

Lassen County Community Wildfire Protection Plan

Lassen County



January 2006

COUNTY OF LASSEN

BOARD OF SUPERVISORS

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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

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January 2006

First Revision of the 2004 Lassen County Fire Safe Plan

**2006 CWPP Revision Team
Susanville Interagency Fire Center
October 24, 2005**



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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:

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Community Liaison, Lassen NF
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Nikole Melo
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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 statutes 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.

[Signature] 01/31/06
U.S. Department of Interior Date
Bureau of Land Management

Dayne Barron
Field Office Manager
Eagle Lake Field Office

[Signature] 2/2/06
U.S. Department of Agriculture Date

Forest Service
James Peña
Forest Supervisor
Plumas National Forest

[Signature] 2/8/06
U.S. Department of Agriculture Date
Natural Resource Conservation Service

Kenneth Weaver, District Conservationist

[Signature] 1/23/06
Lassen County Date

Fire Safe Council, Inc.
Dorine Beckman
Chairperson

[Signature] 2/13/06
U.S. Department of Interior Date

Bureau of Land Management
Timothy J. Burke, Field Office Manager
Alturas Field Office

[Signature] 3/8/06
Susanville Indian Rancheria Date

Stacy Dixon, Tribal Chairman

[Signature] 2/1/06
Roseburg Resources Company Date

Don Hansen

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Fruit Growers Supply Company Date
John Eacker

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U.S. Dept. of Agriculture Date

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Forest Supervisor
Lassen National Forest

[Signature]
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California Dept of Fire & Forestry
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Lassen-Modoc Unit

[Signature] 1-24-06
County of Lassen Date

Lassen County Board of
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Robert Pyle, Chairman

[Signature] 2/13/06
U.S. Dept. of Agriculture Date

Forest Service
Stan Sylva
Modoc National Forest

Pit River Nation Date
Jessica Jim, Tribal Chairperson

[Signature] 3/21/06
W.M. Beaty & Assoc. Date

Jeff Pudlicki

[Signature] 3/2/06
Sierra Pacific Industries Date

Mike Mitzel

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 of 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 1 inch 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.

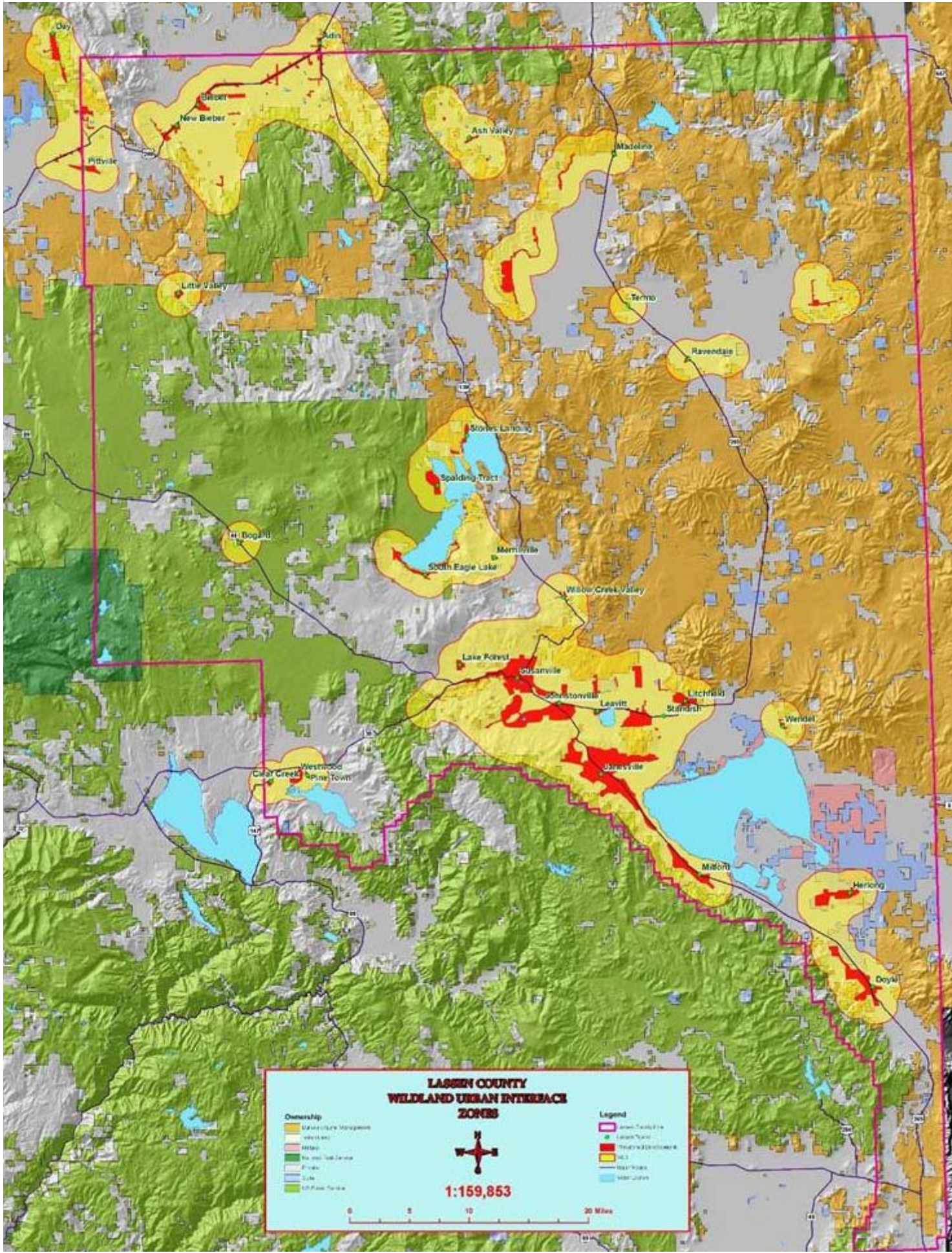
Wildfire: Any unwanted fire occurring in a wildland setting.

