MONTEREY COUNTY

COMMUNITY WILDFIRE PROTECTION PLAN

November, 2010

Updated March 1, 2016

MONTEREY COUNTY, CALIFORNIA

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November 2010 v2 signed - with addendum to Vegetation/Fuels section 3.1.2
Updated March 1, 2016 (Appendix D, Recommended High Priority Hazardous Fuel Reduction Treatments)

Congressional Direction for the 10-Year Comprehensive Strategy

Conference Report for the Fiscal Year 2001 Interior and Related Agencies Appropriations Act (Public Law 106-291)

The Secretaries should also work with the Governors on a long-term strategy to deal with the wildland fire and hazardous fuels situation, as well as needs for habitat restoration and rehabilitation in the Nation. The managers expect that a collaborative structure, with the States and local governments as full partners, will be the most efficient and effective way of implementing a long-term program.

The managers are very concerned that the agencies need to work closely with the affected States, including Governors, county officials, and other citizens. Successful implementation of this program will require close collaboration among citizens and governments at all levels. The managers direct the Secretaries to engage Governors in a collaborative structure to cooperatively develop a coordinated, National ten-year comprehensive strategy with the States as full partners in the planning, decision-making, and implementation of the plan.

Key decisions should be made at local levels.

Preamble

This MCCWPP is an advisory document that was prepared by a committee of the Monterey Fire Safe Council in collaboration with public agencies pursuant to the Healthy Forests Restoration Act. The committee comprises citizens (or their representatives) living in at-risk communities, and the contents of the MCCWPP are opinions of these citizens following the procedures outlined in The Wildland Fire Leadership Council's handbook, Preparing a Community Wildfire Protection Plan, A Handbook for Wildland Urban Interface Communities. More specifically, landscape and fire science discussions, WUI designation, priority of at-risk communities, regulatory interpretation and other discussions set forth in the MCCWPP are findings and recommendations by these citizens to help protect their communities from wildfires. Because the MCCWPP is an advisory document, the MCCWPP does not legally commit any public agency to a specific course of action or conduct and thus, is not a project subject to CEQA or NEPA. At least twelve counties in California have signed CWPPs without considering the CWPP as a project subject to CEQA.

However, if and once grant funding is received from state or federal agencies and prior to work performed pursuant to this MCCWPP or a local CWPP, or prior to issuance of discretionary permits or other entitlements by any public agencies to which CEQA or NEPA may apply, the lead agency must consider whether the proposed activity is a project under CEQA or NEPA. If the lead agency makes a determination that the proposed activity is a project subject to CEQA or NEPA, the lead agency must perform environmental review pursuant to CEQA or NEPA.

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Appendices

1.0 Introduction

The Monterey County Community Wildfire Protection Plan (MCCWPP) was developed by the Monterey Fire Safe Council (MFSC), including the Monterey County Wildfire Working Group (MC2WG) which is serving as its MCCWPP committee, with input from the California Department of Forestry and Fire Protection (CAL FIRE), the United States Forest Service (USFS), the Bureau of Land Management (BLM) and other stakeholders. Other stakeholders include: community members, forest and rangeland property owners, and local fire agencies within State Responsibility Area (SRA) and other interested parties, along with wildfire protection planning consultants from Dudek.

It is recommended that this document serve as an advisory plan to guide wildfire prevention and preparation activities throughout Monterey County, subject to compliance with all other applicable local, state and federal laws and regulations.

This MCCWPP makes the connection between Strategic Fuelbreaks, Defensible Space, Defensible Polygons, and incident management, providing communities and agencies guidance to wildfire prevention and protection. Recommendations made herein include hazardous fuel mitigation activities and methods for reducing structural ignitability.

This MCCWPP covers Monterey County, California, and includes such information as:

- Large destructive fires.
- The County's physical characteristics.
- Landscape-scale and watershed-based fire hazard and fire threat assessment work completed to date.
- Fire hazard risk areas.
- Uniformity of ingress and egress safety.
- Strategic Fuelbreaks.
- Defensible Polygons.
- Hazardous fuel reduction treatments, methods and projects.
- Methods for reducing structural ignitability. (See Section 6.1.)
- Regulatory framework for hazardous fuel reduction projects.
- Methods and preplanned evacuation (e.g., Ready, Set, Go! and "prepare, stay and defend or leave early" (PSDLE) concepts).
- Wildland-urban interface (WUI) zone boundaries.

The purposes of this MCCWPP are to:

- Provide wildfire planning recommendations at a county wide scale.
- Provide recommendations for hazardous fuel assessment and reduction within the County, emphasizing WUI zones, to protect lives, structures and infrastructure from wildfire.
- Reduce the potential for wildfire-originated structure ignitions.

- Reduce wildfire costs and losses.
- Reduce the potential for ignitability of structures and address human activities that may cause wildfires.
- Reduce the spread of wildfire within WUI zones.
- Provide advice to help implement the national and state fire plans, the 10-Year Comprehensive Strategy, and the 10-Year Comprehensive Strategy Implementation Plan.
- Present recommended priorities of at-risk communities.
- Help qualify Monterey County communities, agencies, and others for grant funding from a variety of sources.
- Facilitate efficient use of taxpayer dollars, and mobilize the coordination of community, private, local, state, and federal agency projects and funding priorities.
- Promote the importance of preparing localized fire plans and community wildfire protection plans (CWPPs) that address issues each community considers appropriate, which may vary substantively from the county wide provisions and maps in this MCCWPP, provided such local fire plans and CWPPs receive all necessary approvals from local, state or federal agencies.

This MCCWPP recognizes:

- The success of initial attack fire suppression policy.
- That 2 percent of the state's wildfires that escape initial attack are responsible for 90 percent of wildfire costs and losses.
- That hazardous fuel buildup around structures, infrastructure, roads, highways, watersheds and areas where there is hazardous fuel accumulation due to past fire suppression practices or other hazardous conditions brought about by severe weather events, disease, or other disturbances in Monterey County is a threat to lives, property and the environment due to its potential for high intensity wildfire.
- That extreme weather events can cause high-intensity uncontrolled wildfire, largely irrespective of vegetation age or density, though higher hazardous fuel density and steep topography will increase fire intensity given the same weather conditions.
- That of the factors that affect wildfire behavior and intensity, hazardous fuel is the only factor humans can control, and during mild weather conditions, hazardous fuel density can have a greater ability to alter fire spread probabilities than weather.
- That failure to plan for and implement hazardous fuel reduction work to address wildfire during extreme weather events puts lives, property and the environment at risk.
- That low and moderate intensity fire has a role in maintaining ecosystem balance and biological resiliency.
- That efforts to reduce large, damaging wildfires are protective of the environment as well as of lives and property.

This MCCWPP is intended to be a living document with long term community involvement consistent with requirements of the Healthy Forests Restoration Act (HFRA), including guidance

established by the Wildland Fire Leadership Council (for example, as described in Preparing a Community Wildfire Protection Plan, A Handbook for Wildland–Urban Interface Communities).

Appendix A provides a glossary of technical and regulatory terms used in this document.

2.0 MCCWPP Development Process

This section lists the representatives or organizations either involved in the development of the MCCWPP or who/which provided information for the completion of this MCCWPP. The organization, roles, and responsibilities are indicated in Table 1 below.

Table 1. MCCWPP Development Team

Organization	Roles/Responsibilities
Monterey Fire Safe Council (MFSC)	Provides review and guidance for MCCWPP preparation, prepares sections of the MCCWPP, and is involved with MCCWPP review team and approval process. Coordinates community involvement, planning information and resources web site, web site forms and information, member input, meeting attendance and coordination. Responsible for grant administration, documents, forms and grant management.
Property owners, community members, stakeholders, forest and rangeland property owners, and interested parties	Provide community guidance, input, concerns, priorities, commitment to projects, and collaborative engagement with agencies and MCCWPP co-operators.
California Department of Forestry and Fire Protection (CAL FIRE)	Primary fire suppression for SRA lands within the County -- Provides input and expertise on minimum standards, SRA lands, and hazardous fuel reduction.
Local Fire Districts and Volunteer Fire Departments	Provide community guidance, input, concerns, priorities, commitment to projects, and collaborative engagement with agencies and MCCWPP co-operators.
Bureau of Land Management (BLM)	Primary fire suppression for BLM lands within the County -- Provides input and expertise on MCCWPP preparation, existing and proposed projects, and hazardous fuel reduction efforts.
United States Forest Service (USFS)	Primary fire suppression for USFS lands within the County -- Provides input and expertise on MCCWPP preparation, existing and proposed projects, and hazardous fuel reduction efforts.
Dudek	Wildfire protection planners -- Prepared wildfire hazard reduction plan, recommendations for hazardous fuel reduction and structural ignition reduction, initial development of the MCCWPP with guidance and input from the MFSC, community risk and value assessment, development of community protection priorities, and establishment of hazardous fuels treatment project areas and methods.

Organization	Roles/Responsibilities
Monterey County Planning Department	Identifies regulatory framework for coordinating land use plans with the MCCWPP.
Monterey County Wildfire Working Group (MC2WG)	Coordinates preparation of the MCCWPP by gathering and incorporating agency and community input.

2.1 Federal Agencies

Representatives of the federal agencies in Monterey County are listed in Table 2 below.

Table 2. Federal Agencies Involved

Agency	Representative	Initial MCCWPP Intent Letter Sent	Date Invited to Participate in Agency Meeting
United States Forest Service (USFS) Monterey Ranger District, Los Padres National Forest (LPNF)	John Bradford Sherry A. Tune	May 1, 2006	January 15, 2009
Bureau of Land Management (BLM) Hollister Field Office	Michael Chiodini Rick Cooper	May 1, 2006	January 15, 2009
National Park Service (NPS)	Albert Faria	May 1, 2006	January 15, 2009
United States Fish and Wildlife Service (USFWS)	Terry Palmisano	May 1, 2006	January 15, 2009
USDA Natural Resources Conservation Service (USDA NRCS)	Robert LaFleur	May 1, 2006	January 15, 2009
Tribal Governments	Louise J. Ramirez	May 1, 2006	January 15, 2009

2.2 State and Local Agencies

Representatives of the state/local agencies that have jurisdictional responsibilities in Monterey County are listed in Table 3 below.

Table 3. State and Local Agency Representatives

Agency	Representative	Initial MCCWPP Intent Letter Sent	Date Invited to Participate in Agency Meeting
California Department of Parks and Recreation (CDPR)	Loren Rex	May 1, 2006	January 15, 2009
California Department of Fish and Game (CDFG)	Chuck Hughes	May 1, 2006	January 15, 2009
California Department of Transportation (Caltrans)	Mike Mendoza	May 1, 2006	January 15, 2009
California Highway Patrol, Monterey	Debbie Hershey	May 1, 2006	January 15, 2009
Monterey County Planning Department	Carl Holm	March 1, 2009	March 1, 2009
Monterey Bay Unified Air Pollution Control District (MBUAPCD)	Betsy Hibbits or Bob Nunes	May 1, 2006	January 15, 2009
Monterey County Office of Emergency Services (OES)	Phil Yenovkian	May 1, 2006	January 15, 2009
Monterey County Public Works	Ed Muniz	May 1, 2006	January 15, 2009
Monterey Peninsula Regional Parks District	Tim Jensen	May 1, 2006	January 15, 2009
American Red Cross, Monterey	Sharon Crino	May 1, 2006	January 15, 2009

2.3 Interested Parties

Parties from the communities in Monterey County that have shown interest in fire management or may be interested in this MCCWPP are listed in Table 4 below.

Table 4. Interested Parties Involved

Interested Parties	Initial MCCWPP Intent Letter Sent
Fire Safe Councils Monterey Fire Safe Council	May 1, 2006
Local Landowners/Managers Big Sur Land Trust El Sur Ranch Mason Ranch	May 1, 2006

Interested Parties	Initial MCCWPP Intent Letter Sent
Monterey County Cattlemen's Association Monterey San Benito Range Improvement Association Packard Ranch Santa Lucia Preserve Rancho Rico	
Environmental Organizations Monterey Bay Chapter, California Native Plant Society The Nature Conservancy The Sierra Club, Ventana Chapter	May 1, 2006
Local Utility Companies Pacific Gas & Electric	May 1, 2006
Homeowners Associations Cachagua-Jamesburg Community Task Force Carmel Highlands Association Coast Property Owners Association (CPOA) Corral de Tierra Homeowners Association Friends, Artists, and Neighbors of Elkhorn Slough (FANS) Laguna Seca Homeowners Association Lower Carmel River Advisory Committee Mal Paso Creek Property Association Prunedale Neighbors Group (PNG) Prunedale Preservation Alliance (PPA) Rancho Bolsa Nueva Homeowners Association Rancho Rio Vista Homeowners Association Rancho San Clemente Homeowners Association Rancho Tierra Grande Homeowners Association San Jerardo Housing Co-op Sunset West Homeowners Association Toro Park Homeowners Association White Oaks Homeowners Association White Rock Homeowners Association	May 1, 2006 (Not all)
Other Parties Davey Resource Group	May 1, 2006

As part of preparing this MCCWPP, the MFSC held three separate public meetings where public comments were taken and incorporated into the MCCWPP. The public meetings were held on March 24, March 25, and March 26, 2009 in Big Sur at the Big Sur Lodge conference room, Carmel Valley at the Hidden Valley Facility, and Monterey at the Monterey Fair Grounds, respectively.

2.4 Funding/Grant Management

Funding for preparation of a portion of this MCCWPP was made available from a National Fire Plan grant made possible by federal financial assistance provided to the California Fire Safe Council from the Bureau of Land Management (BLM). That portion of the project was funded via WUI Community Rural Fire Assistance, CFDA # 15.228. The grant number was 08BLM0149. The grant period extended from February 2008 to April 2009. Grant management and reporting are being conducted by the MFSC.

3.0 Monterey County Planning Area

This MCCWPP covers Monterey County, California. Located in central coastal California, Monterey County encompasses over 2.1 million acres, with a population of approximately 425,960 distributed among 12 cities and unincorporated County areas.[1] Monterey County cities encompass a total of about 38,016 acres or about 1.8 percent of the County's land area. Total population of Monterey County cities is about 320,000. The remainder of Monterey County's inhabitants (about 106,000, or 25 percent) live in unincorporated areas. About 1.2 million acres in Monterey County are forest and rangeland.

In 2006, the MFSC contracted with CAL FIRE's Fire and Resource Assessment Program (FRAP), Ron Montague, National Fire Wise Coordinator, and Doug Campbell, Fire Behavior Analyst, to more thoroughly evaluate wildfire threat and risk in Monterey County. While state-level risk analyses are made publicly available by FRAP, the analysis conducted for Monterey County fuels distribution, fire threat, and fire risk ratings is more detailed and experience-specific, with focused results that were instrumental in identifying overall threat to Monterey County communities. A more detailed discussion of the FRAP fire threat analysis is presented in Section 3.1.8.

3.1 Site Characteristics

This section presents a discussion of the variables affecting fire behavior and risk assessment for Monterey County.

3.1.1 Topography

The topography of Monterey County is extremely variable. Within the Salinas Valley, slopes are relatively flat across the valley floor (0-10 percent). Elevations in this region range from sea level, where the valley meets the Pacific Ocean in the north, up to nearly 400 feet above mean sea level (AMSL) in the southern portions of the valley. More significant topographic variation is found in the eastern and western portions of the County, often characterized by steep slopes, deeply incised canyons, and narrow valleys. The elevation within Monterey County ranges from sea level to over 5,800 feet AMSL.[2] Slope measurements reach up to 175 percent gradients, most notably in the Los Padres National Forest (LPNF) located in the western portion of the County and the Gabilan Range located along the eastern County boundary.[3] All maps are

[1] County of Monterey 2008.

[2] FRAP 2006.

[3] FRAP 2006.

included in Appendix B. Topography for Monterey County is graphically presented on the map in Appendix B-1.

The regional topographic conditions within Monterey County have considerable effect on wildland fire behavior, as well as on the ability of firefighters to access and respond to wildfires. Steep slope and canyon alignments are conducive to channeling, deflecting, concentrating, or dispersing winds, and creating extremely erratic wildfire conditions, especially during wind-driven fire events.[4]

See the addendum to Section 3.1.2 after page 91,
which is incorporated by this reference as if fully set forth here.

3.1.2 Vegetation/Fuels

The Monterey Fire Safe Council's findings on the vegetation type and distribution in the County and the vegetation's role in affecting fire behavior are based substantially on a special Fire Threat Assessment conducted in 2006 by CAL FIRE's Fire Resource Assessment Program (FRAP) using best available data for Monterey County.

By agreement with the MFSC, the Sierra Club, and the Ventana Wilderness Alliance, a more detailed review of the scientific basis for these findings will be augmented by a collaboration of the MFSC/MC2WG Science Review Team and Dr. Scott Stephens. Dr. Stephens will address scientific knowledge of the fire ecosystem, both ecological impacts of disturbance, and effectiveness of treatments for each biological community type in Monterey County. The Sierra Club has agreed to provide funding for Dr. Stephens' work.

This work should be completed, reviewed, and formally inserted into this Section 3.1.2 to the MCCWPP no later than April 1, 2011, as part of a subsequent amendment to the MCCWPP.

Vegetation/Fuels

The following is a brief review of the vegetation conditions and fire threat assessment protocol in Monterey County:

California and Monterey County are fire prone, fire-adapted ecosystems. Protection and conservation of both human and natural wildland communities from fire threat can be achieved through maintenance of the fire adapted ecosystem supporting human and natural wildland community function, resilience, and sustainability over time.

Ecosystems can be managed such that the structure, composition, and function of all elements, including their frequency, distribution, and natural extinction, may be conserved. Addressing the science of both fire threat to human communities and threat to ecosystem simultaneously allows

[4] Davis, F.W., & Borchert, M.I., 2006. Central Coast Bioregion. In: Sugijara, N.G., Van Wagtendonk, J.W., Shaffer, K.E., Fites-Kaufman, J., and Thode, A.E., eds. Fire in California's ecosystems. University of California Press, Berkeley, pp. 321-349.

Hanson & Usner 1993. The Natural History of Big Sur. University of California Press, Berkeley, pp. 232-238.

U.S. Department of Agriculture, Forest Service (USDA FS). 2000. "Policy Implications of Large Fire Management: A Strategic Assessment of Factors Influencing Costs." A Report by the Strategic Overview of Large Fire Costs Team. Washington, DC: Forest Service, U.S. Department of Agriculture. 43 pp.

stakeholders, utilizing an adaptive management decision process, to determine priorities and best treatment methods to be applied.

The Fire Equation

In addition to weather and topography, vegetation (or fuel) plays a major role in affecting fire behavior and shaping fire hazard potential. Vegetation distribution throughout the county varies by location and topography, with dramatic differences observed between coastal, valley, and inland regions.

Frequent presence of low and moderate intensity fire shaped the landscape, the vegetation, and its ecology. Lightning, Native Americans, and early settlers provided ignition sources before fire suppression policy interrupted these processes. Prior to 1800, approximately 4.4 million acres burned annually in California[5].

Over the past century, federal land management agencies and others have learned that the active suppression of fires has resulted in large contiguous areas of hazardous fire fuel beds with large concentrations of down-dead and ladder fuels that contribute to costly, suppression-resistant, high heat intensity wildfires, that threaten communities, both human and natural wildland. Over-crowding, resource depletion, and disease susceptibility due to high vegetation densities (stem spacing) are some of the effects resulting from long-term fire suppression.

Hazardous levels of fire fuels can cause fire intensities to exceed firefighting tactical ability to contain and control. High intensity fire contributes to long distance spotting of flaming embers. Structural losses in wildland fires initially occur due to spotting, flying embers and firebrands, and backing and creeping surface fires. Once a structure is ignited, most structural losses are due to structure-to-structure ignition; relatively few are destroyed by a flaming fire front.

Fire intensity is a measure of total heat (BTU), which is a function of available fire fuel, considering the condition of the fuel, the conditions of the fire environment, weather, and topography. High intensity fire occurs when fire environment conditions come into alignment and burnable fuel volume is greatest.

Fire intensity is subjectively quantified as low, moderate, and high for given conditions within a fire regime or ecosystem/bioregion. The most obvious indications of fire intensity are the length of the flames, the rate of spread, and flame duration. Hazardous fuel reduction is about reducing fire intensity.

Can a fire safe protocol be developed that identifies Wildland Urban Interface Zones and Hazardous Fuel Reduction Zones (HFRZ), and supports functioning, resilient, sustainable communities, both human and natural wildland communities, using an adaptive management decision process? We have the opportunity to approach the problem as one of a choice between potentially destructive high intensity wildfire under severe conditions and desirable low and moderate intensity prescribed fire, or ecosystem-sensitive hazardous fuel reduction based on the

[5] Stephens, S.L. et al., Prehistoric fire area and emissions from California's forests, woodlands, shrublands, and grasslands, Forest Ecol. Manage. (2007), doi:10.1016/j.foreco.2007.06.005

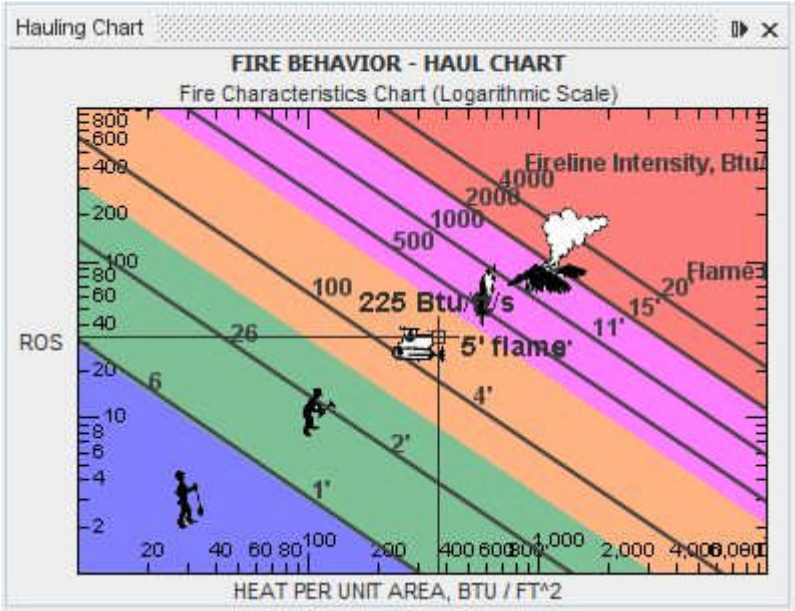
principles of fire surrogates; hand crew and mechanical treatments are a safe and economically viable method of reducing fuel loads to reduce fire threat and maintain ecological function.

In the HFRZ the desired fire intensity is low to moderate, within tactical firefighting capability. In the Defensible Space Zone, the desirable fire intensity is zero for the protection of citizens and firefighters. The goal is firefighter and citizen safety, using safe rules of tactical firefighting engagement, according to the FAHJ.

Fire Threat Assessment is the art and science of predicting fire intensity and threat from fire. This characterization is then mapped to inform the creation of the boundaries of effective Safety Zones, Defensible Space, and designation of HFRZ. Effective pre fire, pre-attack planning identifies existing roads, topography, and strategic fuel breaks as anchor points to "connect the dots" to firefighter and citizen safety: Safety Zones, Defensible Space Zones, and values protected.

To determine treatment distances and intensity, each community or project area is analyzed using a fire threat assessment that proactively performs hypothetical scenarios of potential fire situations. The rules of safe tactical engagement are applied to delineate and inform the prioritization and identify the appropriate level of pre fire treatment necessary for effective mitigation and protection.

The wildland fire service utilizes the "Haul Chart" (see below) as a rule of thumb reference guide for quickly assessing fire behavior, fire intensity, and fire effects, relative to firefighter safety.



The scales of the Haul Chart are based on the same science, base codes and algorithms of the BEHAVE, FARSITE, and FLAMMAP fire modeling tools used by FRAP and pre-attack planners. For a full explanation of fire behavior and fire spread algorithms, see Rothermel's publications on his mathematical model[6] and wildland fire management.[7]

ROS = Rate of Spread in chains per hour. 1 chain = 66 feet.

Flame Length Color Code:

- Blue < 1 foot flame length;
- Green < 3 foot flame length;
- Tan < 8 foot flame length;
- Magenta <15 foot flame length;
- Red +15 foot flame length

[6] Rothermel, Richard C., 1972. A mathematical model for fire spread predictions in wildland fuels. USDA For. Serv. Res. Pap. INT-115, 40 p. lntermt. For. and Range Exp. Stn. Ogden, Utah.

[7] Rothermel, Richard C., and Charles W. Philpot. 1973. Fire in wildland management: predicting changes in chaparral flammability. J. For. 71(10):640-643.

The values represented in the Haul Chart characterize safe direct tactical engagement of firefighters, correlating to low intensity flame lengths no greater than 4-8 feet high. These are the safety standards firefighters apply to hazardous fuel reduction and the creation of Defensible Space and Safety Zones during a conflagration.

CONCLUSIONS:

- This Section 3.1.2 should be completed, reviewed, and formally inserted into this MCCWPP no later than April 1, 2011.
- Fire Science and Fire Ecology are complementary.
- Utilize an adaptive management decision process.
- More research is needed to investigate comparative fire effects upon the varied landscape ecosystems of Monterey County.
- Develop environmentally sensitive hazardous fuel reduction protocols and treatments to reduce high intensity fire potential by reducing potential flame length and duration.
- Refine WUI map for Monterey County. Refine FRAP maps and pertinent data. Refine mapping and designation of biological communities.
- MCCWPP integration with USFS "FireScape Monterey".
- "Connect the dots" between Defensible Space and Strategic Fuelbreaks.

Science Review Team Members:

Dr. Scott Stephens	Associate Professor of Fire Sciences, UC Berkeley
Jonathan Pangburn	Registered Professional Forester, CAL FIRE
Michael Emmett	Mal Paso Homeowners' Association
Joe Rawitzer	Monterey-San Benito Range Improvement Association Wildland Fire Safe Council
Robin Hamelin	Battalion Chief, CAL FIRE

Table 5. Monterey County Land Cover/Fuels Distribution*

Fuel Model** Number	Description	Approximate Acreage	Percent Cover
1	Grass	662,270	31.3%
5	Light Brush	450,958	21.3%
2	Light Grass/Woodland	312,639	14.8%
8	Hardwood Litter	276,924	13.1%
97	Agriculture	240,714	11.4%
4	Heavy Chaparral	58,945	2.8%
28	Urban	43,525	2.1%
9	Light Conifer Litter	35,039	1.7%
98	Water	15,033	0.7%
10	Heavy Conifer Litter w/ Understory	9,007	0.4%
7	Young Maritime Chaparral	6,209	0.3%
99	Barren	5,698	0.3%

Fuel Model** Number	Description	Approximate Acreage	Percent Cover
30	Maritime Live Oak Forest	95	0.0%
6	Moderate Brush	70	0.0%
	Total:	2,117,126	100.0%

**FRAP Monterey Fire Risk Analysis, 2006*
*** Fuel Model is a rating of vegetation and dead woody material and their volume, type, condition, arrangement, distribution and location.*

3.1.3 Climate and Weather Conditions

Localized weather patterns may vary significantly in different portions of the County as humidity levels and plant moisture content near the coast can be higher than inland locations due to the influence of the Pacific Ocean. The northwestern portions of the County adjacent to the Pacific Ocean exhibit a typical coastal weather pattern with morning low clouds and fog burning off by midday with maximum temperatures reaching over 80 degrees F. Onshore wind speeds in excess of 15 miles per hour (mph) are normal. Several miles inland, fog and the marine layer are typically only nominal factors, and it is not unusual for peak summer temperatures to reach 90 to 100 degrees F. In the southern and eastern (leeward side of the Santa Lucia Mountain Range) portions of the County, clouds and fog are less prevalent, allowing maximum temperatures to reach 90 to 100 degrees F with minimum humidities dropping to 10 percent or less (CAL FIRE 2009). Afternoon winds in the Salinas Valley and surrounding terrain may often exceed 15 mph. Average annual rainfall in Monterey County is approximately 19 inches; however actual annual rainfall can vary dramatically from one location to another. Fluctuations in wind patterns are expected due to the influence of topography, although predominant wind direction is northwest with average speeds between 7 and 10 mph (CAL FIRE 2009).

Joining of marine and land air masses over uneven topography significantly compounds fire behavior in Monterey County. Erratic fire behavior due to rapidly shifting winds and humidities under "normal" conditions is common. Fire behavior under rare or extreme fire weather conditions constitute the greatest threat of destructive uncontrolled wildland fires, and historically are immune to planned tactical response and aggressive initial attack. During extreme fire-weather conditions, fuel factors like age, density and moisture content may be overshadowed by weather factors such as high wind and low humidity.[8] Nevertheless, under the same weather conditions, higher fuel loads in a given vegetation type will generally result in fires that are more difficult to suppress and have higher heat intensity. Given that humans cannot control weather, and that fuel density is largely within our control, this MCCWPP emphasizes hazardous fuel reduction and reduction of structural ignitability as the primary means of addressing the destructive force of wildfire. However, the importance of weather should not be ignored. Fire planning and fuel treatments should assume worst case weather conditions, or risk loss of life and property and harm to the environment in the event of wildfire during extremely adverse weather conditions.

[8] Spatiotemporal Analysis of Controls on Shrubland Fire Regimes: Age Dependency and Fire Hazard, Max Moritz, Ecology, 2003, volume 84, number 2, p. 359.

During warmer and drier offshore wind flow regimes, which occur several times each year, wind patterns shift from onshore northwest to offshore east-northeast in the northern section of the County, and east-southeast in the southern portions of the County, often with above-average velocities. These conditions are associated with "Severe Fire Weather" and "Red Flag" fire warnings.

3.1.4 Fire History

Fire history is an important component in understanding fire frequency, fire type, significant ignition sources, and vulnerable areas/communities. The topography, vegetation, and climatic condition associated with Monterey County combine to create a unique situation capable of supporting large-scale, often damaging wildfires. The history of wildfires in Monterey County is significant, and is graphically portrayed in Appendix B-3.

Based on historical fire perimeter data (FRAP 2008),[9] portions of the County are more susceptible to wildfires, with some areas having burned up to six times during the recorded fire history period. Specifically, the western portion of the County within and adjacent to the LPNF exhibits more frequent fires over the recorded history. Fire size within the County is also extremely variable, with fire sizes ranging from less than 5 acres to over 100,000 acres.

A number of notable fires have occurred in WUI zones in Monterey County. Fires that occurred under extreme fire weather or red flag conditions are the Los Laureles Fire (1970), Molera Fire (1972) and Cherry Canyon Fire (1985). The Morse [Pebble Beach] Fire (1987), Fort Ord Escape (2003), and the Eucalyptus Fire (2005) occurred under normal Monterey County weather conditions. The Morse Fire burned about 160 acres, destroying 31 homes in a short period of time and causing approximately $18,000,000 in damage.

The greatest threat to the WUI in Monterey County occurs under extreme fire weather conditions. Areas in Monterey County share a similar risk as the Oakland Hills area, where the Tunnel Fire in 1991 was the most destructive and deadly WUI wildfire in California history: 26 dead and 2,900 homes destroyed in less than five hours.

