearances be corrected to current Fire Safe Standards (PRC 4290) as a condition of any new building permit, and before being able to proceed with construction.
C.3.d.	**Excessive slopes -** Emergency responders have come across driveways too steep for their apparatus.	1) **Insure compliance of Fire Safe Standards for driveways during the building development & inspection -** Have building inspectors sign off compliance with Fire Safe Standards (PRC 4290) during construction of new

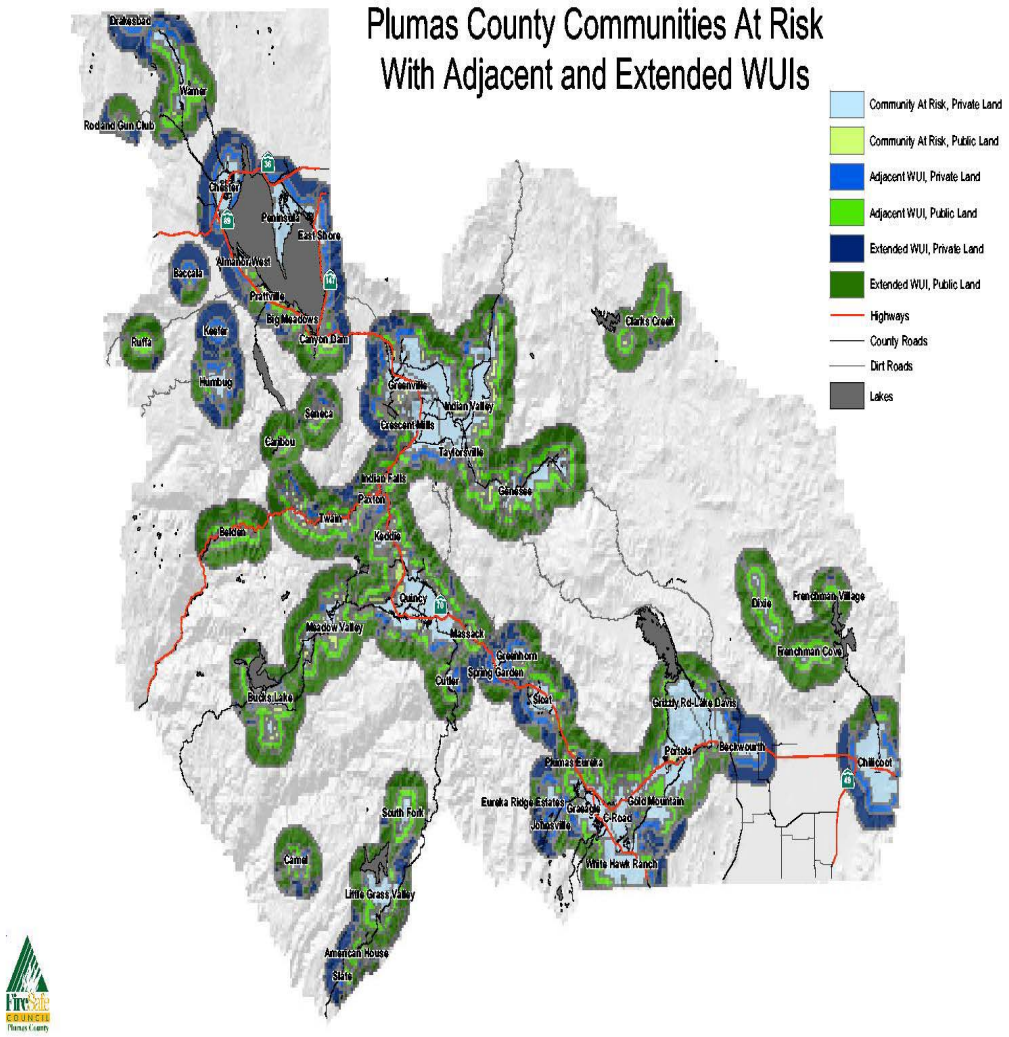
		residences.
Item	***Risk Condition:***	***Mitigation Measures:***
C.3.e.	**Exempted turnarounds -** Emergency responders have come across private roads with limited space for turning around their apparatus.	1) **Insure compliance of fire safe standards for driveways during the building inspection phase. -** Have building inspectors sign off compliance with Fire Safe Standards (PRC 4290) for roads and driveways during construction of new residences.
C.3.f.	**Bridges -** Emergency responders have often had to make decisions on whether or not their apparatus could squeeze through an allowed single lane bridge.	1) **Consider modification of county and local codes to require bridges be designed and built 4 feet wider than fire apparatus -** Building wider single-lane bridges could lessen risks of damage & access for emergency personnel and their vehicles.
C.4.	**Access for evacuations in and out of the community in the wildland urban interface (WUI) -** A number of existing "at risk" communities in Plumas County presently only have one way in and out of their community.	**Explore development of alternate community escape routes -** There may be opportunities to develop alternate access in the Wildland Urban Interface. Communities, industrial landowners, along with local, state, and federal agencies should work collaboratively to identify and purse funding to improve access for evacuations for communities with one way in and out, or roads.
C.5.	**Water systems -** Water is a premium commodity in the suppression of both structural and wildland fires.	
C.5.a.	**Existing communities -** Many existing Plumas County communities lack sufficient water storage, handling, or delivery systems, placing properties at a higher risk for loss to fire.	1) **Enhance storage and delivery of water -** Development and enhancement of delivery should be a priority. Communities and the County should work collaboratively to increase water storage and delivery capacity in all Plumas County communities. 2) **Explore incentives for enhancing water storage & delivery -** Explore incentives for existing homeowners to meet Fire Safe Standards (PRC 4290) for water for fire suppression on their properties. 3) **Explore options to increase community storage & delivery –** Plumas County Fire Safe Council, special districts, Community Development Commission, and the County should work collaboratively to

		obtain funding for enhancement of water storage and delivery systems.
Item	***Risk Condition:***	***Mitigation Measures:***
C.5.b.	**Proposed residential developments -** Communities may be allowed to develop in the county which have unacceptable water flow and/or storage for firefighting, once they achieve their full development (housing density).	**Consider modification of the County General Plan zoning standards to require less dense zones have an acceptable firefighting water system as a requirement of new developments -** Residential zoning should consider the expected density and number of homes in addition to the parcel size when requiring a firefighting water system.
C.5.c.	**Development in the WUI -** Lack of accessible water sources for wild fire suppression in Plumas County.	**Enhance storage of water in WUI -** Communities and local agencies should work collaboratively at the local, state, and federal level to identify opportunities to improve water storage, access, and development for firefighting on public and private lands.
Item	***Focus Area***	
D.	**Hazardous Fuel Reduction**	
	Risk Condition:	***Mitigation Measures:***
D.1.	**Vegetation on developed lots -** An excess of hazardous fuel around structures places many homes at risk. Structures are required to have at least 100 feet of defensible space (PRC 4291). More clearance may be necessary depending on fuels, slope aspect, and a property's position on the slope. Obtaining compliance with PRC 4291 is currently mostly voluntary and often difficult to obtain.	1) **Educate residents on need for creating structure survivable space -** Efforts should be made to educate residents on the need to comply with PRC 4291 by removing vegetation around their residence. **2) Explore incentives to increase compliance with PRC 4291 -** Explore incentives for existing homeowners to meet fire safe standards for defensible and structure survivable space on their properties. **3) Enforcement of PRC 4291 -** Developing process to aid communities, fire districts, or local agencies in enforcing PRC 4291.
D.2.	**Vegetation on adjacent vacant lots -** Presently in Plumas County, many parcels adjacent to homes are undeveloped with extensive fuel loading, placing homes at risk.	1) **Educate residents on need for reducing hazardous fuels -** Efforts should be made to educate residents of vacant lots of the need to thin and manage excessive vegetation. **2) Explore incentives to increase vacant lot cleanup -** Explore incentives for existing property owners to perform hazardous fuel reduction on their vacant

		lots. **2) Consider modification of county and city codes to require vacant lots conform to a fire safe standard -** Require property owners of vacant properties clear a minimum of 100 feet from other structures, or for a minimum of 30 feet along property lines. 3) **Explore options to increase fuel reduction on vacant lots –** Plumas County Fire Safe Council, special districts, and Plumas County should work collaboratively to obtain funding for hazardous fuel reduction.
Item	***Risk Condition:***	***Mitigation Measures:***
D.3.	**Vegetation in and around the community -** While many communities have begun to develop hazardous fuel reduction projects, there is much untreated land between structures and in common areas throughout the county. Projects include fuel breaks around, or fuel reduction within, the community.	1) **Encourage collaborative community based HFR projects -** Encourage property owners, homeowner associations, community services districts, and communities to identify through collaborative efforts strategic areas to perform hazardous fuel reduction (HFR) to eliminate catastrophic stand-replacing fire in their communities (between structures). 2) **Implement recommended HFR projects -** Implement fuel treatment measures within and around communities which are described in Appendix B of the Plumas County Hazardous Fuel Assessment and Strategy, produced for PC FSC by Wildland Rx, 2/2005. 3) **Continue to pursue HFR funding for communities -** County efforts should be made to continue to pursue funding for community HFR activities. 4) **Explore incentives for landowners to reduce hazardous fuels -** Explore incentives for existing large landowners to meet HFR standards on their properties.
D.4.a.	**Treating hazardous fuels in planned subdivisions -** Many proposed subdivisions in Plumas County have hazardous fuel	**Consider modification of county codes to require HFR on proposed developments prior to recordation of final map -** To expedite fuel reduction

