

CHAPTER 4

COMPLETING THE PICTURE: CONCLUSIONS AND ACTIONS FOR COMMUNITY WILDFIRE PROTECTION

DEFINING WILDLAND-URBAN INTERFACE BOUNDARIES IN MENDOCINO COUNTY

“**Our whole county is a WUI!**” So responded county residents when meeting facilitators described the term “Wildland-Urban Interface” and asked attendees to name their communities. Indeed, they were very close to the truth, and with this in mind, we will attempt to define the WUI situation in our county’s various areas.

The Healthy Forests Restoration Act of 2003 provides that, in a Community Wildfire Protection Plan, communities themselves may define the sizes and boundaries of their Wildland-Urban Interface areas. This means that, based on their local topography, weather, wildland fuels, and other factors, they may determine an appropriate distance away from their population centers within which vegetation reduction projects should be undertaken to protect their communities.

Defining such boundaries in Mendocino County is a difficult task, for this reason. *The majority of Mendocino County’s residents live not in the Interface per se but rather in the Wildland-Urban Intermix, in homes and small communities scattered throughout thick wildland fuels, with no clearly distinguishable boundaries.* This situation resulted in part from a lack of decisive planning relative to wildfire danger, as was noted in the CDF Executive Summary at the beginning of Chapter 3. It resulted also from the strong desire of many Mendocino County residents to live in privacy, surrounded by the untouched beauty of pines, tanoaks, manzanitas, scotch broom, and other vegetation that happens to be highly flammable.

How then can WUI boundaries be determined? Due to the desire to create this Plan within a relatively short time frame, and the large number of WUIs identified (see Appendix B for the complete list), a case-by-case analysis of each community’s boundaries was not possible. Such analyses, including consideration of natural and man-made barriers that might become parts of fuel breaks, will be accomplished in the future and reported in this Plan’s revisions.

At this time, however, the county’s communities may be preliminarily divided into the two types of WUIs: Interface and Intermix.

Interface Communities. These larger population centers, which are cities containing just under one-third of the county’s residents, have discernable urban-interface boundaries:

- Willits, in Planning Zone 1
- Ukiah, in Planning Zone 2
- Fort Bragg, in Planning Zone 4

We wish to identify the WUI boundaries of these communities as extending five (5) miles beyond the borders of their city limits.

Intermix Communities. These smaller population centers, most of which are located along a portion of one of the county’s major roads, have little or no distinct interface boundary, and most are immediately surrounded by wildland fuels:

- Leggett and Piercy, small towns located in thick forests along the Eel River
- Branscomb, to the west of Laytonville, a lumber mill town in thick forest
- Brooktrails, with 4,000 persons living mostly on heavily wooded hillsides
- The coastal towns of Gualala, Point Arena, Manchester, Irish Beach, Elk, Albion, Little River, Caspar, Cleone, Westport, and Rockport, located on the coast and intermixed with abundant trees and other vegetation
- Redwood Valley, Calpella, Hopland, Laytonville, Covelo, Yorkville, Boonville, Philo, and Navarro, small population centers in the flatlands, surrounded immediately by light flashy fuels such as oak woodlands with tall grasses
- Potter Valley in the eastern-most valley of the county, primarily an agricultural town surrounded by cultivated fields intermixed with trees and native brush.

The list of Wildland-Urban Interface/Intermix Communities identified by persons at the community meetings, reproduced in Appendix B, includes hundreds more WUIs. These are mostly Intermix areas, and their populations range from hundreds to only a few homes. Of course, communities with only a handful of homes may not qualify as official federal “Communities at Risk.” However, they do have distinct names or characters, and their residents identify their home locations by these names. They are most definitely at risk, as they are exposed to dense fuels, steep slopes, and the potential for severe fire weather. The exact natures of small Intermix communities will be addressed in the future as mapping of these communities is performed.

We wish to designate a WUI boundary of five (5) miles around the Intermix communities listed above and all communities identified in the List of WUI Communities appended to this CWPP.

ASSETS AT RISK IDENTIFIED BY COUNTY RESIDENTS

At this Plan’s outreach meetings, the second type of information gathered was residents’ perception of Assets as Risk in their WUIs. Attendees completed 3-page forms identifying 24 categories of assets, roughly paralleling those in the California Fire Plan and duplicated in Chapter 3, Part 1; this section supplements the Assets at Risk data mapped and listed there. MCFSC personnel tallied the residents’ responses and performed some analysis, as listed in the chart below. The chart’s columns are these:

- Attendees = the number of persons who attended the meetings
- Forms = the number of attendees who at least partially completed the 3-page form. Very few attendees filled out the entire form, partly due to meeting time constraints.
- Homes at Risk Completed = the number of attendees who responded to the question about the level of risk to homes in their areas
- Homes at High Risk = the number and percentage of persons who responded who feel their communities' homes are at high risk of destruction by wildfire

Because protection of lives and homes is a top priority of Mendocino County's fire safe efforts, we include here data only about homes at risk. These figures are not conclusive or objective, as they are only thoughts captured at a single time. Further, as the meetings were not equally advertised due to limitations of time, attendance at the meetings cannot be construed as truly representative of all residents. This information, however, is still valuable.