Notable Monterey County wildfires in the WUI and those in excess of 10,000 acres are presented in Table 6.

Table 6. Notable Monterey County Fires

Fire Name	Year	Approximate Acreage Burned
Marble-Cone Fire	1977	173,000
Basin Complex Fire	2008	162,000
Big Sur Fire	1906	150,000
Kirk Fire	1999	86,000

[9] Based on polygon GIS data for CAL FIRE and USFS -- fires measuring 10 acres and greater between 1950 and 2007.

Fire Name	Year	Approximate Acreage Burned
Indians Fire	2008	76,000
Gorda-Rat Fire	1985	56,000
Unnamed Fire	1924	55,000
Buckeye Fire	1970	42,000
Pine Canyon Fire	1924	42,000
Cherry Fire	1985	41,000
Wild Fire	1996	26,000
Sam Jones Fire	1953	24,000
Casey Fire	1953	21,000
Unnamed Fire	1928	21,000
Tule Canyon	1942	21,000
Reliz Canyon	1942	19,000
Unnamed Fire	1944	18,000
Miller Canyon Fire	1928	18,000
Chalk Fire	2008	16,000
Unnamed Fire	1913	15,000
Rico Fire	2006	15,000
Paloma Fire	1944	14,600
Unnamed Fire	1985	14,000
Devil Fire	1954	13,000
Unnamed Fire	1913	12,000
Fort Ord Escape	2003	1500
Los Laureles	1970	450
Morse (Pebble Beach)	1987	160

The average interval between large wildfires in excess of 10,000 acres burning within Monterey County is 7.3 years, with intervals as short as 1 year and as long as 16 years. The median interval between such fires is 7 years. Most recently, three large fires in 2008 (the Basin Complex Fire, the Indians Fire, and the Chalk Fire) burned over 250,000 acres within Monterey County combined. The Basin Complex Fire (Basin Fire), the largest of these fires, started on June 21, 2008, triggered a state of emergency announcement by Governor Schwarzenegger on June 23, 2008, and ultimately burned over 160,000 acres, destroying 58 structures and causing 9

injuries, before it was contained on July 27, 2008 (InciWeb 2008). Fire suppression costs for these fires alone exceeded $200 million.

3.1.5 Population and Housing

The estimated population of Monterey County is 425,960 people within 12 incorporated cities and unincorporated County lands (County of Monterey 2008). The largest population center is the City of Salinas, with approximately 150,000 people, followed by unincorporated County areas that include approximately 106,000 people. Other relatively large cities in the County include Seaside (approximately 34,000 people), Monterey (approximately 30,000 people), and Soledad (approximately 28,000 people). The remaining population is spread out among the remaining eight cities. The County includes approximately 138,000 housing units (US Census 2008).

Table 7. Monterey County Housing Density

Housing Density*	Approximate Acreage	Percent
One unit per 40 acres, or less	2,019,515	95.4%
One unit per 5 acres to one unit per 20 acres	37,162	1.8%
One unit per acre to one unit per 5 acres	22,131	1.0%
Greater than one unit per acre	38,318	1.8%
Total:	2,117,126	100.0%

** FRAP Monterey Fire Risk Analysis, 2006*

3.1.6 Land Ownership

Over 70 percent of the land within Monterey County is privately owned. Other significant ownership includes the USFS - LPNF (14.3 percent), U.S. Army installations (9.7 percent), and the Bureau of Land Management (1.9 percent). The current distribution of land ownership within Monterey County is presented in Table 8. Land ownership distribution for Monterey County is presented in the Land Ownership map in Appendix B-4.

Table 8. Monterey County Land Ownership

Ownership Type*	Approximate Acreage	Percent
Private	1,512,658	71.5%
USFS (LPNF)	302,627	14.3%
US Army (Fort Ord, Presidio, Fort Hunter Liggett, Camp Roberts)	204,460	9.7%
BLM	40,555	1.9%
California State Parks	26,005	1.2%
City/County Park	22,741	1.1%
CDFG	3,318	0.2%
California State Lands Commission	2,948	0.1%
NPS (Pinnacles National Monument)	1,190	0.1%
US Navy	581	>0.0%
Other Military	43	>0.0%
Total:	2,117,126	100.0%

**FRAP Land Ownership data, 2008*

3.1.7 Unique Community Conditions

3.1.7.1 Uniformity of Ingress and Egress Safety

Safety of ingress and egress is not uniform in all areas. It is possible that some communities may become trapped without the option to evacuate, forcing them to shelter in place and defend themselves. Examples are Big Sur coast, Palo Colorado, Partington Ridge, Los Burros Road, Cachagua and White Rock.

3.1.7.2 Unique Values and Level of Preparedness

Certain communities have shown increased interest in higher levels of preparedness and involvement in protecting their property. The California Constitution provides the following:

> All people are by nature free and independent and have inalienable rights. Among these are enjoying and defending life and liberty, acquiring, possessing, and protecting property, and pursuing and obtaining safety, happiness, and privacy.

CAL FIRE's policy is Ready, Set, Go! (see Appendix C). While early evacuation is the safest option, there may be times when homeowners cannot evacuate or choose not to evacuate. It cannot be overemphasized that creation of defensible/survivable space and the use of firewise materials and firesafe practices are extremely important for reducing risk in the event a homeowner cannot, or chooses not to evacuate. An excellent resource for firewise information can be found at http://firecenter.berkeley.edu/toolkit/homeowners.html.

3.1.8 Fire Threat

Based on vegetation/fuel distribution, topography, and fire history, fire threat was evaluated for Monterey County during the 2006 FRAP/MFSC analysis. This analysis characterizes fire threat as the summation of fire probability (based on fire history) and hazard or expected fire behavior (based on fuels, weather, topography and on-the-ground fire experience). The FRAP fire threat analysis rates areas of the County into five separate categories, including little/none, moderate, high, very-high, or extreme. Table 9 presents fire threat acreages for Monterey County, while the map in Appendix B-5 graphically presents the distribution of fire threat ratings across the County. It is important to note that 83.5 percent of Monterey County's land area is categorized as high, very-high, or extreme fire threat.

Table 9. Monterey County Fire Threat

Fire Threat Rating*	Acreage	Percent
Little to None	261,698	12.4%
Moderate	87,911	4.2%
High	719,366	34.0%
Very-High	646,759	30.5%
Extreme	401,394	19.0%
Total:	2,117,127	100.0%

** FRAP Monterey Fire Risk Analysis, 2006*

3.2 Existing Fire Plans

The following sections describe existing fire management plans prepared by agencies and/or local districts that affect fuel management activities in Monterey County.

3.2.1 California Department of Forestry and Fire Protection (CAL FIRE)

The 2009 Fire Plan[10] prepared by CAL FIRE San Benito – Monterey Unit (BEU) addresses the goals and objectives set forth in the California Fire Plan, focusing on overall wildfire risk reduction at a local level (CAL FIRE 2009). The Plan outlines local stakeholders, discusses the local fire environment, evaluates assets at risk, and identifies priority fuel treatment areas.

The priorities outlined in this MCCWPP are intended for inclusion in future CAL FIRE BEU fire plan updates.

3.2.2 Bureau of Land Management (BLM)

The BLM Hollister Fire Management Plan (FMP) presents fire management strategies for BLM land in Monterey County (BLM 2008). It identifies resource values and conditions pertaining to fire management on BLM land and recommends strategies for wildland fire suppression,

[10] Online at: http://cdfdata.fire.ca.gov/fire_er/fpp_planning_plans_details?plan_id=95

prescribed fire, non-fire hazardous fuels treatment, and community assistance/protection. The strategies outlined in the BLM FMP are utilized in preparing the annual agency work plan and associated budgets. Management guidelines in the FMP prioritize public/firefighter safety, reduction of hazardous fuels, and wildfire risk reduction through prevention, mitigation, education, and other actions.

The FMP also identifies and describes BLM-specific fire management units (FMU) and provides target hazardous fuel treatment objectives, treatment types, special conditions, and at-risk communities/assets associated with each FMU. Table 10 summarizes the BLM FMU characteristics and management objectives within Monterey County.

Table 10. BLM FMU Characteristics and Objectives in Monterey County

Fire Management Unit/ID	BLM Acreage	Fuel Type/ Fuel Model	Target Rx Burn Acreage	Target Mechanical Treatment Acreage	Comments
Fort Ord BLM Land FMU CA-190-02	7,253	Maritime chaparral Fuel Model 4	500 ac. (annual); 5,000 ac. (decadal)	500 ac. (annual); 5,000 ac. (decadal)	Former Fort Ord military base. Habitat Management Plan (HMP)-covered species present. Rx burns in 1997, 2003, 2005. At-risk communities: Del Rey Oaks, Marina, Salinas, Sand City, and Seaside.
Sierra de Salinas, Williams Hill FMU CA-190-09	23,581	California chaparral Fuel Model 4	100 ac. (annual); 1,000 ac. (decadal)	100 ac. (annual); 1,000 ac. (decadal)	Monterey knobcone pine present in FMU. At-risk values: oil/gas reserves, habitat, communication sites, sensitive plant species.
Parkfield FMU CA-190-10	5,099	California chaparral and grassland Fuel Model 4 and 1	1,000 ac. (annual); 5,000 ac. (decadal)	1,000 ac. (annual); 5,000 ac. (decadal)	Rugged terrain in Diablo Range. At-risk values: oil/gas reserves, communication site at Charley Mountain, fire lookout at Smith Mountain, homes.
Ventana Contiguous WSA FMU CA-190-11	655	California chaparral Fuel Model 4	100 ac. (annual); 500 ac. (decadal)	none	Steep terrain, adjacent to LPNF. At-risk values: City of Carmel, White Rock gun club adjacent to the west side of FMU, habitat, LPNF, Rancho San Clemente and Santa Lucia Preserve (wildlife preserve and residential community), Palo Corona/ Monterey Peninsula Regional Parks District.

3.2.3 United States Forest Service (USFS)

The 2008 LPNF Fire Management Plan is a strategic document that addresses the fire management program and guides fire management activities based on the 2006 *Los Padres National Forest Land Management Plan* (LPNF Management Plan). The Monterey Ranger District, responsible for management of USFS lands in Monterey County, segregates areas of the National Forest into two primary Fire Management Units (FMU) that are differentiated by management objectives, fire suppression expectations, and values at risk. The Developed and General Forest unit (FMU1) encompasses the majority of at-risk communities identified through the National Fire Plan, which focuses on public and firefighter safety, cost containment, and full suppression as primary objectives.

Fire prevention planning and management within FMU1 focuses on maintaining defensible space around structures/improvements, and strategically treating hazardous fuels to interrupt fire spread and enhance suppression efforts.

The Wilderness, Research, Natural, and Special Interest Areas (FMU2) are generally removed from developed areas and focus primarily on public and firefighter safety and Minimum Impact Suppression Tactics (MIST), where applicable.

The USFS prepared the LPNF Management Plan and an associated Environmental Impact Statement (EIS), and a Record of Decision (ROD) was issued in April 2006. The LPNF Management Plan includes fire and fuel management planning as discussed further in Section 3.3.1.3.

3.2.4 Pebble Beach Community Services District

The Fire Defense Plan for the Pebble Beach Community Services District (2009 FDP) is included in the CAL FIRE BEU Fire Plan. The 2009 FDP addresses fire and life safety related to wildland fires within the Del Monte Forest area of Pebble Beach. The plan addresses emergency access and hazardous fuel treatment standards for open space areas and undeveloped vacant parcels. The plan outlines roadside fuel treatment methods, firebreak maintenance criteria, road and access gate identification standards, environmental protection, and targets fuel break areas.

3.2.5 Other Plans

In addition to the aforementioned plans dealing with wildland fire issues in Monterey County, several other plans have been or are in the process of being prepared, including the following:

- Santa Lucia Preserve Fuel Management Plan. Addresses habitat-based fire management concerns for the Santa Lucia Preserve
- Monterey County Emergency Permit, Sudden Oak Death - Permit for removal of dead trees infected with SOD in the Palo Colorado Canyon and Big Sur areas of Monterey County
- Aromas Tri-County FPD Fire Plan
- Big Sur Community Wildfire Protection Plan

- Cachagua-Jamesburg Community Wildfire Protection Plan
- Carmel Highlands FPD Community Wildfire Protection Plan
- Cypress FPD Community Wildfire Protection Plan
- Mid Coast (Palo Colorado area) Community Wildfire Protection Plan
- Fort Ord
- Pinnacles National Park
- Fort Hunter Liggett

The status of the above plans can be determined by contacting CAL FIRE.

3.3 Regulatory Framework

This section discusses the complex framework of federal, state and local laws and regulations that relate to hazardous fuel reduction work.

3.3.1 Applicable Federal Laws

3.3.1.1 Healthy Forests Restoration Act

Devastating wildfires in the western United States at the turn of this century resulted in action by the Western Governors Association in concert with the Secretaries of Agriculture and Interior, counties, southern governors, and tribes, to address the hazardous fuels problem at a national level. In 2002, the Western Governors Association agreed on a plan called *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Strategy*.

In 2003, Congress enacted the Healthy Forests Restoration Act of 2003 (HFRA). The HFRA improves the ability of the United States Secretary of Agriculture and Secretary of Interior to conduct hazardous fuel reduction projects on National Forest System lands and BLM lands, to protect communities, watersheds, and infrastructure from catastrophic wildfire. The provisions of the HFRA include the following: (1) a streamlined National Environmental Policy Act (NEPA) process for hazardous fuel treatments and other activities that would reduce hazardous fuels on Federal land and, (2) incentives for local communities to prepare Community Wildfire Protection Plans (CWPP) that prioritize where hazardous fuel reduction should take place on Federal lands, and where federal fuel reduction funds should be expended on private lands (e.g., fuel reduction grants).

This MCCWPP was prepared pursuant to provisions of the HFRA, recognizing that certain large federal land holdings influence wildfire risk to nearby state, county and private lands, and local communities. In accordance with section 101 of the HFRA, this MCCWPP: (1) identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment on federal and non-federal land that will protect at-risk communities, watersheds and essential infrastructure; and (2) recommends measures to reduce structural ignitability throughout at-risk communities. Pursuant to section 103 of the HFRA, through the preparation of this MCCWPP and subsequent community-specific CWPPs, federal fuel reduction funding priorities on federal and non-federal land should be allocated to protecting those at-risk

communities described in this MCCWPP and local CWPPs, and to those hazardous fuel reduction projects recommended priorities in Appendix D.

3.3.1.2 Wilderness Acts

Monterey County contains 290,000 acres of federal and state wilderness designated as the Ventana Wilderness Area, Silver Peak Wilderness Area and Limekiln State Park Wilderness. These designated wilderness areas encompass 14% of Monterey County and are located in the northern Santa Lucia Mountains. Each wilderness area has been the subject of multiple acts of Congress. Congressional records indicate exceptions were made to wilderness prohibitions so that these wilderness areas can and will be managed to protect communities and watersheds from wildfire.

3.3.1.2.1 Wilderness Act of 1964

The Wilderness Act of 1964 (Wilderness Act) states as follows:

> In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness. Wilderness areas…shall be administered for the use and enjoyment of the American people in such matter as will leave them unimpaired for future use as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character and for the gathering and dissemination of information regarding their use and enjoyment as wilderness…

Wilderness is defined under Section 2(c) of the Wilderness Action of 1964 as follows:

> A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

The Wilderness Act of 1964 (Wilderness Act) generally prohibits use of motor vehicles and motorized equipment within wilderness areas.

However, the Wilderness Act also provides a special provision for "fire, insects and diseases" and for administration and personal heath and safety emergencies as exceptions to its prohibitions as follows: [11]

> Prohibition provisions: commercial enterprise, permanent or temporary roads, mechanical transports, and structures or installations; exceptions: area administration and personal health and safety emergencies. Except as specifically provided for in this Act [16 USCS §§ 1131 et seq.], and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act [16 USCS §§ 1131 et seq.] and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act [16 USCS §§ 1131 et seq.] (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area. (16 USCS § 1133(c).)

3.3.1.2.2 The Endangered American Wilderness Act of 1978

The Endangered American Wilderness Act of 1978 (Wilderness Act of 1978) builds upon the above referenced exceptions in the Wilderness Act, applying additional exceptions for fire presuppression measures and techniques specifically to the Ventana Wilderness to guarantee the continued viability of watersheds and the continued health and safety of communities. The Wilderness Act of 1978 reads in pertinent part as follows (emphasis added):[12]

> In order to guarantee the continued viability of the Ventana watershed and to insure the continued health and safety of the communities serviced by such watershed, the management plan for the Ventana area to be prepared following designation as wilderness shall authorize the Forest Service to take whatever appropriate actions are necessary for fire prevention and watershed protection including, but not limited to, acceptable fire pre-suppression and fire suppression measures and techniques. Any special provisions contained in the management plan for the Ventana Wilderness area shall be incorporated in the planning for the Los Padres National Forest. …

Specific to forest fires, the report on the Wilderness Act of 1978 by the Senate Committee on Energy and Natural Resources reads in pertinent part as follows (emphasis added):[13]

> Due to the extreme hazard of forest fires in the Los Padres National Forest, the committee adopted the special management language for the Santa Lucia and Ventana Wilderness areas approved by the House authorizing the Forest Service

[11] 16 USC 1133(d)(1); see, *Sierra Club v. Lyng* (1987) 663 F.Supp. 556.

[12] The Endangered American Wilderness Act of 1974, section 2(d).

[13] Senate Report 95-490 on H.R. 3454 (The Endangered American Wilderness Act of 1978), 95th Congress 1st session October 11, 1977, Senate Committee on Energy and Natural Resources.

> "to take whatever appropriate actions are necessary for fire prevention and watershed protection included [*sic*] but not limited to acceptable fire pre-suppression and fire suppression measures and techniques."

3.3.1.2.3 The California Wilderness Acts of 1984

The California Wilderness Act of 1984 (State Wilderness Act of 1984) signed into law by President Ronald Reagan on September 28, 1984 adding 2,750 acres to the Ventana Wilderness Area

Section 103 of the State Wilderness Act of 1984 states in relevant parts as follows:

> Within the National Forest wilderness areas designated by this title …as provided in section 4(b) of the Wilderness Act, the Secretary concerned shall administer such areas so as to preserve their wilderness character and to devote them to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use.

Section 103(b)(2) of this Act referenced the following exception in the Wilderness Act for the control of fire:[14]

> As provided in subsection 4(d)(l) of the Wilderness Act, the Secretary concerned may take such measures as are necessary in the control of fire, insects, and diseases, subject to such conditions as he deems desirable. (Section 103(b)(2)).

Specific to addressing the threat of fire, the report by the House Committee on Interior and Insular Affairs on the Wilderness Act of 1984 reads in pertinent part as follows (emphasis added):[15]

> Fire management—<u>Due to the arid climate, high seasonal temperatures and buildup of fuel that exists</u> in so many California roadless areas, especially in Southern California, fire management is a key concern. … <u>Not only does the threat of wildfire pose a danger to public safety, but uncontrolled fires can also cause severe damage to watersheds, water quality and other beneficial wilderness values</u>.
>
> To address this concern in the [Wilderness Act of 1984], the Committee reiterated the fire provisions of Section 4(d)(1) of the Wilderness Act. … As the Committee stressed … <u>this provision is intended to grant the Forest Service with the means of utilizing such measures or tools as it deems "necessary" and "desirable" in the control of [*sic*] pre-suppression of fire in wilderness areas. In some instances, the Forest Service has exercised this broad authority [for] fire roads, fuel breaks or other management.</u> … <u>The major point to be made however, is that the Wilderness Act permits the Forest Service to utilize measures necessary to control</u>

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[14] 16 USC 1133.

[15] House Report 98-40 on H.R. 1437 (P.L. 98-425), 98th Congress 1st session, March 18, 1983, House Committee on Interior and Insular Affairs.

> wildfire, or the threat of fire, in wilderness areas. Obviously, such measures should, to the maximum extent practicable, be implemented consistent with maintaining the wilderness character of areas, while at the same time protecting the public health and safety and protecting private property located immediately adjacent to wilderness areas.

3.3.1.2.4 Los Padres Condor Range and River Protection Act (1992)

The Los Padres Condor Range and River Protection Act of 1992 (Los Padres Act of 1992) was signed into law by President George H. W. Bush on June 19, 1992 adding 38,000 acres to the Ventana Wilderness Area and creating the 14,500 acre Silver Peak Wilderness Area.

Section 1 of the Los Padres Act of 1992 states as follows:

> The Congress finds that --- (1) areas of undeveloped national Forest System lands within the Los Padres National Forest have outstanding natural characteristics which will, if properly preserved, contribute as an enduring resource of wilderness for the benefit of the American people; and (2) it is in the national interest that certain of these areas be designated as components of the National Wilderness Preservation System and Wild and Scenic River System or reserved from mineral entry in order to preserve such areas and their specific multiple values for watershed preservation, wildlife habitat protection, scenic and historic preservation, scientific research, educational use, primitive recreation, solitude, physical and mental challenge, and inspiration for the benefit of all of the American people of present and future generations.

In the Act, Congress sets forth the following exceptions to the Wilderness Act prohibitions which allow for fire pre-suppression measures within wilderness in order to protect watersheds and communities. Section 3(b) of the Los Padres Act of 1992 reads as follows (emphasis added):

> FIRE PREVENTION AND WATERSHED PROTECTION —In order to guarantee the continued viability of the watersheds of the wilderness areas designated by this Act and to ensure the continued health and safety of the communities serviced by such watersheds, the Secretary of Agriculture may take such measures as are necessary for fire prevention and watershed protection including, but not limited to, acceptable fire pre-suppression and fire suppression measures and techniques.

3.3.1.2.5 Big Sur Wilderness and Conservation Act of 2002

The Big Sur Wilderness and Conservation Act of 2002 (Wilderness Act of 2002) expanded the Ventana Wilderness and the Silver Peak Wilderness. Congress provided exceptions to wilderness prohibitions to allow for fire pre-suppression measures and techniques. Section 4 of the Wilderness Act of 2002 reads as follows (emphasis added):

SEC. 4. WILDERNESS FIRE MANAGEMENT.

(a) REVISION OF MANAGEMENT PLANS.—The Secretary of Agriculture shall, by not later than 1 year after the date of the enactment of this Act, amend the management plans that apply to each of the Ventana Wilderness and the Silver Peak Wilderness, respectively, to authorize the Forest Supervisor of the Los Padres National Forest to take whatever appropriate actions in such wilderness areas are necessary for fire prevention and watershed protection consistent with wilderness values, including best management practices for fire pre-suppression and fire suppression measures and techniques.

(b) INCORPORATION INTO FOREST PLANNING.—Any special provisions contained in the management plan for the Ventana Wilderness and Silver Peak Wilderness pursuant to subsection (a) shall be incorporated into the management plan for the Los Padres National Forest.

3.3.1.3 Los Padres National Forest Management Plan (LPNF Management Plan)

Consistent with the Wilderness Act of 1978 and the Wilderness Act of 2002, the USFS prepared the LPNF Management Plan. An EIS and a ROD was adopted for the LPNF Management Plan in April 2006. The ROD includes the following language to describe the overall intent of the plan:

> [W]e will be doing fuels work in the Wildland/Urban Interface (WUI) Defense and Threat zones for community protection. In these areas, the emphasis is on vegetation treatments that are expected to create conditions allowing fire fighters to work safely in the area. Wildlife habitat requirements are still an emphasis. However, to be absolutely clear, the protection of human life and property is our highest priority. While we do the work in the WUI Defense and Threat zones, we will try to maintain habitat in a condition that will support the species that live there, but we will meet the criteria for community defense. If there is a trade-off, human life and property will be the priority.[16]

The LPNF Management Plan describes the WUI and WUI zones as follows:

> There are extensive areas within and adjacent to the national forests of southern California meeting the definition of Wildland/Urban Interface (WUI) as described in the Healthy Forests Restoration Act of 2003. WUI (as defined by the Act) is a variable width … as defined in individual community fire protection plans. This forest plan further identifies a direct protection zone (WUI Defense Zone) and an indirect protection zone (WUI Threat Zone) that fall within the broader definition of WUI. A WUI Defense Zone is the area directly adjoining structures and evacuation routes that is converted to a less-flammable state to increase defensible space and firefighter safety. The WUI Threat Zone is an additional strip of vegetation modified to reduce flame heights and radiant heat. The Threat Zone generally extends approximately 1 1/4 miles out from the Defense Zone

[16] Record of Decision, Los Padres National Forest Land Management Plan, page 11

> boundary. Yet, actual extents of Threat Zones are based on fire history, local fuel conditions, weather, topography, existing and proposed fuel treatments, and natural barriers to fire and community protection plans, and therefore could extend well beyond the 1 1/4 mile. The two zones together are designed to make most structures more defendable.[17]

The EIS for the LPNF Management Plan analyzed impacts well beyond the 1 1/4 mile distance for WUI Threat Zone[18] The LPNF Management Plan includes fire and fuel management planning. Forest Goal 1.2 discusses community protection through vegetation treatment in the WUI and strategically located fuelbreaks and associated burns. The LPNF Management Plan also states that existing fuelbreaks are to be maintained using prescribed fire, fireline explosives, grazing, herbicide or mechanical methods.[19]

3.3.1.4 National Environmental Policy Act (NEPA)

The purpose of the NEPA is to declare a national policy that will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere, and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council of Environmental Quality.[20]

Any proposed hazardous fuel treatment projects on federal land or requiring federal discretionary approval will require compliance with NEPA. Hazardous fuel reduction treatments on non-federal land that do not use federal funding and do not require federal discretionary approval generally do not require NEPA review. If NEPA review applies, projects implementing a hazardous fuel reduction recommendation in a CWPP on Federal land, that is within a WUI, or within 1.5 miles of an at-risk community, are afforded expedited NEPA review under the HFRA. Further environmental review under NEPA may be required by the USFS prior to the USFS's implementation of individual projects in the LPNF Management Plan.

Moreover, hazardous fuel reduction treatments recommended for USFS and BLM land in a CWPP must be considered in the NEPA analysis by the USFS or BLM as an alternative to the agency's proposed project. As provided by the HFRA, if a federal fuel reduction project is within a WUI, but more than 1.5 miles from the at-risk community's boundary, only one alternative other than the proposed project is required to be considered.[21] If the hazardous fuel reduction project is within 1.5 miles of the boundary of the at-risk community, an alternative to the proposed project is not required to be considered, unless the proposed agency action does not implement the recommendations in an adopted CWPP "for the same general location and basic

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[17] Appendix K, Guidelines for Development and Maintenance of WUI Defense and Threat Zones, page 81 in Part 3, Design Criteria for Southern California National Forests, of the Land Management Plan [for the Los Padres National Forest, 2005].

[18] Final Environmental Impact Statement, Volume 1, Land Management Plan [for the Southern California National Forests], page 315.

[19] Page 22, Los Padres National Forest Land Management Plan, Part 2, Los Padres National Forest Strategy.

[20] 42 USC 4321

[21] Note that without this provision, 2 or more alternatives must be considered, one of which must be a "no action" alternative.

method of treatments", in which case the recommendations in the CWPP should be evaluated as an alternative to the proposed agency action in accordance with HFRA.[22] This streamlined NEPA process does not apply to certain hazardous fuel reduction treatments within wilderness areas. The USFS prepared the LPNF Management Plan and an associated EIS, and a ROD was issued in April 2006. The key community protection factors in the ROD for the LPNF Management Plan are stated in the ROD as follows:[23]

- Emphasizes the protection of lives and property;
- Includes the flexibility to adjust WUIs according to CWPPs; and
- Retains access.

The LPNF Management Plan also discusses the maintenance of existing fuelbreaks using prescribed fire, fireline explosives, grazing, herbicides or mechanical methods. Herbicide use may delay need for mechanical treatment, especially when there is a diminished workforce. The Departments of Agriculture and Interior enacted categorical exclusions to NEPA for hazardous fuel reduction activities and rehabilitation activities for lands and infrastructure impacted by fires or fire suppression.[24] The categorical exclusions are limited to (1) those activities identified through a collaborative framework as described in the 10-Year Comprehensive Strategy Implementation Plan; (2) fuel reduction activities that are within a WUI, or, if outside the WUI, in Condition Classes 2 or 3 in Fire Regime Groups I, II, or III; (3) hazardous fuels reduction activities using fire, limited to 4,500 acres; (4) mechanical hazardous fuels reduction activities, limited to 1,000 acres; (5) fuel reduction and rehabilitation activities that are not in wilderness areas or where they would impair the suitability of wilderness study areas for preservation as wilderness; and (6) fire rehabilitation activities of not more than 4,200 acres. At the time of this writing (September 2010), certain categorical exclusions were under legal challenges.

3.3.1.5 Federal Endangered Species Act (ESA)

The purposes of the ESA are to provide a means whereby the ecosystems upon which endangered and threatened species depend may be conserved; to provide a program for the conservation of such endangered and threatened species; and to take such steps as may be appropriate and practicable pursuant to various international treaties and conventions.[25]

Section 7 of the ESA requires federal agencies, such as the U.S. Fish & Wildlife Service (USFWS), to ensure that any action authorized, funded or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat. Section 9 of the ESA provides that it is unlawful for any person subject to the jurisdiction of the United States to take, possess, deliver or sell any species that has been listed as threatened or endangered pursuant to the ESA.[26]

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[22] Title 16 USC 6514(d).

[23] Record of Decision, Los Padres National Forest Land Management Plan, page 5.

[24] Federal Register, Vol. 68, No. 108, June 5, 2003.

[25] 16 USC 1531 (a) & (b).

[26] 16 USC 1538. The term "take" means to, "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." (16 USC 1532(19).)

In accordance with the ESA, hazardous fuel reduction activities proposed in this MCCWPP must avoid a taking of federally listed threatened or endangered species, or, if a take cannot be avoided, the take must be authorized pursuant to the ESA. The USFWS has the authority to allow the take of threatened or endangered species or impacts to their critical habitat incidental to fire prevention/protection activities.[27]

3.3.2 Applicable State Laws

3.3.2.1 California Constitution

Article 1, Section 1 of the California Constitution reads as follows:

> All people are by nature free and independent and have inalienable rights. Among these are enjoying and defending life and liberty, acquiring, possessing, and protecting property, and pursuing and obtaining safety, happiness, and privacy.

While no rights are absolute, fundamental rights such as the rights to defend life, protect property, and pursue and obtain safety, may be infringed only to the minimum extent necessary to promote a compelling government interest.

3.3.2.2 Division 4 of California Public Resources Code (PRC) – Forests, Forestry and Range and Forage Lands

3.3.2.2.1 Board of Forestry and Fire Protection and Department of Forestry and Fire Protection (CAL FIRE)

The Board of Forestry and Fire Protection (Board of Forestry) is a government-appointed body within CAL FIRE. The Board of Forestry is responsible for developing the general forest policy of the state, for determining the guidance policies of CAL FIRE, and for representing the state's interest in federal forestland in California. Together, the Board of Forestry and CAL FIRE work to carry out the California Legislature's mandate to protect and enhance the state's unique forest and wildland resources.