	conditions before and after their division. Upon parcel sale, it transfers the problem to multiple landowners.	countywide, manage fuels in an economy of scale, and insure completion it may be prudent to require hazardous fuel reduction which is compatible with other environmental attributes on all forested lands prior to recordation of the final subdivision map. Hazardous fuel reduction should create a fire-resilient stand, which would not contribute to initiating or sustaining a crown fire, and potential surface fuel flame lengths would be 4 feet or less.
D.4.b.	**Maintenance of treated hazardous fuels in planned subdivisions –** Hazardous fuel treatment must be part of an on-going strategy in order to maintain a fire resistant condition into the future. Once planned subdivisions are treated to a fire resilient condition, there need to be a written strategy to maintain that condition and an assignment of responsibility should be required,	**Consider modification of county codes to require a plan for the maintenance of treated fuelbeds on proposed developments prior to recordation of final map -** To maintain the investment, desired fuel condition, and provide for community safety, in upcoming developments. It is prudent to require a hazardous fuel reduction maintenance plan that can assign either the Homeowners Association or Communities Service District the responsibility to provide for future fiscal and enforcement responsibilities to maintain fuelbeds fire resistant condition. Maintenance activities should be compatible with other environmental attributes and maintain a fire-resilient stand, which would not contribute to initiating or sustaining a crown fire, and potential surface fuel flame lengths would be 4 feet or less.
Item	***Risk Condition:***	***Mitigation Measures:***
D.5.	**Treating hazardous fuels on public lands within communities at risk -** There are approximately 30,000 acres of public lands within the boundaries of Plumas County's communities at risk.	**Treat all public lands within community at risk boundary -** Through collaborative efforts, all public lands within communities at risk should be assessed for treatment. Available lands should be to a standard which will create a fire-resilient stand, which would not contribute to initiating or sustaining a crown fire, and potential surface fuel flame lengths would be 4 feet or less
D.6.	**Treating hazardous fuels in the**	**1) Complete QLG network on public**

	adjacent WUI zone - Up to ½ mile around the "Community At Risk" boundary to the outer edge of the WUI is the area where collaborative community based hazardous fuel reduction efforts should occur so that fires approaching or leaving a community will be less intense, generate fewer embers for spot fires, and provide for defensible actions by suppression resources. These fuel reduction projects would focus on reductions in surface, ladder, and canopy fuels on public and private lands.	**lands -** Complete all proposed Quincy Library Group (QLG) projects, and seek opportunities to expand the proposed QLG network into communities. There are corresponding QLG maps and associated acres in table format. (Section 3. Page 48) 2) **Explore incentives for landowners to reduce hazardous fuels -** Explore incentives for existing large landowners to meet HFR standards on their properties.
D.7.	**Extended WUI zone -** Up to a mile around the adjacent WUI zone (for a total WUI of 1.5 miles). In this area, community based hazardous fuel reduction efforts should occur to compliment work within the adjacent WUI, providing additional community protection. This would reduce potential wildland fire impacts so that they will be less intense, generate fewer embers for spotfires into the community, provide protection to surrounding natural values, and provide for safer and more efficient firefighting. These fuel reduction projects would focus on reductions in surface, ladder, and canopy fuels on public and private lands.	**1) Continue mitigation measures into extended WUI -** Mitigation measures in the extended WUI would be the same or similar to those in the adjacent WUI zone, but be second priority for WUI work. **2) Complete QLG network on public lands -** Complete all proposed Quincy Library Group (QLG) projects, and seek opportunities to expand the proposed QLG network into communities. There are corresponding QLG maps and associated acres in table format. (Section 3. Page 48) 3) **Explore incentives for landowners to reduce hazardous fuels -** Explore incentives (e.g. tax breaks, waive yield taxes, and THP exemptions) for existing large landowners to meet HFR standards on their properties.



To view the entire Plumas County Fire Safe Council web site go to: plumasfiresafe.org. Once at the site you can navigate through the many area's such as: Council Activities, Firewise, Fire Resistant Landscaping, Fire Sites, Fire and Weather information (local and nation wide) and links to many different agencies, federal, state, local and private. The Plumas Fire Safe Council web site informs the public on upcoming meeting dates and times, projects and workshops available.

Lassen County Community Wildfire Protection Plan

Lassen County

January 2006

COUNTY OF LASSEN

BOARD OF SUPERVISORS

Robert Pyle, District 1
Jim Chapman, District 2
Lloyd Keefer, District 3
Brian Dahle, District 4
Jack Hanson, District 5

Prepared by

Lassen County Department of Community Development
and
Lassen County Fire Safe Council, Inc.

in cooperation with

California Department of Forestry and Fire Protection
USDA Forest Service
DOI Bureau of Land Management
USDA Natural Resources Conservation Service
Susanville Indian Rancheria
Sierra Pacific Industries

with assistance under contract from

Shasta Land Management Consultants
W. M. Beaty & Associates, Inc.

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USDA Forest Service; National Fire Plan Federal Assistance Grant
and
Title III Funds provided Lassen County through the Secure Rural School and Community Self-Determination Act of 2000

January 2006

First Revision of the 2004 Lassen County Fire Safe Plan

2006 CWPP Revision Team
Susanville Interagency Fire Center
October 24, 2005

Left to right, Albert Savage, Alturas BLM; Lloyd Keefer, Lassen County Supervisor; Ken Weaver, NRCS Susanville; Ray Nielsen, Day Lassen Bench FSC; Jerry Wheeless, Eagle Lake BLM; Heidi Perry, Lassen National Forest; Karl Todd, Eagle Lake BLM; David Ramirez, Lassen National Forest; Dan Douglas, Lassen County FSC; Nikole Melo, CDF; Jon Michaels, Lassen County; Mike Mitzel, Sierra Pacific Industries; Steve Emerick, CDF; Michael Condon, Plumas National Forest; Frank Stewart, RPF, Quincy Library Group & California State FSC; Tom Esgate, Lassen County FSC

Not pictured: Cathy Hilts, Lassen County FSC; Lawrence Crabtree, Modoc National Forest; Paul Whitcome, NorCal BLM; Tim Keesey, Susanville Indian Rancheria; Mike Holmes, Lassen National Forest; Mark Pustejovsky, Sierra Pacific Industries; Ryan Hilburn. W.M. Beaty & Associates; Don Dockery, Eagle Lake BLM; Hank Falcon, Modoc National Forest;

TABLE OF CONTENTS

Introduction

This Community Wildfire Protection Plan (CWPP) is prepared for the Lassen County Board of Supervisors and the residents of Lassen County for the purpose of wildland fire loss mitigation. It is a planning tool to help concerned citizens, planning professionals, Fire Safe Councils, responsible Federal, State and local fire agencies, and other interested parties assess the threat level and to identify measures that may be taken to reduce the threat that wildland fire poses to the communities in Lassen County.

Historically, in pre-settlement and settlement years through the early 1900's, wildland fire has been a naturally occurring event throughout much of California. Now, due in part to nearly 100 years of fire suppression resulting in increased levels of wildland fuel loading, the risk of uncontrollable and catastrophic fire has intensified. As a consequence, these fuel conditions coupled with the expansion of rural development in the wildland-urban interface zone has led to a significant increase risk for potential loss of life and property.

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

The purpose of this project is to help reduce the potential loss of human life and damage to property and natural resources within Lassen County. More specifically the objective is to protect assets at risk through focused pre-fire management prescriptions (such as fuel reduction) and increasing initial fire attack success. A critical component is to assist individual citizens to be involved in the coordinated effort of pre-fire planning and fire prevention and protection within his or her respective community.

This document is organized in two parts, each of which can be viewed as a stand-alone document. The first part is this Lassen County Community Wildfire Protection Plan, a general overview relevant to wildland fire for the County. The second part consists of more detailed individual Community Fire Safe Plans for each of the inhabited communities of Lassen County. The individual Fire Safe Plans are intended to be in a constant state of flux as the individual communities become better organized. Each community is encouraged to expand and improve on its plan through inter-action with the Lassen County Fire Safe Council, Inc. (LCFSC).

The CWPP is a dynamic document and as such it should be reviewed periodically, with facilitation from the LCFSC, and amended as needed by the Board of Supervisors. Part and parcel of the CWPP are the Annual and Future Work Plans. These work plans are developed through a group identified in the Memo of Understanding (MOU) set forth in the CWPP. It is entered into by all relevant and interested resource bodies in the Lassen County Community and is open to expansion at any time through consensus. The Annual Work Plan contains information on all the fuel reduction projects contemplated by all parties for the coming year. During this assembling of the Annual Work Plan the MOU participants

conduct annual review, and modification if necessary, of the Wildland Urban Interface boundaries. The Future Work Plan contains conceptual projects and is constantly being updated as new projects are identified and prioritized by the MOU participants.

Memorandum of Understanding

JANUARY 11, 2006

THE DEVELOPMENT OF A LASSEN COUNTY COLLABORATIVE FUELS TREATMENT PROGRAM

and approval of the
COMMUNITY WILDFIRE PROTECTION PLAN

Among the

UNITED STATES DEPARTMENT OF AGRICULTURE
Forest Service
Natural Resources Conservation Service

and the
UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management

and the
STATE OF CALIFORNIA
Department of Forestry & Fire Protection

and the
SUSANVILLE INDIAN RANCHERIA
PIT RIVER TRIBE

and
W.M. Beaty and Associates
Sierra Pacific Industries
Roseburg Resources Company
Fruit Growers Supply Company

and
LASSEN COUNTY
AND
LASSEN COUNTY FIRE SAFE COUNCIL, INC.

This Memorandum of Understanding (MOU) is made and entered into by and among the U.S. Department of Agriculture, Forest Service (hereinafter referred to as "FS") and Natural Resources Conservation Service (hereinafter referred to as NRCS); U.S Department of the Interior, Bureau of Land Management (hereinafter referred to as "BLM"); the California Department of Forestry and Fire Protection (hereinafter referred to as "CDF"); Susanville Indian Rancheria (hereinafter referred to as "SIR"); Pit River Tribe (hereinafter called "PRT"); W.M. Beaty and Associates (hereinafter referred to as "Beaty"); Sierra Pacific Industries (hereinafter referred to as "SPI"); Roseburg Resources Company (hereinafter referred to as "RRC"); Fruit Growers Supply Company (hereinafter referred to as "FGS"); Lassen County Fire Safe Council, Inc. (hereinafter referred to as "LCFSC") and Lassen County (hereinafter referred to as "County"), all collectively referred to as "Parties".

A. PURPOSE:

The purpose of this Memorandum of Understanding is to provide the framework of a process for Parties for the annual selection of a fuels treatment program of work within their respective jurisdictions to provide for community protection and enhance the health of forests and rangelands. This collaborative process is provided for and shall be consistent with, the goals, performance measures and collaborative framework outlined in the 10-Year Comprehensive Strategy and Implementation Plan, also known as the National Fire Plan. The parties recognize that fuel treatments should be prioritized and selected through a timely collaborative process and should be coordinated across ownerships and jurisdictions to effectively protect communities and improve forest and rangeland health. This will be accomplished by concentrating on high priority acres: 1) in the wildland – urban interface and, 2) outside the wildland-urban interface that are in condition classes two and three. (See 10-Year Plan cited above for description of goals, outcomes, performance measures, tasks, monitoring and glossary of definitions, http://www.fireplan.gov/ .)