	<u>Number of Attendees</u>	<u>Forms Completed</u>	<u>Homes at Risk Completed</u>	<u>Homes at High Risk # and %</u>	
<u>Planning Zone 1</u>					
Willits	33	18	12	12	100%
Laytonville	25	14	11	9	82%
Leggett	14	6	4	2	50%
Covelo	<u>11</u>	<u>11</u>	<u>4</u>	<u>4</u>	<u>100%</u>
<i>Totals/average</i>	83	49	31	27	87%
<u>Planning Zone 2</u>					
Ukiah	33	16	13	10	77%
Hopland	9	4	4	3	75%
Redwood Valley	<u>12</u>	<u>12</u>	<u>9</u>	<u>7</u>	<u>78%</u>
<i>Totals/average</i>	54	32	26	20	77%
<u>Planning Zone 3</u>					
Boonville	22	14	7	3	43%
Point Arena	<u>20</u>	<u>15</u>	<u>14</u>	<u>12</u>	<u>86%</u>
<i>Totals/average</i>	42	29	21	15	71%
<u>Planning Zone 4</u>					
Mendocino	20	10	7	6	86%
Westport	<u>10</u>	<u>6</u>	<u>4</u>	<u>3</u>	<u>75%</u>
<i>Totals/average</i>	30	16	11	9	82%
County Totals:	209	126	89	71	80%

In summary, of meeting attendees who ranked homes at risk, 80% feel their own and their communities' homes are at high risk of destruction by wildfire.

Attendees also repeatedly emphasized concern about these assets and values:

Assets (Infrastructure)

- Electric power lines, most of which belong to PG&E
- Telephone and other communication lines
- Water supply, storage, and treatment facilities
- Cell phone towers
- Emergency radio repeater sites
- Solar power facilities (privately owned)
- Roads and bridges

Values

- Human lives
- Pets, horses, and livestock
- Wildlife
- Rivers and watersheds
- Recreational and scenic areas
- Timber
- Historic buildings, including these:
 - Laytonville: Bowman Homestead
 - Mendocino: Many buildings in Village of Mendocino
 - Comptche: Old Comptche School
 - Westport: Many buildings 100 years old, including Lost Coast Inn and Dubois House
 - Covelo: Eel River Forest Service Station
 - Leggett: Peg House
 - Point Arena and Gualala: Historic districts, Carriage House, St. Orres Hotel/restaurant, Old Milan Hotel outbuildings
 - Brooktrails: Brooktrails Lodge
 - Ukiah: Numerous buildings in town, plus Vichy Springs Resort to the west
 - Overall: Many barns at least a century old

A note about terminology. Both facilitators and meeting attendees, new to the world of wildfire planning, struggled with the term “assets at risk.” Some residents associated the word “assets” primarily with items of specific monetary worth. Facilitators therefore used both “assets” and “values” to explain the broad meaning of the information being sought. The division of the above lists into those categories reflects a general consensus gained from all twelve meetings.

STRUCTURE IGNITABILITY IN MENDOCINO COUNTY

As more people move into Mendocino County's WUI areas, structure ignitability – a building's susceptibility to catching on fire -- becomes a more pressing issue. Very few homes in the county have been lost to wildfire in the past several decades, but this good fortune could change on any day of any fire season.

Most structure losses due to wildfire can be prevented through attention to all three of these crucial practices:

- Proper planning, which locates homes and communities such that their exposure to wildfire is minimized
- Use of building design techniques that prevent flames or windborne embers from entering the structure, and use of building materials that are fire and heat resistant
- Managing and reducing the flammable vegetation around the structure

The typical home in Mendocino County's Interface and Intermix areas is far from being well-planned and well-designed as pertains to wildfire, and its vegetation is far from being sufficiently managed. Unfortunately, a significant percentage of these homes --

- Are built on steep hillsides with no setback from the slope
- Are of all wood construction
- Have roofs which cannot sufficiently resist ignition by blowing embers
- Have wooden decks under which flammable materials accumulate
- Have eaves and soffits that are not enclosed, and vents that are not screened
- Have large paned windows and glass doors facing heavy wildland fuels
- Are surrounded by trees with dead branches over the roof
- Are surrounded by dense, flammable vegetation or light, flashy fuels

All of these factors, of course, make for a high level of ignitions. A lesson on reducing structure ignitability could consist precisely of *not* doing all these things! A Wildfire Risk Assessment adapted by the MCFSC for Mendocino County from a Firewise Communities checklist covers all the above mistakes and teaches homeowners how to avoid them, in keeping with the requirements of California Public Resources Code Sections 4290 and 4291.

The Destructive Power of Embers

The vulnerability of untreated wood shake roofs was shown near Ukiah as this Plan was being compiled. Wind-driven flames of the 8-acre Watson Fire in Rogina Heights were racing uphill as firefighters scrambled to protect the numerous WUI homes above. In the thick smoke, the Incident Commander could not see what the Air Attack pilot reported from above: a home not directly impacted by flames, but with its wood shake roof on fire! The roof was soon extinguished, and the excellent work of local and CDF firefighters resulted in quick containment of this potentially devastating fire. But the lesson remains: *that home, with a shake roof, was the only structure damaged by the fire, and the ignition was caused by a flying ember.* Fire Safe and CDF personnel returning to the scene two months later were delighted to see the home sporting a new, less-combustible roof.

This example supports what wildfire researcher Jack Cohen has discovered, and why video footage of wildfires often shows the ruins of homes amidst nearly untouched trees: *flying embers are a major source of home ignitions, and structures must be built to resist them.* Further, it must be remembered that homes in the wildlands are also fuels – often more flammable than the vegetation surrounding them -- and burning embers from one home often ignite other homes. Thus a home that resists ignition helps nearby homes survive as well.

The Fire Safe Council would like to add here an observation regarding fire suppression techniques in the Wildland-Urban Interface. Often in a major wildfire the “bump and roll” method is used. This means that firefighters temporarily defend a home in the fire’s path by directing the fire around the home, then move to another home and do the same. Some firefighters using this method have visited the scene in the aftermath and been astonished that homes they defended, sometimes even at great risk to themselves, had nevertheless burned to the ground. The reason? Smoldering embers had hidden themselves in vulnerable places such as cracks in roofing material or inside unscreened vents. After firefighters left, the embers had burst into flames that eventually consumed the homes.