The Board of Forestry is charged with protecting the forest resources of all the wildland areas of California that are not under federal jurisdiction. These resources include: major commercial and non-commercial stands of timber, areas reserved for parks and recreation, the woodland and brush-range watersheds, and all such lands in private and state ownership that contribute to California's forest resource wealth.[28]

Under California Public Resources Code (PRC) section 4111, the Board of Forestry has the authority to "make and enforce such regulations as are necessary and proper for the organization,

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[27] For example, a memorandum of understanding (MOU) was executed by and between USFWS, the California Department of Fish and Game (CDFG), CAL FIRE and other fire agencies and districts for hazardous fuel reduction activities in San Diego County.

[28] http://www.bof.fire.ca.gov/about_the_board/

maintenance, government, and direction of the fire protective system for the prevention and suppression of forest fires."

3.3.2.2.2 State Responsibility Areas (SRA)

PRC section 4102 defines the term "State Responsibility Areas" (SRAs) as "the areas of the state in which the financial responsibility of preventing and suppressing fires has been determined by [CAL-FIRE] ... to be primarily the responsibility of the state." (Emphasis added.)

Lands in SRAs include:

1. Lands covered wholly or in part by forests or by trees producing or capable of producing forest products.
2. Lands covered wholly or in part by timber, brush, undergrowth, or grass, whether of commercial value or not, which protect the soil from excessive erosion, retard runoff of water or accelerate water percolation, if such lands are sources of water which are available for irrigation or for domestic or industrial use.
3. Lands in areas which are principally used or useful for range or forage purposes, which are contiguous to the lands described in subdivisions (a) and (b) Division 4 of the PRC, Forests, Forestry and Range and Forage Lands, which contains statutes related to fuel reduction on certain land.[29]

The map in Appendix B-6 shows that most of Monterey County is within SRA.

3.3.2.2.3 Title 14 CCR 1299 and Defensible Space Guidelines

In 2006, the Board of Forestry promulgated a regulation to implement the defensible space provisions of PRC section 4291. The regulation was codified in Title 14, section 1299 of the California Code of Regulations (14 CCR 1299).

14 CCR 1299(b) provides the following specific mandatory language: "Any vegetation fuels identified as a fire hazard by the fire inspection official of the authority having jurisdiction shall be removed or modified provided it is required by subsection (a)(1) & (a)(2)."

Subsections (a)(1) and (a)(2) state as follows:

> (a) A person that owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, and is within State Responsibility Area, shall do the following:
>
> (1) Within 30 feet from each building or structure, maintain a firebreak by removing and clearing away all flammable vegetation and other combustible growth pursuant to PRC § 4291(a). Single specimens of trees or other

[29] PRC section 4126.

vegetation may be retained provided they are well-spaced, well-pruned, and create a condition that avoids spread of fire to other vegetation or to a building or structure.

(2) Within the 30 feet to 100 feet zone (Reduced Fuel Zone) from each building or structure (or to the property line, whichever is nearer to the structure), provide a fuelbreak by disrupting the vertical and/or horizontal continuity of flammable and combustible vegetation with the goal of reducing fire intensity, inhibiting fire in the crowns of trees, reducing the rate of fire spread, and providing a safer environment for firefighters to suppress wildfire pursuant to PRC § 4291(b).

Subsection (c) broadens and adds flexibility to CAL FIRE's authority by stating the following:

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

The creation of defensible space is a requirement subject to penalties if property owners do not comply with the mandatory requirement.

14 CCR 1299(c) also references a guidance document for implementation of this regulation, which is entitled, General Guidelines for Creating Defensible Space (Guidelines), as published by the Board of Forestry by resolution adopted on February 8, 2006. The Guidelines provide criteria intended to instruct individuals and fire officials on acceptable ways to comply with 14 CCR 1299, and are incorporated into section 14 CCR 1299 by reference. See Appendix E for the Guidelines.

3.3.2.2.3.1 California Environmental Quality Act (CEQA) Review of 14 CCR 1299 and Guidelines

The Board of Forestry considered adoption of 14 CCR 1299 and its associated Guidelines a "project" subject to CEQA (Project), and the scope of the CEQA review was the Project's ultimate effect on the environment. Generally, CEQA defines the term "project" as an activity carried out, supported by, or authorized by a public agency, "which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. ..."[30] CEQA is discussed further in Section 3.3.2.4 of this MCCWPP.

At the time of the Board of Forestry's adoption of the Guidelines on February 8, 2006, the Board of Forestry deliberated on the issue of CEQA and concluded that the Class 4 categorical exemption applied and that the Project "is consistent with the CEQA statutory exemption under section 21080(b)(4) specifying that actions [are] necessary to prevent or mitigate an emergency."[31]

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[30] PRC section 21065; 14 CCR 15378(a).

[31] Item 9 of Meeting Minutes.

3.3.2.2.4 Public Resources Code Section 4291 (PRC 4291)

PRC 4291 requires that any person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material, shall maintain defensible space of 100 feet from each side and from the front and rear of the structure, or as further provided in PRC 4291, but not beyond the property line unless allowed by state law, local ordinance, or regulation, and with the consent of the adjacent landowner.

The statute provides that the amount of fuel modification necessary shall take into account the flammability of the structure as affected by building material, building standards, location, and type of vegetation.

PRC 4291 provides that a distance greater than 100 feet may be required by state law, local ordinance, rule, or regulation, with limitations on requiring fuel modification beyond the property line, including consent by the adjacent landowner.

PRC 4291 also provides that an insurance company that insures an occupied dwelling or occupied structure may require a greater distance if a fire expert, designated by the Director of Forestry and Fire Protection, provides findings that such hazardous fuel reduction is necessary to significantly reduce the risk of transmission of flame or heat sufficient to ignite the structure, and there is no other feasible mitigation measure possible to reduce the risk of ignition or spread of wildfire to the structure. The greater distance may not be beyond the property line unless allowed by state law, local ordinance, rule, or regulation. The statute also requires other hazardous fuel reduction measures, such as a minimum distance of 10 feet between trees and the outlet of a chimney or stovepipe.

PRC 4291 further provides that the Director of Forestry and Fire Protection may authorize removal of vegetation that is not consistent with the standards of PRC 4291.

PRC section 4291.1 describes the penalties for PRC 4291 violations. Penalties range from a fine of not less than $100, to not less than $500, depending upon the number of violations during a five year period. PRC section 4291.1 also provides that under certain conditions, CAL FIRE may contract to have hazardous fuel reduction work done and bill the person convicted of the violation for the cost of the work.

3.3.2.2.5 Access Roads

Under 14 CCR 1273, all road and street networks, whether public or private (unless exempt), must provide safe access for emergency equipment and civilian evacuation concurrently. There are roads that do not meet this standard and cannot feasibly be upgraded. Fuel reduction along access roads is a necessary maintenance activity in order to provide safe access for fire equipment and resident evacuation during fires. Emergency access is part of defensible space.[32]

[32] The Guidelines adopted to implement PRC 4291 define Defensible Space to include emergency vehicle access; "Defensible space: … The area is characterized by the establishment and maintenance of emergency vehicle access. …" (General Guidelines for Creating Defensible Space, 2006, page 3.)

3.3.2.3 California Coastal Act (CCA) and Local Coastal Programs

The California Coastal Commission (CCC) was established temporarily by voter initiative in 1972 (Proposition 20) and later made permanent by the Legislature through adoption of the California Coastal Act (CCA). The CCA serves as a comprehensive planning and regulatory program to manage conservation and development within the California coastal zone.

The California Coastal Commission (CCC), in partnership with coastal cities and counties, plans and regulates the use of land in the coastal zone. The California Coastal Act (CCA) provides that land uses that meet its definition of "development"[33] require a coastal development permit (CDP) from either the CCC or the local government that has been delegated permitting authority.[34] As relevant here, the term "development" in the CCA includes the following definition: "Development" means… the removal or harvesting of major vegetation …[35] (Emphasis added.)

Monterey County has been delegated CDP permitting authority through the adoption and certification of Local Coastal Programs (LCP). However, the CCC retains appellate authority. The need for a CDP is reviewed against the policies of the certified LCP. Monterey County has divided its portion of the coastal zone into four separate coastal planning areas: (1) Big Sur, (2) North County, (3) Carmel, and (4) Del Monte Forest. Each coastal planning area has its own coastal land use plan and coastal implementation plan. When adopted and certified, these coastal plans underwent environmental review that was the functional equivalent of CEQA, and CEQA review was therefore not required.[36] The following sections discuss policies related to fire prevention and protection in these four coastal land use plans, which are in certified LCPs.

3.3.2.3.1 Big Sur Coast Land Use Plan (Big Sur LUP) and Implementation Plan (Big Sur CIP)

The Big Sur LUP recognizes that the entire Big Sur area is "subject to fire hazard to life, property, vegetation, and wildlife."[37] The Big Sur LUP cautions, "Fire danger is ever present in summer and can be extremely hazardous for residents."[38]

In addition to numerous policies for new development in the Big Sur LUP, the plan provides the following broad policy to support fire protection agencies:

> Monterey County should support and assist the efforts of the various fire protection agencies and districts to identify and minimize fire safety hazards to the public. (Big Sur LUP Policy 3.7.3.C.5.)

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[33] PRC section 30106 for the CCA's definition of development.

[34] PRC sections 30106, 30101.5 and 30600(a).

[35] PRC section 30106

[36] The CCC obtained certification from the Secretary of Resources that its regulatory program is the functional equivalent of CEQA in 1979, and the LCP approval process has been exempt from EIR requirements ever since. *Santa Barbara County Flower and Nursery Growers Association, Inc. v. County of Santa Barbara*, (2004) 121 Cal.App.4th 864; Title 14 CCR section 15251, subdivision (f); Title 14 CCR section 15265.

[37] Page 40, Big Sur LUP.

[38] Page 6, Big Sur LUP

As stated in Section 3.3.2.3, the term "development" in the CCA includes the removal or harvesting of major vegetation. Big Sur LUP Policy 5.4.2.13 states as follows (emphasis added):

> A coastal development permit must be obtained for the removal of trees and other major vegetation. <u>However,</u> in the Big Sur Coast area, <u>the following will not be considered as removal of major vegetation</u>:
>
> a. Removal of non-native or planted trees, except where this would result [in] the exposure of structures in the critical viewshed;
>
> b. Removal of hazardous trees which pose an imminent danger to life or property, or threaten contagion of nearby forested areas, subject to verification by the County <u>or</u> California Department of Forestry;
>
> c. Thinning of small (less than 12" diameter) or dead trees from density [*sic*] forested areas, especially as needed to reduce unsafe fuel accumulations adjacent to existing occupied buildings; and,
>
> d. Prescribed burning, crushing, lopping or other methods of brush clearing which do not materially disturb underlying soils.

The Big Sur CIP mimics the language of Policy 5.4.2.13 in its Forest Resources Development Standards (Big Sur CIP section 20.145.060.) The Big Sur CIP's Forest Resources Development Standards provide development standards for the protection and maintenance of Big Sur's forest resources. Section 20.145.060 of the Forest Resources Development Standards states as follows: "A coastal development permit must be obtained for the removal of trees and other major vegetation <u>with the following exceptions….</u>" (Emphasis added.) The same subsections (a through d) provided in Policy 5.4.2.13 of the Big Sur LUP follows that sentence.[39]

3.3.2.3.2 North County Land Use Plan (North County LUP) and Implementation Plan (North County CIP)

The North County LUP recognizes the high dangers of wildland fires in North County. It states, "Wildland fires are a danger to lives and property, and continued residential development in North County increases the risk of fire."[40] The North County LUP acknowledges that "most of North County has a moderate to high fire potential because of its vegetation or 'heavy' fuel loading."[41]

To address the heavy fuel loads in North County, North County LUP Policy 2.3.3.A.2 provides the following:

> A fuel reduction program should be developed for North County's oak woodland and chaparral to reduce the potential risk of wildfires, to maintain the vigor of plant communities, and to maintain the diversity and value of habitat areas.

[39] To the extent the language in the CIP fails to implement the language in the LUP, the language in the LUP controls.

[40] Page 50, North County LUP.

[41] Page 50, North County LUP.

> Controlled burning should be strictly limited and managed in maritime chaparral areas.

Policy 2.8.3.C.5 of the North County LUP states the following to maintain fire access in North County:

> Roads serving residential development in high fire hazard areas shall be adequate to serve emergency equipment.

Finally, Policy 2.8.3.C.7 provides the following broad provision to support fire agencies and districts in North County:

> Monterey County should support the efforts of the various fire protection agencies and districts to identify and minimize fire safety hazards to the public.

North County CIP Policy 20.144.050.A.1 states the following:

> A coastal development permit must be obtained for the removal of trees and other major vegetation with the following exceptions:
>
> a. Removal of non-native or planted trees, except where this would be ridgeline tree removal as per Section 20.144.050.D.8 or where the trees are considered to be of significant or landmark status, as defined in Section 20.144.050.D.1;
>
> b. Removal of hazardous trees which pose an immediate danger to life or structures;
>
> c. Removal of native trees less than 12" diameter when measured at breast height, or removal of oak trees less than 6" in diameter measured 2 feet above the ground, or removal of marine trees less than 6" in diameter measured at breast height; and prescribed burning, crushing, lopping, or other methods of clearing brush which do not materially disturb underlying soils.

3.3.2.3.3 Carmel Area Land Use Plan (Carmel LUP) and Implementation Plan (Carmel CIP)

The Carmel LUP recognizes the high risk of damage to life and property from fires in the unincorporated areas of Carmel as follows: "Poor roads and limited accessibility in areas of rugged terrain such as steep mountain slopes and canyons increase the response time for firefighting equipment and may hinder escape. The risk of damage to life and property, therefore, is more severe and fire control more difficult."[42]

In addition to numerous policies set forth for new development, the Carmel LUP Policy 2.7.4.5 provides the following broad policy to support the fire protection agencies and districts in the Carmel area:

[42] Page 54 Carmel LUP.

> Monterey County should support and assist the efforts of the various fire protection agencies and districts to identify and minimize fire safety hazards to the public.

Moreover, the following General Policy 2.5.3.9 of the Carmel LUP addresses hazardous fuel reduction activity in the Carmel area:

> Fuel hazard reduction and prescribed burning shall be considered acceptable management techniques for forested areas in private or public ownership where such action will enhance the vigor of the forest habitat or will reduce hazardous fuel loads.

Recommended Action 2.3.5.7 in the Carmel LUP recommends the following activities to reduce fuel loads in certain areas of unincorporated Carmel:

> To reduce accumulated fuel loads, maintain the health and vigor of the pine and cypress forests, facilitate reproduction of the Gwen and Monterey cypress, and reduce the spread of Monterey pine into certain areas such as Northern Coastal Prairie, the State Department of Parks and Recreation should develop a fuel hazard reduction and prescribed burning program. Such a program should not be executed, however, until it is proven practical and prudent. In the meantime, the California Department of Parks and Recreation should give serious consideration to contracting for manual removal of fuel-hazardous materials.

Carmel CIP Policy 20.146.060.A.1 provides the following:

> A coastal development permit must be obtained for the removal of trees and other major vegetation with the following exceptions:
>
> a. Removal of non-native or planted trees, except where this would result in the exposure of structures in the critical view shed area; where defined as habitat; where previously protected by coastal permit or forest management plan or scenic/conservation easement;
>
> b. Removal of hazardous trees which pose an immediate danger to life or structures;
>
> c. Thinning of small (less than 12" in diameter) or dead trees from densely forested areas, especially as needed to reduce unsafe fuel accumulations adjacent to existing occupied buildings;
>
> d. Prescribed burning, crushing, lopping or other methods of brush clearing which do not materially disturb underlying soils.

3.3.2.3.4 Del Monte Forest Land Use Plan (Del Monte LUP) and Implementation Plan (Del Monte CIP)

The Del Monte LUP recognizes the high fire hazards in the Del Monte Forest as follows: "Most forested areas of the Del Monte Forest are considered high fire hazard areas…"[43] The plan also warns, "Land uses and development in areas of geologic, flood, and fire hazard shall be carefully regulated through the best available planning practices in order to minimize risks to life and property, or damage to the environment.

Policy 48 of the Del Monte LUP acknowledges the PRC 4291 requirement and states as follows:

> The fire hazard policies contained in the Safety Element of the Monterey County General Plan and the clearance requirements of the State Forest and Fire Law (Section 4291 of the Public Resources Code) shall be regularly and consistently applied.

Del Monte CIP Policy 20.147.050.A.1 states as follows:

> A coastal development permit must be obtained for the removal of trees and other major vegetation with the following exceptions:
>
> a. Removal of non-native or planted trees, except where this would result in the exposure of structures in the critical viewshed area; where defined as habitat; where previously protected by coastal permit or forest management plan or scenic/conservation easement;
>
> b. Removal of hazardous trees which pose an immediate danger to life or structures or where a diseased tree is determined by a qualified professional forester to represent a severe and serious infection hazard to the rest of the forest; and
>
> c. Except for Monterey Cypress in its indigenous range, thinning of small (less than 12" in diameter) or dead trees from densely forested areas, especially as needed to reduce unsafe fuel accumulations adjacent to existing occupied buildings; and
>
> d. Prescribed burning, crushing, lopping or other methods of brush clearing which do not materially disturb underlying soils.

3.3.2.4 California Environmental Quality Act (CEQA)

The purpose of CEQA is to maintain a quality environment for the people of this state; provide a high-quality environment that at all times is healthful and pleasing to the senses and intellect of man; understand the relationship between the maintenance of high-quality ecological systems and the general welfare of the people of the state, including their enjoyment of the natural resources of the state; understand that the capacity of the environment is limited, and that the government of the state must take immediate steps to identify any critical thresholds for the health and safety of the people of the state and take all coordinated actions necessary to prevent

[43] Page 30, Del Monte LUP.

such thresholds being reached; and regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the environment so that major consideration is given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian.[44]

A public agency must comply with CEQA when the agency undertakes an activity defined by CEQA as a "project." PRC section 21065 defines a "project" subject to CEQA as follows:

> "Project" means an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following:
>
> (a) An activity directly undertaken by any public agency.
>
> (b) An activity undertaken by a person which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
>
> (c) An activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

If the activity does not meet the definition of a "project" above, CEQA does not apply and CEQA analysis is not required. Even if the activity qualifies as a project, CEQA analysis may not be required if it is statutorily exempt or categorically exempt. For example, PRC section 21080(b)(4) and 14 CCR 15269(c) provide a statutory exemption for specific actions necessary to prevent or mitigate an emergency.

Class 4 categorical exemption, i.e., minor alteration to land, consists of minor public or private alterations in the condition of land, water, and/or vegetation. As relevant to fuel mitigation activities, subsection (I) of Class 4 states as follows:

> Fuel management activities within 30 feet of structures to reduce the volume of flammable vegetation, provided that the activities will not result in the taking of endangered, rare, or threatened plant or animal species or significant erosion and sedimentation of surface waters. This exemption shall apply to fuel management activities within 100 feet of a structure if the public agency having fire protection responsibility for the area has determined that 100 feet of fuel clearance is required due to extra hazardous fire conditions.

3.3.2.4.1 MCCWPP Not a Project Subject to CEQA

This MCCWPP is an advisory document subject to compliance with all other applicable local, state and federal laws, and comprises recommendations by the community to various governmental agencies. The MCCWPP does not legally commit any agency to a specific course of action or conduct, including by the act of signing the MCCWPP. The MCCWPP is not a project subject to CEQA or NEPA. However, if any agency adopts a regulation or ordinance, or makes a discretionary decision to implement an action recommended in the MCCWPP that has

[44] PRC section 21000.

the potential to cause a significant adverse impact on the environment, such discretionary action might be considered a project subject to CEQA or NEPA, and an environmental analysis of that proposed action may be required, unless one of the factors discussed in Section 3.3.2.4.2 below applies.

3.3.2.4.2 Implementation of MCCWPP

Implementation of vegetation management activities recommended in this MCCWPP might be a project subject to CEQA as shown in the Flowchart included as Appendix F, unless:

- An environmental review has already been completed that can be relied upon by an agency or agencies,
- A statutory or categorical exemption applies to the activity, or,
- The project does not involve any discretionary approval by a public agency, does not involve public funding, and will not be carried out by a public agency.

3.3.2.5 California Endangered Species Act (CESA) and Native Plant Protection Act (NPPA)

The California Endangered Species Act (CESA)[45] generally parallels the main provisions of the federal Endangered Species Act and is administered by the California Department of Fish and Game (CDFG). A lead agency is required to consult with CDFG if any action it undertakes is likely to jeopardize the continued existence of any endangered or threatened species. CESA section 2080 of the State Fish and Game Code states:

> No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter [or] the Native Plant Protection Act.

The California Native Plant Protection Act (NPPA) was "enacted to preserve, protect and enhance endangered or rare native plants of this state." The NPPA authorizes the California Fish and Game Commission to designate species of native plants as endangered or rare. The NPPA provides:

> No person shall import into this state, or take, possess, or sell within this state, except as incident to the possession or sale of the real property on which the plant is growing, any native plant, or any part or product thereof, that the commission determines to be an endangered native plant or rare native plant, except as otherwise provided in this chapter.

[45] Fish & Game Code section 2050, *et seq.*

The NPPA grants authority to the Commission to adopt regulations governing the take of any endangered or rare native plants.[46] The NPPA includes provisions that provide exclusions from the NPPA regulation.

Section 1912 of the Fish and Game Code states that the provisions of this chapter "shall not be applicable to emergency work necessary to protect life or property."[47] The NPPA also states:

> [T]he provisions of this chapter are not intended and shall not be construed as authorizing any public agency to mandate, prescribe, or otherwise regulate management practices, including [among others] … clearing of land for … fire control measures."[48] (Emphasis added.)

Under the provisions of Fish and Game Code sections 1912 and 1913, emergency work and land clearing for fire control measures are excluded from NPPA regulation. As applicable to the interpretation of provisions in the CESA, Attorney General's Published Opinion No. 98-105[49] states the following with regard to section 2080 of the CESA:[50]

> We thus conclude in answer to the … question that a landowner may destroy a plant on his property that is listed as threatened or endangered under CESA when … (7) incidental to specified emergency projects, or (8) incidental to … the clearing of certain property under the provisions of NPPA.

3.3.2.6 Forest Practice Rules and Z'berg-Nejedly Forest Practice Act

The Z'berg-Nejedly Forest Practice Act of 1973 (Forest Practice Act)[51] was enacted to create and maintain an effective and comprehensive system of regulation and use of all timberlands. Extensive regulations have been promulgated to implement the Forest Practice Act, the California Forest Practice Rules (Rules).[52]

CAL FIRE is responsible for administering the Rules on all non-federal timberland. The Rules apply regardless of zoning and include lands inside city limits. The removal of California native "commercial" timber species from forested lots, areas of pending new construction, and from around existing structures may be regulated by the Rules. Appendix G contains a checklist

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[46] California Fish & Game Code §1907(a).

[47] Section 1912 includes the following notification requirement: "[N]otification by the person or agency performing such emergency work shall be made to the department within 14 days of the commencement of such work."

[48] California Fish and Game Code §1913(a).

[49] 81 Ops. Cal. Atty. Gen. 222.

[50] Fish and Game Code section 2080 reads, "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (Chapter 10 (commencing with Section 1900) of this code), or the California Desert Native Plants Act (Division 23 (commencing with Section 80001) of the Food and Agricultural Code)." (Emphasis Added.)

[51] PRC section 4511 *et seq* (to 4628)

[52] 14 CCR 895 *et seq* (to 1115.3).

prepared by CAL FIRE for the purpose of helping individuals decide if the Rules will apply to a tree-removal activity.

3.3.2.7 California Smoke Management Guidelines

The California Air Resources Board (CARB) promulgated regulations, the Smoke Management Guidelines, on March 23, 2000.[53] The Smoke Management Guidelines apply to prescribed and agricultural burns, and required each air district in the state to develop a Smoke Management Program for their region by July 1, 2001. The regulation also established the overall framework each air district was to follow in developing the program for their area. The requirements of the Smoke Management for the North Central Coast Air Basin, which includes Monterey, Santa Cruz and San Benito Counties, are outlined in the Monterey Bay Unified Air Pollution Control District's (MBUAPCD) Rule 438, Open Outdoor Fires.

3.3.2.8 California Wilderness Act of 1974

The California Wilderness Act of 1974 states as follows:

> In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas on state-owned lands within California, leaving no areas designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the State of California to secure for present and future generations the benefits of an enduring resource of wilderness.

A California wilderness preservation system to be composed of state-owned areas was established through the State Wilderness Act of 1974 and was designated by the Legislature as "wilderness areas" or “state wildernesses”. Relevant parts of section 5093.33 of the State Wilderness Act describes the wilderness areas and state wildernesses areas administered for the use and enjoyment of the people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, provide for the protection of such areas, preserve their wilderness character, and provide for the gathering and dissemination of information regarding their use and enjoyment as wilderness. No state-owned areas shall be designated as "wilderness areas" except as provided for in this chapter or by subsequent legislative enactment.

A wilderness area, in contrast to those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain. A wilderness area is further defined to mean an area of relatively undeveloped state-owned land which has retained its primeval character and influence or has been substantially restored to a near natural appearance, without permanent improvements or human habitation, other than semi-improved campgrounds and primitive latrines, and which is protected and managed so as to preserve its natural conditions and which:

> (1) Appears generally to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable.

[53] 17 CCR 80100 *et seq*.

(2) Has outstanding opportunities for solitude or a primitive and unconfined type of recreation.

(3) Has at least 5,000 acres of land, either by itself or in combination with contiguous areas possessing wilderness characteristics, or is of sufficient size as to make practicable its preservation and use in an unimpaired condition.

(4) May also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.

Assembly Bill 2945 was signed into law by Governor Arnold Schwarzenegger on September 30, 2008 amending the California Wilderness Act to create the 413 acre Limekiln State Park Wilderness.

3.3.3 Applicable Local Laws, Regulations, and Policies

3.3.3.1 2010 Monterey County General Plan

Monterey County's 2010 General Plan recognizes the high risk of fire in Monterey County, and the need to minimize that risk. The 2010 General Plan states as follows:

> Monterey County experiences a variety of types of fires: wildland, structural, and chemical. Over half of the land area in Monterey County is mountainous and covered with highly combustible vegetation. Wildland fires are part of the ecosystem that are both a beneficial and destructive force. Monterey County has some older communities (Chualar, Spreckels, San Lucas, Bradley, North County, and Carmel Valley Village) where structural failure could occur as a result of out-dated electrical or mechanical conditions. In addition to wildland and structural fires, Monterey County is subject to fire hazards from oil and natural gas fields, gasoline storage wells and flammable chemicals.
>
> The California Department of Forestry and Fire Protection (CAL FIRE) is charged with Wildland fire protection for much of Monterey County. CAL FIRE provides wildland fire protection to 1.3 million acres of State Responsibility Area (SRA) from seven fire stations and one conservation camp located in Monterey County. In addition to the CAL FIRE equipment located within Monterey County, there are two air tankers, an aerial command aircraft and a helicopter located in adjacent San Benito County. The state funded fire equipment located in Monterey County is sufficient to meet the stated CAL FIRE goal of controlling 95% of SRA wild fires in the first burning period.
>
> Older buildings that do not have adequate fire protection devices pose a high fire hazard risk. Structural fire protection in the county (Local Responsibility Area or LRA) is the responsibility of local government and is provided by various fire protection districts and special districts, of which five have contracts with CAL FIRE to manage and staff their departments. Pebble Beach Community Services District, Cypress Fire Protection District, Carmel Highlands Fire Protection District, Aromas Tri-County Fire Protection District, and South Monterey County Fire Protection District all contract with CAL FIRE.

To assure that the County is prepared to anticipate, respond and recover from fire emergencies, Monterey County adopted Policy S-5.1, which states as follows:

> The County shall participate in developing emergency plans that provide preparation for, as well as a coordinated and effective response to, emergency and disaster events. Plans include, but are not limited to, a multi-jurisdictional Local Hazard Mitigation Plan (LHMP) and Community Wildfire Protection Plans (CWPPs).

This MCCWPP was drafted in anticipation of and pursuant to the above policy.

3.3.3.2 MBUAPCD Smoke Management Program (SMP) [54]

As required in 17 CCR 80100 to 80330, the MBUAPCD's Smoke Management Program (SMP) requires that burn managers obtain a smoke management permit from the District for certain types of burns. Not all types of burns require a District permit. For example, "back yard" and agricultural burning activities do not trigger the permit requirement.

The permit is obtained through District Rule 438 - Open Outdoor Fires, which also requires that burn projects be registered annually, have a smoke management plan and be conducted on permissive burn days with District authorization. Collectively, the requirements of Rule 438, including the permit and project specific smoke management plan, fulfill the requirements of the MBUAPCD's SMP.

The MBUAPCD adopted Rule 438 in 2003, in consultation with the Open Burn Task Force, which was a group of local, state and federal fire officials, as well as private and governmental land managers. Rule 438 allows and permits landowners and agencies to conduct landscape scale prescribed burning for the purposes of hazardous fuel reduction and habitat and range improvement. The MBUAPCD plans to begin revising Rule 438 in 2009, which will allow for input related to this MCCWPP from the reconvened Open Burn Task Force.

The MBUAPCD recognizes the need to reduce the accumulation of hazardous fuels in our area in order to reduce the threat of catastrophic wildfires, which history demonstrates can seriously impact the air quality of the entire region. Through the MBUAPCD's SMP, which encourages good smoke management practices, the MBUAPCD will work collaboratively with landowners and fire and land management agencies to reduce the wildfire threat while protecting air quality. The MBUAPCD also encourages the use of alternative practices whenever practical, such as chipping, mechanical removal, mowing, composting or recycling.

District Rule 402 provides that nuisance may apply to burn projects. Rule 402 basically means that no one can create a public nuisance with smoke from their fire.

Environmental review for impacts from burn projects permitted through the MBUAPCD's SMP is addressed in the MBUAPCD's Program EIR for the SMP entitled, Monterey Bay Unified Air Pollution Control District Proposed Smoke Management Program, State Clearing House # 200112114. The Program EIR was approved by the MBUAPCD Board on May 15, 2002.

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[54] This section incorporates comments from MBUAPCD staff.

4.0 Fuel Reduction Zone Descriptions

This section recommends zones where hazardous fuel reduction work should take place. Section 5 discusses the framework used to assess fire threat. Section 6 discusses recommended hazardous fuel reduction treatments within various zones based upon the fire threat assessment.

4.1 Wildland-Urban Interface

4.1.1 Introduction

The wildlands of Monterey County are fire dependent, a living landscape that has evolved with fire over time, sometimes referred to as a "firescape." Native Americans of the Central Coast lit fires as a management tool. Early explorers report numerous smoke columns across the Monterey County landscape as their ships sailed the central coast. Today, you can see the residual effects of traditional use of fire management in the burn-hollowed redwoods, sycamores, and great oaks throughout the county.