B. AUTHORITIES:

The Following authorities allow for the Parties to enter into this MOU:

1. The Act of September 20, 1922 (42Stat. 857, 16 U.S.C. §§ 594), (The Protection Act)
2. The Cooperative Forestry Assistance Act of 1978, Section 5 (Pub. L. No. 95-313, 16 U.S.C. §§ 2101 et seq.)
3. Federal Land Policy and Management Act (43 U.S.C. §§ 1700 et seq.)

C. IT IS MUTALLY AGREED AND UNDERSTOOD THAT ALL PARTIES SHALL:

1. Collaborate, by notification and discussion, on identification of a proposed annual program of work for fuel treatment consistent with the process identified in this January 11, 2006 Memorandum of Understanding for the Development of a Collaborative Fuel Treatment Program and the goals, performance measures and collaborative framework of the 10-Year Plan. The amount of collaboration at the local and state/regional and tribal level will be consistent with the complexity of land ownership patterns, resource management issues, and the number of interested stakeholders. Views of all relevant partners and stakeholders will be considered in accordance with law.

2. Complete by approximately March 1 of each year, proposed programs of work for the upcoming Federal fiscal year that will:

    a. Focus on actively managing acres in the wildland-urban interface and acres outside of the wildland urban interface that are in condition classes two and three consistent with the goals and performance measures of the 10-Year Plan.

    b. Place priority on treating acres within the County that are actively incorporating federal, state, county, and tribal projects into the joint program of work. On a case-by-case basis, participating parties shall work with their local partners, tribes and federal agencies to identify communities and landscapes at risk from wildland fire, and prioritize them into one of three categories of risk: high, medium, or low. Based on these priorities and using a collaborative process, partners will annually identify high priority fuels reduction and ecosystem restoration projects for their respective lands. CDF, FS and BLM will use the Community Wildfire Protection Planning effort to identify projects for the units, to fully incorporate projects into an annual program of work by September 30th.

    c. Take into account multi-year landscape level projects across ownerships.

    d. Be based on the Agency budgets and adjusted as necessary, in accord with appropriations and final Agency budget allocations.

    e. Consider long-term to ensure that projects are strategically located and implemented across the landscape.

    f. Develop a local educational program that includes Fire Safe Council messages as appropriate.

    g. The Lassen County Fire Safe Council, Inc., a local work-group comprised of the FS, CDF, and BLM Interagency Fuels Teams, Lassen County representatives and other public and private parties will provide the forum for implementation of this MOU.

D. IT IS MUTUALLY AGREED AND UNDERSTOOD BY ALL PARTIES THAT:

1. The BLM and FS have already entered into the January 13, 2003 Memorandum of Understanding for the Development of a Collaborative Fuel Treatment Program. This Memorandum outlines the process to synchronize the critical steps to accomplish selection of projects by May 1 of each year for implementation at the beginning of the Federal fiscal year (see Attachment A). It is understood that this MOU will not function independently of that process.

2. FREEDOM OF INFORMATION ACT (FOIA). Any information furnished to the DOI and FS under this MOU are subject to the Freedom of Information Act (5 U.S.C. 552).

3. PARTICIPATION IN SIMILAR ACTIVITIES. This instrument in no way restricts the parties from participating in similar activities with other public or private agencies, organizations, and individuals.

4. RESPONSIBILITIES OF PARTIES. The parties will handle their own activities and utilize their own resources, including the expenditure of their own funds, in pursuing these objectives. Each party will carry out its separate activities in a coordinated and mutually beneficial manner. Decisions considering expenditures of federal funds and activities of the federal partners under this MOU will be made by the federal partners. Decisions considering expenditures of private and Tribal funds and activities of the private and Tribal partners under this MOU will be made by the private and Tribal partners, individually.

5. PRINCIPAL CONTACTS. The principal contacts for this instrument are:

Heidi Perry
for the Forest Service
Community Liaison, Lassen NF
530-252-6604
hperry@fs.fed.us

Lassen County Fire Safe Council, Inc.
Tom Esgate, Director
530-310-0146
twesgate@hdo.net

L. Paul Whitcome
NORCAL Regional Fire Mgmt Officer, BLM
530-257-5575
lwhitcom@ca.blm.gov

Lloyd Keefer
Lassen County Supervisor
530-257-7360
lkeefer@co.lassen.ca.us

Nikole Melo
California Department of Forestry
530-257-7360
Nikole.Melo@fire.ca.gov

6. NON-FUND OBLIGATING DOCUMENT. Nothing in this MOU shall obligate any of the parties to obligate or transfer any funds. Specific work projects or activities that involve the transfer of funds, services, or property among the various agencies will require execution of separate agreements and be contingent upon the availability of appropriated funds. Such activities must be independently authorized by appropriate statutory authority. This MOU does not provide such authority. Negotiation, execution, and administration of each such agreement must comply with all applicable statues and regulations.

7. ESTABLISHMENT OF RESPONSIBILITY. This MOU is not intended to, and does not create, any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity, by a party against the United States, its agencies, its officers, or any person.

8. COMMENCEMENT/EXPIRATION/TERMINATION. This MOU takes effect upon the signature of the participating parties and shall remain in effect for no more than five years from the date of execution. This MOU may be extended or amended upon written request of all the parties. Any of the signatories of this MOU may terminate their participation in the MOU with a 60-day written notice to the other Parties.

THE PARTIES HERETO have executed this instrument.

U.S. Department of Interior Date
Bureau of Land Management
Dayne Barron
Field Office Manager
Eagle Lake Field Office

U.S. Dept. of Agriculture Date
Forest Service
Laurie A. Tippin
Forest Supervisor
Lassen National Forest

U.S. Department of Agriculture Date
Forest Service
James Peña
Forest Supervisor
Plumas National Forest

State of California Date
California Dept of Fire & Forestry
Donald G. Posten
Unit Chief
Lassen-Modoc Unit

U.S. Department of Agriculture Date
Natural Resource Conservation Service

Kenneth Weaver, District Conservationist

County of Lassen Date
Lassen County Board of Supervisors
Robert Pyle, Chairman

Lassen County Date
Fire Safe Council, Inc.
Dorine Beckman
Chairperson

U.S. Dept. of Agriculture Date
Forest Service
Stan Sylva
Modoc National Forest

U.S. Department of Interior Date
Bureau of Land Management
Timothy J. Burke, Field Office Manager
Alturas Field Office

Pit River Nation Date
Jessica Jim, Tribal Chairperson

Susanville Indian Rancheria Date
Stacy Dixon, Tribal Chairman

W.M. Beaty & Assoc. Date
Jeff Pudlicki

Roseburg Resources Company Date
Don Hanson

Sierra Pacific Industries Date
Mike Mitzel

Fruit Growers Supply Company Date
John Eacker

Overview

Lassen County is located in Northeastern California. Both residents and visitors alike enjoy its rural appeal and many benefits. It is rich in scenic and recreational areas, natural, cultural, and historical resources, clean air and water, and wildlife habitat.

The City of Susanville is located in the southeast portion of the County. It is the County seat and the only incorporated city in the County. Approximately 25 unincorporated smaller communities comprise the remainder of the population centers within the County. They include Ash Valley, Bieber, Nubieber, Bogard, Day Lassen Bench, Doyle, Herlong, Janesville, Lake Forest Estates, Little Valley, Madeline, Merrillville, Milford, Pittville, Ravendale, Termo, Richmond, Gold Run, Johnstonville, Standish, Litchfield, Stones/Bengard, Spalding, South Eagle Lake, and Westwood-Clearcreek. Lassen County's organizational structure is typical of many counties and is governed by a board of supervisors consisting of five elected members.

There are numerous wildland fire protection agencies that have responsibility within the County, including the USDA Forest Service (FS), the Bureau of Land Management (BLM), and the California Department of Forestry and Fire Protection (CDF). There are also numerous fire departments and fire protection districts (primarily responsible for structure fire protection) 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.

Two Fire Safe Councils are in operation within the County, including the Janesville and the Lassen County Fire Safe Councils. There is already a Fire Safe Plan in place for the Janesville area that was written in 1998. The Day Lassen Bench Fire Safe Council and the Tionesta Basin Advisory Group also have interests within portions of the County. The Fire Safe Councils are voluntary organizations formed to enhance the effectiveness of fire protection. The cooperative nature of and educational and outreach efforts of these groups is a critical component for wildland pre-fire planning and mitigation.

The main assets at risk in Lassen County include the various residential, commercial, governmental, and other structures and property that exist within the County. Many of these structures and properties are located close to or within the flammable natural vegetation of the area. Utilities and associated infrastructure such as electric, telephone, gas, water lines and structures, and rail lines are also critical components.

Other important assets that are in jeopardy from wildfires include the many scenic and recreational areas, wildlife and watershed values, timber, livestock forage, agricultural crops, and prehistoric and historic archaeological sites and artifacts.

Area

There are 3,001,780 acres (4,690 square miles) in Lassen County (Reference #1). Water covers approximately 3 percent of the total acres, with Eagle Lake, the second largest natural lake located wholly within California, and Honey Lake the primary water bodies. Modoc County lies to the north, Shasta County to the west,

Plumas County to the west and south along a jagged line roughly following the Diamond Mountains, Sierra County also to the south, and the State of Nevada to the east (see “Appendix B - Lassen County Map”).

The County is accessed from the Red Bluff, Chico, and Redding areas in the Sacramento Valley by State Routes 32, 36, and 44. The Big Valley area in the northern part of the County is served by State Route 299 running between Redding and Alturas in Modoc County. State Route 139 and US 395 provide north-south access through the eastern part of the County.

The nearest major metropolitan area from Susanville is Reno, Nevada located approximately 90 miles to the southeast. The California State Capitol, Sacramento, is approximately 210 highway miles to the southwest of Susanville.

Topography

The County has a variety of open valleys, forested plateaus, mountain meadows, and high mountain peaks and ranges. Almost the entire County is located on the eastern side and the southern tip of the Cascade Mountain Range, a volcanic mountain chain. The distinction between the mountain range and the Modoc Plateau, a more or less large flat plateau built up of irregular masses of volcanic materials and mountain peaks, is not well defined. The many hills and basins that have formed across the plateau are a result of volcanic activity and geologic block faulting over a long time period. Steep slopes exist in places but are much less severe than the slopes of the Coast, Klamath, or the western side of the Cascade Mountain Range.

