

DOYLE

Community Fire Safe Plan

Lassen County



January 2004

COUNTY OF LASSEN
BOARD OF SUPERVISORS

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COMMUNITY DESCRIPTION

Population

According to U.S. Census Bureau Data, the population for the Doyle Zip Code Area (96109 – see map below) in 1990 was 985 and the estimated population based on the 2000 census was 1,164 persons. The new Federal prison being constructed just west of the Sierra Army Depot is expected to generate additional housing demand and rural residences in the Doyle community. The map below indicates the coverage area relevant to this information.



The following table provides additional housing structure information from the 2000 census:

	<u>No.</u>	<u>%</u>
<u>HOUSING OCCUPANCY</u>		
Total housing units	587	100.0
Occupied housing units	467	79.6
Vacant housing units	120	20.4
For seasonal, recreational, or occasional use	42	7.2
Homeowner vacancy rate (percent)	3.2	(X)
Rental vacancy rate (percent)	16.1	(X)

<u>HOUSING TENURE</u>	<u>No.</u>	<u>%</u>
Occupied housing units	467	100.0
Owner-occupied housing units	363	77.7
Renter-occupied housing units	104	22.3
Average household size of owner-occupied unit	2.39	(X)
Average household size of renter-occupied unit	2.87	(X)

Values at Risk

The Doyle Community Fire Safe Plan Area is defined as the area within the Doyle Fire Protection District (Doyle FPD). The community is within the Doyle Subarea of the Lassen Southeast Planning Area. Within and surrounding the community of Doyle, physical features that are potentially at risk from encroaching wildfires consist of existing residences, churches, a school, an emporium, a restaurant, RV park, infrastructure, and most importantly the residents themselves. Other more intrinsic, though possibly less tangible values at risk include visual impacts, aesthetics, security, wildlife habitat, and air quality. A loss of any number of these physical features or intrinsic values may also impact employment, cost-of-living, insurability and rates, health, and community stability.

Natural Resources at Risk

Doyle, an old railroad town, is primarily a farming and ranching community with a large portion of the work force working outside the community area. Land ownership is comprised of Federal, State, and private holdings. The community and the surrounding Doyle FPD lies within an open semi-arid, sagebrush covered valley drained by Long Valley Creek. Long Valley Creek empties into Honey Lake just north of Herlong Junction.

The community of Doyle is bordered by the Diamond Mountains immediately to the west and the Fort Sage Mountains across the valley to the east. The Beckworth Ranger District of the USDA Forest Service Plumas National Forest (PNF) and the Carson City, Nevada, Field Office of the Bureau of Land Management (BLM) administer Federal lands. The Federal lands are managed for multiple use. The California Department of Fish and Game administers the Doyle Wildlife Area encompassing 10,740 acres of wildlife habitat along Long Valley Creek. This habitat provides important winter range for mule deer as well as year-round and seasonal habitat for avian and other terrestrial wildlife. The private land consists of cropland, rangeland, and rural residential holdings.

Transportation

US 395 is the primary transportation route that traverses in a northwest-southeast direction through the community. In addition to US 395, the community is served by tributary County roads and bisected by a Union Pacific Railroad line. The Doyle Airport administered by Lassen County is

located just south of County Road A25 and west of A26 approximately 10 miles north of Doyle at the community of Herlong.

Level of Service Provided to Community

The California Department of Forestry and Fire Protection (CDF) bears the primary responsibility for suppression of wildfires on State Responsibility Area (SRA). However, through inter-agency agreements the CDF and Federal fire agencies transfer operational responsibilities for strategic and logistical reasons. Within and around the community of Doyle the PNF has primary responsibility for wildland fires west of US 395 and BLM has primary responsibility for wildland fires east of US 395. The Doyle FPD has primary responsibility for structure fires within its district.

The Doyle FPD, comprised of 15 volunteers, responded to 141 calls in 2002. The Doyle FPD has a mutual aid agreement with CDF, Sierra Army Depot, and the Milford FPD. Due to insufficient funding, the Doyle FPD does not enter into formal mutual aid agreements with BLM or PNF as these agreements require 2 to 12 hours of assistance with no reimbursement. The Doyle FPD will provide equipment and firefighters to these agencies inside and outside their District at standard contract rates, provided this assistance does not compromise their primary role.

The Susanville Interagency Fire Center reports the following equipment available for the Doyle FPD:

<u>Equipment</u>	<u>Type</u>	<u>Gallons</u>	<u>GPM</u>	<u>Drive</u>	<u>Other</u>
Engine	3	600	250	4x4	
Engine	3	450	250	4x4	Foam
Engine	2	500	500	4x4	
Engine	1	400	1000	2X4	Extrication JAWS, Foam
Engine	1	1000	1000	2X4	
Pick –Up Truck		50		4X4	
Water Tender		2500			Trailer

The Doyle FPD station also has a 27,000-gallon underground water tank for refilling fire engines and water tenders but there is no central water system for fire hydrants within the community. In addition, the BLM Station located in Doyle is staffed seasonally, March-November, with a full staff of 7-8 personnel during the peak fire season. Equipment includes one Type 3 Engine (500 gallon) and one Type 6 Engine (300 gallon).