Historical fire suppression policy is contributing to an ever increasing wildfire threat to communities and the environment due to hazardous fuels accumulation. On balance, current fire suppression policy is beneficial, however, resulting hazardous fuels accumulation must be addressed.Pre-suppression strategic fire defense planning identifies and characterizes fire threat, and helps communities prioritize hazardous fire fuel reduction activities.

4.1.2 Wildland-Urban Interface (WUI) Discussion

In general, a WUI is that area where hazardous fuel reduction work should be performed to protect communities, infrastructure and watersheds from wildfire. The WUI zone may extend a variable distance from structures and infrastructure, taking into account such factors as topography, fire fuels, weather, and fire history. Many communities will extend the WUI to the surrounding watershed ridge breaks (i.e., firesheds), which are usually consistent with historical or anticipated fire suppression control points (e.g., firebreaks and/or fuelbreaks).

The HFRA empowers at-risk communities with the ability to determine where the boundaries for their WUI zones will be by showing where the WUI zone is in a CWPP.[55] The California Fire Alliance recommends that CWPPs designate a "generous WUI," noting that certain benefits of the HFRA are lost for areas that are not included in WUI.[56]

The HFRA aims to protect more than structures. The HFRA also aims to protect rangelands, infrastructure (e.g., water systems, power transmission and communications systems), watersheds and other assets.[57] To build flexibility into CWPPs, it is important to extend WUI to include these assets that may benefit from reduction of hazardous fuels.

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[55] "WILDLAND-URBAN INTERFACE.—The term 'wildland-urban interface' means—

(A) an area within or adjacent to an at-risk community that is identified in recommendations to the Secretary in a community wildfire protection plan …" (HFRA section 101(16)(A).)

[56] CWPP Enhancement Guidance – Lessons Learned!, California Fire Alliance.

[57] Title 16 USC 6501.

For example, it is reported that the Los Padres Dam on the Carmel River lost about 700 acre-feet of its 2,500 acre-foot holding capacity during the winter following the Marble Cone Fire of 1977,[58] due in part to the severity of the fire from high fuel loads.[59] Monterey County relies on reservoirs in the Salinas River basin to supply water to support the county's agriculture industry, which sustains about 40 percent of the County's economy. Reservoirs are essential infrastructure for the communities they serve. Through benefits provided by the HFRA, watersheds, which supply reservoirs, may be protected against the production of high levels of silt runoff that can result from high intensity wildfires and reduce reservoir capacity.

Much of the County's rangelands are used for grazing cattle and other livestock, which also contributes to the well being of communities in the County. Though the term wildland-urban interface brings to mind the fringes of densely populated urban areas, Congress defined at-risk communities to be broadly inclusive,[60] to provide flexibility for receiving the maximum benefits of the HFRA.[61]

This MCCWPP describes and refers to hazardous fire fuel treatment areas as Hazardous Fuel Reduction Zones, Defensible Space, Survivable Space, Mitigation Zones and Threat Zones, which are generally within the WUI zone.

It is important to each community at risk from wildfires that it be named as an at-risk community or community at-risk in a CWPP, and that its community and WUI zone boundaries be set where they will help protect the community from wildfire. This is especially true for at-risk communities near land managed by the USFS and BLM. For example, the HFRA provides that if a hazardous fuel reduction project proposed on Federal land is inside a WUI zone and within 1 ½ miles of the boundary of an at-risk community, NEPA review for the project need not consider any alternative but the project.[62] Moreover, if a CWPP describes a hazardous fuel reduction project that is inside a WUI zone and within 1 ½ miles of an at-risk community, and a proposed agency action does not implement the recommendations in the CWPP with regard to the general location and basic method of fuel treatments, the agency is required to evaluate the recommendations in the CWPP as an alternative to the agency's proposed action when doing its

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[58] Fall 2008 Stage-Volume Relationship for Los Padres Reservoir, Carmel River, California, 2009.

[59] Sequential Changes in Bed Habitat Conditions in the Upper Carmel River Following the Marble-Cone Fire of August, 1977, 1981.

[60] Title 16 USC 6511(1).

[61] The Ventana Chapter of the Sierra Club submitted comments on the January 2010 MCCWPP stating that the WUI boundary was overextended. The chapter alleged that a WUI definition it found that was published in the Federal Register in 2001 is "federal law" and implied that the definition was the legal definition for WUI that must be applied when developing CWPPs. However, the referenced definition was an initial definition, was not published as a rule or proposed rule, is not found in any federal statute or regulation, and was not used by Congress when it passed the HFRA in 2003. The definition for WUI used for developing this MCCWPP is the definition in the HFRA, and is the lawful definition for WUI to be used when developing CWPPs. Other CWPPs have used the HFRA's WUI definition to extend a "generous" WUI to maximize the benefits available through the HFRA. (See, for example the Santa Cruz County CWPP, which extends WUI throughout most of the County's non-urban areas.) Were the initial definition to be applied, the landscape scale protection of watersheds, rangeland and infrastructure contemplated by the HFRA would be frustrated, as flexibility would be lost as to where benefits of the HFRA might be applied.

[62] Title 16 USC 6514(d)(2).

NEPA review for the project.[63] It is therefore appropriate for this MCCWPP to recommend at-risk communities, and to map recommended WUI zone boundaries for Monterey County. The WUI boundaries recommended in this MCCWPP are identified pursuant to the provisions of the HFRA. They fully encompass at-risk communities, watersheds, forests and rangelands across the landscape; are broadly inclusive to allow for flexibility; and may be refined or redefined in local CWPPs. The recommended priority of at-risk communities for reduction of hazardous fuels within the WUI is discussed in Section 5.4.

Notwithstanding the area of WUI that this MCCWPP identifies in recommendations to the Secretaries of Agriculture and Interior (Secretaries), specific locations where reduction of hazardous fuels are recommended are generally limited to those listed in Appendix D and those recommended in Section 9.

To address concerns about unintended consequences of the area of WUI identified, it is important to emphasize that this WUI is designated pursuant to the HFRA in the context of hazardous fuel reduction to protect communities and infrastructure and "enhance efforts to protect watersheds and address threats to forest and rangeland health, including catastrophic wildfire, across the landscape."[64] More specifically, the recommended activities within the WUI are listed below:

- Fuel mitigation work around ingress/egress/emergency roads;
- Fuel mitigation work around structures;
- Reduction of structural ignitability;
- Maintenance of strategic fuelbreaks; and
- Fuel mitigation work to protect infrastructure and watersheds.

It is important to note that the WUI designation should not be used for purposes of expediting or encouraging development, removing trees and other vegetation for unrelated purposes, or for any other purpose that is not contemplated by the HFRA. The WUI identified to the Secretaries in recommendations in this MCCWPP should have no application but the purposes of the HFRA.

Subject to the priority of at-risk communities recommended to the Secretaries in Section 5.4, the WUI zones, shown on the map in Appendix B-7, are areas within the County where hazardous fuel reduction and reduction of structural ignitability activities may occur. The WUI map is low resolution and may require a higher resolution map to further refine the WUI boundary. Additional refinement may occur in the local CWPPs, or in areas where local CWPPs are not prepared, the WUI may be refined in the scope of work description.

Such activities within the WUI include: Strategic Fuelbreaks; Safety Zones; Defensible Polygons; shaded fuelbreaks; strategically placed landscape area treatments (SPLATS/SPOTS); building construction or modifications that improve the structure's ability to withstand a wildfire, survivable space around structures, prescribed fire, and other treatments. These activities may need to be conducted to reduce hazardous fuel, structure ignition potential and threats to wildlife habitat, while providing for increased citizen and firefighter safety.

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[63] HFRA section 104(d)(3) (Title 16 USC 6514(d)(3)).

[64] HFRA, 16 USC 6501(3).

4.2 Hazardous Fuel Reduction Zones

A Hazardous Fuel Reduction Zone (HFRZ) is an area designated by the Fire Authority Having Jurisdiction (FAHJ), based upon the FAHJ's experience, knowledge and anticipated fire behavior, as containing hazardous fuel that presents a potential threat to lives, communities, structures, infrastructure, access roads, and/or watersheds in the event of wildfire. HFRZs may also include areas where fuelbreaks, firebreaks and other treatments may be needed to protect such areas from wildfires originating outside the area. HFRZs may vary in size, and are independent from, though may include, Defensible Space, Mitigation Zones and Threat Zones. The concept of HFRZs is specific to the Monterey County area, and was developed to help focus on locations where hazardous fuel reduction work is most needed, as determined by the FAHJ.

The intent is that HFRZs identify areas where hazardous fuels present a potential threat to lives, communities, structures, infrastructure, access roads, and/or watersheds in the event of wildfire, especially under extreme adverse fire-weather conditions. In such areas, large quantities of hazardous fuels may need to be reduced to help protect communities and infrastructure from wildfire. One of the goals within HFRZs is to restore such areas to a fuel density that, in the judgment of the FAHJ, approximates the fuel density the area would have if fire suppression had not been practiced in the area, and to protect any remaining hazardous fuel from ignition. Due to the extensive time that can be required to reduce hazardous fuel accumulations, and the short time it can take for a wildfire to start and progress to catastrophic proportions, removal, disposal and continued maintenance of hazardous fuels on an ongoing basis is recommended.

The FAHJ may also provide oversight for new construction and may require certain building construction to improve the structure's ability to withstand a wildfire.

It is intended that any of the treatments in Section 6 may be applied in HFRZs, provided they can be applied safely. The following list activities recommended within the HFRZ:

- Fuel mitigation work around ingress/egress/emergency roads;
- Fuel mitigation work around structures;
- Reduction of structural ignitability;
- Maintenance of strategic fuelbreaks; and
- Fuel mitigation work to protect infrastructure and watersheds.

4.3 Fire Threat Treatment Areas

Within the WUI zone, this MCCWPP identifies four fire threat treatment areas: Defensible Space, Survivable Space, Mitigation Zones and Threat Zones.

4.3.1 Defensible Space

Defensible Space includes the area within the perimeter of a parcel (or beyond if permission is obtained from the adjacent landowner(s)) where basic wildfire protection practices are implemented, providing a key point of defense from an approaching wildfire or escaping structure fire. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, structure

defense measures to reduce the likelihood of structure ignition, and fuel modification measures. Defensible Space is intended to protect lives and property and to ensure the safety of those defending the area from wildfire. Defensible Space implies that tactical resources will be available to defend assets during a wildfire.

4.3.2 Survivable Space

Survivable Space includes structure defense measures to reduce the likelihood of structure ignition and the area around a structure where fuels have been modified to provide a high likelihood, under the site's conditions (e.g., vegetation type, construction materials and terrain), that the structure (and people if present) will survive in the event of a wildfire, under extraordinarily adverse weather conditions, without the presence of firefighters or others defending the structure. Survivable Space applies where there is potential that tactical resources will not be available to defend assets during a wildfire.

4.3.3 Mitigation Zones

Mitigation Zones are strategically prioritized target areas within the Threat Zone where hazardous fuel reduction activity will be of high value to protect life, property, and the environment, and to support safe tactical suppression capability. The Mitigation Zone includes and extends from the Defensible/Survivable Space to distances determined by considering such anticipated factors as fuel, topography, weather, fire history, flame length, firebrand spotting and tactical suppression capability. Hazardous fuel reduction work in Mitigation Zones may serve to mitigate the fire threat exacerbated by years of fire suppression and/or regulations that discourage vegetation removal.

4.3.4 Threat Zones

Threat Zones extend out from Defensible/Survivable Space to major landscape/watershed features such as roads, rivers, or ridges. Threat Zones generally extend to the boundary of the WUI, and may include strategic fuelbreaks and/or other treatments placed in coordination with major watershed features, and with the Mitigation Zones and Defensible Space, creating anchor points for wildfire suppression. Areas entirely surrounded by such fuelbreaks, other treatments or watershed features are known as Defensible Polygons. Hazardous fuel treatments in the Threat Zone will often be prescribed fire, prescribed grazing (wildlife, livestock) and fuelbreaks.

5.0 Fire Fuel Hazard, Threat, and Risk

In 2006, the MFSC contracted with CAL FIRE's FRAP and a fire threat assessment team consisting of local fire chiefs and experienced fire veterans to evaluate wildfire threat and risk in Monterey County, and to field validate the FRAP computer-based assessment models on a site-specific basis.

This section presents a summary of the 2006 FRAP analyses including the fire hazard, threat, and risk assessment protocol for Monterey County, and the prioritization of threats to at-risk communities. There is concern that the 2006 FRAP analyses understated fire risk and threat. A new 2010 FRAP analysis is under development by CAL FIRE which should provide updated maps based on new data, science, and technology.

Fire fuel hazard is a rating of vegetation and dead woody material and their volume, type, condition, arrangement, distribution and location (i.e., Fuel Model), and topography.

Fire threat is a rating that combines fire fuel hazard, fire history and weather conditions.

Fire risk is a rating that combines fire threat plus the value of assets that would be threatened in the event of wildfire.

5.1 Fire Fuel Hazard

Fire fuel hazards were evaluated in the 2006 FRAP Monterey Fire Risk Analysis. Fire fuel hazard was analyzed based on such factors as the Fuel Model and topography. Fire fuel hazard analysis utilized updated county wide vegetation maps, aerial photography and terrain modeling in combination with field validation and air review. The refined vegetation/fuels data for Monterey County was then analyzed and the resulting data was used to classify fire fuel hazard rating. (Appendix B-8)

Table 11 presents fire fuel hazard rating acreages for Monterey County.

Table 11. Monterey County Fire Fuel Hazard Rating

Fire Fuel Hazard Rating*	Acreage	Percent
Little to None	261,455	12.3%
Moderate	410,187	19.4%
High	960,478	45.4%
Very-High	485,007	22.9%
Total:	2,117,127	100.0%

** FRAP Monterey Fire Risk Analysis, 2006*

5.2 Fire Threat

Fire threat was evaluated for Monterey County during the 2006 FRAP analysis based on fire hazard, weather, and fire history. This analysis characterizes fire threat as the combination of fire probability (based on fire history) and hazard or expected fire behavior (based on fuels, weather, and topography and on-the-ground fire experience). The FRAP fire threat analysis rates areas of the County into five separate categories, including little/none, moderate, high, very-high, or extreme. According to the 2006 FRAP analysis, 83.5 percent of Monterey County lies within a high, very-high, or extreme fire threat area.

Assessment of fire threat assists in prioritization of hazardous fuel reduction projects. The fire threat assessment informs strategic management decisions. A cooperative approach to community wildfire protection with local input can then be accomplished. Table 12 presents fire threat acreages for Monterey County, while the map in Appendix B-5 graphically presents the distribution of fire threat ratings across the County.

Table 12. Monterey County Fire Threat Rating

Fire Threat Rating*	Acreage	Percent
Little to None	261,698	12.4%
Moderate	87,911	4.2%
High	719,366	34.0%
Very-High	646,759	30.5%
Extreme	401,394	19.0%
Total:	2,117,127	100.0%

(FRAP, 2006.)

5.2.1 Field Fire Threat Assessment

The field fire threat assessment was used to provide on-the-ground site-specific validation of the 2006 FRAP fire threat analysis. This threat assessment process characterizes the wildfire environment to inform prioritization decisions for the community and agencies. Consideration of fire threat helps effectively locate Safety Zones, Strategic Fuelbreaks and fuel reduction buffer zones, and determine minimum fuel break widths, and extent of hazardous fuel reduction required to help ensure citizen and firefighter safety.

To complement the FRAP analysis, the fire threat assessment team provided field verification of threat, including identification of:

- Factors of fire behavior change (fuels, slope, topography, weather).
- Fire behavior decision points [predetermined locations (i.e. proximity to structures, change in slope, etc.) or set of meteorological thresholds that may require a change in tactics to deal with changing conditions (location or weather)].
- Fire severity alignment scenarios (situations in which the slope, fuels, and/or weather align to create an increase in fire activity and subsequent fire severity and possibly fire intensity).
- Direction of fire spread (influenced by prevailing winds, topography, and fuels).
- Tactical suppression thresholds of control (identification of potential wildfire control lines or anchor points, such as ridges, roads, and drainages).
- Fire history (the number and geographic extent of previous fires in a given area).
- Tactical fire suppression capacity (level of firefighting resources available).

Examples of fire defense plans are the Pebble Beach Fire Defense Plan, and the BLM/Department of Defense (DOD) Fire Defense Plan for Fort Ord. See Appendix I for a map with proposed BLM fuel treatment areas on former Fort Ord.

5.3 FRAP Fire Risk

Fire risk is a rating that combines fire threat plus the value of assets that would be threatened in the event of wildfire. An objective of the FRAP fire risk analysis for Monterey County was to analyze data to be used for pre-suppression fire planning purposes. The data can be used to identify treatment areas and potential measures to mitigate wildfire risk, and develop products that can be used in community outreach. The methodology employed by FRAP in this process included geographic information systems (GIS) based field, air, and infrared imagery analysis to refine fire fuels data throughout the county and develop fire fuel hazard rating, fire threat, and fire risk data for analysis and presentation purposes.

The risk analysis performed by FRAP included an assessment of risk to ecosystems, risk to soils, and risk to communities.

5.4 Prioritization of Need for Fuel Reduction Work

Table 13 provides recommended prioritization of areas within Monterey County where wildfire hazardous fuel reduction work may be needed. The communities listed qualify as at-risk communities pursuant to the HFRA and/or communities at-risk as listed by the California Fire Alliance, as indicated in the table. The communities in Table 13 may be characterized as being at risk of harm from wildfire.

Table 13. Prioritization of Need for Fuel Reduction Work, by Community

Community or Area at Risk	See Note A	See Note B	See Note C	Fuel Hazard	Risk of Wildfire Occurrence	Structural Ignitability	Overall Priority
Aromas			X	High	Medium	Medium	High
Big Sur	X	X	X	High	High	High	High
Bryson-Hesperia		X		High	High	High	High
Cachagua-Jamesburg		X		High	Medium	High	High
California State University Monterey Bay		X		High	Medium	High	High
Carmel			X	Medium	Low	High	High
Carmel Highlands		X	X	High	Medium	High	High
Carmel Valley (also includes Jamesburg - Cachagua)	X	X	X	High	Medium	High	High
Carmel Valley Village	X	X	X	High	Medium	High	High

Community or Area at Risk	See Note A	See Note B	See Note C	Fuel Hazard	Risk of Wildfire Occurrence	Structural Ignitability	Overall Priority
Castroville			***	Low	Low	Medium	Low
Chualar Canyon			***	High	High	High	High
Corral de Tierra			***	High	High	High	High
Del Monte Forest/ Pebble Beach	X		X	High	Medium	High	High
Del Rey Oaks	X		X	High	Medium	High	High
Elkhorn			X	Medium	Medium	Medium	Medium
Former Fort Ord	X		X	High	Medium	High	High
Fort Hunter Liggett		X		High	High	High	High
Gabilan Range		X		High	High	Medium	High
Gonzales			X	Low	Low	Low	Low
Greenfield	X		X	Low	Low	Low	Low
Highway 68 Corridor			***	High	High	High	High
Jack's Peak			***	High	Medium	High	High
King City	X		X	Medium	Medium	Medium	Medium
Las Lomas			X	Medium	Medium	Medium	Medium
Las Palmas/ Indian Springs		X		High	High	Medium	High
Lucia	X		X	High	High	High	High
Manzanita Park			***	High	High	High	High
Marina	X		X	Low	Medium	Medium	Medium
Monterey	X		X	Medium	Medium	High	High
Pacific Grove	X		X	Medium	Low	High	High
Pajaro			X	Medium	Medium	Medium	Medium
Palo Colorado	**	X	**	High	High	High	High
Pine Canyon (North)		X		Medium	High	Medium	Medium
Pine Canyon (South)		X		High	High	Medium	High
Pinnacles National	X		X	High	Medium	Low	High

Community or Area at Risk	See Note A	See Note B	See Note C	Fuel Hazard	Risk of Wildfire Occurrence	Structural Ignitability	Overall Priority
Monument							
Prunedale			X	High	Medium	Medium	High
Rancho San Carlos		X		High	Medium	High	High
Rancho San Clemente		X		High	Medium	High	High
Reliz Canyon		X		High	High	Medium	High
Rural Northern Monterey County			***	High	Medium	High	High
Rural Southern Monterey County			***	High	Medium	High	High
Salinas	X		X	Medium	Medium	Medium	Low
San Antonio Lake		X		High	High	High	High
Sand City	X		X	Low	Low	Medium	Low
Santa Lucia Preserve		X		High	High	Low	High
Seaside	X		X	Low	Medium	High	High
Sierra de Salinas		X		High	High	Medium	High
Soledad			X	Low	Low	Low	Low
Toro County Park			***	Medium	High	Medium	Medium
Toro Park Estates			***	High	Medium	High	High
White Rock		X		High	High	High	High

Note A *- These communities meet the definition of an at-risk community in the HFRA (i.e., they are on the list published in the Federal Register; are at risk of wildfire; and are within or adjacent to Federal land), per 16 USC 6511(A)(i).*

Note B *- These communities meet the definition of an at-risk community in the HFRA (i.e., a group of homes and other structures with basic infrastructure and services (such as utilities and collectively maintained transportation routes), that are at risk of wildfire, and are within or adjacent to Federal land, per 16 USC 6511(A)(ii).*

Note C *- These communities are listed as a community at-risk on the list maintained by the California Fire Alliance.*

*** *Palo Colorado is within the Big Sur at-risk community and the Big Sur community at-risk.*

*** *These communities should consider applying to the California Fire Alliance for listing as a community at-risk. See http://www.cafirealliance.org/communities_at_risk/communities_at_risk_addtolist.*

5.5 Detailed Priority Threat Descriptions

Recommended prioritization of communities for hazardous fuel reduction work is provided in Table 13 above. Certain areas, listed in alphabetical order below, are described in more detail in Appendix I.

- Bryson-Hesperia
- Fort Ord
- Highway 68 Corridor
- North County
- Palo Colorado
- Pine Canyon (South)
- Santa Lucia Fire Defense System
- Sierra de Salinas-Gabilan Fuel Reduction Project and Strategic Fuel Break System
- Tularcitos Ridge
- White Rock

5.6 Special Study Areas: FRAP Fire Behavior Modeling

Three representative areas within Monterey County were selected for special study by FRAP: Fort Ord, Carmel Valley, and the North County. Fire behavior modeling was conducted by FRAP utilizing the refined topography and fuels data, and refined local 3D wind modeling data obtained from the Monterey Naval Postgraduate School Meteorology Section. Employing FlamMap and FARSITE computer models, simulations were conducted for each area.[65] Two ignition scenarios and two weather scenarios (moderate and severe) were evaluated to assess fire behavior potential.

The study summarizes (1) the FRAP findings for each area, based on modeling results, and (2) the field validation performed by the fire threat assessment team.

(See Appendix H)

6.0 Hazard Reduction

Hazard reduction includes the following:

- Reduction of structure ignitability
- Hazardous fuel reduction and fuelbreaks
- Defensible space (PRC 4291)
- Fuel treatments
- Community fire safe prescriptions

[65] http://www.fs.fed.us/psw/topics/fire_science/craft/craft/Resources/Fire_models_tools.htm

6.1 Reduction of Structure Ignitability

Current California Fire and Building Codes and Monterey County amendments to those Codes provide for strict fire safe construction for new construction in State Responsibility Areas (SRAs). SRAs encompass essentially most of the sloped areas of the County that are not federally owned. Examples of the requirements under the Codes are Class A rated roofing materials, boxed eaves, special venting devises, boxed deck, fire resistant siding and residential sprinklers. Reducing structural ignitability is an effective way of reducing structure losses in the event of wildfire. In cooperation with CAL FIRE, the Monterey Fire Safe Council supports and promotes firewise activities by (1) educating citizens on ways to reduce structural ignitability and (2) seeking funding to support the use of fire resistant building materials and other strategies to reduce the impact of human activities on wildfires.

Threat to structures by a burning wildfire is a progressive process. Typically, the first threat is from ashes cast in front of a fire by winds or the fire convection column. In some cases, ashes may retain enough heat and/or flame that secondary ignitions are possible. Next, embers and firebrands are blown in front of an advancing fire. These have more surface area and mass than ashes and consequently more heat, and are often a cause of ignition of structures and vegetation, sometimes far in advance of the wildfire front. Finally, the wildfire flame front and associated radiant heat can expose combustible material, including vegetation and structures, to sufficient heat to cause ignition.

Studies reveal that the exposure of a structure to a wildland flame front is usually less than six minutes. The majority of structure losses from wildland fire occur not from the flaming fire front but from burning embers and firebrands. Anywhere a flying bee can go, a burning ember can go.

Preventing structure ignition requires addressing each of these causes of ignition, as any one source can lead to loss of the structure if ignition is initiated.

To prevent structure ignition caused by ashes, embers and firebrands, roof materials should be Class A rated, such as Class A composition shingles, clay tiles or cement tiles. Heat can be conducted through metal coverings and ignite wood or other combustible materials behind it, so metal roof coverings (and siding) should be backed with materials that will result in a system with a Class A rating.

Rain gutters, roof valleys, clerestories, and other areas that may collect combustible debris such as leaves and pine needles should be kept clean. Follow CAL FIRE's Guidelines (see Section 6.2.1 and Appendix E), including removing vegetation and combustible materials to mineral soil within 30 feet of structures so flammable materials cannot be ignited by embers and transfer fire to the structure. Openings for underfloor vents and roof and soffit vents should be covered with wire mesh, and should be completely blocked if a wildfire is approaching. Combustible materials such as firewood and patio furniture should be kept away from structures so they cannot transfer fire to structures if they are ignited.

Radiant heat can pass through windows and ignite curtains, papers and other combustible materials inside structures. To prevent ignition inside structures from radiant heat, combustible

materials should be moved away from windows if a wildfire is approaching. It is recommended that CAL FIRE's Guidelines be followed to reduce vegetation density around structures, which should reduce fire intensity and radiant heat during a wildfire.

Various other measures may help reduce the likelihood of structure ignition during a wildfire. For example, decks and balconies can be conduits for fire to ignite a residential structure. By boxing in the undersides of decks and balconies, especially with fire resistant materials, the chances of ignition are reduced. A relatively recent development includes aluminized fiberglass fabric used to "wrap" a house with reflective fire-resistant fabric, much like when a house is wrapped for termite control. Water gels are available that can be sprayed on structures as a fire approaches (though effectiveness is time-limited due to evaporation). These methods require preparation well before wildfire approaches, including purchasing special materials and equipment to have them ready to use and learning how to use them. There is no assurance these measures will prevent a structure from igniting, but they will likely increase the odds of structure survival.

New building code provisions for wildland areas are generally required for new construction. Owners of existing structures should consider voluntarily using wildland construction materials when maintaining buildings. For example, if windows are being replaced, the property owner could consider replacing them with tempered glass, which may help avoid window breakage during a wildfire. Windows broken by the heat from an approaching fire can provide a path for the fire to enter a structure. Owners of structures may consider purchasing and pre-fitting fire resistant material to place over the outside of windows when there is a threat from approaching fire, to help prevent windows from transmitting radiant heat, and to help avoid breakage and window openings from becoming a path for fire to enter structures. A brochure on fire safe structures is available at http://anrcatalog.ucdavis.edu/pdf/8393.pdf.

Maintaining defensible/survivable space around structures is an effective means of reducing structure ignitability by reducing the opportunity for ignition. Removal of vegetation overgrowth in the WUI reduces overall wildfire intensity, thus, reducing the energy in the convection column and lowering its potential for transporting ashes, embers and firebrands over distance, and reducing radiant heat and potential for direct flame impingement, which lower structure ignition potential.

It is recommended that grant funding be sought for the following measures to help reduce structural ignitability:

- To assist owners who want to replace existing ignitable materials on structures with fire resistant materials.
- To develop educational materials to inform owners how to protect their residences through actions such as cleaning rain gutters, roof valleys and clerestories; the importance of maintaining defensible/survival space around structures; and the importance in the event of fire, of covering vent openings, clearing flammable material from on and under decks and moving wood piles.
- To form a defensible space/Firewise Program in neighborhoods throughout Monterey County.

To summarize, individuals and community members can reduce structural ignitability throughout Monterey County by implementing defensible space/Firewise Programs to include the following: [66]

- Assess risk/structure ignitability.
- Consider fire resistant exterior siding and roofing materials.
- Maintain defensible space around structures.
- Clean roofs and gutters annually.
- Develop a community phone tree in case of a fire emergency.
- Develop agreements with the County to use the reverse 911 system.
- Remove ladder fuels.
- Clean and screen chimney.
- Maintain green grass and fire resistant plants (or bare earth as discussed above) within 30 feet of house.
- Move all flammable materials at least 30 feet from buildings and structures.
- Remove dead, dying, or diseased shrubs trees, dried grass, fallen branches and dried leaves around the defensible space of structure.
- Attach a hose that can reach to all parts of the house.

Where it is necessary to maintain a survival space, the following activities may be taken:

- Clean roof surfaces and gutters of pine needles, leaves, branches, etc., to reduce flammable materials.
- Remove portions of any tree extending within 10 feet of the flue opening of any stove or chimney.
- Maintain a screen constructed of non-flammable material over flue opening of every chimney or stovepipe. Mesh openings of the screen should not exceed ½ inch.
- Remove branches from trees to height of 15 feet.
- Create a fuelbreak around the structure.
- Dispose of stove or fireplace ashes and charcoal briquettes only after soaking them in a metal pail of water.
- Store gasoline in an approved safety can away from occupied buildings.
- Garden hose should be connected to outlet.

[66] In a July 13, 2010 comment letter to the January 2010 MCCWPP, the Ventana Chapter of the Sierra Club provided various excerpts from approved CWPPs that include discussions of methods for reducing structural ignitability. The discussions in the July 13, 2010 comment letter are reflected below, and some of the discussions below are duplicative of those above.

- Have fire tools handy such as: ladder long enough to reach the roof, shovel, rake and bucket for water.

6.2 Hazardous Fuel Reduction and Fuelbreaks

Hazardous fuel reduction work may be performed by private property owners, contractors and/or public agencies, subject to compliance with all applicable local, state and federal laws. Funding may be from private sources, grants, agency budgets or a combination of these.

A strategic watershed/fireshed approach is advocated by this MCCWPP to protect communities, infrastructure and watersheds, as promoted by the HFRA. Utilization of historic and existing roads, firebreaks (during a fire) and fuelbreaks is recommended as top priority. Strategic coordination and connection of firebreaks and fuelbreaks is key to protecting communities. This MCCWPP recommends, as a priority, the long term maintenance and restoration of existing and historic Strategic Fuelbreaks in state responsibility areas and on federal land. It is recommended that CAL FIRE, fire districts, volunteer fire departments, the DOD, BLM, National Park Service (NPS), and USFS cooperate with each other and communities to establish and maintain a network of Strategic Fuelbreaks to protect at-risk communities from wildfire.

6.2.1 Access Roads

In a July 13, 2010 comment letter to the January 2010 MCCWPP, the Ventana Chapter of the Sierra Club provided various references[67] that include discussions of fire access and escape routes. The discussions in the July 13, 2010 comment letter are reflected below.