Such situations have resulted in hundreds of home losses, and add weight to the value of “sheltering in place.” In this scenario, able-bodied residents remain in their homes as the fire front passes, and then keep vigil to watch for, and extinguish, such smoldering embers, inside or out. Some wildfire educators in Mendocino County are beginning to educate residents on this option where evacuation may be impossible. They emphasize, however, that residents must be well informed and thoroughly prepared before choosing this course of action. We will return to this subject later.

Recommendations for Ignition Resistant Building Construction

As was noted at the beginning of this section, reduction of vegetative fuels must go hand-in-hand with ignition-resistant building methods and materials if WUI homes are to be consistently saved.

We can learn lessons for Mendocino County from analyses of past fires elsewhere, such as the 1961 Bel Air Fire, which destroyed 505 homes. (Thanks to Ethan Foote of CDF for this material.) The report “Decision Analysis of Fire Protection Strategy for the Santa Monica Mountains” found that 71% of the buildings with 26-50 feet of brush clearance survived the fire. However, *the survival rate of buildings exposed to the fire increased to 95% if the houses had both brush clearance and ignition resistant building construction.*

A similar pattern was seen on the 1990 Santa Barbara Paint Fire, as reported in *California’s I-Zone: Urban/Wildland Fire Prevention & Mitigation*. On that Fire, which destroyed 479 homes and major buildings, only 4% of the 438 houses surveyed survived when both non-flammable roofing and 30 feet of brush clearance were absent. Put plainly, this implied that 96% of homes with both flammable roofs and lots of brush were destroyed.

Specific recommendations for reducing the ignitability of structures have been available now for 40 years. One outcome of the Bel Air Fire was publication in 1965 of the *Fire Safety Guides for California Watersheds* by the County Supervisors Association of California. These recommendations have been updated through the years, the current version being the *Structural Fire Prevention Field Guide for Mitigation of Wildfires*. The recommendations for ignition resistant building construction address roofing, eaves and balconies, exterior walls, rafters, windows, doors, attic ventilation openings, and under floor areas.

Rather than attempt to duplicate all the current recommendations on structure ignitability here, we refer the reader to the *Structural Fire Prevention Field Guide*, available at <http://osfm.fire.ca.gov/structural.html>, and incorporate its recommendations by reference into this Community Wildfire Protection Plan.

In response to the persistent loss of life and property in wildfires, the most important of these recommendations is now a *requirement* for structures in Interface areas: all new buildings, plus any existing buildings undergoing significant re-roofing, are required by California Building Code’s Section 1503 to have ignition resistant roofing.

Fire Safe Planning in Mendocino County

The inclusion of fire safe concepts in land use planning and building construction was sorely lacking in Mendocino County in past decades. Unfortunately, the requirements of Public Resources Code Section 4290, over which CDF has jurisdiction for State Responsibility Areas, apply only to new construction after 1991. In addition, the current version of the California Fire Code has not been adopted either by the County as a whole or by most of the local jurisdictions, which means its provisions are not enforceable in most of the county. As is shown on the map of local fire districts at the end of Chapter 2, about 50% of the county’s lands lie outside of any local jurisdiction which could adopt the Fire Code. In sum,

Mendocino County is in great need of improved, comprehensive, fire safe planning in its many wildland areas, including adoption of a Fire Code commensurate with the county's wildfire risk.

In late 2003 MCFSC's Coordinator toured the aftermath of the Southern California Fires to learn about wildfire behavior and structure ignitions. One community in particular stood out as a model of fire safe planning. The development is in a classic Interface situation, with numerous homes surrounded by a boundary of wildland fuels. But this community was built with careful attention to all three fire reduction practices. Tasteful concrete walls with overlapping openings serve as fire breaks but allow residents access to the wildlands. The exteriors of the attractive homes, including their roofs, are non-combustible and guard against intruding embers. The interiors of all homes have water sprinkler systems to extinguish fires begun inside. Irrigated lawns and fire resistant plants surround the homes. The result? Although a major wildfire raged along the mountains bordering the community, consuming vegetation very near the homes, not one building was damaged.

Ron Montague, a fire planning expert from San Diego County, proposes another way to reduce the loss of homes, and it is included here as food for thought. Typical housing in WUI situations occurs along both sides of a dead-end road which is frequently the "one way in, one way out" that is so prevalent in Mendocino County. In such situations every home's back yard is a small Interface. Firefighters attempting to protect such homes typically park their engine in front and pull hoses to the back. After the Southern California Fires, MCFSC staff observed that home after home along such roads and especially cul de sacs had been reduced to piles of twisted metal and ash. Why? Because every back yard was a conduit bringing fire to the home, and there were not enough fire engines to go around. Ron Montague suggests a new model: building homes along the *inside* of a road that forms a loop around the homes. Such a road serves as a fire break and reduces evacuation congestion; and the back yards, which border each other, are mutually protective. In addition to greatly reducing the risk to homes, such a design would also reduce the risks to firefighters.

The ultimate goal for new structures in Mendocino County's WUIs should be not "defensibility" but "survivability." These are buildings that can survive a wildfire on their own, with no fire suppression efforts at all, such as those in the community described above. This concept, long promoted by Firewise Communities, is a model which Mendocino County's WUI residents would do well to emulate.

WILDFIRE MITIGATION PROJECTS AND PRIORITIES

Numerous wildfire mitigation projects in Mendocino County have been identified by the Fire Safe Council, CDF, the Bureau of Land Management (BLM), and the U.S. Forest Service. They include, but are not limited to, vegetative fuels reduction projects. In this section, Part One contains *all* projects identified to date. Fuels reduction projects are listed in Part Two.