Restricting Covenants and/or Ordinances

The community of Doyle is unincorporated. As such, no specific restricting covenants and/or ordinances relating to wildland fire, other than those required by the State and policies adopted by the County and listed below, were identified that apply to this community.

Enforcement of vegetation clearing around buildings on SRA land, per California Public Resources Code 4291 (PRC 4291), is normally CDF responsibility. Within the Doyle FPD this responsibility has been transferred to the BLM and PNF through a master agreement.

However, the CDF continues to serve as the permitting agency for State law governing commercial tree harvesting and burning on private land.

Lassen County recognizes the problems associated with wildfire and has adopted appropriate policies. Specific implementation measures include the following:

1. Implement a study to locate and identify areas of existing and potential fire, geologic, and health hazards.
2. Require all structures and developments to strictly adhere to PRC 4291 (clearing for defensible space).
3. Subdivision and minor land division ordinances should require that roads constructed be of sufficient width and that there be multiple ingress and egress options for evacuation routes.
4. Population centers should be encouraged to improve or install water systems with adequate storage capacities.
5. Communities should be protected by fuelbreaks together with fire suppression equipment backed up with an adequate water supply.
6. For the purposes of faster response time of fire suppression equipment, all major and minor roads should have signs identifying their names.

These measures were included in Resolution No. 2552, adopted by the Board of Supervisors on September 3, 1974. This resolution is included as the *Safety and Seismic Safety Element* of the Lassen County General Plan 2000.

Resolution No. 88-117, adopted by the Lassen County Board of Supervisors on November 29, 1988 established "goals, policies and programs for residential development in areas of the unincorporated territory of Lassen County which are not located within the boundaries of any fire protection district or other agency which provides structural fire protection". This resolution specifically outlines actions, facilitated by the County, that may be taken by existing or newly formed fire protection districts to establish capital development revenue sources in order to provide adequate fire protection in designated County growth areas.

In addition, Ordinance No. 427-C was adopted by the Lassen County Board of Supervisors on June 13, 1989 and amended to Chapter 12.08 of the Lassen

County Code. This section prohibits the use of wood shakes or shingles for new construction (roofing or siding) in the unincorporated territory of the County. The provision also applies to existing buildings when fifty percent (50%) or more of the roof or siding is to be replaced.

The Fire Safety Standards Ordinance No. 502 was adopted by the Lassen County Board of Supervisors on June 12, 1990, adding Chapter 9.16 to Title 9 of the Lassen County Code. A summary of the ordinance was published in compliance with the provisions of the California Government Code Section 25124(b) and reads as follows:

“Effective July 12, 1990, the Lassen County Fire Safety Standards Ordinance will establish the policy that all new development within the unincorporated area of the County will be required to meet minimum standards for the adequate fire protection for the particular type of development. These standards will not be applicable within the City of Susanville nor affect State or Federal agencies. Any law, regulation or ordinance involving fire safety which is more restrictive will control over the provisions of Ordinance.

The fire safety standards imposed by the proposed ordinance will apply to new development such as parcel map applications, subdivisions and other development, including commercial, industrial, residential and other development requiring a County permit, to ensure that firefighting equipment will be able to reach and effectively operate at all locations of the new development.

The regulations are broken down into three areas of development classification: Subdivision Standards, Building Standards and Recreational Vehicle/Mobilehome Park Standards. Each of these three classifications are further defined as to access requirements, identification standards, water requirements and construction standards.”

This ordinance adopted in response to what was at the time “an unprecedented rate of building development in its unincorporated forest and watershed areas” combined with “one of the driest summers in several decades and the hazard of forest and brush fires... at an unparalleled high level”. Chapters 9.16, 12.20, and 12.24 of the Lassen County Code were subsequently amended, under Ordinance 502A, on September 24, 1991. This amendment delegated enforcement authority to the County Fire Warden and inspection, certification, and reporting requirements and procedures by the County Fire Warden to the County Building Inspector prior to issuance of a certificate of occupancy.

Community Legal Structure

As are most rural communities, the community of Doyle is unincorporated. There is no formal legal or political structure beyond those provided by State and County governing bodies and the Doyle FPD.

Media

The Doyle community is served primarily by the Lassen County Times, a weekly (Tuesday) newspaper published in Susanville. As noted in the publication, it is "adjudicated a legal newspaper and qualified for publication of all matters required by law to be published in a newspaper". They may be contacted at (530) 257-5321, e-mail to LCTime@AOL.com.

Several television stations are available with standard antennas, via repeaters on the surrounding mountains, both from Reno as well as interior valley communities, including KCRA (channel 3) in Sacramento. Cable service is available in portions of the community and satellite dishes are widely used as well for television reception.

Schools

The Long Valley Elementary (Charter) School, grades K-8, is located in Doyle. Part of the Fort Sage Unified School District, it has an enrollment of 196 students for the 2001-02 school year. The school building is equipped with a fire alarm system; however sprinkler systems have not been installed. Evacuation plans are in place and fire drills are conducted regularly during the school year (*Reference #12*)

Physical Description

Access/Roads

Most primary surface streets are paved, wide, and easily navigated with street signs and posted names. There are single ingress and egress streets in the community.

The roads outside the community but within the Doyle FPD are more variable, and include less maintained dirt roads and private access roads without proper road signs.