Roads are an essential part of any fire and fuels management plan, providing the principal access to the communities, homes and wild places in the watershed. Additionally, roads may offer a defensible space from which firefighters can conduct direct attack on wildfires and also provide strategic locations for roadside shaded fuelbreaks. Roadside shaded fuelbreaks provide not only defensible space for firefighters, but also a safe escape route for residents in the event of a wildfire.

Roadside protection should occur within a corridor that extends up to 100 feet out from either side of the road. This treatment is designed to protect evacuation routes for community residents and provide safety for firefighters entering a community to provide protection in the event of a wildfire. Brush and shrubs that have spacing 3 times the height of the residual plants should be removed immediately adjacent to the road to keep flames from directly impinging the roadway. Spacing between trees should be at least 20 feet between crowns of residual trees, with an average crown base height [distance from the ground to the base of the leaf (needle) crown] of at least 20 feet. Trees immediately adjacent to the road should be few. Flame lengths should be less than 2 feet if there is enough fuel reduction to keep flames from traveling directly across the roadway.

The MFSC generally supports the Sierra Club position, and would add that under extraordinary conditions fuel treatments along roads may need to extend beyond 100 feet given conditions such

[67] Keswick CWPP – Fire Access and Escape Routes; Lexington Hills CWPP – Fire Access and Escape Routes; Fallen Leaf – Fire Access and Escape Routes.

as terrain, vegetation type and potential weather conditions. The MFSC also notes that trees that may fall on a road and block it during a wildfire should be removed or trimmed to avoid the potential for this hazard.

6.2.2 Defensible Space Fuel Treatments

Maintaining properties with appropriate defensible space is a key factor to protecting lives and property. Any of the fuel treatments in Section 6.3 have the potential to be used to create defensible space when they can be used safely.

PRC 4291 and related regulations require certain hazardous fuel reduction measures, and encourage others. The goal is to create "Defensible Space" to enable safe defense of structures during a wildfire, and to provide for such related needs as emergency vehicle access and safe evacuation routes. As discussed previously, detailed information on defensible space is found in the Guidelines, published by CAL FIRE.[68] The Guidelines are incorporated by reference into 14 CCR 1299, which was developed to implement PRC 4291. The Guidelines should be reviewed by all landowners to which PRC 4291 applies.[69]

The Guidelines provide both general and specific defensible space fuel reduction guidance. Important general concepts are expressed in the following Guideline excerpts:

> While individual property owners are not required to clear beyond 100 feet, groups of property owners are encouraged to extend clearances beyond the 100 foot requirement in order to create community-wide defensible spaces.
>
> Properties with greater fire hazards will require more clearing. Clearing requirements will be greater for those lands with steeper terrain, larger and denser fuels, fuels that are highly volatile, and in locations subject to frequent fires.

More specifically, the Guidelines outline two distinct zones: from a structure outward to 30 feet and from 30 to 100 feet from structures (Reduced Fuel Zone). It is important to note that these distances are generally the maximum area that is required to be maintained by the statute, but are based upon flat ground and moderate vegetation fuel loads. Required fuel reduction work over substantially greater distances is desirable where terrain and vegetation type vary from this norm. PRC 4291 provides conditions under which a greater distance may be required by an insurance company, when approved by a fire expert approved by the Director of CAL FIRE, or when required by local rule or regulation; however, such voluntary fuel reduction work may require separate permits and must comply with all local, state and federal laws.

The Guidelines are included in Appendix E. See the Guidelines for more detail on fuel reduction requirements for defensible space, and for detailed information on various treatments for different vegetation types and terrain.

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[68] Online at: http://www.fire.ca.gov/cdfbofdb/pdfs/4291finalguidelines2_23_06.pdf

[69] PRC 4291 applies to every "person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material."

Defensible space fuel reduction should be conducted throughout the year in order to avoid the accumulation of hazardous fuels over time. It should include fuel reduction for emergency access as well as around structures, infrastructure, roads, and watersheds.

Consistent with the Guidelines and PRC 4291, this MCCWPP recommends that responsible parties who reduce fuel for defensible space comply with all applicable federal, state or local environmental protection laws and other laws, and obtain permits when required. Such laws include, but are not limited to, those that protect threatened and endangered species, water quality, air quality, and cultural/archeological resources. For example, trees removed for hazardous fuel reduction that are used for commercial purposes require permits from CAL FIRE. See Appendix G, Forest Practice Rules Checklist that can help you determine when such a permit from CAL FIRE is required. Contact your local fire or planning agency officials to ensure compliance.

PRC 4291 and the Guidelines state in part that:

- Responsible parties shall "Maintain defensible space of 100 feet from each side and from the front and rear of the structure..." or as further provided in PRC 4291, but not beyond the property line unless allowed by state law, local ordinance, or regulation, and with the consent of the adjacent landowner.
- A greater distance may be required by state or local laws or by an insurance company with approval by the FAHJ.
- Groups of property owners are encouraged to extend clearances beyond the 100-foot requirement in order to create community-wide defensible spaces and escape routes.

The recommendations in this MCCWPP encourage prudent hazardous fuel reduction work to protect people as well as the environment. To help those responsible for complying with PRC 4291 properly apply the recommendations in this plan, Table 14 is provided to show examples of inappropriate hazardous fuel reduction work that would be inconsistent with federal, state or local environmental protections or other laws.

Table 14. Misapplication Examples During Non-emergency Situations

	Actor / Entity	Misapplication of PRC 4291 and the Guidelines	Comments
1	Property/Parcel Owner	Removes all 60 oak trees (five greater than 10 inches in diameter) on a non-coastal half acre building site without a removal permit.	Such moonscape removal of trees would violate current county ordinance.
2	Home Owner	Along property boundary, owner removes fuel including cutting down tree with roosting condor pair, without prior approval from appropriate State or Federal agency.	Violates state and/or federal Endangered Species Act(s).

	Actor / Entity	Misapplication of PRC 4291 and the Guidelines	Comments
3	Property Owner	Creates 200-foot radius bare-earth clearing around existing structure on flat terrain, and there is no requirement to do so.	Structure and conditions do not warrant such excessive defensible space.
4	Ranch Owner	Bulldozes a firebreak in a creek bottom.	Violates riparian protection regulations, such as the Fish and Game Code.
5	Private Water Purveyor	Without permit, a purveyor grades, excavates, and installs 60,000-gallon underground water tank in area with known protected plant species.	Violates County building, health, safety, and environmental regulations.
6	Subdivision Housing Project Owner	Builds line of small sheds 200-feet apart for 800-feet, then clears 60-foot wide swath through fuel to provide improved view of valley for the houses being built.	Given that the intent was to improve the view, this is a misuse of defensible space requirements.
7	USFS or BLM	Bulldozes a new road in a wilderness area under the guise of constructing a fuelbreak.	Violates the Wilderness Act.

6.3 Hazardous Fuel Treatments

In addition to defensible space treatments, other hazardous fuel treatment projects described below should be considered to reduce overall wildfire threat to communities, infrastructure, rangelands, watersheds and other assets. Such projects must comply with all applicable local, state or federal laws, and may occur on private or public land under state or federal jurisdiction and would be used to act as a buffer between communities and/or assets and wildland fuels. Hazardous fuel treatments may include treatments such as the following, but not by way of limitation:

- Fuelbreaks or other treatments intended to modify fire behavior and spread by altering fuel beds in a linear alignment, typically situated along roads, rivers and ridgetops, and may include retained trees (e.g., shaded fuelbreaks).
- Roadside fuel treatments, intended to reduce the likelihood of ignition along roadways and to maintain emergency ingress and egress capabilities during wildfires.
- Area treatments, intended to modify fire behavior by treating hazardous fuels over large areas in strategic locations or historic fire corridors; typically conducted in large expanses of federal or private land (e.g., strategically placed landscape area treatments).

- Prescribed burning, intended to reduce hazardous fuel loads in key locations and reduce overall wildfire intensity and negative smoke impacts while considering vegetation type characteristics and disturbance regimes.

The following hazardous fuel treatment prescriptions are recommended to reduce vegetation fuel in treatment areas. Within the recommended WUI zones, the goal is to reduce understory/surface fuel flame length to under four feet around access roads, structures, infrastructure, and watersheds.

6.3.1 Strategic Fuelbreaks and Other Treatments

It is recommended that strategic fuelbreaks and other treatments be established and maintained throughout the County, where indicated in this MCCWPP or local CWPPs, or where determined to be appropriate by the FAHJ including, but not limited to, existing and historic fire containment lines. Fuelbreaks and other treatments should incorporate adjacent buffers in which wildfire fuels are modified in such manner and for such distance as will ensure a high probability the fuelbreak or other treatment will be effective under adverse weather conditions and permit effective tactical suppression actions.

6.3.2 Vegetation Thinning

Thinning of vegetation involves an overall reduction of woody biomass to break up horizontally and vertically continuous fuels. Site specific conditions and fire threat potential should dictate thinning percentages and distance in relation to structures, emergency access routes, and other assets. Factors such as topography and vegetation type may also be considered.

6.3.3 Tree Removal

Removal of trees should focus primarily on removing dead and dying trees. However, in areas with hazardous fuels, live tree removal may be necessary to improve vegetation spacing and reduce overall fuel continuity. Where trees require removal, root systems should generally be left intact where needed to maintain slope stability. In such cases, annual treatment of stump growth or re-sprouting may be needed to maintain reduced fuel load volumes.

Along access roads, spacing between trees should be at least 20 feet between crowns of residual trees, with an average crown base height (distance from the ground to the base of the leaf [needle] crown) of at least 20 feet. Trees immediately adjacent to the road should be few.[70] Trees that may fall on a road and block it during a wildfire should be removed or trimmed to avoid the potential for this hazard.

6.3.4 Tree and Shrub Pruning

Trees or large tree-form shrubs (reaching four feet or taller at maturity) that are to be retained in defensible space should be trimmed or pruned to reduce both vertical and horizontal fuel continuity. Pruning should eventually attain at least 8 foot (16 foot preferable where attainable)

[70] July 13, 2010 comment letter to the January 2010 MCCWPP from the Ventana Chapter of the Sierra Club.

vertical clearance from the highest slope point within the canopy, yet should not exceed 50 percent reduction of live crown (canopy).

Along access roads, brush and shrubs that have spacing 3 times the height of the residual plants should be removed immediately adjacent to the road to keep flames from directly impinging the roadway. Flame lengths should be less than 2 feet if there is enough fuel reduction to keep flames from traveling directly across the roadway.[71]

6.3.4.1 Vertical Separation

At a minimum, pruning of vegetation off the ground should provide vertical clearance that measures three times the height of the understory vegetation or ten feet, whichever is higher (see CAL FIRE's Guidelines for more details). Pruning tree limbs up to 16 feet or more may be desirable in some terrain and vegetation types. Vertical separation serves to minimize the potential for a ground fire to transition to a crown fire. This process will remove ladder fuels and reduce the potential for fire spread from lower shrubs to higher trees and structures.

6.3.4.2 Horizontal Separation

Pruning of vegetation should result in horizontal clearance that measures three times the height of the plant material height or 20 feet, whichever is greater. Horizontal separation of 40 feet or more may be desirable, depending upon slopes and vegetation types. Horizontal separation serves to minimize fire spread from plant to plant and from plant to structure. In defensible space, an alternative to crown separation is to use the Guidelines' option 4b, which provides for retaining a closed canopy while removing surface fuels/understory and lower branches from trees.

6.3.4.3 Vegetation Grouping

Maintaining groups of shrubs is recommended to provide a mosaic pattern in the landscape. However, shrub groups should be separated from other shrub groups according to the horizontal separation criteria discussed above.

6.3.5 Dead/Dying Plant Removal

Removal of dead and dying plant material from the WUI will help reduce low fuel moisture biomass and highly flammable fine fire fuels. This practice should also be conducted in combination with vegetation thinning efforts and may help reach or completely satisfy thinning objectives in some areas.

[71] See previous footnote.

6.3.6 Exotic/Invasive Plant Removal

Removal of non-native and invasive plants from the WUI will help reduce the presence of undesirable species and enhance thinning efforts aimed at reducing overall biomass levels. Typical undesirable exotic species may include, but are not limited to:

- Palm trees (various species)
- Eucalyptus trees (*Eucalyptus spp.*)
- Pepper trees (*Schinus spp.*)
- Fennel (*Foeniculum vulgare*)
- Mustard (*Brassica spp.*)
- French broom (*Genista monspessulana*)
- Poison hemlock (*Conium maculatum*)
- Thistle (various species)
- Harding grass (*Phalaris aquatica*)
- Jubata grass (*Cortaderia jubata*)
- Pampas grass (*Cortaderia selbana*)
- Cape ivy (*Delairea odorata*)

6.3.7 Mowing

Mowing of grasses and exotic weeds should be conducted to maintain grass heights at four inches or lower. Focus should be primarily on invasive weed prevention, suppression and monitoring, and properly timed and implemented grassland management (e.g. mowing, grazing) that promotes the establishment of less volatile native perennial grasses. Mowing should be performed before 10 AM during the dry season to reduce the chance of starting a fire from sparks caused by the mowing equipment.

6.3.8 Chipping and Mastication

Chipping/mastication and spreading of existing dead biomass or biomass from hazardous fuel reduction efforts may be an effective method of hazardous fuel reduction and weed suppression. However, chip or mulch depth should generally not exceed six inches.

6.3.9 Grazing

Livestock (including goats) have proven to be an effective method for reducing hazardous fuel volumes in WUI areas.

6.3.10 Prescribed Burning

Preplanned controlled burning is currently conducted by private landowners throughout Monterey County, by CAL FIRE as a function of the state Vegetation Management Program (VMP), and on land administered by the BLM, DOD, and USFS.

Burning under desirable conditions restores fire to the ecosystem and is normally one of the most cost effective methods for strategically reducing hazardous fuels by 50 to 80 percent. Rangeland property owners and stakeholders have identified the goal of accomplishing 20,000 acres of landscape-scale prescribed fire projects on private property in State Responsibility Areas annually in Monterey County. Large-scale prescribed burning is conducted by private landowners under permit and with the cooperation of the Monterey Bay Unified Air Pollution Control District (MBUAPCD), CAL FIRE, USFS, BLM, and various local fire agencies. Landowners may also contract with CAL FIRE to perform burns under the statewide Vegetation Management Program. For more information about obtaining a Smoke Management Permit, visit www.mbuapcd.org and under "Programs," click on "Smoke Management."

Preplanned burning under low and moderate wildfire hazard conditions is the preferred alternative to unplanned wildfire events occurring under severe fire weather conditions. The Monterey San Benito Range Improvement Association Wildland Fire Safe Council[72] actively assists landowners and cooperating agencies in the coordination of prioritized projects.

See Appendix L for a sample fire prescription for safe controlled burns in chaparral.

Depending on site conditions, piling and burning is a form of prescribed fire that can be more feasible and cost effective than chipping or hauling material to landfills. Project location and setting determines which approach is the most environmentally friendly and effective alternative. Piling and burning can generally be safely conducted during the winter rainy season.

6.3.11 CAL FIRE Vegetation Management Program

The CAL FIRE VMP provides a means for landowners to contract with CAL FIRE for hazardous fuel reduction and prescribed burn projects. Under contract with CAL FIRE, landowners share the costs of regulatory compliance, preparation, and treatment according to the public vs private benefit. Statewide, CAL FIRE is authorized to treat up to 180,000 acres annually under the VMP. The cooperative and coordinated utilization of the CAL FIRE VMP is important to the success of this MCCWPP.

6.3.12 Crushing

Crushing breaks and presses brush and/or slash on or into the ground surface. This occurs when equipment drives over slash. This method involves the use of heavy ground-based equipment that crushes slash to a depth not exceeding two feet. The closer crushed material is to the forest floor, the quicker decomposition occurs and the less chance of fire reaching the above canopy layers.

6.3.13 Lopping and Scattering

Lopping is the cutting of limbs, branches, treetops, small diameter trees, or other woody plant residue into lengths so that the remaining slash will lie close to the ground. Scattering is the spreading of lopped slash evenly over the ground so that the remaining slash will lie no more than three (3) feet off the ground. This method is suited to areas with lower brush and/or slash

[72] Contact via email at: wildland_fsc@yahoo.com

accumulations and is effective for such accumulations in meeting height requirements, facilitating use of the treated area by humans and animals, improving aesthetics, and distributing material more uniformly and closer to the ground for faster decomposition. Lopping is also useful as preparation for piling and burning, especially in areas with higher fuel density where scattering would contribute to wildfire hazard (e.g., see Section 6.3.10).

6.3.14 Fireline Explosives

Fireline explosives are linear explosive charges placed and detonated in lengths of up to a half mile or more to create a fireline through surface and ground fuels. The explosive component is typically a water gel compounded to reduce flame generation to avoid igniting a fire. Fireline explosives may be advantageous in locations where mechanized equipment cannot be used to construct firelines. Four people using fireline explosives can construct fireline as fast as 25 to 40 people with handtools.[73] Less specialized explosive charges may be advantageous to drop trees that are too hazardous for sawyers to cut, such as snags and those with widowmakers. Dropping partially rotted standing Sudden Oak Death killed Tanoaks is an example of when such use of explosives may be beneficial.

6.3.15 Herbicides

Herbicides are chemicals that have been developed to control or kill specific groups of plant species. Three primary types of herbicide exist: foliar active, soil active, and those that are both foliar and soil active. Herbicides that are foliar active enter the plant through the leaves and occasionally the stem. Soil active herbicides are taken up through the roots of the plant. Herbicides are most effective when used in accordance with a sound prescription. A single treatment provides long-term reduction of hazardous live fuels and changes in species composition, but the effect on total live and dead fuels is not immediate.[74] Herbicides can be used as an effective tool for managing vegetation and forest health. Herbicides can have detrimental effects on water quality and lethal effects on non-target organisms. Therefore, they should be used consistent with the instructions under which their use was approved by the Environmental Protection Agency, and with an appreciation of their potential for harm if misused.

6.4 Community Fire Safe Prescriptions

Community Fire Safe Prescriptions are envisioned to be site-specific fuel treatments and fire behavior parameters within the Defensible Space, Mitigation Zones, Threat Zones and HFRZs to reduce the risk of wildfire within and near a community. These treatments and parameters may be developed for some locations on a site-specific basis, to prevent the spread of wildfire to more wildland or structures, and to prevent the spread of a structure fire to neighboring structures or the wildland.

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[73] Wenger, Karl. Forestry Handbook: Second Edition, John Wiley & Sons, 1984. Page 222.

[74] University of Florida. Fuel Reduction Options for Landowners at the Wildland-Urban Interface, Technical Paper for Master of Forest Resources & Conservation.

6.5 Air Quality

As discussed in Section 3.3.3.2, the MBUAPCD works closely with communities, landowners, agencies and the MFSC to allow burning of hazardous fire fuels consistent with air quality goals.

The MBUAPCD may require a permit for burning within the District.[75] Contact the MBUAPCD to determine if a permit is required. For large project burns, the MBUAPCD cooperates with agencies, landowners, the CARB meteorology section, and fire weather forecasters to seek burn conditions that will be conducive to successful smoke dispersion and minimal impacts to communities.

Requirements for efficient pile burning procedures are available from the MBUAPCD.

7.0 Environmental Benefits

7.1 Greenhouse Gases

Globally, fires are a significant contributor of carbon dioxide and other greenhouse gases in the atmosphere. While burning vegetation is carbon neutral, high intensity fires due to hazardous fuel accumulation may result in more vegetation burning than would burn if lower fuel loads were present, contributing more carbon dioxide to the atmosphere than would generally occur with lower fuel loads present. Researchers found that large scale fires contributed to most of the year-to-year changes in atmospheric carbon dioxide totals during the period from 1997 to 2001.[76] Fires were found to account for approximately one-fifth of the total global emissions of carbon dioxide.[77] Fuel reduction and fire suppression efforts will need to occur expeditiously or greater amounts of carbon will be released by large higher intensity wildfires, further exacerbating the global warming problem.

7.2 Use of Biomass

Where practical, use of biomass woody debris resulting from hazardous fuel mitigation efforts is supported by this MCCWPP. Biomass is plant matter, which can be used for purposes such as generating electricity or producing heat. Wood biomass includes wood chips, wood pellets and other low-grade wood wastes. In areas where the location of biomass sources and of biomass utilization make transportation of biomass practical, biomass may offer many benefits including those listed below:

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[75] See the following web page for a summary of when permits are required (when in doubt, contact the MBUAPCD):
http://www.mbuapcd.org/~mbuapcd/index.php?option=com_content&view=article&id=56&catid=21&Itemid=80#Standards1

[76] University of Maryland University College(2004) El Nino Fires Released Clouds of Greenhouse Gases.

[77] Levine, Joel S.; Cofer, Wesley R., III. 2000. Boreal forest fire emissions and the chemistry of the atmosphere. In: Kasischke, Eric S.; Stocks, Brian J., eds. Fire, climate change, and carbon cycling in the boreal forest. Ecological Studies Vol. 138. New York: Springer-Verlag: 31-48.

- Biomass energy is good for the environment. Biomass energy systems help keep forests healthy by providing a market for low-grade "cull" wood, which removal improves the well-being of the forest.
- Biomass fuel is a local product. Dollars spent on biomass fuel stay in the regional economy, creating jobs.
- Biomass is easy to use and has high energy content. Wood pellets or wood chips are a clean-burning, high energy, carbon neutral renewable fuel that is convenient to use and requires less storage space than other biomass fuels.

8.0 Strategy and Action Plan

It is recommended that this document serve as an advisory document to assist in the development of fire safe activities and policies throughout Monterey County, subject to the issuance of all necessary permits and compliance all local, state and federal laws.

This MCCWPP makes the connection between Strategic Fuelbreaks, Defensible Space, Defensible Polygons, and the incident management, providing communities and agencies a cooperative guidance to wildfire protection.

This MCCWPP provides a general framework for coordinated interagency multi-jurisdictional strategic community wildfire protection planning for Monterey County.

Government agencies and private landowners responsible for managing the vegetation in and near the recommended at-risk communities within Monterey County will be invited to submit hazardous fuel reduction projects that provide communities wildfire protection and reduce risk. The Recommended Hazardous Fuel Reduction Projects table in Appendix D presents a list of hazardous fuel reduction projects currently recommended. Whether the projects will actually be initiated or conducted depends upon such factors as continued availability of leaders/organizers, availability of funding, continued interest by landowners, and potential changes to existing conditions before projects are funded and started, and issuance of all necessary permits and compliance with all local, state and federal laws.

The MFSC, along with local communities, intends to assess hazardous fuel reduction progress annually and invite agencies, landowners, and involved citizens to submit projects that provide community, watershed and infrastructure protection. Project identification and implementation are an on-going processes and the table in Appendix D may be updated by the MFSC as needed.

This MCCWPP is a living document and has been created to allow for ongoing management, updates, and community input intended for reducing the severity of wildland fires and reducing the vulnerability of assets to wildland fires in Monterey County. The following sections discuss long term management objectives intended to promote fire safe communities and the overall reduction of wildfire costs and losses in Monterey County.

8.1 Localized Fire Plans and CWPPs

This MCCWPP provides wildfire planning recommendations and information at a county wide scale. The preparation of localized fire plans and CWPPs at the community or neighborhood scale are recommended and supported. This document is intended to provide a guide for communities or neighborhoods to develop localized fire plans and CWPPs. However, local areas may rely on this MCCWPP for the purpose of seeking grant funds to perform hazardous fuel reduction work without the need for a local CWPP. Such work would need to comply with the requirements of all applicable local, state and federal laws, including environmental protection laws, as well as with all requirements of the grant agreement, including development of specific details on the scope of work. It is the intention of this MCCWPP that local CWPPs should have priority and authority over the county-level recommendations included in this MCCWPP, subject to all local, state and federal laws. Pursuant to the HFRA, a local CWPP must be agreed to by the local fire department(s), CAL FIRE and the applicable local government (city or the County of Monterey). Local CWPPs may identify site-specific constraints, fuels treatment options, specific vegetation prescriptions, at-risk community boundaries and refined or redefined WUI boundaries, emergency preparedness and other issues important to community wildfire safety, and accordingly, may deviate from the MCCWPP.

When developing local CWPPs, one should bear in mind that in some locations, coordination of large strategic firebreaks and fuelbreaks is important to the protection of multiple communities. Those drafting local CWPPs should consider the needs of other communities and communicate with them before deciding on such treatments. Fire does not recognize political boundaries, so those working to protect communities must interact and cooperate with other communities in order to be effective.

It is anticipated that the findings, projects, and recommendations included in the localized fire plans and CWPPs will be integrated into this MCCWPP during routine maintenance and updates of the document. Currently, localized fire plans or CWPPs are being considered for the areas of Big Sur, Palo Colorado, Cachagua, Pebble Beach, Carmel Highlands and Carmel Valley.

The following recommendations are intended to provide guidance for the preparation of localized fire plans and CWPPs. Localized fire plans and CWPPs should be prepared as provided in the HFRA, including within the context of the collaborative agreements and the guidance of the Wildland Fire Leadership Council, which calls for collaboration between a broad spectrum of affected parties, and may provide the following information:

- Define or redefine WUI boundaries for the community based on factors such as local topography, fuel types and densities, the desire to protect watersheds, property lines/ownerships, location of historic fuelbreaks and proximity to federal land, all as desirable to promote hazardous fuel reduction to protect the community from wildfires.
- Define or redefine the boundaries for the community.
- Identify and define a description of essential infrastructure such as roads, water supply systems, and power or communication structures, including an estimate of its value. The HFRA provides that CWPPs should make recommendations for hazardous fuel reduction

treatments on federal land and non-federal land to protect such infrastructure from damage by wildfire.

- Requests for hazardous fuel reduction work on land managed by the USFS and/or the BLM.
- Prioritize locations where fuel reduction grants should be made to fund projects on private land.
- Collaborate with Monterey County and the incorporated cities within the County, when required, and other agencies to facilitate and streamline hazardous fuel mitigation work described herein.
- Implement measures to reduce structural ignitability.
- Identify additional stakeholders or at-risk communities not included in this MCCWPP.
- Include in the decision-making process affected individuals including residents and private property owners in the community, CAL FIRE and the FAHJ (e.g. local fire district, volunteer fire department, city fire department, etc.) and the local government (city or Monterey County). The USFS, BLM, environmental groups, and other stakeholders should be consulted during the drafting process.
- Identify and address site-specific environmental regulations and necessary permitting requirements.
- Identify and address hazardous fuel treatment prescriptions, funding sources, and monitoring protocols.
- Identify opportunities for additional public education and safety training.
- Identify local evacuation routes and safe zones, and involve law enforcement officials responsible for emergency evacuation and implementation of Ready, Set, Go! and PSDLE[78] concepts in the planning process.
- Include tribal contact information and provision for notifying tribal representatives in the event ancestral remains are uncovered.

8.2 Long Term Maintenance/Monitoring

Long term maintenance and monitoring of hazardous fuel reduction efforts within Monterey County is important to maintaining reduced hazardous fuel loads in critical threat areas and identifying new or additional projects necessary for reducing overall wildfire risk to communities. The following actions by the MFSC are intended to reduce community wildfire risk:

- It is recommended that the FAHJ conduct annual monitoring of treated areas. Maintenance of hazardous fuels is recommended for access roads, structures, infrastructure, and watersheds within the WUI and can typically be completed at a cost less than that for the initial effort. Monitoring efforts can identify areas in need of additional hazardous fuel reduction treatments.

[78] Example at www.ruralfire.qld.gov.au/Bushfire_Safety/Safety_in_Rural_Areas/Planning_and_Survival.html

- Long term maintenance of the MCCWPP is essential. Maintaining the MCCWPP document is critical to tracking completed projects and on-going hazardous fuel reduction efforts, and most importantly, to address and define new priority areas and associated hazardous fuel reduction projects. A two to three year review/edit cycle is recommended.
- Collaboration with Monterey County and the incorporated cities in the County (when required) and other agencies is important for facilitating and expediting hazardous fuel mitigation work described herein. To facilitate collaboration, it is recommended that Monterey County authorize a position to be the primary contact for fire related and hazardous fuel mitigation related activities, such as a Forester for Monterey County residing within the MFSC.
- The Recommended Hazardous Fuel Reduction Projects included in Appendix D of this MCCWPP shall be updated at least annually by the MFSC. Input from those in an at-risk community (including interested individuals and the local fire authority) shall be given the highest priority for informing such updates for their community. The MFSC shall consider requests from project proponents to update Appendix D in a timely manner. Note that Appendix D may be updated without requiring resigning by signatories to this MCCWPP.

8.3 Public Education and Outreach

Public outreach and education is an important component in community fire preparedness efforts. The MFSC sponsors ongoing fire prevention and public education programs county wide and supports and promotes firewise activities by educating its citizens in ways to reduce structure ignitability. The following MFSC actions are intended to support the wildfire hazard reduction goals of this MCCWPP by incorporating community education, wildfire readiness, and preparedness:

- Maintain the MFSC website as a portal for public information regarding hazardous fuel reduction efforts throughout the County and advice on reduction of structural ignitability.
- Post the MCCWPP, updates, and specific project descriptions on the MFSC website.
- Provide a list of local fuel reduction contractors and consultants on the MFSC website.
- Develop printed educational materials for distribution in the at-risk communities.
- Conduct public outreach/education in communities where fuel reduction projects are proposed prior to initiation of work.
- Develop strategic partnerships and funding opportunities with local industry to support hazardous fuel reduction and firewise demonstration projects.
- Organize site visits to recently burned areas (e.g., one-year, three-year, ten-year post fire), and contrast with old burns.

9.0 Recommendations

In order to mitigate impending catastrophic fires, the recommendations below should be accomplished with all deliberate speed.

The measures recommended in this MCCWPP to protect lives, property and the environment, are intended to facilitate hazardous fuel reduction work in Monterey County, subject to the issuance of all necessary permits and compliance with all local, state and federal laws.

Note on the Collaborative Process Used to Develop the MCCWPP, Including the Recommendations

A CWPP, as defined under HFRA, is a plan that is, "developed within the context of the collaborative agreements and the guidance established by the Wildland Fire Leadership Council."[79] The Wildland Fire Leadership Council provides a handbook, *Preparing a Community Wildfire Protection Plan, A Handbook for Wildland-Urban Interface Communities*, (Handbook) that outlines the process to be used to develop a CWPP.[80]

The MCCWPP was developed using the Handbook as a guide, and accordingly, the development process was an open and collaborative process. This MCCWPP was written over the course of years. Table 4 lists organizations that were sent letters of intent to develop the MCCWPP, and invited to participate. Some groups that were not included in the original notice were added as the MFSC became aware of their interest.

Participants in this process included fire professionals, concerned citizens, and representatives from various organizations including homeowners associations and conservation groups.

During this collaborative process, the working draft was placed on the Internet in an on-line document collaboration application (Acrobat Buzzword), and invitations to participate and enter comments were sent out to a lengthy email list of interested parties, thus affording interested parties an opportunity to collaborate using this convenient and accessible interface.