PART ONE: ALL CURRENT AND PROPOSED PROJECTS

MENDOCINO COUNTY FIRE SAFE COUNCIL PROJECTS

Grant Funding Already Received by MCFSC:

Allen-Heath Memorial Foundation County Fire Planning Grant: \$14,000 was granted to fund the MCFSC's portion of this Plan's work, as described in Chapter 1. The Foundation granted the Council an additional \$20,000 in late 2005 to continue this and other planning and educational work in 2006. That grant will partially fund the Council's operational costs.

MCFSC Start-Up Grant: \$53,324 was awarded by BLM via the California Fire Safe Council Grants Clearinghouse, to support the Council's first year of operation with a full-time Executive Director, namely 2005. The Council had operated for the previous year on \$2,000 of donations and a volunteer Coordinator who is now employed by the Council.

Little Mill Creek Sheltered Fuel Break Grant: \$35,000 of BLM funding was received in early 2005 for creation of a fuel break along a strategic ridgetop road at the northwest end of Anderson Valley. The project involves both mechanical and hand treatment, with vegetation either chipped or burned, and is described in detail in Chapter 3's CDF Battalion 5 report.

Grant Funding to be Received by MCFSC in 2006:

Brooktrails Township Fire Program: \$73,054 of BLM funding was awarded to assist this extreme-risk area in 2006. Of these funds, part is earmarked for fire planning, including mapping and evacuation brochures. The remaining portion, with a large in-kind match by residents, will be used for roadside vegetation removal, plus improved road signage in the outlying areas of Sylvandale and Spring Creek. Fuels treatment will be done by mechanical and hand methods, possibly utilizing a masticator mounted on an adjustable boom.

Hopland Band of Pomo Indians Defensible Space Clearing and Fuel Break: \$22,250 of BLM funding was awarded for hand clearing around 60 homes on the Hopland Indian Reservation, which borders a University of California Field Station, and for a bladed fuel break around the area. A match valued at \$24,000 will be contributed by CDF in the form of LE-38 home inspections before and after the project work.

Mendocino County Title III Funds: \$20,000 of funding through Title III of HR 2389, the Secure Rural Schools and Community Self-Determination Act, was allocated by the Mendocino County Board of Supervisors in September 2005 for fire prevention education and planning. At present the MCFSC is awaiting the end, on December 19, of a 45-day public comment period required for Title III projects.

Projects Submitted by MCFSC but not yet funded:

The Fire Safe Council has submitted six additional “concept papers” through the Grants Clearinghouse for projects not yet funded. Most will be resubmitted in early 2006.

Mendocino County Fire Safe Mailer or Booklet. This project will create a full-color publication covering all aspects of rural fire safety, using pre-existing free-of-charge graphics and text, but with photos and facts tailored to Mendocino County.

50 Model Defensible Space Homes. This county is home to thousands of elderly and disabled persons who lack the resources to remove flammable vegetation around their homes. This project will provide hand clearing around 50 low-income homes, utilize the projects as opportunities to do educational outreach, and ensure maintenance of the clearing.

Pine Mountain Education/Signage/Fuel Reduction. The Pine Mountain Fire Safe Council created this very economical project, which includes a large community fire safe sign, quarterly fire safe mailers to its 304 homes, improved road signage, and chipping services, with a significant in-kind match of hand clearing to be performed by residents.

Rancho Navarro Fire Plan Development. This project, developed by the Rancho Navarro Safety Committee, includes an education campaign, chipping services, hand and/or mechanical fuels reduction along evacuation routes, and creation of a Fire Safety Plan.

McNab Ranch Address Signage and Mapping. This WUI is recognized throughout the county by fire professionals as at extreme risk of wildfire, and has already experienced several “close calls.” The project will unify address signage and develop laminated maps. A Knox Box at the ranch’s entrance will hold the maps for easy accessibility by firefighters.

Additional Projects for which MCFSC will (or may) seek funding:

Eucalyptus Tree Removal at Peachland Road. This project, identified as necessary by attendees at the Boonville community meeting, will remove an 800-foot-long swath of towering eucalyptus trees located along State Highway 128 across from Peachland Road, north of Boonville. These trees, now mostly “suckers,” carried the Peachland Fire across the highway in 1996, resulting in the destruction of two homes. The work will be done by fallers and hand crews with chain saws; permission and commitments have already been obtained.

Simpson Lane Fire Safety and Evacuation Planning. This WUI area southeast of Fort Bragg hosts hundreds of homes relying on one evacuation route. A potential alternate route is Pearl Drive, which if linked to Simpson Lane would create a loop. Exploration of this or other evacuation possibilities may require significant funding but could save many lives.

Community Building for Wildfire Safety. Due to Mendocino County’s immense size, geographical barriers, and varied topography and fuels, Fire Safe education, planning, and vegetation management efforts must be largely based in local communities. *But many WUI residents do not know their neighbors.* The MCFSC wishes to use educational events to help foster community spirit and a desire to work together to meet the common risk of wildfire. MCFSC has already begun this work but lacks funding to do so on the scale that is needed.

County-Wide Address and Road Signage Project. Finding homes in many rural areas is difficult in the daytime and nearly impossible at night. This project would encourage and fund durable signage with reflectorized letters and numbers at least 3” tall, easily visible from both directions, with arrows indicating clearly the location of each home.

County-Wide Mapping of WUI Communities and Creation of Evacuation Brochures. Updated mapping of WUI Communities not separately named in this section is a critical need. The MCFSC would like to provide local groups with both GIS mapping assistance and funding to print educational evacuation brochures they themselves create using their local knowledge. Maps would identify private water supplies, homes of persons needing assistance, and all other available information necessary to firefighters in an emergency.