Structures

There is a mixture of buildings in the community including ordinary wood frame construction and mobile homes. Roofing materials are generally metal or composition shingles, which help protect against embers from a wildfire or chimney. With few exceptions, the buildings are spaced widely apart.

Utilities

All residents are on wells for water as there is no central water system within the community. There are no fire hydrants. Power and telephone service is above ground.

Obstacles to Emergency Response Vehicles

Trains passing through the community on the railroad can block emergency vehicle traffic.

VEGETATION CONDITIONS WITHIN AND SURROUNDING COMMUNITY

Vegetation Fuel Types, Condition, & Fuel Models

The map in Appendix "B" depicts the major vegetation fuel types within and surrounding the community of Doyle.

Sagebrush/Grass: The predominant fuel type, depicted in yellow, is indicated as pine/grass, though it is mainly comprised of sagebrush and annual grass. Sagebrush and annual grass is estimated to account for over 90% of the fuel type within the community area. This fuel type most closely approximates Fire Behavior Fuel Model 2 and has the following characteristics important for estimating fire behavior (*Reference # 10*)

Total fuel load, < 3-inch, dead and live	4.0	tons per acre
Dead fuel load, 1/4 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. 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.

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.



Fuel Model #2

Tall Chaparral: Depicted in brown, tall chaparral is the second most significant fuel type within the community area. Tall chaparral occurs in isolated pockets mainly along the western edge of the community area. This fuel type most closely approximates Fire Behavior Fuel Model 4 and has the following characteristics important for estimating fire behavior (*Reference # 10*):

Total fuel load, < 3-inch, dead and live	13.0	tons per acre
Dead fuel load, 1/4 inch	5.0	tons per acre
Live fuel load, foliage,	0.5	tons per acre
Fuel bed depth	1.0	feet

Tall chaparral is an extremely hazardous fuel type. Once ignited, fires in this type can throw firebrands in front of the fire. Under the same wind speed and fuel moisture scenario as depicted for annual grass and sagebrush, fires in tall chaparral can spread nearly one mile per hour and have flame lengths of 19 feet. While creating and maintaining adequate clearing and defensible space around buildings can reduce the threat to life and property loss from fires occurring in this fuel type, secondary defenses in the form of firebreaks and fuelbreaks are necessary to fully mitigate the threat.



Fuel Model #4

WILDFIRE THREAT EVALUATION

Area Fire History

The fire history in the Doyle community as illustrated on the map (see “Appendix C – Fire History Map”) reveals that large (300+ acres) fires occur very frequently on the east facing slopes of Diamond Mountains and down to the valley floor. Fire records indicate that ignition of smaller fires within the valley floor are infrequent. Primary sources of ignition include lightning and escaped outdoor burning. Vehicles traveling along US 395 can also be a contributing source for wildfire ignition, either through crashes or the careless discharge of burning material from the vehicle. In addition, the railroad is an infrequent but potential source of fires.

The Doyle community has been listed in the Federal Register (August 17, 2001) as an Urban Wildland Interface Community in the Vicinity of Federal Lands that are at High Risk from Wildfire.

Expected Fire Behavior

The climate in and around the community of Doyle is typical of high desert areas of northeastern California. Summers are hot, dry, and often very windy. The average summer maximum temperature for July and August is 93° F. Annual rainfall is 11 inches with approximately 0.27 inches falling in July and August. Most of the precipitation falls as snow and rain during the winter months, November – March. The remaining moisture is contributed

by regional spring rains and localized summer storm cells. The elevation ranges from 4000 feet on the Honey Lake valley floor to peaks of the Diamond Mountains with elevations exceeding 8000 feet.

Erratic winds are common in the area. As per the Master Environmental Assessment for the Lassen Southeast Planning Area: *"Prevailing winds are generally from the southwest. Periods of strong, gusty winds have frequently resulted in overturned camper shells and trailers. The California Department of Transportation has reported that traffic has been stopped at Hallelujah Junction and not allowed to travel northward on 395 during periods of high winds. Winds at these times are estimated to be in excess of 65 M.P.H. (Reference #2)."* Discussions with fire fighting personnel indicate that winds often drive fires rapidly down hill from the top of Diamond Mountain ridge.

The current wildfire threats to the community come from large fires originating on the slopes of the Diamond Mountains and smaller fires originating in the immediate vicinity of dwellings. There are two primary situations where structures are at risk from wildfires in the Doyle community. The first situation occurs where structures are located on or near steep slopes with moderate to heavy fuels. This situation occurs along the bottom edge of the Diamond Mountains, up the Doyle Grade along Willow Ranch Creek, and to a lesser degree, along the western edge of the Fort Sage Mountains. The second situation occurs around those structures where proper clearance of hazardous fuels, or defensible space, has not been accomplished.

The combination of highly flammable fuels in the community, the extended hot and dry summer periods, steep topography flanking to the east and west, and the strong and erratic winds create conditions for extremely unpredictable and hazardous wildland fire behavior. Based on these natural conditions and the area fire history, large fires can be expected to occur in the future. The degrees to which these recurring events impact the community depend largely on the steps taken, both by the public and private sector, to safeguard against catastrophic wildland fire. The recommendations in this community fire safe plan, if implemented, are designed to modify fire behavior in and around the community of Doyle.