Elevations within the County range from about 3,220 feet at Pittville in the northwest portion to 8,737 feet on Hat Mountain in the Warner Mountain Range to the northeast. Major valleys include the Honey Lake Valley at 4,000 feet in elevation and Big Valley at approximately 4,120 feet. The Madeline Plains area is a prominent basin feature located in the northeastern portion of the County.

The tallest peaks are at the southern tip of the Warner Mountains. Other tall peaks are in the far western and southern parts of the County and are associated with the volcanic peaks east of Mount Lassen. The Diamond Mountains on the southwestern boundary of the County is also a prominent and important landform. There are also numerous mountains and peaks on the east side of the County including Cottonwood, McDonald, Observation, Shinn, Shaffer, Skedaddle, and Fort Sage.

Population

Native American peoples have resided in Lassen County for an estimated 12,000 to 14,000 years. Settlers from the present-day Mexico and Canada and from the eastern parts of the United States began to arrive in the 1830s for various reasons including agriculture, trapping, and mining.

As of January 1, 2001, the population of Lassen County was estimated to be approximately 35,900 (Reference #5). Approximately 18,600 live in the greater Susanville area (Susanville, Richmond-Gold Run, Janesville). These figures include a 1997 High Desert and California Correctional Center inmate population count of 9,772. The population balance is distributed in the smaller communities around the

County. As of 1990, there were 10,358 housing units, of which 8,543 were occupied and 5,927 were owner occupied. Housing units used for seasonal use totaled 781.

Vegetation

Vegetation types in Lassen County are largely dependent on the mean annual precipitation received in any given area. 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, and drops off precipitously on the eastern side and in the valleys. In general, the green areas on the "Lassen County Map" in "Appendix B" depict the higher precipitation areas. Refer to "Appendix B – Vegetation Type Map" in the individual Community Safe Fire Plans for a depiction of the various vegetation types and their distribution in Lassen County.

Areas of higher precipitation and sufficient soil depth, such as the western and to a lesser degree the mountains in the southwestern portion of the County, 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 the openings.

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 more difficult to suppress.

In slightly drier zones of the County, the predominant vegetation type is pine/grass and juniper. The density of trees and shrubs is generally much lower in this type. 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 build-ups 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 and in the eastern two-thirds f the County are 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.

These areas 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 this type 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, grass meadows, and areas of tall chaparral (in the western part of the County). These areas have various uses including agriculture, livestock grazing, and wildlife habitat are, with exceptions, generally lower wildfire risk areas.

Wildfire plays a critical role in altering vegetation. In the timbered portions of the County, generally west of Susanville, areas affected by wildfires are often reduced to early seral 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 low value cheat grass and rabbitbrush and restoration efforts on these arid vegetation types are particularly difficult and expensive after the devastating effects of wildfire.

Land Use

Federal, State and local agencies administer over 63 percent of the land area (Reference #1)), with the United States government the largest landowner in Lassen County. The Lassen, Modoc, and Plumas National Forests administer the USDA Forest Service lands. These lands are managed under the multiple use concept, which includes recreation, watershed and wildlife uses, timber growing and harvesting, 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. These lands are also managed under the multiple use concept.

Other government lands in the County include the Department of Defense Sierra Army Depot at Honey Lake, State Lands and State Wildlife Areas, and the National Park Service east of Mount Lassen. There are also Indian Lands north and east of Susanville.

Private lands within Lassen County have many different uses. Private timber lands owned by Sierra Pacific Industries, Roseburg Resources Company, Fruit Growers Supply Company, and 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 and livestock production is another private land use activity within Lassen County. Mainly in the lower valleys of the County, farmers and ranchers produce field crops such as hay, and nursery and livestock products for sale on the open market.

Climate

The climate of Lassen County is variable, but can be generally described as a Great Basin type climate with warm days and cool nights. Summer days average 70 degrees, and winter days average 20 degrees. Most of the annual precipitation occurs between October and May. The average precipitation for the County ranges from four inches along the Nevada border and increasing to 48 inches in the western mountainous regions of the County. Annual snowfall also varies considerably, averaging from about 10 inches in the valley areas to several feet in the western mountains. Regional rain and snowfall averages vary significantly throughout the County and are detailed in the individual Community Fire Safe Plans.

Lassen County's climate, with its warm and dry summers, contributes to low relative humidity and low fuel moistures. When combined with high fuel loading, the potential for a catastrophic fire event is significant.

There are three weather conditions specific to Lassen County that may cause the ignition and/or impact the behavior of wildland fires: (Reference #6)

1. As high air pressure systems move eastward, unstable moist air from the south can move north and northwest along the eastern crest of the Sierra Mountains bringing thunderstorms. These systems occur when there is an unstable southeastern or southern flow aloft, or a closed low pressure system aloft, and most commonly in mid to late summer. The thunderstorms and the associated lightning, with or without precipitation, is a significant source of fire starts.
2. High winds out of the southwest that occur due to deep vertical air mixing over the warm, high terrain. These winds can become steady up to 20 MPH and gust up to 30-40 MPH if they are associated with an upcoming dry cold front or trough. This occurs most commonly in late Spring, and in late August to mid October.
3. Hot, dry conditions associated with high pressure systems. This most commonly occurs in August and September due to diverging air and compression that warm and dry the lower atmosphere, and particularly hinder nighttime humidity recovery.

Individual Community Fire Safe Plans

Detailed Fire Safe Plans have been prepared for the following communities located within Lassen County and are hereby incorporated into this Community Wildfire Protection Plan:

Bieber-Nubieber

Day Lassen Bench

Doyle

Herlong

Janesville

Lake Forest Estates

Little Valley

Madeline

Milford

Pittville

Ravendale-Termo

Richmond-Gold Run-Johnstonville

Standish-Litchfield

Stones-Bengard-Spaulding

Susanville

Westwood-Clear Creek

The property owners and residents of the **Hallelujah Junction** area have initiated the formation of a fire protection district. The Lassen County Board of Supervisors adopted Resolution No. 2003-079 supporting the formation of the "Hallelujah Junction Fire Protection District" on November 25, 2003. District formation is anticipated, after Local Agency Formation Commission (LAFCO) approval, to be completed in 2004 with services for structural fire protection and medical assistance contracted out to neighboring Sierra Valley Fire Protection District.

Appendices

Appendix A – Glossary of Terms

Afforestation: Establishment of a tree crop on an area from which it has always or very long been absent.

Age Class: One of the intervals, commonly 10 years, into which the age range of trees is divided for classification.

Biomass: The conversion of woody material, i.e., limbs, trunks, into wood chips to be used for electrical generation or forest products.

Board Foot: Normally a board 1inch thick x 12 inches wide x 1 foot in length used in measuring logs and lumber.

Butt: Base of a tree, or larger end of a log.

Canopy: More or less continuous cover of branches and foliage formed collectively by the crowns of adjacent trees or other woody growth.

Catface: Defect on the surface of a tree or log resulting from a fire or other wound where healing has not re-established the normal cross section.

Chaparral: Spanish word meaning "where the scrub oak grow." A diverse plant (shrub) community with some of the more common species being chamise, manzanita, Christmasberry, California scrub oak, mountain mahogany, and many species of ceanothus.

Codominant Tree: Forms a general level of crown canopy receiving full light from above but very little from the sides – generally have medium-sized crowns more or less crowded on the sides.

Conifer: Tree that bears cones and in most cases has needle or scale-like leaves. Also collectively called softwoods. Sugar pine, ponderosa pine, Jeffery pine, incense cedar, white fire, and Douglas fir.

Crown: Upper part of a tree or other woody plant, carrying the main branch system and foliage.

Crown Closure: The proportion of the total land area covered by the vertical projection of the tree crowns.

Crown Fire: Intense forest fire burning and spreading in the crown of trees.

Decadent: In regards to vegetation, it refers to plants of declining vigor and deteriorating health.

Defensible Space: That area which lies between a residence and an oncoming wildfire where the vegetation has been modified to reduce the wildfire threat and which provides an opportunity for firefighters (and the homeowner) to safely defend the residence.

Dominant Tree: Has a crown extending above the general level of crown cover and receives full light from above and partly from sides – larger than average tree with well developed crown.

East-Side Pine Forest: A forest type found on the eastern slopes of the Sierra-Nevada Mountain Range consisting primarily of ponderosa and Jeffrey pine.

Even-Aged: A forest composed of no, or relatively small, differences in age.

Federal Responsibility Area (FRA): Area that is the appropriate Federal agency's financial responsibility of preventing and suppressing fires (e.g. National Forest, National Park Service, Department of Defense, etc.).

Firebrand: Any burning material such as leaves, twigs, glowing embers that is carried aloft by the convective heat in a smoke column and falls some distance away from the main fire front that could start another fire.

Firebreak: An existing barrier, or one constructed before a fire occurs, from which all of the flammable materials have been removed; designed to stop or check creeping or running but not spotting fires.

Fire Hazard: Fuel complex, defined by volume, type, condition, arrangement, and location, that determines the degree of both ease of ignition and of fire suppression difficulty.

Fire Season: The period of mid-May through October when vegetation cures, dries out and is most flammable.

Flame Length: From the base of the flame to the average flame tip.

Flash Fuels: Small sized fuels (1/2 inch in diameter or smaller) loosely arranged such as grass, pine needles, etc.

Foehn Wind: Warm, dry wind that occurs on the leeward slopes of a ridge of mountains.

Forb: A herbaceous plant other than grass.

Forest: A plant association predominantly of trees and other woody vegetation growing more or less close together.

Forest Stand: An aggregation of trees or other growth occupying a specific area and sufficiently uniform in composition (species), age arrangement, and condition as to be distinguishable from the forest or other growth in adjoining areas.

Forest Type: Category of forest defined by its vegetation, particularly its species composition.

Fuel: Any combustible material. In regards to wildfire, fuel typically refers to living and dead vegetation.

Fuelbreak: A strategically located wide block, or strip, on which a cover of dense, heavy or flammable vegetation has been permanently changed to one of lower fuel volume of reduced flammability, allowing for safe access by firefighters.

Fuel Loading: Refers to the amount of vegetation, both living and dead, available for burning, commonly measured in tons (dry weight) per acre.

Hardwood: Trees or shrubs of a botanical group, usually having conventional leaves, in contrast to needle-leafed, cone-bearing trees (conifers). Alder, willow, cottonwood, quaking aspen, maple and oaks are examples.