County-Wide Chipper Program. As an incentive for persons able to do their own vegetation management, the MCFSC wishes to offer free or reduced-cost roadside chipping. Most rural residents utilize burn piles, resulting in reduced air quality and numerous escaped “control burns.” A local licensed, insured company would be hired for this work.

Fire Safe Educational Billboards along Highways. Equipment use and cigarettes tossed from cars cause numerous wildfires each year in the county. In addition to the smaller signs posted by CDF, the MCFSC would like to obtain billboard space along Highway 101 during fire season to educate residents and passers-through about the county’s high fire danger.

Educational Materials for Visitors. Following upon excellent suggestions by the fire chiefs in Leggett and Piercy, which experience high levels of tourist traffic, the MCFSC hopes to create one or more attractive pamphlets, cards, or otherwise formatted materials to educate tourists about the realities of wildfire in Mendocino County.

Educational Outreach to Children. Because children can be exceptional carriers of messages to their parents, the MCFSC would like to assist as needed to supplement fire prevention efforts in schools. This project would provide educational materials for various ages and reading levels, and additional materials for the parents.

Educational Packets for Realtors, Insurance Agents, and Planning Departments. These offices are prime locations for reaching new homeowners and those planning to build or remodel in WUI locations. This project would purchase and place packets of pertinent information in each of these offices for distribution to clients.

Education, Planning, and Fuels Reduction in Planning Zone 2 (CDF Battalion 3). The County's largest concentration of WUI residents at risk – perhaps 10,000 or more -- is in the hills surrounding Ukiah Valley and Redwood Valley. A major educational effort, with evacuation and hazard mitigation planning, is needed in all these areas:

- Ukiah Valley's eastern hills: Lake Mendocino Drive, Redemeyer Road, Deerwood, El Dorado Estates, and Rogina Heights
- Ukiah Valley's western hills: Mendocino College, Orr Springs Road, the "West Hills" area within Ukiah's city limits, Oak Knoll/Fircrest, Robinson Creek Road, and Highway 253
- Greenfield Ranch, north of Orr Springs Road (includes creation of safety zones)
- Redwood Valley's northern hills: Upper Tomki Road and Cave Creek subdivision (includes creation of safety zones)
- Other Redwood Valley WUIs: Lower Tomki Road and roads branching east from East Road, including Black Bart Trail, south to Highway 20

Additional Local Vegetation Management Projects. These are future projects as will be identified during the fire planning process begun by creation of this CWPP. Some are named in the list of CDF projects later in this section.

Additional Defensible Space Home Clearing and Maintenance. The MCFSC has applied for funding to perform hand clearing around 50 homes of low-income elderly or disabled persons, but would eventually like to provide this service for many more and to create ways to ensure that clearance will be maintained in future years.

Continuation of Brooktrails Township Fire Program. Funding for fire planning and vegetation reduction has been awarded for 2006. This project, including hand and mechanical fuels reduction, would provide for continuation of those efforts in the future.

The Southern Humboldt (County) Fire Safe Council has brought to our attention two additional proposed projects, in which the MCFSC would like to be a partner.

Bell Springs Road Shaded Fuel Break/Safety Corridor. Bell Springs Road is the main access for over 140 square miles of northern Mendocino, southern Humboldt, and southwestern Trinity counties. Of its 27 miles, 18 are in Mendocino County; and the area sees many wildfire ignitions. The Southern Humboldt Fire Safe Council's proposed project would potentially utilize both mechanical and hand treatments. CDF's Battalion 4 has also named the Mendocino County portion of this road as needing clearance.

Whale Gulch Fire Department Vegetation Management. This Fire Department is located in Mendocino County but dispatched by Humboldt County to the north because of road access issues. The MCFSC does not have details of this work at this time but wishes to support it if possible.

One further idea, supported by some of Mendocino County's most experienced fire planners and perhaps more important than any of the projects listed above, is this: **Creation of a Mendocino County Chaparral Land Management Cooperative**, a public/private partnership of land managers along the county's eastern chaparral-covered mountains and hills. The purpose of this effort, potentially involving the U.S. Forest Service, BLM, and numerous interested landowners, would be to plan and perform mosaic prescribed burns of these fuels all the way from Covelo to Hopland. The project would require hiring a full-time fire planner to promote the burning and guide the work through the maze of related regulations. The work would be huge, but so too is the quantity of dead and dried fuels awaiting a north wind in October to push their flames into the populated valleys of Mendocino County.

CDF'S CURRENT AND PROPOSED FUELS TREATMENT PROJECTS

The following is a summary; details are included in Chapter 3's CDF Battalion Reports.

Battalion 1 (Covelo)

- The Little Valley Fuel Break, located on the ridge west of the Round Valley Indian Housing Tract, was constructed by CDF and continues to be maintained by CDF.
- The Pink Fuel Break, proposed in the Fire Defense Plan prepared by CDF, will minimize risk on both the west side of Round Valley and the east side of Poonkinney Ridge.
- Chicken Ridge and Pigeon Ridge in Round Valley contain 75-100 structures surrounded by large vegetative fuel loads, and have the potential to suffer from a large, damaging fire.

Battalion 2 (Willits)

- The Brooktrails Township Fire Plan, funded via the MCFSC for implementation in 2006, includes hand and mechanical fuels treatment along evacuation routes.
- Brooktrails Township also needs continued development of an effective “Greenbelt Management Plan.”
- The Pine Mountain Fire Safe Council’s Education/Signage/Fuel Reduction grant application includes road clearing by hand treatment.

Battalion 3 (Ukiah)

Three BLM current and proposed projects, described in the BLM section below, are located in this battalion and involve CDF resources:

- Pyramid Ridge Vegetation Management Program (VMP)
- Red Mountain VMP
- North Cow Mountain VMP

A fourth project is Maintenance of the Ukiah West Side Fuel Break. Although this entire project was not completed, as was described in Chapter 3, the portions that were done need to be maintained.