Current Resource Management Wildfire Mitigation Measures

Vegetation conditions on Federal lands are regulated by the agency controlling and managing the land. Within and surrounding the community of Doyle, the two primary Federal land management agencies are the BLM and PNF. Both agencies are fully aware that hazardous fuel conditions on land they administer constitute a threat to communities in Lassen County; hence, the listing of the Doyle community in the Federal Register (August 17, 2001) as an *Urban Wildland Interface Community within the Vicinity of Federal Lands that are at High Risk from Wildfire*. Both agencies have established grant programs to assist local communities in reducing hazardous fuel conditions, initially focusing efforts in those urban-wildland interface

areas adjacent to public lands. Both agencies have proposed and plan to execute projects to reduce hazardous fuel conditions.

Currently, the PNF Beckworth Ranger District has planned the Crystal-Adams Defensible Fuel Profile Zone (DFPZ) Project. Initiated & funded through the Herger-Feinstein Quincy Library Group Forest Recovery Act of 1998, the project is intended to create a fuelbreak/shaded fuelbreak, depending upon vegetation, along the crest of the Diamond Mountains from the Doyle Grade south to Adams Peak. Due to litigation the fuels management project has been delayed, but is still planned to begin in 2003.

RECOMMENDATIONS

Community Recommendations

Community Fuel Reduction Zone

A community fuel reduction zone could be established along the entire western boundary of the Doyle FPD. An on-the-ground inventory is necessary to identify the specific location of this zone. Segments within this proposed zone should be prioritized based on existing fuel condition and proximity to dwellings an example of locations is depicted in Appendix B.

Infrastructure Improvements

The Lassen County Fire Protection Study 1983 prepared for the Lassen County Local Agency Formation Commission recommended improvement of water availability within the Doyle FPD, an inventory of available water sources, and a requirement for a fire hydrant system for all new subdivisions (Reference # 13).

The following specific measures, appropriate to individuals and residences within and around the Doyle community, are recommended to reduce the threat of wildfire:

1. The development of a community water system (fire hydrant and/or storage) for fire emergencies should be investigated. Available water sources should be inventoried and the specific location of the water system infrastructure identified. Once this is accomplished, a cost estimate can be prepared for inclusion in the appropriate grant proposal.
2. Mail out appropriate informational packets developed for this purpose such as Homeowners "Watch Outs" developed by the California Fire Safe Council to all parcel owners. Use the Lassen County Assessor's roll to identify owners.

3. Identify specific private parcels with fuel conditions that threaten adjacent properties and make personal contact with these property owners.
4. Increase compliance with PRC 4291 provisions for removal of flammable vegetation, overhanging tree limbs, etc. from around buildings and propane tanks. Follow-up law enforcement action should be taken as necessary to achieve compliance.
5. Encourage landowner/homeowner to comply with additional defensible space recommendations in Appendix D.

Defensible Space

In order to protect structures from wildland fire it is recommended that a defensible space be constructed around all structures, particularly residences, with vegetation encroachment within the community of Doyle. Implementing the basic clearing requirements specified in PRC 4291 and creating additional defensible space can reduce the threat to dwellings and other buildings within the community.

Defensible space refers to *"that area which lies between a residence and an oncoming wildfire where the vegetation has been modified to reduce the risk of wildfire threat and which provides an opportunity for firefighters (and the homeowner) to safely defend the residence"*. All fuel types can be modified to create defensible space. Fuel modifications include thinning and pruning to break up fuel continuity and reduce or eliminate crown fires. Creating a defensible space around a residence involves the cutting, removing, and/or thinning of grass, brush, trees, or any other vegetation type to within a minimum specified distance, or farther, from structures. The amount of thinning and pruning needed to provide sufficient defensible space in and around the community is dependent upon characteristics such as fuel type, topography, and seasonal wind and weather patterns. The concept of "defensible space" also applies to roads, driveways and other access or escape routes that individuals, firefighters, or other emergency personnel may use to protect life or property.

The "Appendix D – Defensible Space" provides detailed information, including specific measures and illustrations, that can be applied to protect structures from the risk of wildland fire. In addition, the Lassen County Fire Safe Council and CDF have several excellent publications that address creation of defensible space.

Monitoring, Evaluation, and Maintenance

As part of the ongoing efforts to ensure that the Doyle community continues to be protected or reduce the risk from wildland 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 fuelbreaks, 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 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 staffing is limited in order to better focus and utilize available resources.

Proposed Projects

Proposed Project	Responsible Party
Mail out fire safe information to all landowners within the community and FPD.	Doyle FPD/Lassen County Fire Safe Council (LCFSC)
Inventory for specific problem properties.	Doyle FPD
Recruit cooperators for assistance in fuel reduction/removal.	Doyle FPD
Prepare fuel reduction zone plan.	Doyle FPD/LCFSC/BLM
Community fire hydrant system and/or strategically located storage tank system feasibility study.	Doyle FPD/LCFSC/ Lassen County
Encourage landowner/homeowner to comply with additional defensible space recommended in Appendix D	BLM, Doyle FPD, PNF
Inventory for additional FPD equipment & facility needs and seek appropriate funding sources.	Doyle FPD

COMMUNITY EDUCATION, OUTREACH, AND INVOLVEMENT RECOMMENDATIONS

The Doyle community is at risk from wildfires. This Community Fire Safe Plan has been prepared to assist the Doyle community in achieving a greater level of protection from wildfires. When fires erupt, most people rely on the fire department for their protection. This approach to safety is perilous in the urban/wildland 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 Doyle community if initiated and maintained by citizens within the community (Reference #11).