The January 2010 MCCWPP, which was signed by 18 agencies including CAL FIRE; the Monterey County Fire Chiefs Association and local fire districts, departments and volunteer fire brigades; USFS; BLM; the Presidio of Monterey/Fort Ord; and the California Department of Parks and Recreation, contained recommendations to amend local, state and federal laws and regulations to expedite fuel mitigation and fire preparedness efforts, to better protect lives, property and the environment.

However, after the January MCCWPP was finalized and signed by these 18 agencies, comments on the January 2010 MCCWPP were received from various environmental groups. In the spirit of collaboration and in response to these comments, the MFSC removed from the MCCWPP, among other things, recommendations to amend various environmental laws that in the opinion of the MFSC are needed to better protect lives, property and the environment. Letters from various organizations commenting on the January 2010 MCCWPP are included in Appendix J.

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[79] Title 16 USC 6511(c)(A).

[80] Download the handbook at http://www.forestsandrangelands.gov/communities/documents/cwpphandbook.pdf

The MFSC prepared a letter in response to these comments from these organizations, which is also included in Appendix J.

In response to those comments, the September 2010 MCCWPP was revised to address them. However, during Monterey County's review of the September 2010 MCCWPP, Monterey County and various environmental organizations requested additional changes to the document. The MFSC amended the September 2010 MCCWPP to respond to the additional comments, which are also included in Appendix J, resulting in the November 2010 MCCWPP. The November 2010 MCCWPP was further amended to this version 2 (v2), after Monterey County again deferred signing the MCCWPP.

9.1 Recommendations to the Secretary of Agriculture

Pursuant to sections 101(3)(B), 103, 104 and 105 of the HFRA,[81] this MCCWPP recommends the following to the Secretary of Agriculture:

9.1.1 Maintain the Ventana Fuelbreak (Big Box Firebreak)

Background: The Ventana Fuelbreak (formerly the Big Box Firebreak), which generally surrounds much of the Monterey District of the LPNF, protects the following at-risk communities from fires originating in the LPNF, and protects the LPNF from fires originating in the following at-risk communities:

- Arroyo Seco
- Big Sur
- Big Sur, South Coast
- Bryson-Hesperia
- Cachagua
- Carmel Highlands
- Carmel Valley
- Carmel Valley Village
- Indians
- Jamesburg
- Lockwood
- Palo Colorado
- Pine Canyon (south)
- Rancho San Carlos
- Rancho San Clemente
- Reliz Canyon
- San Antonio Lake
- Tassajara
- White Rock

[81] 16 USC 6511(3)(B)), 6511(16)(A), 6513 & 6514.

The image below shows the Basin Fire burning toward Carmel Valley in 2008. The Basin Fire was stopped on the north at the Big Box/Ventana Firebreak. Most of the northern portion of the Big Box/Ventana Firebreak (near Carmel Valley) is in the Ventana Wilderness. The photo was taken from the Los Tulares area in Carmel Valley, looking generally southward, on or about July 15, 2008. The fog in the foreground is over the valley floor.

Recommendation: Reduce the risk to communities by maintaining the Ventana Fuelbreak, and treatment on both sides of it in a condition and for such distance that will ensure a high probability the fuelbreak or other treatment will be effective under adverse weather conditions and permit effective tactical suppression actions. The fuelbreak should serve to allow firefighters to work safely in the area; to change fire direction; to drop fire to the ground; and to stop the spread of wildfire under adverse fire conditions. The width of treatment should be determined utilizing such factors as fuel loads, topography, predominant winds, values at risk and fire behavior modeling. To the extent the Ventana Fuelbreak and the treatments on both sides of it are on non-federal land, this recommendation should be construed as recommending that federal funds be made available for their maintenance (e.g., through grants). The location of the Ventana Fuelbreak is shown on the map in Appendix B-7 by the line representing the Big Box Firebreak.

Rationale: The Big Box Firebreak was used to protect at-risk communities surrounding the LPNF from the 178,000 acre Marble Cone Fire in 1977, the 86,000 acre Kirk Complex Fire in 1999, and the 163,000 acre Basin Fire and 81,000 acre Indians Fire in 2008.

The Basin Fire burned on the west side of an 8 mile segment of the western portion of the Big Box Firebreak, consuming 26 homes and 32 other structures in the Big Sur at-risk community, and threatening approximately 300 homes in the Palo Colorado at-risk community. Maintaining and defending the Ventana Fuelbreak and treatments on both sides of it will reduce the threat of harm to firefighters and to the communities surrounding the Los Padres National Forest. As noted in Section 3.3.1.2., "Due to the extreme hazard of fires in the Los Padres National Forest" Congress has provided special management language for wilderness areas in the Los Padres National Forest, including allowing pre-suppression measures such as those recommended in this MCCWPP.[82]

The recommendation to maintain the Ventana Fuelbreak and its side-treatments before fire starts is to help ensure they can be used effectively and safely without delay to stop the spread of fire, to protect lives, property and the environment. However, it is important to note that a fire, whether natural or human-caused could occur outside fuelbreaks/firebreak, which would make the fuelbreaks/firebreaks ineffective for slowing or stopping fires.

Note 1: Firebreak vs. Fuelbreak – Comments on the January 2010 MCCWPP included concerns over the use of the term, "firebreak" instead of the term "fuelbreak". In an attempt to reach consensus, this November 2010 MCCWPP deleted the recommendation to maintain "firebreak" in its recommendations. The USFS and BLM have stated that as a matter of policy, the agencies can only maintain strategic fuelbreaks, and not firebreaks. These agencies state that firebreaks are, instead, opened and/or created during a wildfire. This MCCWPP recommends measures to allow mechanized equipment into wilderness areas, when necessary, to open and/or construct firebreaks and fight wildfire without any procedural delays.

Note 2: Use of Fuelbreaks – Fuelbreaks typically contain vegetation, though at reduced volume. Fuelbreaks are generally maintained over substantially wider distance than firebreaks, depending upon such factors as topography and vegetation type and density. Due to their vegetation, fuelbreaks must be properly designed and maintained for such distance as will ensure a high probability the fuelbreak or other treatment will be effective under adverse weather conditions and permit effective tactical suppression action.

Fuelbreaks may be improved with heavy equipment to be firebreaks during fires, if time allows and resources are available. During catastrophic events like the 2008 Lightning Siege in California, which started over 2,000 fires statewide[83] including the Basin Fire, availability of resources can be problematic.

Note 3: Wilderness Expansion – The Ventana Wilderness was created in 1969 encompassing approximately 98,000 acres.[84] The 1968 report from the Secretary of Agriculture to President Johnson on the proposed Ventana Wilderness states, "The boundary of this proposed Wilderness is very important and has been intentionally established wherever possible to allow the construction of peripheral fuelbreaks, and fire control access. Approximately 70 percent of

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[82] Section 3.3.1.2.2, quoting Senate Report 95-490 on H.R. 3454 (The Endangered American Wilderness Act of 1978), 95th Congress 1st session October 11, 1977, Senate Committee on Energy and Natural Resources.

[83] http://www.fire.ca.gov/index_incidents_overview.php

[84] Public law 91-58, August 18, 1969.

the boundary of this area would be located 250 feet below the crest of the ridge to permit the machine construction of effective fuelbreaks."[85]

The boundary of the Ventana Wilderness has been expanded four times, and now encompasses over 236,000 acres. In 2002, wilderness boundaries in the Monterey Ranger District of the LPNF were expanded in twelve areas, in some locations to within 30 to 100 feet of roads. Some of the roads serve as escape routes in event of fire and some double as firebreaks. In at least one location, wilderness was expanded over the Big Box Firebreak.

Because of past procedural delays in obtaining authorization for using mechanized equipment in wilderness, and to help avoid such procedural delays in the future, this MCCWPP makes recommendations for additional training and communication, and expedited procedures, for improving and/or creating firebreaks without procedural delay once wildfire has started.

Note 4: Sierra Club's Expert's Support for Maintaining Existing Firebreaks – As part of the comments to the January 2010 MCCWPP,[86] the Ventana Chapter of the Sierra Club included as an exhibit, an opinion memo by Dr. Scott Stephens, Associate Professor of Fire Science at the University of California, Berkeley. Mr. Stephens stated in his memo the following: "The CWPP specifies where existing fire and fuel breaks are located throughout the county (Pg 72, 73 & 74). Since these are already installed maintaining them into the future makes sense. They can act as anchor points for fire suppression operations and safety areas for fire fighters." As acknowledged by Dr. Stephens, the existing Big Box Firebreak should be maintained, before fire starts, and treatments should be provided on each side to help ensure the firebreak can be safely manned and effectively used during wildfires.

9.1.2 Maintain the Bixby Mountain Fuelbreak

Recommendation: Reduce the risk to communities by maintaining the Bixby Mountain Fuelbreak, and treatments on both sides of it in a condition and for such distance as will ensure a high probability the fuelbreak or other treatment will be effective under adverse weather conditions and permit effective tactical suppression actions. The fuebreak should result in a high probability that the fuelbreak will serve to allow firefighters to work safely in the area; to change fire direction and spread; to drop fire to the ground; and to stop the spread of wildfire under adverse fire conditions. The width of treatment should be determined utilizing such factors as fuel loads, topography, predominant winds, values at risk and fire behavior modeling. To the extent the Bixby Mountain Fuelbreak or its side-treatments are on non-federal land, this recommendation should be construed as recommending that federal funds be made available for their maintenance (e.g., through grants). The location of the Bixby Mountain Fuelbreak is shown on the map in Appendix B-7 as the Bixby Mountain Firebreak.

Rationale: The Bixby Mountain Firebreak protected the Palo Colorado at-risk community from the Basin Fire in 2008. This community contains almost half the residential population in the greater Big Sur at-risk community. Much of the land on which the Bixby Mountain

[85] 90th Congress, 2d Session, House Document No, 292, Part 9.

[86] July 13, 2010 Letter to Monterey Fire Safe Council from Lippe GaffneyWagner LLP.

Firebreak is located is currently in private ownership, and some of the land is owned by the USFS.

The Bixby Mountain Fuelbreak is the "backup" firebreak referred to in the rationale for Section 9.1.1, which was successfully used to stop the Basin Fire from burning into the greater Palo Colorado area. The Bixby Mountain Firebreak is strategically critical for wildfires burning north from the Los Padres National Forest southeast of Bixby Mountain. Recommendation 9.1.1 would restore the Bixby Mountain Fuelbreak to its historic role as a backup/secondary fuelbreak. For additional explanation, see the rationale discussion for the Ventana Fuelbreak above. However, it is important to note that a fire, whether natural or human-caused could occur outside fuelbreaks/firebreaks, which would make the fuelbreaks/firebreaks ineffective for slowing or stopping fires.

9.1.3 Establish Agreement with CAL FIRE to Defend the Bixby Mountain Fuelbreak/Firebreak

Recommendation: To the extent the Bixby Mountain Fuelbreak is on Federal land, establish agreements for CAL FIRE to defend the Bixby Mountain Fuelbreak during wildfires in a manner consistent with CAL FIRE's fire suppression policies.

Rationale: The USFS and CAL FIRE differ in their policies regarding defense of firebreaks and fuelbreaks that protect rural communities from wildfire. As noted above, the Bixby Mountain Firebreak is currently located primarily on private land, which is SRA over which CAL FIRE currently has jurisdiction. During the Basin Complex Fire, CAL FIRE successfully improved and defended the Bixby Mountain Firebreak, protecting hundreds of homes in the Bixby, Palo Colorado, Rocky Creek and Garrapata watersheds. Given that CAL FIRE has successfully defended the Bixby Mountain Firebreak, defense of the fuelbreak should be contracted out to CAL FIRE should the USFS acquire or own lands on which the fuelbreak is located, and the agreement should specify that defense of the fuelbreak will be consistent with CAL FIRE's suppression policies.

9.1.4 Pre-attack Planning by USFS in Cooperation with CAL FIRE and Local Fire Departments

Recommendation: It is recommended that the USFS prepare, and update as needed, a pre-attack plan that identifies the Ventana (Big Box) Firebreak and the Bixby Mountain Firebreak as critical strategic firebreaks. The Pre-attack plan needs to address the urgency and procedures for obtaining approvals to improving the firebreaks when a wildfire threatens communities at risk. It is further recommended that the pre-attack plan be prepared and updated in cooperation with local communities, CAL FIRE, and local fire departments responsible for wildfire suppression and/or structure protection in communities that may be impacted by wildfires originating in the Monterey Ranger District of the LPNF. It is also recommended that copies of the pre-attack plan and its updates be provided to CAL FIRE and to such local fire departments upon completion, in order that they may have them in their possession before fires start. The pre-attack plan should also be provided to Monterey County for incorporation into the County's Emergency Operational Plan.

Rationale: Pre-attack planning can be used to avoid delays improving firebreaks that are critical to protecting communities from wildfires that originate in the LPNF. See the Fire Frequency Map at Appendix B-3 for a graphical indication that most major wildfires in Monterey County start in the LPNF. Because of past procedural delays in obtaining authorization for using mechanized equipment in wilderness, and because of the potential for rapid spread of wildfires in the LPNF under severe fire conditions, and because incident commanders from outside the area may not be familiar with local conditions, it is important to prepare documentation in advance of wildfires that will avoid procedural delays improving critical firebreaks once a wildfire has started.

9.1.5 Letter of Delegation and Expedited Process to Open and/or Construct Firebreaks Upon Start of Wildfires

Recommendation: It is recommended that the USFS ensure that all fire management personnel while managing a wildfire will understand the process for requesting authorization to use mechanized equipment in wilderness to avoid any procedural delays. This process should be conveyed to the initial attack Incident Commander and Incident Command Team through a letter of delegation. It is further recommended that to the extent existing procedures have potential to delay the use of motorized equipment in wilderness during wildfires, the USFS should alter or supplement existing procedures to implement an expedited process to ensure that mechanized equipment can be used in wilderness in the Monterey Ranger District of the LPNF during wildfires, without procedural delay.

Rationale: Use of motorized equipment in wilderness is generally restricted until after a fire has started. Even after a wildfire is burning delays obtaining authorization to use motorized equipment in wilderness have been known to occur. To avoid procedural delays obtaining authorization to use motorized equipment in wilderness during wildfires, the USFS should implement procedures to ensure that all fire management personnel understand the process for requesting authorization to use mechanized equipment in wilderness, or if needed to avoid potential for such delays, USFS should alter or supplement existing procedures to implement an expedited authorization process.

9.1.6 Support the Santa Lucia Fire Defense System (In Progress)

Background: The Santa Lucia Fire Defense System (in progress), including but not limited to the Ventana Fuelbreak, is a network of interconnecting fire lines and fuelbreaks that protects at-risk communities from fires originating in the LPNF (including those at-risk communities not protected by the Ventana and Bixby Mountain Fuelbreaks), and protects the LPNF from fires originating in at-risk communities. Development of the Santa Lucia Fire Defense System (SLFDS) is supported by private landowners adjacent to LPNF and BLM threat areas. Initial work was started on the SLFDS as part of the USFS FireScape Monterey (in progress), and the BLM Sierra de Salinas-Gabilan Fuel Reduction Project and Strategic Fuel Break System.

Recommendation: Support funding for installation and maintenance of fuelbreaks and fuel reduction buffer zones on Federal and non-federal lands within the SLFDS.

Rationale: New and existing firebreaks and fuelbreaks in the area proposed to be encompassed by the SLFDS were used to protect at-risk communities surrounding the LPNF from the 163,000 acre Basin Fire and 81,000 acre Indians Fire in 2008. The Ventana Fuelbreak will be part of the SLFDS.

For additional explanation, see the rationale discussion for the Ventana Fuelbreak, above. However, it is important to note that a fire, whether natural or human-caused could occur outside fuelbreaks/firebreak, which would make the fuelbreaks/firebreaks ineffective for slowing or stopping fires.

9.1.7 Manage Hazardous Fuels on National Forest System Lands to Protect All At-Risk Communities

Recommendation: Manage vegetation on National Forest System lands in Monterey County to protect all at-risk communities named in this MCCWPP. Recommended activities include modifying hazardous fuels and installing and maintaining effective fuelbreaks, SPLATS and fuel reduction buffer zones in a manner that will result in a high probability that wildfires originating on National Forest System lands can be kept from spreading to at-risk communities under extreme conditions.

Rationale: Though much of the LPNF burned over in the recent Basin, Indians and Chalk fires, much of the burned over areas still have dead vegetation that is capable of reburning. The risk of wildfire and danger to communities is therefore not eliminated on much of this Federal land. Moreover, given the favorable environmental conditions, vegetation will rapidly regrow, and the problem of overgrowth must be addressed.

9.1.8 Priorities for Hazardous Fuel Reduction Funding on Private Lands

Recommendation: Award grants and allocate other federal funding through the Department of Agriculture for hazardous fuel reduction work on private lands and lands owned by state and local government in Monterey County in accordance with the priorities of this MCCWPP in Table 13 and Appendix D, subject to compliance with all local, state and federal laws.

Rationale: Pursuant to the HFRA, one purpose of a CWPP is to prioritize hazardous fuel reduction projects to protect at-risk communities. The prioritization of hazardous fuel reduction projects in this MCCWPP is based upon community priorities, state of the art fire modeling analysis (e.g., FRAP fire threat analysis), on-the-ground fire threat assessment, and the expert opinion of fire professionals familiar with Monterey County's WUI areas.

9.1.9 Fund Emergency Ingress and Egress to the Los Padres National Forest (LPNF)

Recommendation: Fund fuel reduction work along roads that provide emergency ingress and egress to the LPNF and to at-risk communities near the LPNF.

Rationale: Access to the LPNF during a wildfire is critical to USFS firefighting operations. Where such access roads also provide emergency ingress and egress for at-risk communities, the

added benefit of protecting lives and property in at-risk communities justifies a high priority for fuel reduction work along such roads.

9.1.10 Incorporate CWPPs Into the USFS's Fire Management Plan and Pre-attack Planning

Recommendation: Incorporate the maps and community pre-attack strategic fire defense planning that may be prepared pursuant to this MCCWPP and local CWPPs into the USFS incident management team's planning processes. Maps that are prepared should include firebreaks and fuelbreaks, evacuation plans, Safety Zones, and WUI and at-risk community boundaries, as provided in CWPPs.

Rationale: This recommendation would promote effective support of, and communication and engagement with, communities that may be affected by wildfires originating on Federal land, and avoid unnecessary displacement and disharmony among residents. The intent is to provide for a full range of strategic and tactical options to manage wildland fires to accomplish resource and protection objectives. This is in keeping with the 1995/2001 Federal Fire Policy and Guidance for Implementation of Federal Wildland Fire Management Policy (February 13, 2009).[87]

9.2 Recommendations to the Secretary of the Interior

Pursuant to sections 101(3)(B), 103, 104 and 105 of the HFRA,[88] this MCCWPP recommends the following in this Section 9.2 to the Secretary of the Interior:

9.2.1 Maintain Former Fort Ord Fuelbreak System

Recommendation: Maintain existing Strategic Fuelbreaks and Defensible Polygons, as well as existing roads and trails in the former Fort Ord Fuelbreak System. Provide for young seral stage buffer zones at BLM borderlands adjacent to developed areas.

- Coordinate with existing and future communities adjacent to BLM borders to reduce hazardous fuel loads through fuel treatments that involve a public/private commitment to reduce fire hazards along WUI areas.
- Develop workforce and interagency prescribed fire skills at Fort Ord.
- Support firewise principles on parcels that will be developed adjacent to current and future BLM lands at Fort Ord.

Rationale: BLM Borderlands at Fort Ord lie directly adjacent to communities at-risk. According to the Habitat Conservation Plan (HCP), a range of seral stages will be managed, including older age stands of chaparral and sage adjacent to at-risk communities and identified as high fire threat.

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[87] See, http://www.nifc.gov/policies/guidance/GIFWFMP.pdf

[88] 16 USC 6511(3)(B)), 6511(16)(A), 6513 & 6514.

9.2.2 Install and Maintain Sierra de Salinas-Gabilan Fuel Reduction Project and Strategic Fuel Break System

Recommendation: Install and maintain strategic fuelbreaks, reduced fuel buffer zones and defensible polygons as well as roads and trails in the Sierra de Salinas-Gabilan Fuel Reduction Project and Strategic Fuelbreak System.

Rationale: The Sierra de Salinas-Gabilan Fuel Reduction Project and Strategic Fuel Break System lie in the upland watershed of the Salinas River. With heavy rains following a high intensity wildfire event, post-fire erosion can be catastrophic to the downstream communities and the Salinas Valley's agricultural crops, including world class vineyards. For example, the 2008 fires caused significant damage to many of Monterey County's premium wines from smoke taint.

9.2.3 Pinnacles National Monument Hazardous Fuel Reduction

Recommendation: At Pinnacles National Monument, support cooperative Sierra de Salinas-Gabilan Fuel Reduction Project and Strategic Fuel Break System to include memorandums of understanding and cooperative agreements between NPS and landowners.

Rationale: See rationale in Section 9.2.2 above.

9.2.4 Prescribed Hazardous Fuel Reduction at Toro Creek and Creekside

Recommendation: Support prescribed hazardous fuel reduction at Toro Creek and Creekside BLM Borderlands (Highway 68) in coordination with adjacent landowners and Salinas Rural Fire District.

Rationale: Should conditions in these areas preclude mechanical treatment, prescribed fire is the preferred alternative.

9.2.5 Manage Hazardous Fuels on BLM Lands to Protect At-Risk Communities

Recommendation: Manage hazardous fuels on lands administered by the BLM in Monterey County to protect all at-risk communities recommended in this MCCWPP that may be threatened by wildfires originating on such lands. Recommended activities include modifying hazardous fuels and installing and maintaining fuelbreaks, shaded fuelbreaks, SPLATS and fuel reduction buffer zones in a manner that will result in a high probability that wildfires originating on lands administered by BLM will not spread to at-risk communities under extraordinarily adverse conditions.

Rationale: Wildfire danger exists on lands that are administered by the BLM in Monterey County. The problem of hazardous fuels will need to be addressed to protect adjacent at-risk communities.

9.2.6 Priorities for Fuel Reduction Funding on Private Lands

Recommendation: Award grants and allocate other federal funding through the Department of Interior related to hazardous fuel reduction work on private lands and lands owned by state and local government in Monterey County in accordance with the priorities in Table 13 and Appendix D, subject to issuance of all necessary permits and compliance with all local, state and federal laws.

Rationale: Pursuant to the HFRA, one purpose of a CWPP is to prioritize hazardous fuel reduction projects to protect at-risk communities. The prioritization of hazardous fuel reduction projects recommended in this MCCWPP is based upon community priorities, FRAP analysis, on-the-ground fire threat assessment, and the expert opinion of fire professionals familiar with Monterey County's WUI areas.

9.2.7 Fund Emergency Ingress and Egress to Lands Administered by BLM

Recommendation: Fund fuel reduction work along roads that provide emergency ingress and egress to lands administered by BLM in Monterey County, and to at-risk communities that may be threatened by wildfires originating on such lands, in order that such roads may be used during a wildfire.

Rationale: Access to lands administered by BLM during a wildfire is critical to firefighting operations. Where such access roads also provide emergency ingress and egress for at-risk communities, the added benefit of protecting lives and property in at-risk communities justifies a high priority for fuel reduction work along such roads.

9.2.8 Incorporate CWPPs Into BLM's Pre-attack Planning

Recommendation: Incorporate the maps and community pre-attack strategic fire defense planning that may be prepared pursuant to this MCCWPP and local CWPPs into the incident management team's planning process. Essential maps that may be prepared include those showing firebreaks and fuelbreaks, evacuation plans, Safety Zones, those showing boundaries of communities at-risk and those showing WUI boundaries, as provided in CWPPs.

Rationale: This recommendation would promote effective support of, and communication and engagement with, communities that may be affected by wildfires originating on Federal land, and avoid unnecessary displacement and disharmony among residents.

9.3 Recommendation to Congress

9.3.1 Enact Legislation to Enable and Require that Fuelbreaks be Maintained, if Fuelbreak Recommendations to the Secretary of Agriculture are not Implemented Within Three Years

Recommendation: Should the fuelbreaks and side-treatments described in Sections 9.1.1 and 9.1.2 not be installed, maintained and defended as recommended, within three years from the date this MCCWPP is signed by the signatories required by the HFRA, it is recommended that

Congress enact legislation to clearly enable and require the recommendations in Sections 9.1.1 and 9.1.2.

Rationale: Though Congressional documents, for decades, have repeatedly stated that the USFS is free to use whatever presuppression methods and techniques it finds are necessary to manage wildfire fuels to protect communities near California's wilderness areas, and the Ventana Wilderness and Silver Peak Wilderness areas in particular,[89] little or no such preparation has taken place. When wildfires come, communities remain vulnerable, with their survival depending almost entirely on the weather and the location of random lightning strikes or human-caused ignition.

After fire starts, bulldozers, hydraulic excavators, trucks, chainsaws, and other motorized equipment must be approved for use in areas designated as wilderness. Obtaining such approval can be delayed as fire spreads.[90] Once approval is obtained motorized equipment is used in a race to reopen overgrown firebreaks and fuelbreaks. However, depending on the weather and where lightning strikes, there is no assurance that work can be done in time. This scenario plays out every 10 to 20 years in the Monterey Ranger District of the LPNF (e.g., Marble Cone Fire (1977), Kirk Fire (1999), Basin Fire (2008)).

9.4 Recommendations to all Federal, State and Local Regulatory Agencies with Jurisdiction in Monterey County

This MCCWPP makes the following recommendations to all federal, state and local regulatory agencies with jurisdiction in Monterey County, subject to compliance with all local, state and federal laws.

9.4.1 Establish an Annual Goal for Hazardous Fuel Reduction Work in Monterey County

Recommendation: An annual acreage goal for hazardous fuel reduction work in areas where such fuel presents a potential threat to lives, structures, infrastructure, access roads or watersheds in Monterey County should be established by agreement among fire organizations such as CAL FIRE, the Monterey County Fire Chiefs Association and the MFSC, for the purpose of restoring vegetation density and ecosystem fire resiliency to a state that approximates the condition an area would likely have (in the judgment of the FAHJ) had fire suppression not been practiced in the area.

Rationale: Hazardous fuels in certain areas of Monterey County present a potential threat to lives, communities, structures, infrastructure, access roads, and watersheds in the event of wildfire. Significant portions of Monterey County are rated by CAL FIRE's FRAP program as high, very-high or extreme threat from wildfire. Without an annual goal for performance of hazardous fuel reduction work in these certain areas that present a potential threat to lives,

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[89] See Section 3.3.1.2 in this MCCWPP, Wilderness Acts, for acts of Congress and Congressional reports related to wilderness areas in Monterey County.

[90] Reference: Chief Hutchinson's statement at September 21, 2010 Board of Supervisors Hearing. Other fire professionals who worked on the Basin Fire have reported that delays of several days occurred before approval for use of heavy equipment could be obtained for some areas.

communities, structures, infrastructure, access roads, and watersheds in the event of wildfire, it is not possible to gauge whether the hazardous fuel problem is being adequately addressed.

9.4.2 Establishment of Hazardous Fuel Reduction Zones (HFRZ) and Approval of Hazardous Fuel Reduction Work

Recommendation: It is recommended that the FAHJ be empowered to designate particular areas within its jurisdiction where hazardous fuel presents a potential threat to lives, communities, structures, infrastructure, access roads, and watersheds in the event of wildfire, as HFRZ. It is also recommended that the FAHJ be empowered to approve hazardous fuel reduction work that requires regulatory oversight.

Rationale: The FAHJs are the recognized experts at wildfire prevention, suppression and fuels management, and under state law, enforce compliance with hazardous fuel reduction requirements. Moreover, FAHJs bear the added burden of fire suppression in SRAs. Given that HFRZs are intended to mitigate hazardous fuel conditions, and that hazardous fuels in certain areas of Monterey County present a potential threat to lives, communities, structures, infrastructure, access roads, and watersheds in the event of wildfire, FAHJs are the appropriate agencies to designate HFRZs and to approve fuel reduction work within them.

9.4.3 Lead Agency for California Environmental Quality Act (CEQA) Purposes

Recommendation: For all hazardous fuel reduction work to which CEQA is applicable, this MCCWPP recommends that CAL FIRE be the lead agency for CEQA purposes for fuel reduction work on private land in SRA in Monterey County.

Rationale: CAL FIRE is recognized as the expert at wildfire prevention, suppression and fuels management, and under state law enforces compliance with hazardous fuel reduction requirements.[91] Vast portions of Monterey County contain hazardous fuels, which could result in catastrophic high-intensity wildfire. Such areas are in need of hazardous fuel treatment at the earliest opportunity to protect lives, property and the environment. CAL FIRE is best positioned to analyze the impacts from treatment alternatives related to hazardous fuel reduction work, and to do so with minimum cost and delay. Environmental analysis for the USFS FireScape Monterey may be used by CAL FIRE as the functional equivalent for such CEQA analysis to the extent permitted by law.

9.4.4 Within HFRZs, Allow and Facilitate Creation of Survivable Space

Recommendation: For structures within HFRZs, creation of survivable space should be allowed and facilitated as a means of encouraging early evacuation in the event of wildfire, and reducing risk to firefighting personnel and others.

Rationale: Survivable space is an effective means of protecting lives and property, and should be allowed and facilitated. Due to conditions such as high hazardous fuel content, steep terrain, poor access roads or potential for overwhelming scale of wildfire, it is likely that for some

[91] CAL FIRE is currently the lead agency for fuel reduction undertaken pursuant to PRC 4291 and related regulations, within the SRA.

structures in certain locations, firefighting professionals will not be present to defend assets from wildfire. Landowners who have been allowed to prepare survivable space are more likely to evacuate early if they know their structure has a good chance of survival without anyone present defending it. Moreover, survivable space provides potential refuge for those caught by unexpected change in fire conditions.

9.4.5 Allow and Facilitate use of Large Burn Piles During Winter Rains with a Minimum of Regulatory Requirements

Recommendation: This MCCWPP recommends that the MBUAPCD allow and facilitate use of large burn piles during winter rains to dispose of piled vegetation debris.

Rationale: Large quantities of vegetation and deadwood must be disposed of in Monterey County at low cost. The quantity and remote location of hazardous fuels can make it impractical to transport the material to landfills or to chip it. Large burn piles are an efficient means of disposing of vegetation cuttings and deadwood. The MBUAPCD should facilitate a process to allow landowners to use pile burning as a safe means of material disposal. Proper disposal of vegetation overgrowth and deadwood is key to the success of the hazardous fuel reduction work recommended in this MCCWPP, and safe burning of large piles is an appropriate means of disposal.

9.4.6 Consider the Option of Biomass for Use of Woody Debris From Fuel Mitigation Activities

Recommendation: This MCCWPP recommends that all relevant agencies consider the option of biomass for use of woody debris resulting from hazardous fuel reduction effort, where such use is practical and would help facilitate fuel reduction activities. The agencies should evaluate technological options that may be available to make vegetation a practical renewable energy source.