Battalion 4 (Laytonville)

- The Sinkyone VMP is a joint CDF/Department of Parks and Recreation project for the Sinkyone Wilderness State Park, seeking to return fire to a marine terrace ecosystem.
- The Cahto Tribe has obtained grant funding to conduct a tree-thinning project around tribal residences, but additional funding is needed to complete the project.
- Fuel reduction and shaded fuel breaks are needed along these evacuation routes: Spy Rock Road (including Registered Guest, Iron Peak, and Blue Rock), Ten Mile Creek, Bear Pen Subdivision, Ebert Lane, Pepperwood Springs Subdivision, Cherry Creek Subdivision, Mulligan Lane, and Bell Springs Road (see MCFSC list re: Bell Springs).

Battalion 5 (Boonville)

- The Little Mill Creek Sheltered Fuel Break, described in the Battalion 5 report, is a major ongoing fuels treatment project involving both hand and mechanical treatment.

Battalion 6 (Fort Bragg)

- Removal of Gorse overgrowth in the Casper area along Highway 1 is needed to remove this invasive shrub that poses a significant fire and access hazard.

BUREAU OF LAND MANAGEMENT PROPOSED PROJECTS

The Bureau of Land Management, Ukiah Field Office, intends to perform three vegetation management projects in Mendocino County in the near future. All are located within CDF Battalion 3, and further details may be found in Chapter 3.

- **Pyramid Ridge VMP (2005).** BLM will do hazard reduction burning in cooperation with CDF, in an area with a perimeter is 22,300 acres, of which approximately 40% is in Mendocino County; the rest is in Lake County.
- **Red Mountain VMP (2007).** This project will conduct prescribed fire treatments for a 3-year research study on the efficacy of prescribed burning and mechanical methods in reducing the fire hazard in chaparral.
- **North Cow Mountain VMP (2009).** The project will develop a burn plan for the northern area of Cow Mountain, under CDF's Vegetation Management Program. The burn plan would be implemented in subsequent years. Fuel breaks in the fire-prone upper Mill Creek Road area may be part of this project.

U. S. FOREST SERVICE PROPOSED PROJECTS FOR THE MENDOCINO NATIONAL FOREST

- **Etsel Ridge Fuel Break:** Understory brush clearance on Etsel Ridge/Mexico Ridge
- **Anthony Peak Ridge:** Understory brush clearance on Anthony Peak to Road M1
- **Howard Lake SPLAT:** Understory brush clearance in the Howard Lake area
- **Roadside Clearance:** Roadside brush clearance along M1 road/Etsel Ridge/Mexico Ridge Road, Indian Dick (M1), and side roads

These six additional projects have been identified by the Forest Service:

- **Tar Flat Burn.** Understory burn for hazard fuels reduction in 212 acres, to be accomplished in Fall of 2005.
- **Newhouse Ridge Burn.** Understory burn for hazard fuels reduction / deer habitat improvement in 272 acres, to be accomplished in Fall of 2005.
- **Covelo TSI.** Plantation pre-commercial thinning on 20 acres in Mendocino Pass Township. Still in planning phase.
- **Grizzly Late Successional Reserve.** Still in planning as of Summer 2005.
- **Steep Slope.** Brush burning on 120 acres, to be accomplished in Spring 2006.
- **Horse Pasture Ridge.** Brush burning on 400 acres in Spring 2006-2007.

PART TWO: FUEL REDUCTION PROJECTS

The following is a concise list of all high priority fuel reduction projects developed by the Mendocino County Fire Safe Council, CDF Mendocino Unit, the Bureau of Land Management, and the U.S. Forest Service. Further work on prioritizing the projects is still needed. These projects are listed by Planning Zone and CDF Battalion.

PROJECT NAME	AGENCY	ZONE / BATN	
50 Model Defensible Space Homes	MCFSC	All	All
Additional Home Clearing and Maintenance	MCFSC	All	All
Countywide Chipper Program	MCFSC	All	All
Additional Local Vegetation Management Projects	MCFSC	All	All
Etsel Ridge Fuel Break	USFS	1	1
Anthony Peak Ridge	USFS	1	1
Howard Lake SPLAT	USFS	1	1
Roadside Clearance	USFS	1	1
Tar Flat Burn	USFS	1	1
Newhouse Ridge Burn	USFS	1	1
Covelo Timber Stand Improvement	USFS	1	1
Grizzly Late Successional Reserve	USFS	1	1
Steep Slopes	USFS	1	1
Horse Pasture Ridge	USFS	1	1
Little Valley Fuel Break	CDF	1	1
Pink Fuel Break	CDF	1	1
Chicken Ridge/Pigeon Ridge Vegetation Management	CDF	1	1
Brooktrails Township Fire Program	MCFSC	1	2
Continuation of Brooktrails Township Fire Program	MCFSC	1	2
Brooktrails Township "Greenbelt Management Plan"	CDF/BTCSD	1	2
Pine Mountain Education/Signage/Fuel Reduction	MCFSC	1	2
Sinkyone VMP	CDF/Parks & Rec	1	4
Cahto Tribe tree thinning	Cahto Tribe	1	4
Spy Rock Road Roadside Clearing	CDF	1	4
Ten Mile Creek Roadside Clearing	CDF	1	4
Bear Pen Subdivision Roadside Clearing	CDF	1	4
Ebert Lane Roadside Clearing	CDF	1	4
Pepperwood Springs Subdivision Roadside Clearing	CDF	1	4
Cherry Creek Subdivision Roadside Clearing	CDF	1	4
Mulligan Lane Roadside Clearing	CDF	1	4
Bell Springs Road Roadside Clearing	CDF/MCFSC	1	4