The Fire Safe Council was formed at the State level in 1993 to educate and encourage Californians to prepare for wildfires before they happen to reduce the risk to their communities, their homes, and their property. Since then, many local Fire Safe Councils have been established. Utilizing the combined expertise, resources and distribution channels of its members, the Fire Safe Council fulfills its mission to preserve California's natural and manmade resources by mobilizing all Californians to make their homes, neighborhoods and communities fire safe (Reference #11)

This Plan is specifically prepared assuming that the community of Doyle, Doyle Fire Protection District, and Lassen County Fire Safe Council will provide the leadership role for acting on recommendations included in the plan. The Council has already been instrumental in gaining cost-share assistance to execute fuel reduction projects in Lassen County.

APPENDICES

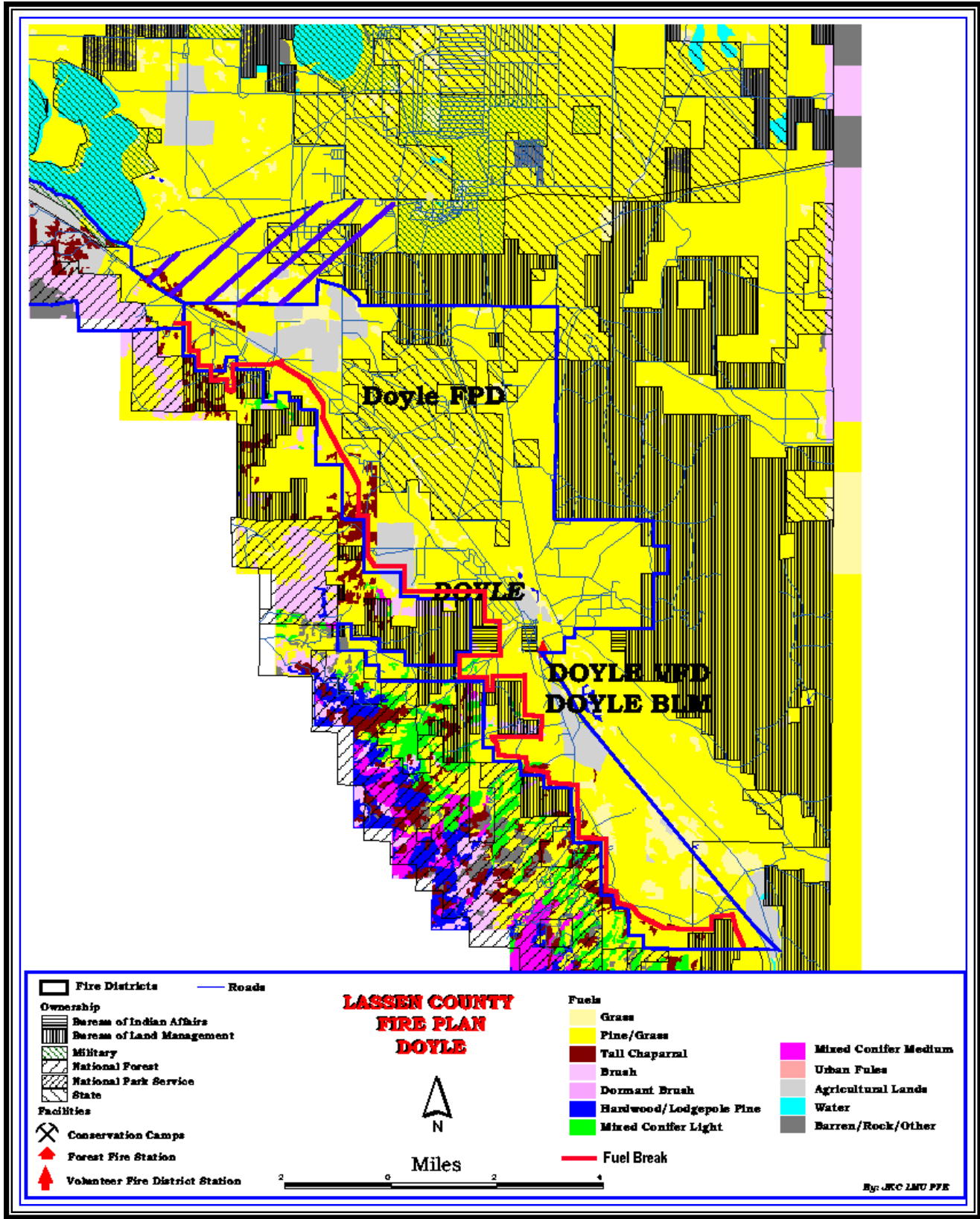
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Appendix A – Vicinity Map