Healthy Forest (Ecosystem): Is a balanced and dynamic plant association of trees and other woody vegetation that is not structurally damaged or overly at risk from fire, disease, insects, wind, drought, or human activities and is capable of natural reproduction. (A system formed by the interaction of living organisms, including people, with their environment.)

Herb: Any seed-producing plant that does not develop persistent woody tissue above the ground, including both forbs and grasses. See Also Forb.

Horizontal Continuity: The degree at which fuels form a continuous layer on a particular horizontal plane (e.g., a brush field, contiguous tree crowns, a grassy field or bed of leaves).

Intermediate Tree: Shorter than dominants or codominants, but crowns extend partially into crown canopy. Receives little direct light from above and none at all from sides – has small crown and is considerably crowded on sides.

Ladder Fuels: Fuels that provide vertical continuity between strata. Fire is able to move from the surface fuels into shrubs and into brush and tree crowns with relative ease.

Licensed Timber Operator (LTO): One who is licensed by the State to harvest trees.

Litter: A surface layer of loose organic debris in forests, consisting of freshly fallen or slightly decomposed organic materials such as leaves, pine needles, and twigs.

Local Responsibility Area (LRA): Land which is not under State or Federal financial responsibility for preventing and suppressing fires such as the incorporated area of a city.

Mortality: The loss to a population of trees or other plants from all lethal causes.

Native Plant Species: Plants regenerated from seed sources indigenous to the same geographic place.

Overstory: That portion of the trees in a forest stand forming the upper tree crown cover.

Prescribed Burning: A controlled application of fire to wildland fuels, in either their natural or modified state, under such conditions of weather, fuel moisture, soil moisture, etc., as to allow the fire to be confined to a predetermined area and, at the same time, to produce results to meet planned objectives of management.

Property Improvement: Any man made modification to real property (Fences, Structures, Vehicles, etc.)

Registered Professional Forester (RPF): One who is licensed by the State of California to manage and apply the principles of forestry for fees paid by a landowner.

Riparian Vegetation: Trees – alder, willow, cottonwood – shrubs, grasses and forbs growing along river banks and stream sides whose roots are in, or close to, the zone of saturation due to the proximity of surface or underground water.

Riparian Zone: The area adjacent to streams and rivers characterized by the presence of riparian vegetation.

Sawlog: Log considered suitable in size and quality for producing sawn timber or lumber.

Second Growth: A term for young trees, left or grown since the first harvest.

Sierrian Mixed Conifer Forest: A forest type found throughout the Sierra-Nevada Mountain Range consisting of a wide variety of tree species, including ponderosa pine, Jeffrey pine, sugar pine, white fire, Douglas-fir, California red fire and incense cedar.

Site: Productive capacity of an area to produce forests or other vegetation, related to climatic, biotic, and soil factors. For forest crops, it is expressed by a site index based on height of dominant trees in a stand at a certain age. Site indices are sometimes grouped into site classes.

Slash: Debris such as tree tops, branches, leaves and bark generated from tree cutting or other vegetation manipulation practices.

Snag: Standing dead tree or section thereof.

Soil Series: Basic unit of soil classification, consisting of soils that are alike in all major profile characteristics, same texture of the surface layer, and having similar horizons.

Spotting: Behavior of a fire producing sparks or embers that are carried by the updraft and wind and start new fires beyond the main fire. Spotting usually occurs with low humidity.

State Responsibility Area (SRA): Areas of the State in which the financial responsibility of preventing and suppressing fires has been determined by the State Board of Forestry and Fire Protection to be primarily the responsibility of the State.

Stand: Community of trees or brush possessing sufficient uniformity in composition, structure, age, arrangement, or condition to be distinguishable from adjacent forest communities.

Stocking: Term for an amount of anything on a given area, particularly in relation to what is considered the optimum, used in forest, range and wildlife management.

Suppressed Tree: Crown entirely below crown canopy. Receives no direct light from either above or below. Tree smaller than average and crown poorly developed.

Timber Harvest Plan (THP): An environmental review document under the Functional Equivalency provision of the California Environmental Quality Act (CEQA). It has an operational element to implement commercial timber harvest, an analysis component to assist state agency review of a proposed harvest, and requires CDF approval for all commercial harvests on private timberlands in California.

Uneven Aged: A forest, crop, or stand, composed of intermingling trees that differ markedly in age. Also called All-aged. See Even Aged.

Urban Intermix: An intermingling of structures and natural forest fuels within a forest setting.

Wetlands: Land containing much soil moisture for definite periods of time. Bogs and swamps, wet meadows, and lowland seasonal pools.

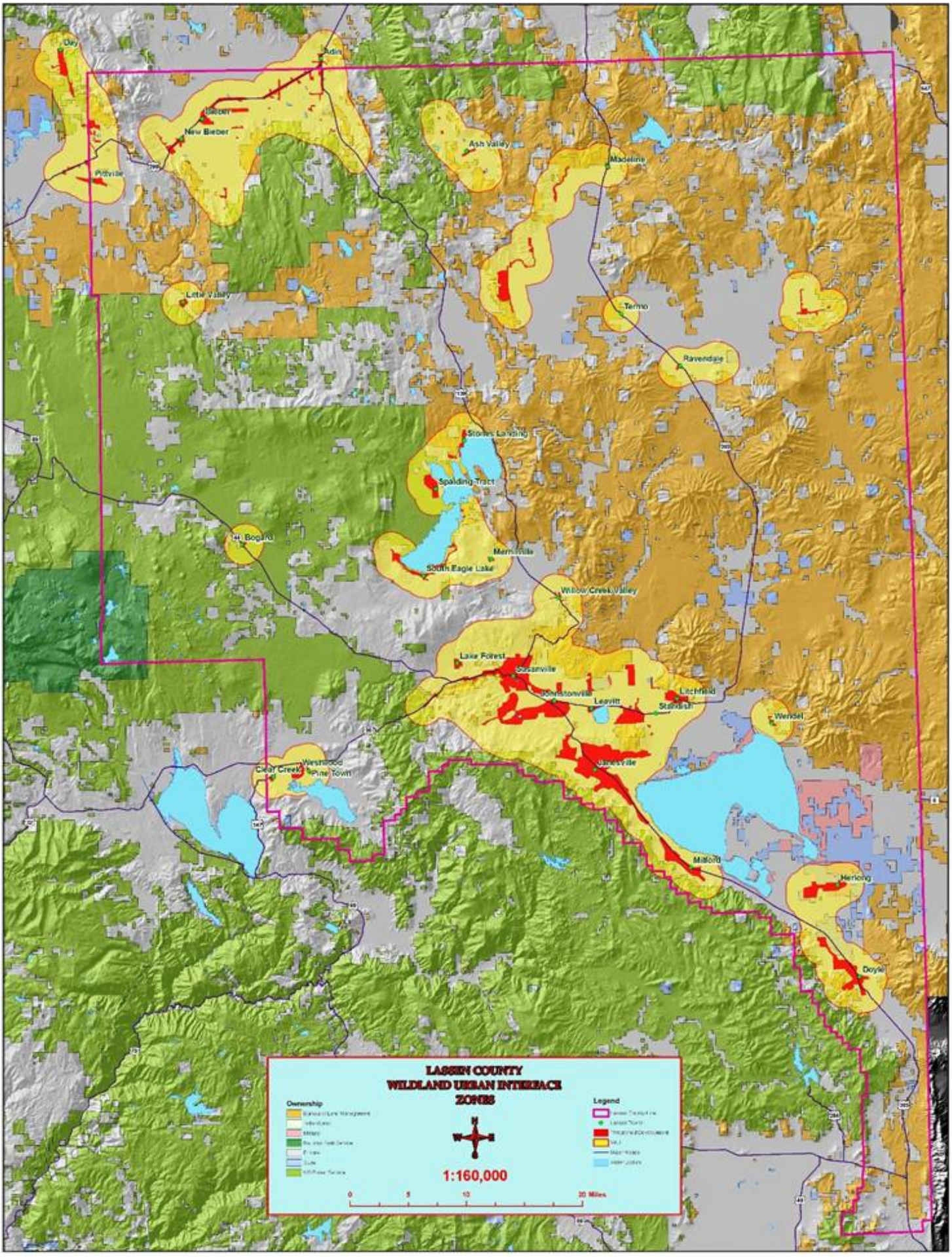
Wildfire: Any unwanted fire occurring in a wildland setting.

Wildland: Uncultivated land, other than fallow, neglected or maintained for such purposes as wood or range-forage production, wildlife, recreation protective watershed cover, wilderness.

Wildlife Habitat: Vegetation, climate and other natural conditions suited to the life needs for an animal species to survive and reproduce.

Wolf Tree: Vigorous tree generally of bad growth form with a dominantly wide crown, that occupies more growing space than it warrants, so harming potentially better neighbors.

Appendix B – Lassen County Map


Day
Bieber
New Bieber
Pittville
Ash Valley
Madeline
Little Valley
Termo
Ravendale
Stones Landing
Spalding Tract
Bogard
Merrillville
South Eagle Lake
Willow Creek Valley
Lake Forest
Susanville
Johnstonville
Leavitt
Litchfield
Standish
Wendel
Clear Creek
Westwood
Pine Town
Janesville
Milford
Merrimac
Doyle
LASSEN COUNTY
WILDLAND URBAN INTERFACE
ZONES
Ownership
Legend
1:160,000
0
5
10
20 Miles

Appendix C – Funding Source Information

The following includes general pre-fire funding information including a list of potential funding sources listed at the National Fire Plan web site: http://www.fireplan.gov/.

Community Assistance Program Elements

Under the wing of the National Fire Plan, various community assistance programs focus on building state and community capacity to develop and implement citizen-driven solutions that will lessen local vulnerability to risks associated with wildland fires.

Funding allocations that recognize risk and need are established through a cooperative process with the National Association of State Foresters. States are requested to focus on communities with the greatest risk of severe wildland fire. For more information contact your state representative, or the National Association of State Foresters (http://www.stateforesters.org/).

Program elements are as follows:

- Preparedness - Increases the ability of local, rural, and state organizations to provide coordinated fire protection and mobilization for fire suppression on both federal and non-federal lands.
- Hazard Mitigation - Supports state-led hazard mitigation activities in the wildland urban interface, focused on reducing property loss, decreasing fuels hazards, and increasing public awareness and citizen-driven solutions in rural communities. Currently, hazard mitigation projects are funded through a competitive process and fall into three categories: hazardous fuels reduction, information and education programs targeting mitigation and prevention, and risk reduction and hazard mitigation for homeowners and their communities.
- Fire Prevention - Delivers a nationwide fire prevention program through public service advertising, educational activities, product licensing, and corporate partnerships. The Smokey Bear program is part of this component, and FIREWISE is another prevention component. FIREWISE is a program that promotes wildland fire safety and fosters community-based responsibility through adult education, community action planning, fuels treatments, and landscaping. Currently, occasional FIREWISE workshops for community and business leaders are conducted to help participants work to establish local FIREWISE standards to ensure a safer place for people to live.