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



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):

<u>National Fire Plan</u>	<u>FY 2001 – Final USDA & DOI</u>	<u>FY2002 - USDA-FS</u>	<u>FY2002 - DOI</u>	<u>FY 2002 – Total USDA & DOI</u>
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 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) 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



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 1/4 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

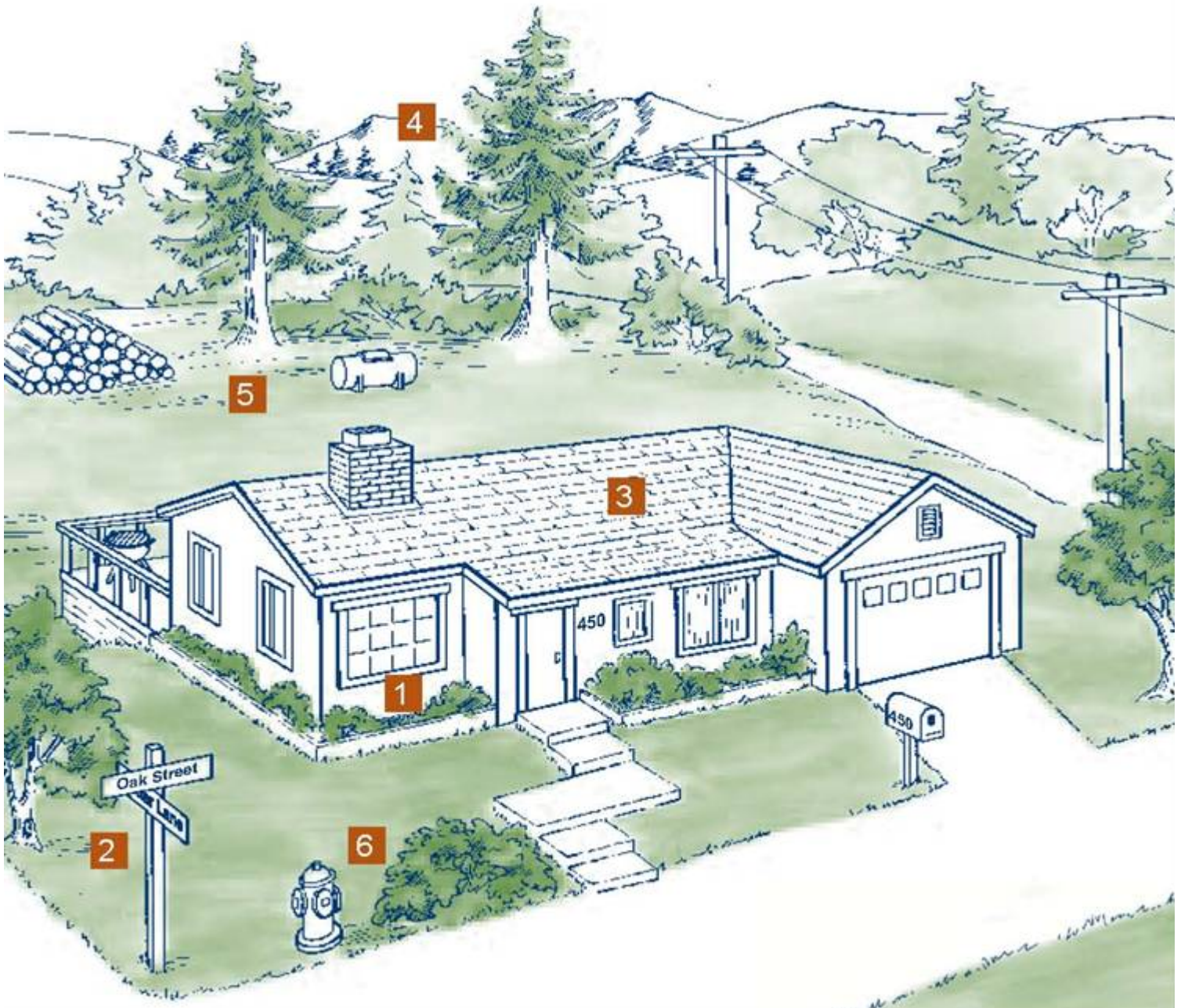
Homeowners Checklist



100 YEARS OF CDF
Preserving Our Legacy • Protecting Our Future

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How To Make Your Home Fire Safe



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 non-flammable screen of 1/2 inch 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 1/4 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 fire fighter 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

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

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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