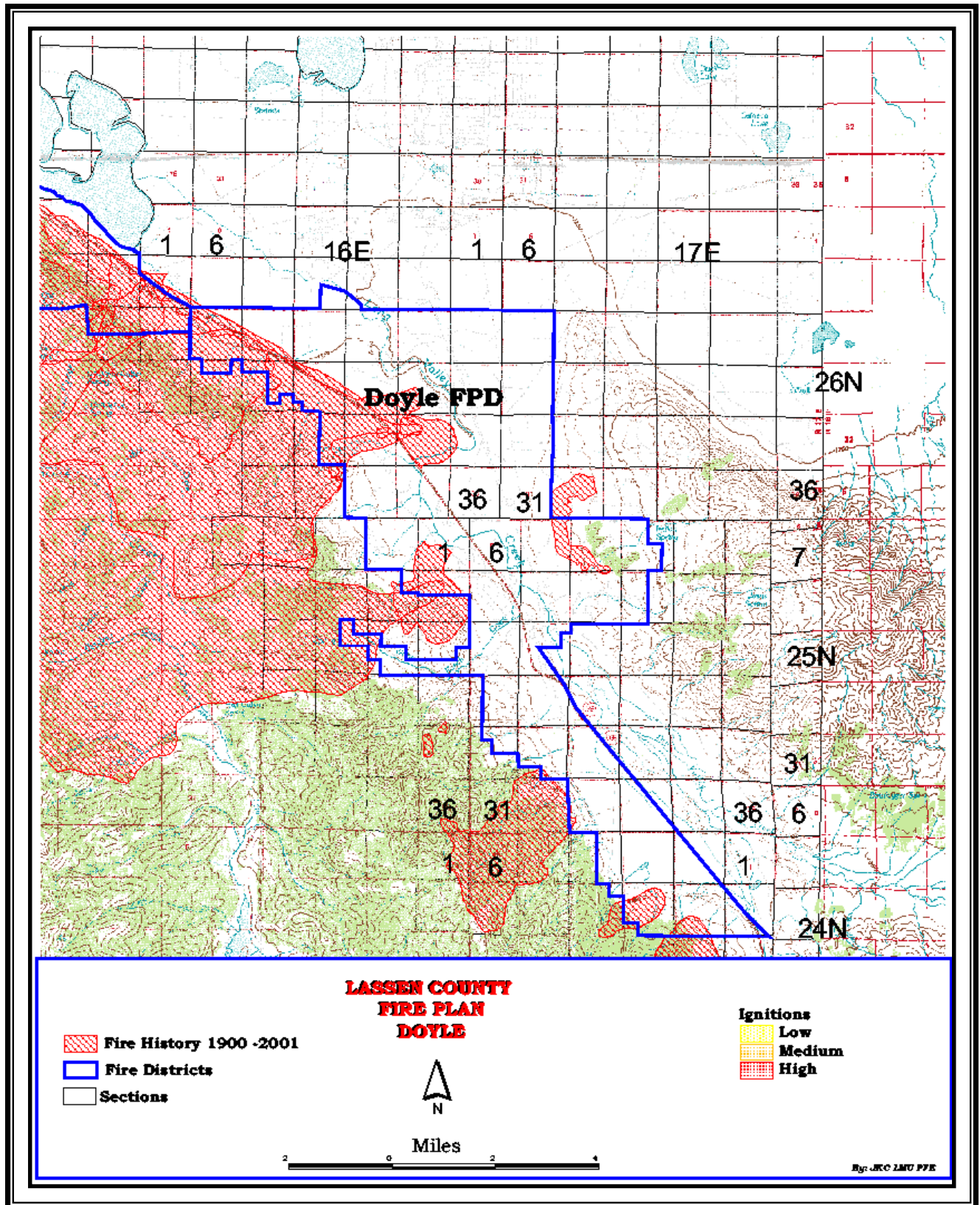
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Appendix B – Vegetation Type Map



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Appendix C – Fire History Map



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

- (a) Maintain around and adjacent to such building or structure a firebreak made by removing and clearing away, for a distance of not less than 30 feet on each side thereof 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, ornamental shrubbery, or similar plants which are used as ground cover, if they do not form a means of rapidly transmitting fire from the native growth to any building or structure.
- (b) Maintain around and adjacent to any such building or structure additional fire protection or firebreak made by removing all brush, flammable vegetation, or combustible growth which is located from 30 feet to 100 feet from such building or structure or to the property line, whichever is nearer, as may be required by the director if he finds that, because of extra hazardous conditions, a firebreak of only 30 feet around such building or structure is not sufficient to provide reasonable fire safety. Grass and other vegetation located more than

30 feet from such 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.

- (c) Remove that portion of any tree which extends within 10 feet of the outlet of any chimney or stovepipe.
- (d) Maintain any tree adjacent to or overhanging any building free of dead or dying wood.
- (e) Maintain the roof of any structure free of leaves, needles, or other dead vegetative growth.
- (f) Provide and maintain at all times a screen over the outlet of every chimney or stovepipe that is attached to any fireplace, stove, or other device that burns any solid or liquid fuel. The screen shall be constructed of nonflammable material with openings of not more than one-half inch in size.
- (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 may vary the requirements respecting the removing or clearing away of flammable vegetation or other combustible growth with respect to the area surrounding said structures. No such exemption or variance shall apply unless and until the occupant thereof, or if there be no occupant, then the owner thereof, files with the department, in such form as the director shall prescribe, a written consent to the inspection of the interior and contents of such structure to ascertain whether the provisions hereof and the regulations adopted hereunder are complied with at all times.