Rationale: Biomass is commonly plant matter grown to generate electricity or produce heat. Wood biomass includes wood chips, wood pellets and other low-grade wood wastes. Biomass has many benefits, which are described in Section 7.2. The following summarizes these benefits: (1) biomass energy is good for the environment – biomass energy systems help keep forests healthy by providing a market for low-grade "cull" wood, whose removal improves the well-being of forests and woodlands; (2) dollars spent on biomass fuel stay in the regional economy, creating jobs; and (3) wood pellets or wood chips are a clean-burning, high energy renewable fuel that is convenient to use.

9.4.7 Monterey Fire Safe Council and California Department of Fish and Game Develop Localized Handouts Describing Species That are Protected by State and/or Federal Law

Recommendation: It is recommended that the Monterey Fire Safe Council (MFSC) and the California Department of Fish and Game (CDFG) work together to prepare localized handouts, containing descriptions and photos of species that are protected by state and/or federal law, to inform those performing hazardous fuel work to avoid the take of listed species.

Rationale: Species that are listed as threatened or endangered pursuant to state or federal law generally must be avoided and cannot be taken. The MFSC and CDFG should work together to develop localized handouts describing and illustrating protected species in order that the public can be informed about which species to avoid while performing hazardous fuel reduction work. The handouts should be localized to each fire district or area of responsibility, and made available through local fire departments and districts, and should focus on only those protected species that may be found in the applicable area.

9.4.8 Reduction of Structural Ignitability

Recommendation: This MCCWPP recommends that the MFSC coordinate a Countywide Fire Education Program. The purpose of this program is to educate community members on methods of reducing structural ignitability through (1) training courses; (2) educational brochures and flyers; and (3) voluntary home inspection program. Grant funding could be used to encourage voluntary participation by homeowners to implement Firewise tasks. The purpose of the education program is to show the homeowners what they can do around their own property to prevent a wildfire from igniting their home. The education program should cover use of Firewise landscaping; use of Firewise roof and other construction materials; methods for maintaining a structure to help prevent ignition; and preparation of a family disaster plan including information on how to create a survival space.

Rationale: Community education is a key component of a successful fire prevention program. Through community education, awareness is raised and the public becomes engaged in the solution. Community-wide commitment to hazardous fuels reduction and reduction of structural ignitability is essential to establishing an effective fire prevention strategy. Educating community members about Firewise technique is critical to preventing fires that may otherwise result in loss of lives, property, and the environment.

9.5 Recommendations to CAL FIRE and Other Fire Authorities Having Jurisdiction (FAHJ)

9.5.1 Designate Hazardous Fuel Reduction Zones (HFRZs)

Recommendation: CAL FIRE and other FAHJs should designate HFRZs in areas where hazardous fuel presents a potential threat to lives, communities, structures, infrastructure, access roads, and/or watersheds in the event of wildfire.

Rationale: This MCCWPP relies on the designation of HFRZs to identify areas that present a potential threat to lives, communities, structures, infrastructure, access roads, and/or watersheds in the event of wildfire. If HFRZs are not designated, lives, property and the environment may continue to be put at risk.

9.5.2 Support Ready, Set, Go! to Include Those Who May be Trapped by Fire

Recommendation: Support Ready, Set, Go! while acknowledging that in some locations individuals may be trapped by fire and/or be unable to evacuate, and that some individuals may elect to follow the concept of PSDLE.

Rationale: Ready, Set, Go! guidelines require community readiness and preparation for trapped-by-fire, evacuation-not-possible incidents as stated in the Ready, Set, Go! vision statement:

> Residents of communities take personal responsibility for living in the Wildland Urban Interface (WUI), possesses knowledge and skills to effectively prepare their home for survival when wildfire is threatening, evacuate early and safely when ordered, and, if trapped, practice learned skills to survive the wildfire.

9.5.3 Support Community Emergency Response Teams (CERT)

Recommendation: Support implementation of Community Emergency Response Team (CERT) training and integrate CERT with Coordinated Emergency Response Plans throughout Monterey County.

Rationale: This recommendation is to prepare and integrate citizen's actions with county-wide emergency and disaster preparation.

9.5.4 Support Annual Treatment Goals in the CAL FIRE Range Improvement and Vegetation Management Programs (VMP)

Recommendation: Proactively support safe landscape scale fire hazard reduction burning. Prioritize assignment of CAL FIRE, local government, and other agency resources to support strategic hazardous fuel reduction, Range Improvement, and VMP projects in Monterey County. Prioritize future projects proposed as part of this MCCWPP implementation process with a goal of treating 20,000 acres annually.

CAL FIRE should acknowledge and proactively support Range Improvement and VMP projects with fire safety standby personnel and equipment in accordance with the provisions of PRC sections 4491[92] and 4480.[93] Both sections provide authority for meeting goals of this MCCWPP.

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[92] PRC section 4491 states as follows: "Cooperation by the department, as provided in this article, with any person desiring to use prescribed burning as a means of converting brush-covered lands into forage lands, which has as its objective prevention of high intensity wildland fires, watershed management, range improvement, vegetation management, forest improvement, wildlife habitat improvement, and maintenance of air quality, or any combination thereof, is declared to be for a public purpose. This article shall be administered by the director or, if responsibility therefor is delegated by the director, by the chief of a county fire department in a county contracting with the department pursuant to the provisions of Section 4129. In furtherance of the provisions of this article, the department shall provide advisory service to applicants for permits as to precautions to be taken by the applicant to prevent damage to the property of others by reason of the prescribed burning, and shall provide standby fire protection, to such extent as personnel, fire crews, and firefighting equipment are available.

[93] PRC section 4480 states as follows: "In any area of the state where there are substantially more requests for prescribed burning operations or other hazardous fuel reduction pursuant to this article than can be conducted directly by the department in a single fiscal year, the director may, with the approval of the Director of Finance, enter into an agreement with private consultants or contractors or with other public agencies for furnishing all or a part of the state's share of the responsibility for planning the operation, preparing the site, and conducting the prescribed burning or other hazardous fuel reduction. The private consultant or contractor or other public agency, and the work assignments of its employees, shall be supervised by the fire boss when conducting prescribed burning operations, or designated officer of the department when conducting other hazardous fuel reduction, as provided in

Rationale: One purpose of a CWPP is to coordinate agency efforts and landowner initiative with funding sources to accomplish the goals of the CWPP through effective utilization of resources. Interagency cooperation, community support, and landowner initiative are necessary for achieving the objectives of this MCCWPP, which include prescribed fire goals of 20,000 acres treated annually within the County.

PRC sections 4491 and 4480 authorize CAL FIRE to cooperate with and support landowners and other agencies in the implementation of hazardous fuel reduction projects.

9.5.5 Prioritize CAL FIRE Resources to Support the Recommendations in this MCCWPP

Recommendation: CAL FIRE should prioritize Unit resources to emphasize strategic pre-fire mitigation and pre-attack activities, and integrate this MCCWPP and community strategic pre-attack fire defense and evacuation plans into the Unit Workplan and incident management team's planning process.

Rationale: Community priorities and Unit priorities need to be synchronized to allow for effective pre-fire planning.

9.6 Recommendations to Monterey County and to Municipalities and Districts Within Monterey County

9.6.1 Include Language to Allow and Facilitate Hazardous Fuel Reduction Work in all Planning Documents, Ordinances, Rules and Regulations

Recommendation: This MCCWPP recommends that Monterey County and all municipalities and districts with jurisdiction in Monterey County include in planning documents, ordinances, rules, regulations and department policies, language to allow and facilitate hazardous fuel reduction work wherever it would advance protecting lives, property or the environment.

Rationale: The source of the police power that justifies the existence of local and regional government entities is the protection of public health and safety. Various well intentioned planning policies, ordinances, rules and regulations can have the consequence of adding costs, delays and limitations that discourage or preclude hazardous fuel reduction work where it is needed to protect lives, property or the environment. In order to allow and facilitate hazardous fuel reduction work, it is critical that all plans, ordinances, rules and regulations include allowances for hazardous fuel reduction work to facilitate such work with the least amount of regulatory hindrance permissible under state and federal law. It is important to understand that the intent is to restore areas with hazardous fuels to an approximation of the fuel loads they would have had fire suppression not been practiced in the area, as determined by the FAHJ.

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subdivision (c) of Section 4476. No agreement may be entered into pursuant to this section unless the director determines that it will enable the prescribed burning operation to be conducted at a cost equal to, or less than, the cost that would otherwise be incurred by the state."

10.0 MCCWPP Agreement

This MCCWPP is a voluntary guideline prepared primarily by various citizen groups with collaborative input from government agencies at the federal, state and local level. It is comprised of a statement of existing conditions and laws, and recommends solutions to individuals and to various government agencies and legislators. This MCCWPP does not legally commit any agency to a specific course of action or conduct, including by the act of signing the MCCWPP.

In the spirit of collaboration encouraged by the Healthy Forests Restoration Act of 2003, the following entities mutually agree with the contents of this Monterey County Community Wildfire Protection Plan:

State Agency Responsible for Forestry

COPY

Richard C. Hutchinson Jr., Unit/Fire Chief
San Benito-Monterey Unit, CAL FIRE

Local Fire Chiefs

Michael Urquides COPY	*Monterey County Fire Chiefs Association*
COPY Richard C. Hutchinson Jr.	*Aromas Tri-County FPD, Carmel Highlands FPD, Pebble Beach CSD Fire Department, Cypress FPD, South Monterey County FPD*
Chris Orman COPY	RATIFIED by Action of The Board *North County Fire Protection District*
COPY Michael Urquides	*Carmel Valley FPD, Monterey County Regional Fire District*
Martha Karstens COPY	*Big Sur Volunteer Fire Brigade*
Cheryl Goetz COPY	*Mid Coast Fire Brigade*
COPY Roderic McMahan	*Cachagua FPD*
Jack Riso COPY	*Presidio of Monterey/Fort Ord*

Local Government

See the following page for Monterey County's resolution

Simon Salinas, Chair
Monterey County Board of Supervisors

Other Agencies and Groups

The following signatories are not required, but are included to express the spirit of collaboration in which this MCCWPP was developed:

Sherry A. Tune, District Ranger
USFS, Monterey Ranger District, LPNF

Rick Cooper, Hollister District
Bureau of Land Management

Mathew L. Fuzie, District Superintendent
Monterey District, California
Department of Parks & Recreation

Kelly Erin O'Brien, President
Monterey Fire Safe Council

Before the Board of Supervisors in and for the County of Monterey, State of California

Resolution No: 10 – 340

Resolution approving and authorizing the Chair of the Board of Supervisors to sign the Monterey County Community Wildfire Protection Plan.)

WHEREAS, one of the purposes of the Healthy Forests Restoration Act of 2003, H.R. 1904 ("Act") was "to reduce wildfire risk to communities, municipal water supplies, and other at-risk Federal land through a collaborative process of planning, prioritizing, and implementing hazardous fuel reduction projects;" and

WHEREAS, another purpose of the Act was to make available federal funds to communities at risk for damage due to wildfires ("At-Risk Communities") in order to undertake hazardous fuel reduction projects ("Projects") on both federal and non-federal land; and

WHEREAS, in order to facilitate these purposes, the Act provides for the adoption of Community Wildfire Protection Plans ("Plans") as a collaborative process between At-Risk Communities, local governments, local fire agencies, federal land management agencies, and interested persons; and

WHEREAS, the Monterey Fire Safe Council has undertaken to prepare a Monterey County Community Wildfire Protection Plan ("MCCWPP"); and

WHEREAS, numerous individuals and entities have provided input into the preparation of the MCCWPP including residents of At-Risk Communities in the County, local fire agencies, federal land management agencies and other interested persons; and

WHEREAS, the MCCWPP provides recommendations for Projects on a county-wide basis; and

WHEREAS, the MCCWPP contemplates the preparation of more localized Plans or implementation of individual Projects, all of which will be subject to compliance with all applicable local, state and federal laws including, if required, the California Environmental Quality Act ("CEQA"); and

WHEREAS, the approval of the MCCWPP by the County does not constitute a "project" for purposes of CEQA because such approval does not constitute approval of any Project not otherwise allowed by law or approval of any other Plan;

NOW, THEREFORE BE IT RESOLVED, by the Board of Supervisors of the County of Monterey as follows:

1. The MCCWPP is hereby approved.

2. The Chair of the Board of Supervisors is hereby authorized and directed to execute the MCCWPP for and on behalf of the County of Monterey.

3. The approval of the MCCWPP, and its execution by the Chair of the Board of Supervisors, shall not be construed or interpreted as an approval by the County of any other Plan, or an authorization for any Project not otherwise permitted by law or that may require the issuance of permits in compliance with other local, state or federal laws including CEQA.

4. Appendices of the MCCWPP provide supplemental information. Appendix J includes comment letters that do not have the any force and applicability as the adopted MCCWPP.

PASSED AND ADOPTED on this 14th day of December, 2010, upon motion of Supervisor Armenta, seconded by Supervisor Calcagno, by the following vote, to-wit:
AYES: Supervisors Armenta, Calcagno, Salinas, Parker, Potter
NOES: None
ABSENT: None

I, Gail T. Borkowski, Clerk of the Board of Supervisors of the County of Monterey, State of California, hereby certify that the foregoing is a true copy of an original order of said Board of Supervisors duly made and entered in the minutes thereof of Minute Book 75 for the meeting on December 14, 2010.

Dated: December 17, 2010

Gail T. Borkowski, Clerk of the Board of Supervisors
County of Monterey, State of California

By _____
Deputy

11.0 References

Bureau of Land Management (BLM) 2008. Bureau of Land Management, Hollister Field Office. Fire Management Plan 2008.

CAL FIRE 2009. California Department of Forestry and Fire Protection, San Benito – Monterey Unit: 2009 Fire Plan.

County of Monterey 2008. County of Monterey FactFinder. Online at: http://www.co.monterey.ca.us/factfinder/pdf/2008FactFinder.pdf

Fire and Resource Assessment Program (FRAP) 2008. GIS data, online at: http://frap.cdf.ca.gov/

Fire and Resource Assessment Program (FRAP) 2006. Monterey Fire Risk Analysis, Report to Monterey Fire Safe Council, Contract No. 8CA03405. 6 June 2006.

Fire in California Ecosystems, Sugihara/Wagtendonk/Shaffer/Fites-Kaufman/Thode www.ucpress.edu

InciWeb: Incident Information System. 2008. Online at: http://www.inciweb.org/

Los Padres National Forest (LPNF) 2008. Fire Management Plan.

Monterey County 2007. Draft 2007 Monterey County General Plan. Online at: http://www.co.monterey.ca.us/planning/gpu/draftNov2007/default.htm

Spatiotemporal Analysis of Controls on Shrubland Fire Regimes: Age Dependency and Fire Hazard, Moritz, 2003, *Ecology*, Vol. 84, No. 2, pg. 360.

As part of the CAL FIRE 2005 Fire Plan, Pebble Beach Community Service District (PBCSD) 2005. Fire Defense Plan for Pebble Beach.

12.0 Resources

Bureau of Land Management, Hollister Field Office

http://www.blm.gov/ca/st/en/fo/hollister.html

California Department of Forestry and Fire Protection (CAL FIRE)

http://www.fire.ca.gov/

http://www.fire.ca.gov/communications/communications_firesafety_100feet.php

http://www.fire.ca.gov/communications/downloads/fact_sheets/Checklist.pdf

California Fire Alliance

http://www.cafirealliance.org/

Fire and Resource Assessment Program (FRAP)

http://frap.cdf.ca.gov/

The Firesafe Council

http://www.firesafecouncil.org/

FIREWISE Communities

http://www.firewise.org/

United States Forest Service, Los Padres National Forest

http://www.fs.fed.us/r5/lospadres/

Following is an addendum to Section 3.1.2, which starts on page 8 in the main body of the MCCWPP.

3.1.2 Vegetation/Fuels

Unfortunately, there has been very little recent fire ecology research in the Central Coast bioregion specifically pertaining to Monterey County. This CWPP utilized the available scientific research and reports, and GIS data, from CAL FIRE's Fire and Resource Assessment Program (FRAP), USFS, the Hastings Natural History Reservation (U.C. Biological Field Station), and other State and County resources. We have also augmented these regional sources with the knowledge and experience of CAL FIRE registered professional foresters, fire professionals and resource managers from USFS and BLM, as well as local stakeholders – often with decades of life experiences in the region. There is tremendous variability in the vegetation of the central coast region and much more needs to be learned about this regions vegetation (Davis and Borchert 2006).

The Monterey Fire Safe Council's findings on the vegetation type and distribution in the County and the vegetation's role in affecting fire behavior are based substantially on a special Fire Threat Assessment conducted in 2006 by FRAP using best available data and high resolution imagery. (See Appendix H.) The following is a brief review of the vegetation conditions and fire ecology in Monterey County.

In conjunction with weather and topography, vegetation (or fuel) plays a major role in affecting fire behavior and shaping fire hazard potential. In addition, the vegetation distribution creates communities and habitat for a variety of organisms. Vegetation distribution throughout the County varies by location and topography, with dramatic differences observed between coastal and inland regions. Current land cover/fuels distribution within the County is characterized by fourteen different vegetation/fuel types, as presented in Table 5. This classification is based on research by Scott and Burgan, as presented in Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model (USDA Forest Service General Technical Report RMRS-GTR-153, June 2005). This does not represent wildlife habitat relationships or other classifications based upon species or communities; rather, it elucidates the nature of fire behavior in terms of the primary fuel carrier of fire.

Dominant vegetative cover within Monterey County is herbaceous or grassland cover (31.3 percent), distributed primarily in the low-lying valley areas along the Highway 101 corridor. While this fuel type can burn quickly under strong, dry wind patterns, it does not produce the high heat intensity and high flame lengths associated with chaparral fuel types. Other significant vegetative cover types include light brush (21.3 percent), light grass/woodland (14.8 percent), and hardwood litter (13.1 percent). These vegetation types are primarily associated with the steeper, upland areas in the southern, western, and northern portions of the County. Fire behavior in brush fuel types may produce flame lengths greater than 12 feet, and resistance to control may be high. Fire behavior in woodlands is variable, depending on surface fuel conditions and the presence of ladder fuels. However, crown fire is common if slope and wind conditions are favorable to allowing fire to enter into the crowns.

The distribution of fuels in Monterey County is graphically presented in Appendix B-2.[1]

[1] Higher resolution vegetation cover maps are currently under development by CAL FIRE (FRAP), USGS and local

Table 5. Monterey County Land Cover/Fuels Distribution*

Fuel Model** Number	Description	Approximate Acreage	Percent Cover
1	Grass	662,270	31.3%
5	Light Brush	450,958	21.3%
2	Light Grass/Woodland	312,639	14.8%
8	Hardwood Litter	276,924	13.1%
97	Agriculture	240,714	11.4%
4	Heavy Chaparral	58,945	2.8%
28	Urban	43,525	2.1%
9	Light Conifer Litter	35,039	1.7%
98	Water	15,033	0.7%
10	Heavy Conifer Litter w/ Understory	9,007	0.4%
7	Young Maritime Chaparral	6,209	0.3%
99	Barren	5,698	0.3%
30	Maritime Live Oak Forest	95	0.0%
6	Moderate Brush	70	0.0%
	Total:	2,117,126	100.0%

**FRAP Monterey Fire Risk Analysis, 2006*

*** Fuel Model is a rating of vegetation and dead woody material and their volume, type, condition, arrangement, distribution and location.*

Variations in vegetative cover type and species composition have a direct effect on fire behavior. A critical factor to consider is the dynamic nature of vegetation types. Fire presence and absence at varying cycles or regimes affects vegetation type succession. Some vegetation types and their associated plant species have increased flammability based on plant physiology (resin content), biological function (flowering, retention of dead plant material), physical structure (leaf size, branching patterns), and overall fuel loading.

The density of trees and shrubs can create a hazardous arrangement, both horizontally and vertically, of closely-standing burnable vegetation, or fuel ladders, in the understory. Fuel ladders help fires ascend into the larger trees, or overstory. This combination of fuel ladders and a high density of fuels can also increase the potential for insect and pathogen infestations which, if they cause tree die-off, increase the potential for fire. In the event of high-intensity uncontrolled

universities. Due to the small scale patch mosaic characteristics of Monterey County's landscape, these maps may provide a more accurate representation of forest and vegetation cover than those currently available. The Watershed Institute at CSUMB has produced a 30 meter resolution map of the Central Coast Bioregion. The map is being edited to provide GIS data and ground cover percentages limited to the boundaries of Monterey County. First approximations suggest that both Mixed Conifer/Montane Forests and Oak Woodland/Mixed Forest cover may be greater than current estimates due to the lower resolution used in current maps.

wildfire, whole landscapes can be denuded and reverted to shrub communities, watershed processes can be compromised, and other environmental values can be greatly altered.[2]

In order to elucidate the nature of the vegetation in the fuel models, CAL FIRE performed a rough analysis of wildlife habitat relationship vegetation classification system for Monterey County, using 2009 LANDFIRE data; the results are listed in Table 6. The distribution of wildlife habitat relationship classifications in Monterey County is graphically presented in Appendix B-2.[3]

Table 6. Monterey County WHR***

Monterey County WHR Analysis		
Numbers may vary due to rounding		
Wildlife Habitat Relationship Classification	**Approximate Acreage**	Percent Cover
Agriculture	249,925.46	11.80%
Annual Grassland	640,938.22	30.26%
Barren	6,877.83	0.32%
Blue Oak Woodland	247,035.14	11.66%
Blue Oak-Foothill Pine	2,810.29	0.13%
Chamise-Redshank Chaparral	54,931.06	2.59%
Closed-Cone Pine-Cypress	3,656.04	0.17%
Coastal Oak Woodland	246,319.26	11.63%
Coastal Scrub	200,366.33	9.46%
Douglas-Fir	1,003.96	0.05%
Estuarine	2.47	0.00%
Eucalyptus	115.07	0.01%
Mixed Chaparral	272,035.69	12.84%
Montane Hardwood	40,926.91	1.93%
Montane Hardwood-Conifer	34,605.67	1.63%
Montane Riparian	479.39	0.02%
Ponderosa Pine	3,716.79	0.18%
Redwood	14,690.82	0.69%
Saline Emergent Wetland	2,578.43	0.12%

[2] Yosemite EIS, page I-7.

[3] Higher resolution vegetation cover maps are currently under development by CAL FIRE (FRAP), USGS and local universities. Due to the small scale patch mosaic characteristics of Monterey County's landscape, these maps may provide a more accurate representation of forest and vegetation cover than those currently available. The Watershed Institute at CSUMB has produced a 30 meter resolution map of the Central Coast Bioregion. The map is being edited to provide GIS data and ground cover percentages limited to the boundaries of Monterey County. First approximations suggest that both Mixed Conifer/Montane Forests and Oak Woodland/Mixed Forest cover may be greater than current estimates due to the lower resolution used in current maps.

Unknown Conifer Type	14.83	0.00%
Unknown Shrub Type	50.11	0.00%
Urban	68,250.46	3.22%
Valley Foothill Riparian	12,216.94	0.58%
Valley Oak Woodland	6,399.50	0.30%
Water	8,470.27	0.40%
Grand Total	**2,118,416.92**	**100.00%**

****CAL FIRE Monterey WHR Analysis, 2011 (unpublished data)*

Sudden Oak Death

Of concern within Monterey County is the presence of the Sudden Oak Death (SOD) pathogen (*Phytophthora ramorum*) that primarily affects tanoaks (*Lithocarpus densiflorus*), coast live oaks (*Quercus agrifolia*), and other oak and tree species found in forest and woodland environments, both coastal and inland. Other affected species include California bay trees (*Umbellularia californica*), Rhododendron spp., coast redwood (*Sequoia sempervirens*) and many other tree and plant species. The potential for SOD is concentrated primarily in the coastal portions of Monterey County, as the pathogen is a water mold that requires moist environments for survival and spore dissemination. The SOD pathogen infects the water flow system of susceptible trees and shrubs, eventually blocking this flow and resulting in rapid plant/tree mortality. Precautions must be used when handling infected plant material and/or tools used in trimming/removal of infected wood if they will be transported outside Monterey County. More information on SOD can be found via the California Oak Mortality Task Force (http://www.suddenoakdeath.org/index.html).

Forests and woodlands in the Big Sur region are among the most impacted by SOD in California (Davis et al. 2010). Among hosts, tanoak is especially susceptible to infection and subsequent mortality: basal area and tree density reductions in tanoak stands of over 50% have been observed within 8 years of infestation (Waring and O'Hara 2008). Annual mortality rates of approximately 5% have also occurred in coast live oak woodlands infested with SOD (Brown and Allen-Diaz 2009).

The 2008 Basin-Indians fire (SEAT 2008) burned a large area of woodlands and shortly after this fire a survey was sent to select personnel who worked on this wildfire (Lee et al. 2010). The most striking responses from firefighting personnel who worked on this wildfire was the perception that SOD caused mortality had markedly increased surface fuel loads and subsequent fire behavior (Lee et al. 2010). Additionally most people who were surveyed noted greater than normal spotting activity, either through increased ember production or increased spotting distance, from standing dead oaks or tanoaks. Another important observation was the large number of SOD killed trees that fell over fire lines and those that fell and hit fire fighters. However it must be stated while this information can be informative it did not include direct measurements of fire behavior and effects in woodlands impacted and not impacted by SOD.

A recent paper has worked to address this information gap regarding SOD impacted woodlands and the potential changes in fire behavior and effects in the 2008 Basin-Indians fire (Metz et al. 2010). Measurements of standing dead woody stems and downed fuels one to two years prior to

the Basin fire documented increased fuels attributed to SOD (Metz et al. 2010). Despite large differences in fuel abundance, no significant differences in burn severity between infested and uninfected plots were found. Instead, the relationship between SOD and fire reflected the changing nature of the disease impacts over time. Increased SOD mortality contributed to overstory burn severity only in areas where the pathogen (*Phytophthora ramorum*) had recently invaded. Where longer term disease establishment allowed dead material to fall and accumulate, increasing log volumes led to increased soil burn severity but not overstory burn severity (Metz et al. 2010).

SOD infected woodlands in the central coast pose significant suppression challenges from falling snags. In areas with high numbers of snags suppression forces may not enter because of significant safety concerns. Management efforts to mitigate fire severity in SOD infected woodlands could focus on areas with large amounts of recent, standing SOD mortality instead of the older mortality areas. Recently infected coast live oak and tanoak trees could have lower live fuel moisture making them more conductive to high intensity fire and crown fires. Pile burning stems recently killed by SOD or possibly chipping these materials are two options to reduce the fire hazards in these areas.

Pitch Canker

Also of concern is the continuing effect of pitch canker disease on the pine forests in Monterey County. Although the disease affects a number of pine species, the largest impact is on the signature Monterey pine trees *(Pinus radiata)* in the forested coastal areas of the County. Pitch canker occurs in response to a fungal infection and is characterized by resinous cankers on the trunk, branches or roots accompanied by needle wilt, limb dieback and eventual tree mortality. Monterey pines in close association with disturbed or developed areas have a higher disease rate than native stands. The fungus (*Fusarium circinatum*) is spread through distribution of the fungal spores by contact with infected material and by insect vectors including several species of bark, twig and cone beetles. A management and research program was adopted in 1995 under the direction of the Pine Pitch Canker Task Force (http://frap.cdf.ca.gov/pitch_canker/). Precautions to prevent the spread of the disease were developed as part of the Pitch Canker Action Plan (available at the above website) and are similar to those outlined in the above discussion of Sudden Oak Death.

The implication of these forest diseases and insect infestations in relation to fire prevention and protection is the relatively rapid mortality that occurs, resulting in increased dead fuel loads. Standing dead fuels contribute to increased wildfire hazard and require treatment and/or removal, especially within wildland-urban interface areas.

Forests

Forests in the County include redwood, close cone pine-cypress, ponderosa pine, Douglas-fir, and a small amount of eucalyptus (FRAP 2002). An analysis of a Monterey County vegetation map (FRAP 2002) by Dr. Scott Stephens in December 2010 resulted in 2.8% of the County in redwood, montane hardwood-conifer, closed cone pine-cypress, ponderosa pine, and Douglas-fir forests, which is similar to the 2% value as determined by the fuel model analysis (Table 5).

Difficulties arise in estimating the smaller scale forested components within the complex vegetation mosaics of the Santa Lucia Range.

A scientific body of literature has been created regarding the reduction of fire hazards in forests that once burned frequently but have been under a policy of fire suppression for approximately 100 years and have been repeatedly harvested (Stephens 1998, Fule et al. 2001, Pollet and Omi 2002, Fiedler et al. 2004, Agee and Skinner 2005, Stephens and Moghaddas 2005, Agee and Lolley 2006, Schmidt et al. 2008, Youngblood et al. 2008, Stephens et al. 2009a). There is scientific consensus that to reduce fire hazards in forests that once burned frequently, fuels treatments should focus on surface, ladder, and then crown fuels. It is important to note that this information for forested landscapes applies to local forested areas with high fire hazards. In these forested areas in Monterey County, the work cited in this paragraph is appropriate, and the strategy of reducing surface, ladder, and crown fuels may reduce fire hazards.Dr. Stephens recommends using an informed landscape approach outlined in Moghaddas et al. (2010) and Collins et al. (2010) which takes many of the theoretical ideas from the development of strategically placed landscape area treatments (Finney 2001) but applies them to real landscapes.

Two forest types bear further discussion: redwood and closed cone pine-cypress. Redwood grows in areas with high moisture and generally does not have high fire hazards. If redwood is mixed with Douglas-fir, then this poses a different fire management challenge since Douglas-fir is much more flammable. When Douglas-fir basal area is > 40% of standing trees, Dr. Stephens recommends managing the area as a Douglas-fir forest and the comments in the preceding paragraphs apply. If Douglas-fir is not present or at lower densities, fire hazards will generally be low. However, fires ignited by Native Americans were once a significant ecological process in most redwood forests (Stephens and Fry 2005, Stuart and Stephens 2006) and its removal the last 150 years has impacted these ecosystems. The use of prescribed fire in redwood forests will restore this important ecological process.

Closed cone pine-cypress forests are adapted to crown fires of high intensity. Such fires burn the entire tree but seeds in closed cones survive the fire and sprout the following spring. These ecosystems are commonly adjacent to chaparral and typically burn at high severity when the chaparral burns. Removal of the ability of these forests to burn every 40-100 years at high intensity will lead to an eventual loss of these species. No fuel treatments would be appropriate in these forests unless they were adjacent to an urban-wildland interface (WUI).

Shrublands

Shrublands are common in Monterey County and include mixed chaparral, coastal scrub, and chamise-redshank chaparral (FRAP 2002). High fire hazards are common in areas dominated by shrublands in coastal California, particularly in areas dominate by chaparral (Moritz 1997, Keeley and Fotheringham 2001). Large areas of chaparral burned in the 1977 Marble-Cone fire (Griffin 1978), the 1999 Kirk Complex, and the 2008 Basin-Indians fire complex (SEAT 2008), attesting to the flammability of this vegetation type.