Whale Gulch Fire Dept Vegetation Management	MCFSC	1	4
Chaparral Land Management Cooperative	Many	1-4	1-2
Pyramid Ridge VMP	BLM w/CDF	2	3
Red Mountain VMP	BLM w/CDF	2	3
North Cow Mountain VMP	BLM w/CDF	2	3
Maintenance of Ukiah West Side VMP	CDF	2	3
Education, Planning, and Fuels Reduction in Zone 2 (see above list of WUIs in Ukiah and Redwood Valleys)	MCFSC	2	3
Hopland Band of Pomo Indians Clearing & Fuel Break	MCFSC	2	3
Rancho Navarro Fire Plan Development & Clearing	MCFSC	3	5
Eucalyptus Tree Removal at Peachland Road	MCFSC	3	5
Removal of Gorse overgrowth in Caspar area	CDF	4	6

ROADBLOCKS TO SAFETY

The road to wildfire safety is not an easy one. Much work must be done, and many minds changed, before Mendocino County will be safe from the threat of devastating wildfires.

Firefighters and fire-conscious residents throughout Mendocino County repeatedly raise several key concerns. *An understanding of these issues is essential to understanding the overall wildfire risk and the difficulties in addressing it.* As some of these were not captured thoroughly during public meetings or in previous sections, they are described here.

(1) INCONSISTENT, ILLEGIBLE, OR NONEXISTENT ROAD AND ADDRESS SIGNAGE

As was mentioned earlier, poor road and address number signage is the greatest overall hindrance to emergency response in Mendocino County. All too often ambulances and fire engines waste precious minutes exploring multiple driveways and even roads, attempting to find persons in dire need of medical assistance or fire suppression.

Many rural roads have multiple names and some have no names at all. The names on official records or maps, including those at the county's Emergency Command Center, may not be those colloquially used by the roads' residents. A fire in Sylvandale, for example, may be reported as located at 10000 Troll Ridge, whereas dispatch maps call the road "Timberline." To add to the confusion, the road immediately preceding it is called "Timber." In the Pine Mountain area east of Willits, road signage is almost nonexistent, partly because certain roads or branches thereof are simply unnamed! Many rural residents receive their mail at Post Office boxes and do not "need" a street address. One of this Plan's authors listened recently to a dispatcher and ambulance driver trying to locate the unmarked home, on an unmarked road, of a person who had stopped breathing. She understood the responders' frustration, having been lost in that location herself. Fortunately, Fire Safe Councils have been established in both areas, and are working to correct these problems.

Where road names are known and signs are posted, signs are often faded, incomplete, and difficult to read, and may not point to the correct road. Signage meeting the requirements of California Public Resources Code section 4290 – reflective, visible from both directions, with numbers and letters at least 3 inches tall and contrasting in color from the background -- is rare in rural areas. Again, local fire safe personnel are beginning to address this problem. But much work remains to be done.

Often residents raise the objection that signage is not needed because "if there's a fire you'll see the smoke." Firefighters respond that this may be true, but given the thousands of ridges

and valleys in this county, and the prevalence of dead-end roads, seeing the smoke doesn't equal getting to the fire. And seeing smoke at night is not a certainty. Even more powerful is this response from Emergency Medical Technicians: "Eighty percent of our calls are for medical emergencies. At two o'clock in the morning when your spouse is having a heart attack, I can't see your home from three miles away!"

In rural settings where farmers or ranchers have been on their land for decades, humorous situations can arise when older folks assume that everyone knows the history they do. A little story will illustrate. One CDF emergency dispatcher reports receiving a request for assistance from an older gentleman who described the location as "the place where Roscoe Brown's dog got hit back in '79." The hapless dispatcher responded, "I'm sorry, sir, but I wasn't born yet then, so I don't remember the incident!"

(2) RESISTANCE TO FIRE SAFE EFFORTS

A portion of both full-time and part-time WUI residents actually resist fire safe efforts, including 1) vegetation removal, 2) installation of road and address signage, and 3) opening of evacuation routes. *For some residents, dense vegetation, thick trees, nearly-impassable driveways, locked gates, and a complete lack of signage are the very reasons for which they moved to Mendocino County!* Locked gates across formerly-open access and evacuation routes are common. Many a populous WUI area now has no second evacuation route because a stubborn landowner – who may or may not have the right to do so -- refuses to allow anyone on his/her road even to save lives!

The primary reasons for resistance are these:

- The desire to maintain the beauty of their surroundings "naturally," thus a resistance to creating even minimal defensible space or removing completely dead brush.
- A strong affinity for trees and a corresponding resistance to any removal, trimming, or thinning of trees, sometimes even those that are diseased, dead, or in crowded locations where they could never thrive.
- An intense desire for privacy, either for personal reasons or to hide illegal activities, such as marijuana cultivation or, less frequently, the manufacture of methamphetamine. Many persons wishing to remain unfound and unseen, for whatever reason, are quite active in protecting their anonymity. Road signs installed by emergency-conscious residents at their own expense have frequently been destroyed or stolen.

Fortunately, minds are beginning to open, one by one, to the reality that this resistance puts residents and their neighbors in danger. Small interactive meetings are a good venue for

providing “reality check” education. Aware of the sensitivity regarding illegal activities, fire personnel sometimes attend these meetings in jeans and t-shirts, to avoid the appearance of law enforcement. It is highly rewarding to those leading the meetings to see former resisters “converting” to the wildfire message. Special thanks are due to the fire-conscious residents who have opened their homes to their neighbors for these meetings.

(3) NON-RESIDENTS OR NEW RESIDENTS

Out-of-county persons visiting, passing through, or newly-arrived as residents pose special problems. Such persons are generally oblivious of wildfire danger, resulting in the following. To be fair, we acknowledge that careless residents are also guilty of these follies!