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.

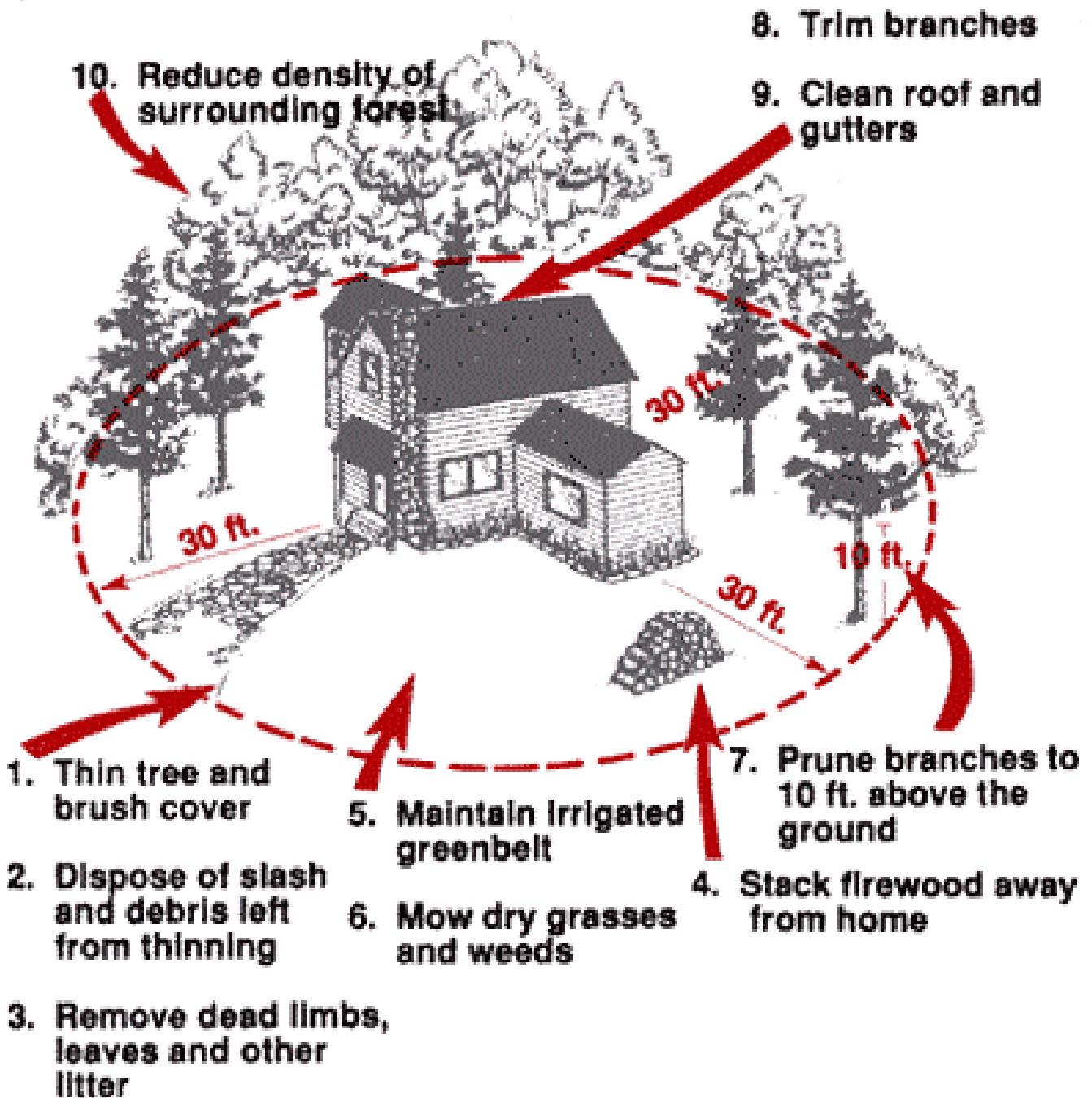
(b) If a person convicted of a violation of Section 4291 produces in court verification prior to imposition of a fine by the court, that the condition resulting in the citation no longer exists, the court may reduce the fine imposed for the violation of Section 4291 to fifty dollars (\$50).