Community Assistance Budget Summary ($ in thousands):

National Fire Plan	FY 2001 – Final USDA & DOI	FY2002 - USDA-FS	FY2002 - DOI	FY 2002 – Total USDA & DOI
Rural Fire Assistance	$9,978	N/A	$10,000	$10,000
State Fire Assistance	$75,328	$81,693	N/A	$81,693
Volunteer Fire Assistance	$13,251	$13,315	N/A	$13,315
Economic Action Programs	$12,472	$12,472	N/A	$12,472
Community & Private Land Assistance	$34,923	$0	N/A	$0

Community Assistance Programs

Rural Fire Assistance (Department of the Interior)

Department of the Interior funding will be used to provide technical assistance, training, supplies, equipment, and public education support to rural fire departments, thus enhancing firefighter safety and strengthening wildland fire protection capabilities. Assistance program Information: http://www.fireplan.gov/step1.cfm

State Fire Assistance (USDA Forest Service)

An important element of the National Fire Plan is the coordination of federal, state, tribal, and local fire organizations to prevent, prepare for, and manage wildland fire across the landscape. The State Fire Assistance program provides financial and technical support directly to the state forest fire protection organizations to enhance fire fighting capacity. The Program also supports community based hazard mitigation and an expanded national public service fire prevention program. State and local matching funds leverage the federal investment for cost-effective results. The Forest Service has an allocation of over $81 million in National Fire Plan and base program funding for the State Fire Assistance program.

Volunteer Fire Assistance (USDA Forest Service)

The Volunteer Fire Assistance Program provides funds through States to volunteer fire departments serving communities to improve communication capabilities, provide critical wildland fire management training, and purchase protective fire clothing and equipment. These departments provide, at no cost, wildfire and emergency protection service to communities with populations of less than 10,000. Volunteer Fire Departments provide services that reach 43% of the population, at an estimated value of $36 billion per year. Of the more than 32,000 local fire agencies nationwide, 75% are volunteer fire departments.

The National Fire Plan Budget provides $13,315,000 in National Fire Plan and base program funding for the Volunteer Fire Assistance Program.

Economic Action Programs (USDA Forest Service)

USDA Forest Service funding will provide for Economic Action Programs that work with local communities to identify, develop, and expand economic opportunities related to traditionally underutilized wood products and to expand the utilization of wood removed through hazardous fuel reduction treatments. Information, demonstrations, application development, and training will be made available to participating communities. For more information contact a Forest Service Regional Representative at: http://www.fs.fed.us/spf/coop/eap_coord's. The Lassen County representative is Elizabeth Norton, Lassen National Forest, 2250 Riverside Drive, Susanville, CA 96130, (530) 252-6645, Fax: (530) 252-6428.

Assistance to Firefighters (FEMA)

The Federal Emergency Management Agency's (FEMA) United States Fire Administration has an Assistance to Firefighter's Grant Program designed to improve the safety and health of the nation's fire service and the communities they serve.

Further information is available online at the U.S. Fire Administration (USFA) web site at: http://www.usfa.fema.gov/dhtml/inside-usfa/grants.cfm. For more information on the grant program, or problems with the application process, visit the website, or call the toll-free information line at (866) 274-0960 or send e-mail to: usfagrants@fema.gov.

Appendix D – Defensible Space

Defensible space is the area between a house and an oncoming wildfire where the vegetation has been modified to reduce the wildfire threat and to provide an opportunity for firefighters to effectively defend the house.

The clearing for defensible space is entirely under the control of the individual citizen. It is one of the easiest and most important pre-fire management activities, and one that could make the difference between a residence surviving a wildfire or being destroyed.

The State of California has mandatory defensible space requirements of "any person that owns, leases, controls, operates, or maintains any building or structure" within the rural and wildland interface zone. These requirements are spelled out in Public Resources Code (PRC) 4291, which is included at the end of this section.

In brief, PRC 4291 requires the clearing of accumulated flammable vegetation from within 30 feet of buildings, and within 100 feet of buildings if directed by CDF because of "extra hazardous conditions". The statute also provides for the removal or maintenance of trees near chimneys, stovepipes, and roofs, the removal of flammable debris from roofs, and the maintenance of chimney or stovepipe screens.

The requirements specified in PRC 4291 are minimum requirements. Individual citizens are encouraged to voluntarily comply with the supplemental recommendations included within this section. In addition, both the CDF website (http://www.fire.ca.gov/Education/IndoorFireSafety.asp) and the Janesville Fire Safe Plan (pages 38-48) have excellent discussions of defensible space.

Residence Protection Measures

The Home Zone 0'-10'

Purpose: To prevent the spread of fire from vegetation to structure.

Actions: Remove all flammable fuel sources from this zone. Conifer trees, brush, dry grass, leaves, needles, woodpiles, and flammable ornamentals are examples.

- Remember to remove leaves and needles from roofs, rain gutters, and under decks.

This zone can be landscaped with gravel, rock, concrete or left to bare mineral soil. Replace vegetation with less flammable plants: green lawns, and/or flower beds are good choices, if well watered. Keep flammable mulches away from base of house.

The Yard Zone 10'-30'

Purpose: To provide an area where fuels have been substantially modified to reduce wildfire intensity and reduce potential exposure problems. (This fuel zone should be sufficient for grasslands, and is integrated into fuel reduction for brush and timberlands.)

Actions:

1) Thin tress so that spacing between crowns equals crown width.
2) Prune branches of trees to at least 10' above ground (trim not more than 1/3 of height for small trees).
3) Eliminate fuel ladders.
4) Limit litter layer to 1" to 2".
5) Remove any bitterbrush.
6) Remove snags and logs.
7) Break up horizontal continuity of fuels by use of low flammability plants, flower beds, green lawns, and gravel or concrete. Watering reduces flammability.
8) Propane tanks located 10' from structure or property line.
9) Oil tanks located 5' from home; 10' from property line.

(Check with County Building Department with questions concerning *Actions 8 and 9*)

The Screen Zone 30' to 100'

Purpose: To keep wildfire on the ground, and to use vegetation to screen for privacy. This is the primary zone for fire suppression. Even though 100' of fuel reduction appears adequate for brush covered lands, further effort is necessary in timberlands.

Actions:

1) Thin trees so that spacing between crowns equals crown width.
2) Prune branches of trees to at least 10' above ground (trim not more than 1/3 of height for small trees)
3) Eliminate fuel ladders.
4) Remove snags and logs.
5) Thin bitterbrush and other species so that spacing equals plant height. Remove dead branches.
6) Separate patches and clumps of understory so they are spaced horizontally and vertically apart from the overstory.
7) Use vegetation to screen for privacy.

The Forest Zone 100' to 150'

Purpose: To provide a space in which a wildfire will "cool down, slow down, and stay on the ground." This zone can provide cover for wildlife. Views within this zone can be enhanced to be more aesthetically pleasing.

Actions:

1) Apply all recommendations for improving forest health.
2) Thin trees so that spacing between crowns equals 1/3 of crown width.
3) Prune branches of trees to at least 10' above ground (trim not more than 1/3 of height for small trees).
4) Eliminate fuel ladders.
5) Thin bitterbrush and other species so that spacing equals plant height. Small patches and strips can be left.

Burning

- Contact local fire department to see if open burning is allowed in your area; if so obtain a burning permit. Clear at least 10 feet around burn piles prior to burning.

Public Resources Code Section 4291 – Reduction of Fire Hazards around Buildings; Requirements; Exemptions

4291. A person that owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, shall at all times do all of the following:

(a) Maintain around and adjacent to the building or structure a firebreak made by removing and clearing away, for a distance of not less than 30 feet on each side of the building or structure or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This subdivision does not apply to single specimens of trees or other vegetation that is well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to any building or structure.

(b) Maintain around and adjacent to the building or structure additional fire protection or firebreak made by removing all brush, flammable vegetation, or combustible growth that is located within 100 feet from the building or structure or to the property line or at a greater distance if required by state law, or local ordinance, rule, or regulation. This section does not prevent an insurance company that insures a building or structure from requiring the owner of the building or structure to maintain a firebreak of more than 100 feet around the building or structure. Grass and other vegetation located more than 30 feet from the building or structure and less than 18 inches in height above the ground may be maintained where necessary to stabilize the soil and prevent erosion. This subdivision does not apply to single specimens of trees or other vegetation that is well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to a dwelling or structure.

(c) Remove that portion of any tree that extends within 10 feet of the outlet of a chimney or stovepipe.

(d) Maintain any tree adjacent to or overhanging a building free of dead or dying wood.

(e) Maintain the roof of a structure free of leaves, needles, or other dead vegetative growth.

(f) Prior to constructing a new building or structure or rebuilding a building or structure damaged by a fire in such an area, the construction or rebuilding of which requires a building permit, the owner shall obtain a certification from the local building official that the dwelling or structure, as proposed to be built, complies with all applicable state and local building standards, including those described in subdivision (b) of Section 51189 of the Government **Code**, and shall provide a copy of the certification, upon request, to the insurer providing course of construction insurance coverage for the building or structure. Upon completion of the construction or rebuilding, the owner shall obtain from the local building official, a copy of the final inspection report that demonstrates that the dwelling or structure was constructed in compliance with all applicable state and local building standards, including those described in subdivision (b) of Section 51189 of the Government **Code**, and shall provide a copy of the report, upon request, to the property insurance carrier that insures the dwelling or structure.

(g) Except as provided in Section 18930 of the Health and Safety **Code**, the director may adopt regulations exempting structures with exteriors constructed entirely of nonflammable materials, or conditioned upon the contents and composition of same, he or she may vary the requirements respecting the removing or clearing away of flammable vegetation or other combustible growth with respect to the area surrounding those structures.

No exemption or variance shall apply unless and until the occupant thereof, or if there is not an occupant, the owner thereof, files with the department, in a form as the director shall prescribe, a written consent to the inspection of the interior and contents of the structure to ascertain whether this section and the regulations adopted under this section are complied with at all times.