- Burning cigarette butts tossed from vehicles cause a number of wildfires each year, especially along Highway 101 and Highway 20 but also on the lesser-used roads.
- Users of campgrounds, parks, and beaches are careless with campfires and other sources of ignition. These situations are often associated with “partying,” during which times people are more reckless than usual.
- Most absentee landowners of rural parcels – and they are numerous -- make no effort to clear their property, even when cited for failure to do so, posing a threat to adjoining properties where full-time, fire-conscious residents live. This is an extremely pervasive problem in Mendocino County.
- Many new residents of the county, either full-time or in numerous weekend homes, are from urban or suburban areas. These persons, used to fire departments just down the street, are woefully ignorant of the potential for wildfire and the long response times required to reach fires in remote locations. Such persons even berate emergency personnel for not arriving within several minutes – although they may not even live within a district or pay a penny for such services.

Education is the main key to solving all of these problems. The Mendocino County Fire Safe Council, local Fire Safe Councils, CDF, and local fire departments are committed to work together to educate the residents, landowners, and visitors of Mendocino County as to the wildfire threat we face and what we can do to make ourselves Fire Safe.

A VISION FOR THE FUTURE: FIRE SAFE HOMES AND COMMUNITIES

In the two years since the MCFSC was founded, the MCFSC's vision has grown much broader than its founders could have dreamed. It now includes the desire to explore using biomass and small diameter trees, to work cooperatively with local businesses to help create jobs, to develop private water supplies with fire hose fittings, to join in multi-county projects, to partner with organizations doing related work, to have CDF Volunteers in Prevention trained to perform home inspections, to foster acceptance of needed control burns, and to perform other projects as described in the MCFSC's grants proposals.

In addition, the MCFSC, together with CDF and local fire personnel, is now urging WUI residents to think ahead realistically and seriously about a worst-case scenario such as the Southern California Fire Siege of 2003 – one where firefighters are not familiar with the area, the Incident Command System is overwhelmed, and, in general, chaos reigns. A possible scenario follows:

“Suppose, for example, that our CDF air tankers and helicopter, engines, dozers, and even local fire department resources are fighting a major fire in Southern California -- when a significant wildfire breaks out in Mendocino County. Fire personnel and apparatus completely unfamiliar with the county arrive to help. In the confusion, local fire department maps can't be found. A fire chief from Shasta County, leading a strike team of five engines from the Sierras, arrives at the beginning of your narrow road bordered by manzanitas, tanoaks, and scotch broom. The fire is a mile away and moving rapidly toward your home.

“A small wooden sign tells the chief your road's name -- but there's no indication of how long the road is, if it dead ends or connects to other roads, if a fire engine could navigate all the curves, if there are bridges that might or might not support fire engines, how many homes there are, if the homes have clearance around them, if there's room for fire engines to turn around, if any water is available, and a host of other questions the chief needs to know to make sure his firefighters can work the fire safely. Right now he sees no one evacuating, and the sheriff doesn't respond to his radio transmissions, so he wonders if everyone is gone, if some people are staying to defend their homes, if any elderly or disabled persons need to be rescued, and if so, where they are. What should he do?”

Local preparation is the key to preventing such life-and-death dilemmas, and the MCFSC is encouraging road associations and small communities to create clear, visible signage that answers this chief's questions and to place it at the beginning of their roads. If residents desire privacy and security of such information, a locked Fire Department/ Emergency

Response box containing laminated maps and other information may be placed at the road's entrance instead.

In recent months MCFSC and fire personnel have begun to seriously and realistically assess life safety issues in areas of Mendocino County where roads are narrow and few. Having all residents evacuate is simply not possible where the only road is barely wide enough for a Type 3 fire engine, with no turnouts to allow for evacuating vehicles. In these circumstances, residents are being presented with information about the two options other than evacuation: (1) sheltering in place in their homes, or (2) moving to pre-designated safety zones. It is emphasized that both options require significant preparation and understanding of fire behavior. With technical assistance from fire personnel, the MCFSC has prepared an information sheet about creating Safety Zones and hopes to prepare another about the many facets of preparing to shelter in place.

Fire prevention forces in Mendocino County are beginning to work together to urge comprehensive preparation for worst-case scenarios of all kinds. They are urging WUI communities to do vegetation reduction, map their communities, improve road and address signage, identify and secure alternate evacuation routes, develop and practice evacuation procedures, identify and clear safety zones where evacuation would be nearly impossible, provide for elderly and disabled persons, plan for large animal evacuation, create emergency communication systems including phone trees and utilizing CBs or ham radios, increase water supply and install fire department connectors, clear areas around ponds, clear helispots or helibases, and numerous other innovative and necessary life safety measures. The MCFSC wishes to have all the county's WUI communities and individual homeowners sufficiently educated and prepared that they and their homes will survive any wildfire.

The ultimate level of structure preparedness will be survivable homes—homes which are not merely “defensible” by firefighters but are able to withstand a wildfire without the intervention of fire suppression forces. These homes, located away from hazardous terrain, built with fire resistant materials, constructed with wildfire's force in mind, and surrounded by carefully maintained vegetation, will be there to welcome their families after the fire has passed.

Another part of the vision, for years to come, will be preserving our watersheds and other natural resources by careful fire break planning, prescribed fire, and other methods. Natural and man-made breaks will be enhanced or created to assist in containing fires to small compartmentalized areas, allowing wildlife to escape, preventing fires from reaching waterways, and guarding against situations leading to post-fire erosion and flooding.

Pursuing this broad vision is a huge task, but one the Mendocino County Fire Safe Council is willing to undertake, to keep our county beautiful and its residents and resources safe.