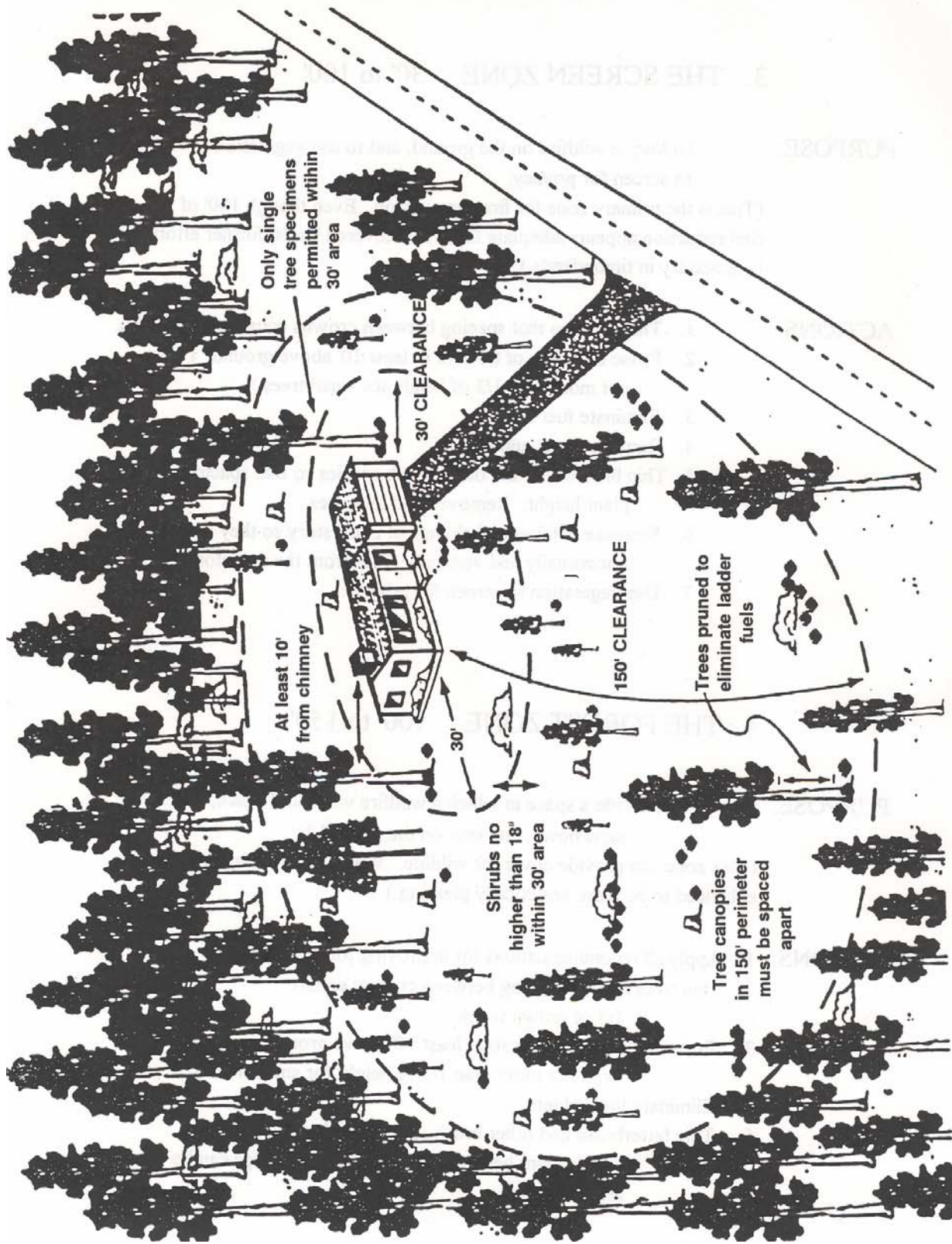
Supplemental Defensible Space Clearances

The following supplemental defensible space clearances, beyond the required minimum distance of 30 feet, are recommended by CDF in the following fuel types:

Fuel Model #	Fuel Model Type	Recommended Fuel Reduction Distances
1	Grass	30 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

FOLLOW THESE GUIDELINES





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Homeowner's Checklist

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 1/2 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

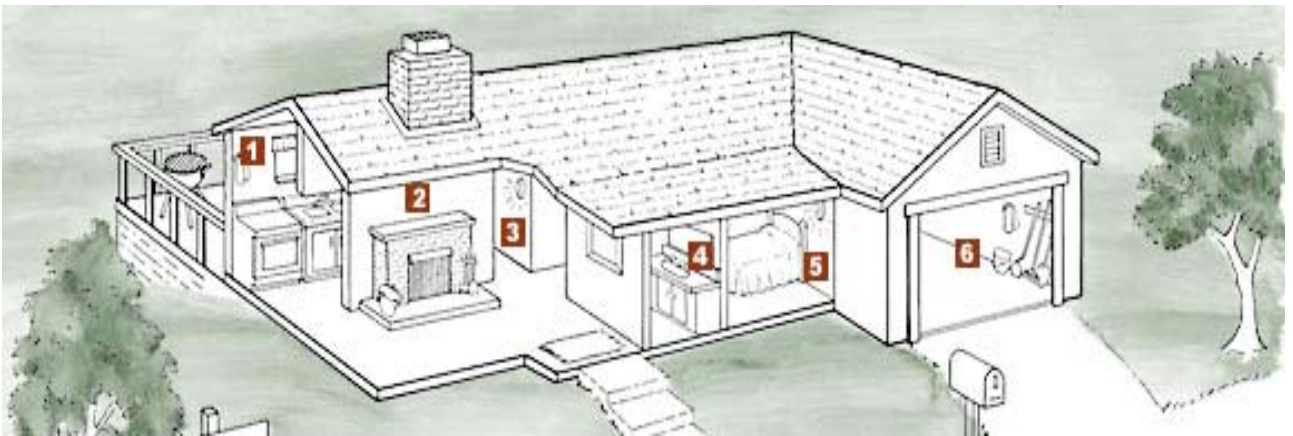
5 Yard

- 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 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 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

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