(h) The director may authorize the removal of vegetation that is not consistent with the standards of this section. The director may prescribe a procedure for the removal of that vegetation and make the expense a lien upon the building, structure, or grounds, in the same manner that is applicable to a legislative body under Section 51186 of the Government **Code**.

(i) As used in this section, "person" means a private individual, organization, partnership, limited liability company, or corporation.

4291.1. (a) Notwithstanding Section 4021, a violation of Section **4291** is an infraction punishable by a fine of not less than one hundred dollars ($100), nor more than five hundred dollars ($500). If a person is convicted of a second violation of Section **4291** within five years, that person shall be punished by a fine of not less than two hundred fifty dollars ($250), nor more than five hundred dollars ($500). If a person is convicted of a third violation of Section **4291** within five years, that person is guilty of a misdemeanor and shall be punished by a fine of not less than five hundred dollars ($500). If a person is convicted of a third violation of Section **4291** within five years, the department may perform or

contract for the performance of work necessary to comply with Section **4291** and may bill the person convicted for the costs incurred, in which case the person convicted, upon payment of those costs, shall not be required to pay the fine. If a person convicted of a violation of Section **4291** is granted probation, the court shall impose as a term or condition of probation, in addition to any other term or condition of probation, that the person pay at least the minimum fine prescribed in this section.

(b) If a person convicted of a violation of Section **4291** produces in court verification prior to imposition of a fine by the court, that the condition resulting in the citation no longer exists, the court may reduce the fine imposed for the violation of Section **4291** to fifty dollars ($50).

Supplemental Defensible Space Clearances

The following supplemental defensible space clearances, beyond the required minimum distance of 100 feet, are recommended by CDF in the following fuel types:

Fuel Model #	**Fuel Model Type**	**Recommended Fuel Reduction Distances**
1	Grass	100 feet
2	Pine/Sagebrush/Grass	100 feet
4	Tall Chaparral	100 feet
5	Brush/Dominant Brush	100 feet
6	Brush	100 Feet
9	Second Growth Pine	150 feet
10	Mixed Conifer	150 feet

100' Defensible Space Update

January 11, 2006

In January 2005 a new state law became effective that extended the defensible space clearance around buildings and structures from 30 feet to 100 feet. Proper clearance out to 100 feet dramatically increases the chance of your house surviving a wildfire. This defensible space also provides for firefighter safety when protecting homes during a firestorm. The following is the latest information to come out of last year's new law:

- State law now requires 100 feet of defensible space clearance in most rural areas of California. Some local jurisdictions have ordinances that require more than 100 feet while many municipalities may have no requirements
- The Board of Forestry and Fire Protection (Board) on Thursday January 5, 2006 received additional public comment on proposed defensible space regulations and guidelines designed to advise homeowners on how to comply with the new 100 foot requirement.
- The Board directed staff to issue revised regulations and guidelines based on oral testimony and written comments. Once issued, these revised documents will be available for public review and comment.
- The earliest the Board is expected to finalize the regulations is at the February meeting, but it could be continued until the March meeting.
- After the Board adopts final language, it must be approved by the Office of Administrative Law before it becomes official. This process usually takes 30 days.
- Now that the Board language is nearly finalized, CDF is embarking on a training program for its inspectors. Delivery of this training is expected by April, 2006.
- CDF is also preparing public information documents, brochures, and web content to explain to homeowners how to comply with the new regulations. The basis of this information will be the "Guidance" document prepared by the Board. This Guidance document takes into account the extreme variability of California's vegetation and ecological zones.
- Since the State law now requires 100 feet of defensible space, and even though these guidance documents are not yet official, CDF is performing inspections out to 100 feet from homes. Until such time that these regulations become effective, staff has been advised to use common sense and professional judgment when advising homeowners on whether they are in compliance with the 100 foot clearance requirement.
- CDF recognizes that for some homeowners, coming into compliance out to 100 feet can be difficult, may require hard work, and in some cases can be a financial burden. Therefore, the guidelines offer alternatives to achieve defensible space and reduce wildfire intensity.
- If compliance is met out to 30 feet, but not 100 feet, the homeowner will receive a written notice of violation, (similar to a traffic "fix it ticket") with recommendations to reduce the fire hazard. The Board and the Department wish to emphasize an educational and cooperative approach with the public to reduce fire hazards.

www.fire.ca.gov

Make Your Home FIRE SAFE

100' DEFENSIBLE SPACE

Contact your local CDF office, fire department, or Fire Safe Council for tips and assistance.

www.fire.ca.gov

1905 2005
100 YEARS OF CDF
Preserving Our Legacy • Protecting Our Future

A Quick Checklist

Following these simple steps can dramatically increase the chance of your home surviving a wildfire!

- ☐ Create a **DEFENSIBLE SPACE** of 100' around your home. The area closest to your home is the most important.
- ☐ Try to get 10 to 15 feet of spacing, both vertically and horizontally between shrubs, large plants, and trees. If you have 4 foot high brush underneath larger trees with limbs, limb up the tree at least 14 feet. Breaks like this in the vegetation help to slow down an advancing fire and gives firefighters a fighting chance.
- ☐ Plan your landscape to eliminate a continuous path of vegetation. Do not have any combustible fuel within three feet of your home.
- ☐ For landscaping purposes, use of irrigated fire resistant plants is encouraged. Green lawn, rock, stone, and other materials can be used to create an attractive and fire safe landscape.
- ☐ Clear all vegetation and other flammable materials from beneath your deck. Enclose undersides of elevated decks with fire resistant building materials, or with screen mesh with openings no greater than ¼ inch.
- ☐ Keep trees trimmed at least 10' from your chimney and trim all dead limbs hanging over your house or garage.
- ☐ Clean all needles and leaves from the roof, eaves, and rain gutters.
- ☐ Maintain your landscaping with regular watering and weeding to keep it fire safe.

More than 1,700 structures are destroyed by wildfire each year just within CDF's jurisdiction. Don't become a statistic...

Be Fire Safe, California!

May 2005

California Department of Forestry and Fire Protection

Homeowners Checklist

How To Make Your Home Fire Safe

1905 2005

100 YEARS OF CDF

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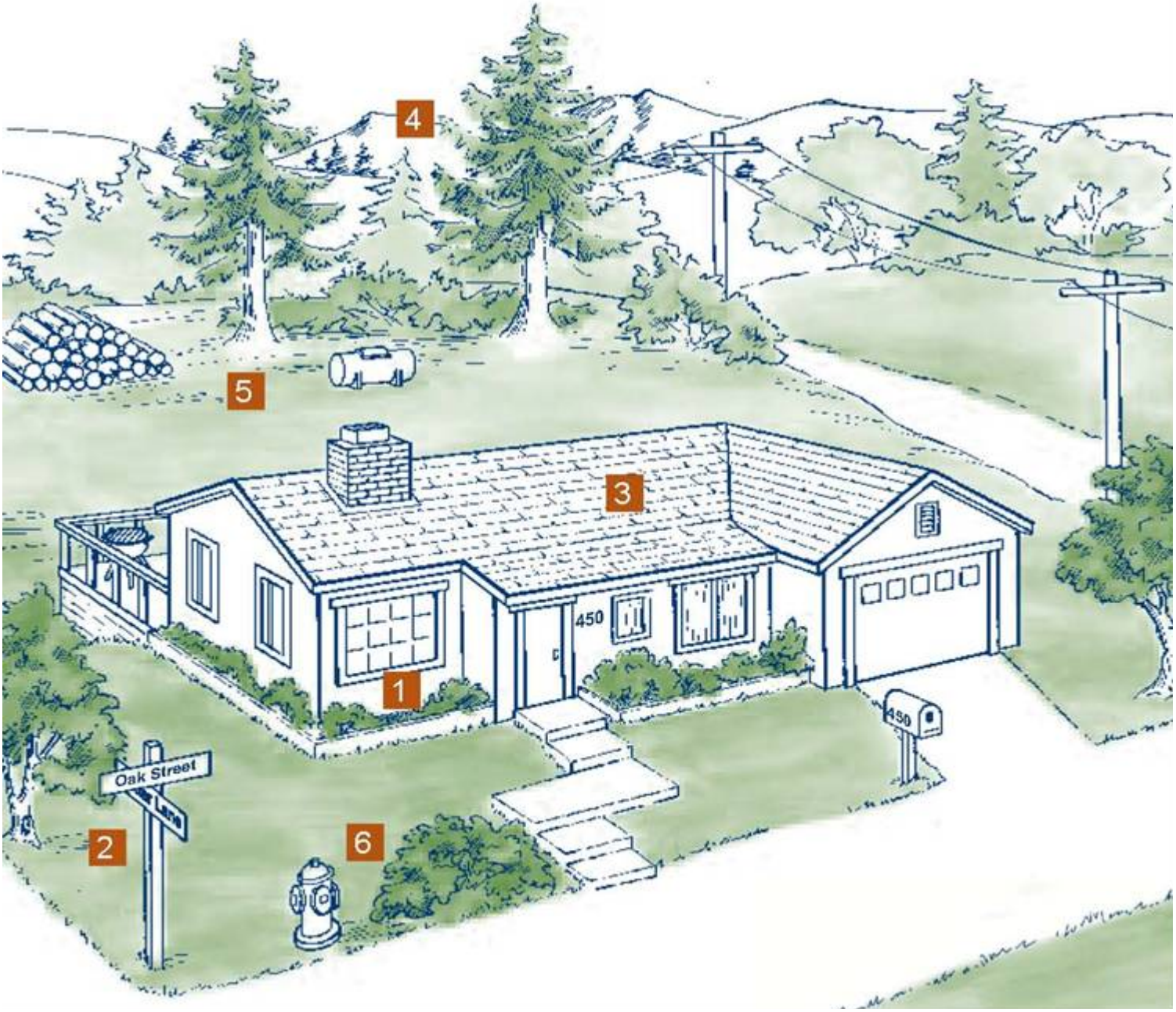


OUTSIDE

1 Design/Construction

- ___ Consider installing residential sprinklers
- ___ Build your home away from ridge tops, canyons and areas between high points on a ridge
- ___ Build your home at least 30-100 feet from your property line
- ___ Use fire resistant materials
- ___ Enclose the underside of eaves, balconies and above ground decks with fire resistant materials
- ___ Try to limit the size and number of windows in your home that face large areas of vegetation
- ___ Install only dual-paned or triple-paned windows
- ___ Make sure that electric service lines, fuse boxes and circuit breaker panels are installed and maintained as prescribed by code
- ___ Contact qualified individuals to perform electrical maintenance and repairs

2 Access

- ___ Identify at least two exit routes from your neighborhood
- ___ Construct roads that allow two-way traffic
- ___ Design road width, grade and curves to allow access for large emergency vehicles
- ___ Construct driveways to allow large emergency equipment to reach your house
- ___ Design bridges to carry heavy emergency vehicles, including bulldozers carried on large trucks
- ___ Post clear road signs to show traffic restrictions such as dead-end roads, and weight and height limitations
- ___ Make sure dead-end roads, and long driveways have turn-around areas wide enough for emergency vehicles
- ___ Construct turnouts along one-way roads
- ___ Clear flammable vegetation at least 10 feet from roads and five feet from driveways
- ___ Cut back overhanging tree branches above roads
- ___ Construct fire barriers such as greenbelts
- ___ Make sure that your street is named or numbered, and a sign is visibly posted at each street intersection
- ___ Make sure that your street name and house number are not duplicated elsewhere in the county
- ___ Post your house address at the beginning of your driveway, or on your house if it is easily visible from the road

3 Roof

- ___ Remove branches within 10 feet of your chimney and dead branches overhanging your roof
- ___ Remove dead leaves and needles from your roof and gutters
- ___ Install a fire resistant roof. Contact your local fire department for current roofing requirements
- ___ Cover your chimney outlet and stovepipe with a nonflammable screen of ½inch or smaller mesh

4 Landscape

- ___ Create a "defensible space" by removing all flammable vegetation at least 100 feet from all structures
- ___ Never prune near power lines. Call your local utility company first
- ___ Landscape with fire resistant plants
- ___ On slopes or in high fire hazard areas remove flammable vegetation out to 100 feet or more
- ___ Space native trees and shrubs at least 10 feet apart
- ___ For trees taller than 18 feet, remove lower branches within six feet of the ground
- ___ Maintain all plants by regularly watering, and by removing dead branches, leaves and needles
- ___ Before planting trees close to any power line contact your local utility company to confirm the maximum tree height allowable for that location

5 Yard

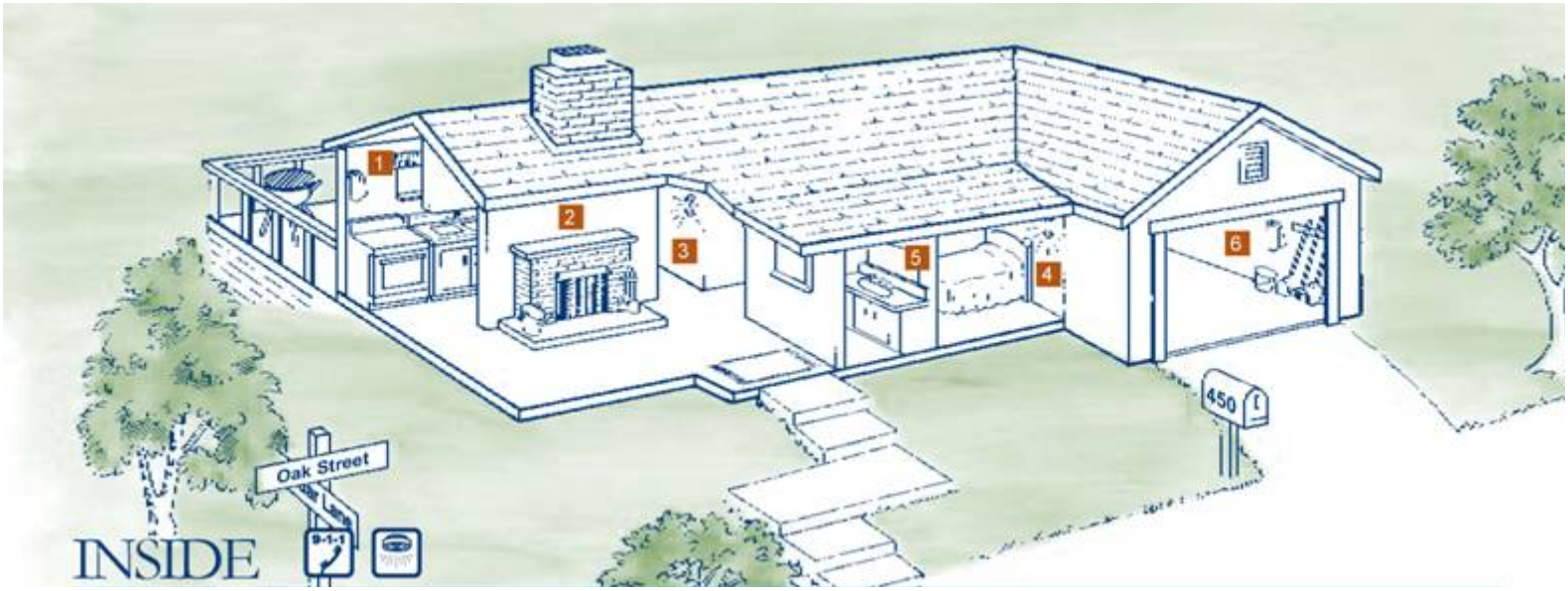
- ___ Stack woodpiles at least 30 feet from all structures and remove vegetation within 10 feet of woodpiles
- ___ Locate LPG tanks (butane and propane) at least 30 feet from any structure and maintain 10 feet of clearance
- ___ Remove all stacks of construction materials, pine needles, leaves and other debris from your yard
- ___ Contact your local fire department to see if open burning is allowed in your area; if so, obtain a burning permit
- ___ Where burn barrels are allowed, clear flammable materials at least 10 feet around the barrel; cover the open top with a non-flammable screen with mesh no larger than ¼ inch

6 Emergency Water Supply

- ___ Maintain an emergency water supply that meets fire department standards through one of the following:
  - a community water/hydrant system
  - a cooperative emergency storage tank with neighbors
  - a minimum storage supply of 2,500 gallons on your property
- ___ Clearly mark all emergency water sources
- ___ Create easy firefighter access to your closest emergency water source
- ___ If your water comes from a well, consider an emergency generator to operate the pump during a power failure

Fire Your Power

January 2005



1 Kitchen

- Keep a working fire extinguisher in the kitchen
- Maintain electric and gas stoves in good operating condition
- Keep baking soda on hand to extinguish stove-top grease fires
- Turn the handles of pots and pans containing hot liquids away from the front of the stove
- Install curtains and towel holders away from burners on the stove
- Store matches and lighters out of the reach of children
- Make sure that electrical outlets are designed to handle appliance loads

2 Living Room

- Install a screen in front of fireplace or wood stove
- Store the ashes from your fireplace (and barbecue) in a metal container and dispose of only when cold
- Clean fireplace chimneys and flues at least once a year

5 Bathroom

- Disconnect appliances such as curling irons and hair dryers when done; store in a safe location until cool
- Keep items such as towels away from wall and floor heaters

6 Garage

- Mount a working fire extinguisher in the garage
- Have tools such as a shovel, hoe, rake and bucket available for use in a wildfire emergency
- Install a solid door with self-closing hinges between living areas and the garage
- Dispose of oily rags in (UL) (Underwriters Laboratories) approved metal containers
- Store all combustibles away from ignition sources such as water heaters
- Disconnect electrical tools and appliances when not in use
- Allow hot tools such as glue guns and soldering irons to cool before storing
- Properly store flammable liquids in approved containers and away from ignition sources such as pilot lights

3 Hallway

- Install smoke detectors between living and sleeping areas
- Test smoke detectors monthly and replace batteries twice a year, when clocks are changed in the spring and fall
- Install child safety plugs (caps) on all electrical outlets
- Replace electrical cords that do not work properly, have loose connections, or are frayed

4 Bedroom

- If you sleep with the door closed, install a smoke detector in the bedroom
- Turn off electric blankets and other electrical appliances when not in use
- Do not smoke in bed
- If you have security bars on your windows or doors, be sure they have an approved quick-release mechanism so you and your family can get out in the event of a fire

Disaster Preparedness

- Maintain at least a three-day supply of drinking water, and food that does not require refrigeration and generally does not need cooking
- Maintain a portable radio, flashlight, emergency cooking equipment, portable lanterns and batteries
- Maintain first aid supplies to treat the injured until help arrives
- Keep a list of valuables to take with you in an emergency; if possible, store these valuables together
- Make sure that all family members are ready to protect themselves with STOP, DROP AND ROLL
- For safety, securely attach all water heaters and furniture such as cabinets and bookshelves to walls
- Have a contingency plan to enable family members to contact each other. Establish a family/friend phone tree
- Designate an emergency meeting place outside your home
- Practice emergency Exit Drills In The House (EDITH) regularly
- Outdoor cooking appliances such as barbecues should never be taken indoors for use as heaters

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16. Todd, Karl, Fire Mitigation Education Specialist, Bureau of Land Management Eagle Lake Field Office, Susanville, California, WUI Map preparation.
17. Perry, Heidi, Lassen National Forest, Having the intuition to develop the MOU and making it happen.
18. Stewart, Frank, RPF, Quincy Library Group & California State Fire Safe Council, Giving us all solid direction in making the process broad and inclusive.

Lassen County Fire Safe Council, Inc.

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January 17, 2006

Lassen County Board of Supervisors

Gentlemen:

Attached are revisions to the Lassen County Fire Safe Plan that we'll be requesting you adopt at your January 24th meeting. Some of these changes are necessary to bring us into compliance with Community Wildfire Prevention Plan (CWPP) guidelines. Other changes make Lassen County's CWPP a model for the entire state to emulate. Here are some of the additions and/or changes to the 2002 Memo of Understanding (MOU) and 2004 Fire Safe Plan (FSP):

1. Includes a revised MOU as part of the CWPP/FSP
2. Adds Tribes and private forest industry partners to the MOU
3. Ties all Lassen County Community FSPs to the CWPP/FSP
4. Gives the communities and the MOU participants the ability to expand and amend the individual FSPs as better planning evolves
5. Defines the Wildland Urban Interface boundaries in Lassen County
5. Gives the MOU participants the ability to modify the WUI boundaries as we improve on our planning
6. Amends the CWPP/FSP to include the new California 100' clearance requirements
7. Establishes a procedure for developing Annual and Future Work Plans, including a March 1 date for assembling the information

We look forward to seeing you on the 24th.

Very truly,

Tom Esgate, Director