Several papers have been written on chaparral fire regimes that include the federal lands in northern Monterey County; two of the most important papers are Moritz et al. (2004) and Moritz (2003). Moritz worked to determine if wildfires in coastal shrublands are strongly influenced by

the age of the shrubs (or time since last stand replacing fire) or if weather was the more important factor. Analysis presented in these papers concludes that shrubland fuel age is a relatively minor factor in chaparral fires in US Forest Service lands in northern Monterey County; however, his analysis made the assumption that the areas burned with the same intensity and severity throughout the entire perimeter. In addition, Moritz only used fire perimeters for fires greater than 100 acres on federal land, potentially losing any correlation between shrubland fuel age and smaller acreage fires versus the large fires used in his analysis. Fire fuel age is an important factor in fires occurring in areas of steep terrain that have not seen fire in decades.

In areas dominated by shrublands, the most effective strategy for community protection fuel reduction activities may be to work in areas in close proximity to the WUI. The WUI has enormous assets at risk, and fuels treatments can be used to reduce the vulnerability to catastrophic losses. However, it is important to note that the risk will never be reduced to zero; it can be reduced, but treatments must be maintained to remain effective. Moreover, even effective treatments will not stop fires; rather, they will reduce their flame lengths, rates of spread, and spotting potentials. Reducing fuel loads along access roads to provide safe access for fire personnel and resident evacuation is a priority. A recent study by Syphard, Keeley and Brennan on fuel breaks in the Los Padres National Forest was published in the International Journal of Wildland Fire. In this article, Syphard discusses the effectiveness of fuel breaks in stopping fires, especially when strategically located. Syphard et al. hypothesize that maintenance of historic fuel breaks, especially those that have proven useful in previous fires or that are located in close proximity to the WUI is an important aspect of fire management (Syphard et al. 2011)

Prescribed fires in different seasons or mechanical mastication are the two most common fuel management alternatives in chaparral. Chaparral typically burned in the late summer and fall before Euro-American settlement. Two recent papers from northern California chaparral (Potts and Stephens 2009, Potts et al. 2010) determined that burning in the fall, winter, or spring resulted in the regeneration of the vast majority of local, native species. Mastication treatments that shredded the vegetation in place resulted in the majority of native species returning but also a significant increase in non-native annual grasses. This increase in grass cover can lead to an increase in fire frequency that can negatively impact chaparral ecosystems if they burn at high frequency. Unfortunately, there is little information on fire frequency in Monterey County, especially in chaparral ecosystems; this is an important area for future research. Research from other areas in California has determined that some fuel treatments in chaparral can increase non-native species (Keeley et al. 2005, Potts and Stephens 2005, Keeley 2006) and this has the potential to change species composition and substantially modify wildlife habitat. Type conversions (changes from chaparral to grasslands) are possible because non-native grasses can increase fire frequency to the point where chaparral species cannot regenerate. In general, it is not recommended to create new fuel breaks in chaparral shrublands that are not next to the WUI or other important assets at risk, nor a key component of the strategic pre-attack fire plan. While severe weather is extremely rare in Monterey County, fuel breaks may prove useful in containing fires, so long as they are adequately staffed and properly maintained (Syphard et al., 2011). If fuel breaks are too narrow, then spotting embers will fly right over them, especially during severe weather; thus, maintenance, proper size, and strategic location of fuel breaks is essential. Increases in chaparral dead fuel loads (increased fire hazards) can be produced from snow as was the case before the 1977 Marble-Cone fire (Griffin 1978). Local research on the ecological

effects and effectiveness of fuel reduction methods and the strategic location of fuel breaks is essential in order to determine the utility of fuel breaks in chaparral. The most effective treatments, though, typically are in areas adjacent to the WUI and the creation of defensible space clearance projects surrounding structures. Strategic fuel breaks are discussed in greater detail in Section 6.3.1.

Grasslands

The County has a large area of annual grasslands (30% of the County) and blue oak woodlands (12% of County) (FRAP 2002). Annual grasslands and blue oak woodlands have understories dominated by exotic annual grasses that naturalized in California after European settlement. Since these plants grow and die annually, the use of livestock grazing can be an effective method to reduce surface fuel loads. Years with higher rainfall (such as 2009-2010) are periods where reduction of annual grass fuels near the WUI may be particularly important. Many woodlands and grasslands also have shrubs that will be of varying cover and height. If woodlands have extensive shrub cover, these could act as ladder fuels to the overstory, particularly when the overstory is coniferous (such as gray pine, *Pinus sabiniana*). In these areas, particularly near the WUI, removal of some of the larger shrubs (ladder fuels) might be appropriate. Without grazing or the periodic use of prescribed fire, some areas of annual grasslands and blue oak woodlands will change to shrublands and fire hazards will increase. However, if shrub cover in woodlands is clumpy or low it will not increase fire hazards significantly.

Woodlands

Coast live oak, montane hardwoods, and montane hardwood-conifer occupy 16% of Monterey County (FRAP 2002). Coast live oak, tankoak, and montane woodlands in Monterey County are being significantly impacted by sudden oak death syndrome (SOD). These areas have varying canopy cover, ranging from less than 10 percent canopy cover to a complete 100 percent coverage. This variability results in further variability in understory species abundance and composition. Ladder fuels may be present, especially along the edge of woodlands. Fuel treatments to reduce ladder fuels may be appropriate in these areas.

Fire in the Wildland-Urban Interface

While not vegetation, structures and other materials in the WUI are fuels available for burning in a wildfire. To reduce losses in the WUI, private land-owners will have to reduce the vulnerability of their assets (Stephens and Ruth 2005). Homeowners that live in the WUI need to reduce the chances of their homes or yards being ignited by flying embers, which is the primary ignition method in the WUI (Cohen 2000, Stephens et al. 2009b, Gill and Stephens 2010). Under severe fire behavior, it is possible that some communities may become trapped without the option to evacuate, forcing them to shelter in place and defend themselves (Mutch et al. 2010). When discussing this possibility with residents in the WUI, it is important to include what actions they need to do before and during such an event to minimize the loss of life and property.

Monterey County already has a system of fuel breaks. Since these are already installed, maintaining them into the future makes sense (Stephens 2010). They can act as anchor points for fire suppression operations and safety areas for firefighters. The requisite width of such fuel breaks is an issue that is debated. Cohen (2000) has written that the vegetation immediately near

the homes (within 100-150 feet) is the critical area regarding safety in the WUI. Embers can also be produced from areas further away and can impact structures. In order to reduce losses in the WUI, it is generally more efficient to invest in measures to reduce the probability of home and urban-garden ignition from embers and to decrease vegetation fire hazards that directly impact the WUI, in order to maintain tactical defensibility.

More information on the reduction of structure ignitability can be found in Section 6.1. More information on defensible space fuel treatments and hazardous fuel treatments can be found in Section 6.2

Summary

The previous discussion relies heavily on generalizations of vegetation community types. It fails to address site-specific information, such as fire obligate species or fire sprouting species. The ecology of Monterey County is not well understood and merits further research. Increasing our understanding of the ecology and the ecological effects of fuel treatments will lead to a refinement of appropriate treatment methods. Research on the effectiveness of fuel treatment methods and combinations, especially pertaining to the duration of such effects, will further inform future planning.

APPENDIX A

Glossary of Terms

APPENDIX A – Glossary of Terms

At-Risk Community – Means as defined in the Healthy Forests Restoration Act of 2003 (HRFA), namely:

An area –

(A) that is comprised of –

(i) an interface community as defined in the notice entitled "Wildland Urban Interface Communities Within the Vicinity of Federal Lands That Are at High Risk From Wildfire" issued by the Secretary of Agriculture and the Secretary of the Interior in accordance with title IV of the Department of the Interior and Related Agencies Appropriations Act, 2001 (114 Stat. 1009) (66 Fed. Reg. 753, January 4, 2001); or

(ii) a group of homes and other structures with basic infrastructure and services (such as utilities and collectively maintained transportation routes) within or adjacent to Federal land;

(B) in which conditions are conducive to a large-scale wildland fire disturbance event; and

(C) for which a significant threat to human life or property exists as a result of a wildland fire disturbance event.

(See the definition for "Community At-Risk," below.)

Building – Any structure used or intended for supporting or sheltering any use or occupancy. (NFPA, *NFPA 1144*, 2002, p. 4.)

Combustible – Any material that, in the form in which it is used and under the conditions anticipated, will ignite and burn or will add appreciable heat to an ambient fire. (NFPA, *NFPA 1144*, 2002, p. 5.)

Community At-Risk – A community that is listed as a community at-risk on the list maintained by the California Fire Alliance (see, www.cafirealliance.org/communities_at_risk/communities_at_risk_list). A community at-risk differs from an at-risk community in that a community at-risk is not required to be near land managed by the United States Forest Service (USFS) or the Bureau of Land Management (BLM) ("With California's extensive urban [*sic*] Wildland-Urban Interface situation, the list of communities extends beyond just those adjacent to Federal lands." see, www.cafirealliance.org/communities_at_risk/.)

(See the definition for "At-Risk Community," above.)

Community Fire Safe Prescriptions – Community Fire Safe Prescriptions are envisioned to be site-specific fuel treatments and parameters within the Defensible Space, Mitigation Zones, Threat Zones and HFRZs to reduce the risk of wildfire within and near a community. These treatments and parameters may be developed for some locations on a site-specific basis, to prevent the spread of wildfire to more wildland or structures, and to prevent the spread of a structure fire to neighboring structures or the wildland.

Community Wildfire Protection Plan (CWPP) – A plan for an at-risk community that—

(A) is developed within the context of the collaborative agreements and the guidance established by the Wildland Fire Leadership Council and agreed to by the applicable local government, local fire department, and State agency responsible for forest management, in consultation with interested parties and the Federal land management agencies managing land in the vicinity of the at-risk community;

(B) identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment on Federal and non-federal land that will protect 1 or more at-risk communities and essential infrastructure; and

(C) recommends measures to reduce structural ignitability throughout the at-risk community.

(Source: HFRA.)

The process of developing a CWPP can help communities clarify and refine their priorities for the protection of life, property, and critical infrastructure in the wildland-urban interface (WUI). The language in the HFRA provides maximum flexibility for communities to determine the substance and detail of their plans and the procedures they use to develop them. (Source: *Preparing a Community Wildfire Protection Plan*, March 2004.)

Condition Class – Describes fire-related risk to ecosystems and relates current expected wildfires to their historic frequency and effects. Condition class ranks are defined as the relative risk of losing key components that define an ecosystem. Higher ranked areas present greater risk to ecosystem health. Condition class is a measure of the expected response of ecosystems to fire given current vegetation type and structure that often is far different from that historically present.

Condition Class	Departure from natural regimes	Vegetation composition, structure, fuels	Fire behavior, severity, pattern	Disturbance agents, native species, hydrologic functions	Increased smoke production
Condition Class 1 (Little to None*)	None, minimal	Similar	Similar	Within natural range of variation	Low
Condition Class 2 (Moderate*)	Moderate	Moderately altered	Uncharacteristic	Outside historical range of variation	Moderate
Condition Class 3 (High and Very-High*)	High	Significantly different	Highly uncharacteristic	Substantially outside historical range of variation	High

(Source: *CAL FIRE FRAP 2003 Forest and Range Assessment*, p. 98)

* These terms are CAL FIRE equivalents of fire fuel hazard rating to the pertinent condition class.

Coordinated Emergency Response Plans – The Monterey County Office of Emergency Services (OES) is responsible for initiating and coordinating disaster and emergency preparation, response, recovery, and mitigation operations within Monterey County. OES develops and maintains various emergency plans, including coordinated emergency response plans for certain

geographical threat areas (e.g., Big Sur). These plans are intended to enhance inter-jurisdictional coordination by maintaining agreements with local, state and federal agencies to provide coordinated emergency response.

Defensible Polygon – An area surrounded by firebreaks, fuelbreaks, shaded fuelbreaks or similar means of controlling the spread of fire, such that there is an increased probability that wildfire may be stopped from passing in or out of the area, and danger to those working to control the fire is reduced.

Defensible Space – Defensibe Space includes the area within the perimeter of a parcel (or beyond if permission is obtained from the adjacent landowner(s)) where basic wildfire protection practices are implemented, providing the key point of defense from an approaching wildfire or escaping structure fire. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, structure defense measures to reduce the likelihood of structure ignition, and fuel modification measures. Defensible space intended to protect lives and property and to ensure the safety of those defending the area from wildfire. Defensible Space implies that tactical resources will be available to defend assets during a wildfire. (See the definition for "survivable space," below.)

Disaster – Disaster is characterized by the scope of an emergency. An emergency becomes a disaster when it exceeds the capability of the local resources to manage it. Disasters often result in great damage, loss, or destruction. (Greene, R.W., *Confronting Catastrophe*, ESRI Press, 2002, p. 110.)

Dudek – An environmental consulting firm headquartered in Encinitas, California.

Emergency – A situation that calls for immediate action to avoid serious harm to the public peace, health, safety, or general welfare. (California Government Code section 11342.545.)

Evacuation/Escape Route – A route away from dangerous areas of a fire; should be preplanned. (FIREWISE Communities, 2009, http://www.firewisewiki.org/main/index.php/Escape_Route.)

Federal land – means:

> Land of the National Forest System (as defined in section 1609 (a) of [title 16 United States Code]) administered by the Secretary of Agriculture, acting through the Chief of the Forest Service; and
>
> Public lands (as defined in section 1702 of title 43), the surface of which is administered by the Secretary of the Interior, acting through the Director of the Bureau of Land Management.

(HFRA, Title 16 United States Code (USC) section 6502.)

Fire Authority Having Jurisdiction (FAHJ) – The organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure. (NFPA, *NFPA 1144*, 2002, p. 4.)

Fire Behavior – The manner in which a fire reacts to the influences of fuel, weather, and topography. (FIREWISE Communities, 2009, http://www.firewisewiki.org/main/index.php/Fire_behavior.)

Fire Frequency – A broad measure of the rate of fire occurrence in a particular area. For historical analyses, fire frequency is often expressed using the fire return interval calculation. (*CDF FRAP 2003 Forest and Range Assessment*, p. A-12.)

Fire Hazard – A fuel complex, defined by volume, type, condition, arrangement, and location that determine the degree of ease of ignition and of resistance to control. (FIREWISE Communities, 2009, http://www.firewisewiki.org/main/index.php/Fire_hazard.)

Fire Protection – All measures taken to reduce the burden of fire on the quality of life. Fire protection includes, but is not limited to, fire prevention, fire suppression, built-in fire protection systems, and other such measures discussed in the planning and building codes. (NFPA, *NFPA 1141*, 1998, p. 4.)

Fire Regime – A measure of the general pattern of fire frequency and severity typical to a particular area or type of landscape. The regime can include other metrics of the fire, including seasonality and typical fire size, as well as a measure of the pattern of variability in characteristics. (*CDF FRAP 2003 Forest and Range Assessment*, p. A-12.)

Fire Threat – The combination of two factors: 1) fire frequency, or the likelihood of a given area burning, and 2) potential fire behavior (hazard). Components include surface fuels, topography, fire history, and weather conditions. (Source: *CDF FRAP 2003 Forest and Range Assessment*, p. A-12, http://frap.cdf.ca.gov/assessment2003/.)

Fire Threat Assessment – Provides field verification of threat, including identification of:

- Factors of fire behavior change
- Fire behavior decision points
- Fire severity alignment scenarios
- Direction of fire spread
- Tactical suppression thresholds of control
- Fire history
- Tactical fire suppression capacity

Determinations of fire threat are based upon anticipated fire flame length, rate of spread, fire intensity, fire front duration or residence time, and fire brand ember spotting distances under a range of weather scenarios.

Fire Weather – Weather conditions that influence fire starts, fire behavior or fire suppression. (FIREWISE Communities, 2009, http://www.firewisewiki.org/main/index.php/Fire_weather.)

Firebreak – A natural or constructed barrier used to stop or check fires that may occur, or to provide a control line from which to work. (FIREWISE Communities, 2009, http://www.firewisewiki.org/main/index.php/Firebreak.) A firebreak is at least 10 feet wide,

frequently 20 to 30 feet wide, and contains no vegetation or other combustible matter. (*The Use of Fuelbreaks in Landscape Fire Management*, 1998, James K. Agee *et al.*)

Fuelbreak – A natural or manmade change in fuel characteristics which affects fire behavior so that fires burning into them can be more readily controlled. (National Wildfire Coordinating Group (NWCG*), Glossary of Wildland Fire Terminology*.)

Fuels – All combustible material within the WUI or intermix, including vegetation and structures. (FIREWISE Communities, 2009, http://www.firewisewiki.org/main/index.php/Fuels.)

Fuel Loading – The volume of fuel in a given area generally expressed in tons per acre. (FIREWISE Communities, 2009, http://www.firewisewiki.org/main/index.php/Fuel_loading.)

Fuel Models – Description of the types of vegetative combustible material, for example:

- *Light Fuels* – grasses, forbs
- *Medium Fuels* – short light brush and small trees
- *Heavy Fuels* – tall dense brush, timber and hardwoods
- *Slash Fuels* – logs, chunks, bark, branches, stumps, and broken understory trees and brush.

Fuel Modification – Any manipulation or removal of fuels to reduce fire intensity, rate of spread, and/or the likelihood of ignition or the resistance to fire control. (FIREWISE Communities, 2009, http://www.firewisewiki.org/main/index.php/Fuel_modification.)

Fuel Reduction Buffer Zone – The term refers to the Strategic Placement of Treatments (SPOTS) within the Mitigation Zone or the Threat Zone. This zone is an area where a younger age class (or earlier seral class) is maintained in a strategic location to reduce the risk of fire spread to adjacent lands, such as residential areas.

Geographic Information Systems (GIS) – The combination of skilled persons, spatial and descriptive data, analytic methods, and computer software and hardware – all organized to automate, manage, and deliver information though geographic presentation (i.e., maps). (Zeiler, M., *Modeling Our World*, ESRI Press, 1999, p. 46.)

Ground Fuels – All combustible materials such as grass, duff, loose surface litter, tree or shrub roots, rotting wood, leaves, peat or sawdust that typically support combustion. (FIREWISE Communities, 2009, http://www.firewisewiki.org/main/index.php/Ground_fuels.)

Hazard – Refers generally to physical characteristics that may cause an emergency. Earthquake faults, flood zones, and highly flammable brush fields are all examples of hazards. (Greene, R.W., *Confronting Catastrophe*, ESRI Press, 2002, p. 110.) Also see ***Fire Hazard***.

Hazardous Fuel – Combustible material that accumulates in the forest or other wildlands and is concentrated on the ground surface as surface fuel or just above the ground surface as ladder fuel, or in the tree canopy as crown fuel.

Hazardous Fuel Reduction Zone (HFRZ) – An area designated by the FAHJ, based upon the FAHJ's experience and knowledge, as containing hazardous fuel that presents a potential threat to lives, communities, structures, infrastructure, access roads, and/or watersheds in the event of wildfire. HFRZs may also include areas where fuelbreaks, firebreaks and other treatments may be needed to protect such areas from wildfires originating outside the area. HFRZs may vary in size, and are independent from, though may include, Defensible Space, Mitigation Zones and Threat Zones.

Hazardous Vegetation Overgrowth –Vegetation growth that, in the judgment of the FAHJ, exceeds the vegetation density that would exist in the area had fire suppression not been practiced or had proper fuels mitigation measures been accomplished, which in the judgment of the FAHJ, presents a threat of increased probability of ignition or high intensity wildfire.

Healthy Forests Restoration Act of 2003 (HFRA) – Gives incentives for communities to engage in comprehensive forest planning and prioritization. This legislation includes statutory incentives for the USFS and the BLM to give consideration to the priorities of local communities as they develop and implement forest management and hazardous fuel reduction priorities. The Act emphasizes the need for federal agencies to work collaboratively with communities in developing hazardous fuel reduction projects, and it places priority on treatment areas identified by communities themselves in a CWPP. (Source: *Preparing a Community Wildfire Protection Plan*. March, 2004.)

Hydrophobic – Repels water, as with soils that repel water after a high heat intensity wildfire. A thin layer of soil at or below the mineral soil surface can become hydrophobic after intense heating. The hydrophobic layer is the result of a waxy substance that is derived from plant material burned during a hot fire. This waxy substance penetrates the soil as a gas and solidifies after cooling, forming a waxy coating around soil particles. The layer appears similar to non-hydrophobic layers. (*After the Fires: Hydrophobic Soils*, Randy Brookes, University of Idaho Cooperative Extension Series, http://www.cnr.uidaho.edu/extforest/F5.pdf.)

Intermix – An area where improved property and wildland fuels meet with no clearly defined boundary. (NFPA, *NFPA 1144*, 2002, p. 5.)

Ladder Fuels – Fuels that provide vertical continuity allowing fire to carry from surface fuels into the crowns of trees or shrubs with relative ease. (FIREWISE Communities, 2009, http://www.firewisewiki.org/main/index.php/Ladder_fuels.)

Mitigation – Action that moderates the severity of a fire or risk. (NFPA, *NFPA 1144*, 2002, p. 5.)

Mitigation Zone – Mitigation Zones are strategically prioritized target areas within the Threat Zone where fire fuel reduction activity will be of high value to protect life, property, and the environment, and to support safe tactical suppression capability.

National Fire Protection Association (NFPA) – An international nonprofit organization, established in 1896, to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education. (NFPA, 2009, http://www.nfpa.org/categoryList.asp?categoryID=143&URL=About%20Us.)

NFPA-1144 Standard for Protection of Life and Property from Wildfire (NFPA 1144) – Standard developed by the NFPA to be used to provide minimum planning, construction, maintenance, education, and management elements for the protection of life, property, and other values that could be threatened by wildland fire. The standard shall be used to provide minimum requirements to parties responsible for fire protection, land use planning, property development, property maintenance, and others responsible for or interested in improving fire and life safety in areas where wildland fire could threaten lives, property, and other values. (NFPA, *NFPA 1144*, 2002, p. 4.)

Nitrogen Fixer – Plants whose roots are colonized by certain bacteria that extract nitrogen from the air and convert or "fix" it into a form required for their growth. When the bacteria are done with this nitrogen, it becomes available to the plant itself. An example of a nitrogen fixer is clover. (http://landscaping.about.com/cs/lazylandscaping/g/nitrogenfixer.htm.)

Noncombustible – Any material that, in the form in which it is used and under the conditions anticipated will not ignite and burn, nor will add appreciable heat to an ambient fire. (NFPA, *NFPA 1144*, 2002, p. 5.)

Overstory – That portion of the trees in a forest that forms the upper or uppermost layer. (FIREWISE Communities, 2009, http://www.firewisewiki.org/main/index.php/Overstory.)

Risk – The potential or likelihood of an emergency to occur. For example, the risk of damage to a structure from wildfire is high if it is built upon, or adjacent to, a highly flammable brush field or other area deemed to have a high fire threat. (Greene, R.W., *Confronting Catastrophe*, ESRI Press, 2002, p. 110.)

Safety Zone – An area cleared of flammable materials used for escape in the event the line is outflanked or in case a spot fire causes fuels outside the control line to render the line unsafe. In firing operations, crews progress so as to maintain a Safety Zone close at hand allowing the fuels inside the control line to be consumed before going ahead. Safety Zones may also be constructed as integral parts of fuelbreaks; they are greatly enlarged areas which can be used with relative safety by firefighters and their equipment in the event of blowup in the vicinity. (National Wildfire Coordinating Group, 2009, http://www.nwcg.gov/pms/pubs/glossary/s.htm.)

Shaded Fuelbreak – A reduction in vegetation created by altering surface fuels, increasing the height to the base of the live crown, and opening the canopy by removing trees. This type of fuelbreak spans a wide range of understory and overstory prescriptions and methods of creation through manual, mechanical, and prescribed fire means. (*The Use of Fuelbreaks in Landscape Fire Management*, 1998, James K. Agee *et al.*)

Slope – The variation of terrain from the horizontal; the number of feet rise or fall per 100 feet measured horizontally, expressed as a percentage (FIREWISE Communities, 2009, http://www.firewisewiki.org/main/index.php/Slope). Upward or downward incline or slant (NFPA, *NFPA 1144*, 2002, p. 5).

State Responsibility Area (SRA) – The area "in which the financial responsibility of preventing and suppressing fires is primarily the responsibility of the state" (PRC section 4125). This is further expanded in PRC sections 4125-4128.[136]

Strategically Placed Landscape Area Treatments (SPLATS) **–** Areas of forest thinning designed to slow the spread of fire. They are placed on the landscape so that a spreading fire does not have a clear path of untreated fuels from the bottom of the slope to the ridge top. These are to be designed to burn at lower intensities and slower rates of spread during wildfires than comparable untreated areas. In the example of a large parking lot with speed bumps, the SPLATs are the speed bumps that slow down fires. (University of California Sierra Nevada Adaptive Management Project http://snamp.cnr.berkeley.edu/about/snamp-glossary/.)

Strategic Fuelbreak **–** See the definition for "fuelbreak," above.

Strategic Placement of Treatments (SPOTS) **–** See the definition for "strategically place landscape area treatments," above. SPLATS and SPOTS are synonymous, although SPOTS is newer and may be the preferred term.

Surface Fuels – Surface fuels include understory plants generally less than 6 feet tall (dead and alive), the litter layer, downed woody materials, and often brush and midstory tree and shrub fuels. Surface fuel availability for consumption is determined by moisture content, particle size, horizontal continuity, compactness, and fuel type (particularly fuels with high volatile compounds).

Survivable Space – Survivable Space includes structure defense measures to reduce the likelihood of structure ignition and the area around a structure where vegetation has been modified to provide a high likelihood, under the site's conditions (e.g., vegetation type, construction materials and terrain), that the structure (and people if present) will survive in the event of a wildfire, under extraordinarily adverse weather conditions, without the presence of firefighters or others defending the structure. Survivable space applies where there is potential that tactical resources will not be available to defend assets during a wildfire. (See the definition for "defensible space," above.)

Threat Zone – Threat Zones extend out from Defensible/Survivable Space to major landscape/watershed features such as roads, rivers, or ridges. Threat Zones generally extend to the boundary of the WUI, and may include strategic firebreaks and fuelbreaks placed in coordination with major watershed features, and with the Mitigation Zones and Defensible Space, creating anchor points for wildfire suppression.

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[136] Also see, http://frap.cdf.ca.gov/projects/population/sra_definition.html

Understory – Low growing vegetation (herbaceous, brush or reproduction) growing under a stand of trees. The term also includes that portion of trees in a forest stand below the overstory. (FIREWISE Communities, 2009, http://www.firewisewiki.org/main/index.php/Understory.)

Water Supply – A source of water for firefighting activities or other purposes. (NFPA, *NFPA 1144*, 2002, p. 5.)

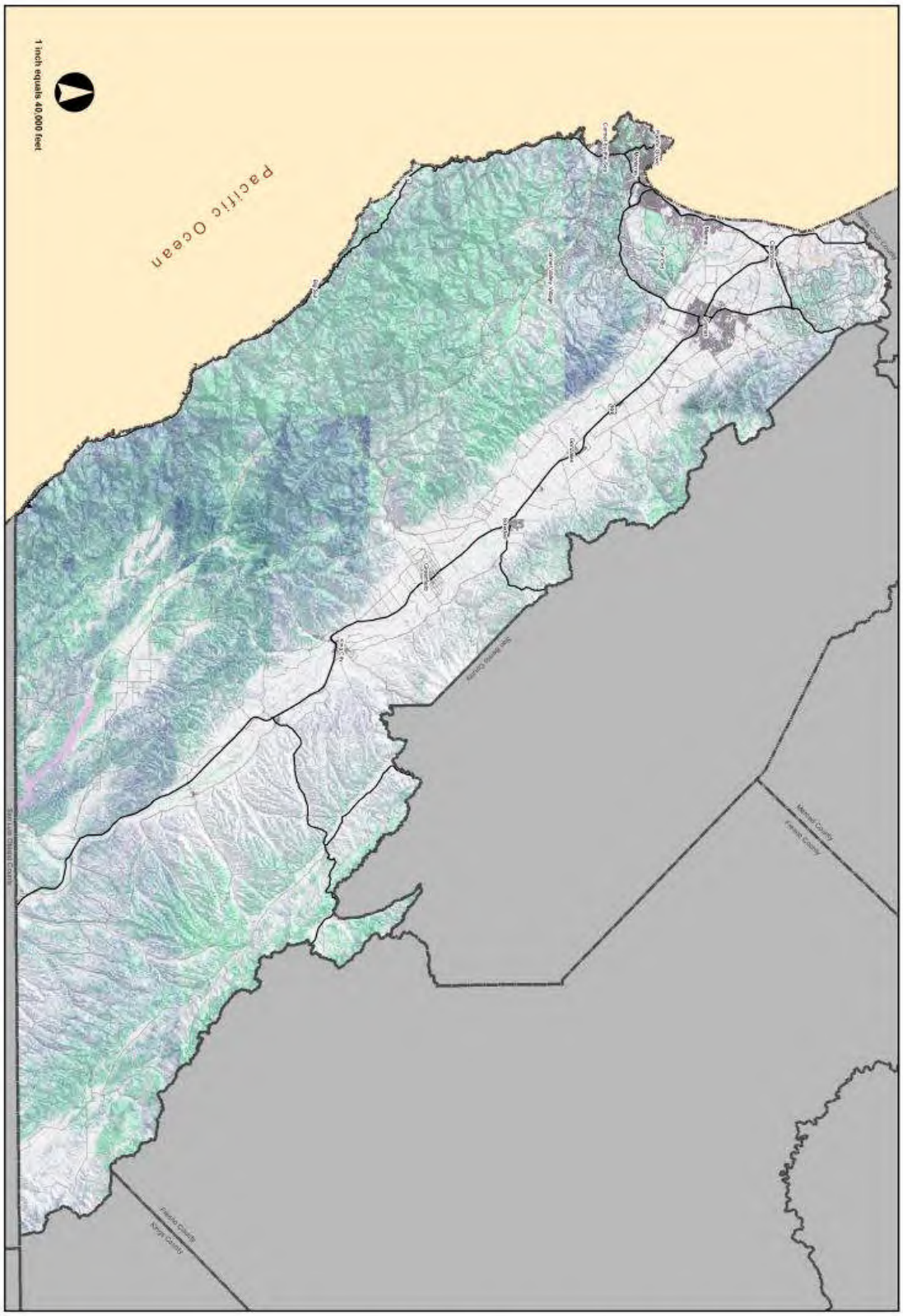
Wildfire – Any unplanned fire occurring in a wildland or wildland-urban interface area that does not meet management objectives and thus requires a suppression response. Wildland fire protection agencies use this term generally to indicate a vegetation fire. Wildfire often replaces such terms as forest fire, brush fire, range fire, and grass fire.

Wildland – A region with minimal development as evidenced by few structures; transportation networks may traverse region. Region typically contains natural vegetation and may be used for recreational or agricultural purposes. (*CDF FRAP 2003 Forest and Range Assessment*, p. A-17.)

Wildland-Urban Interface (WUI) – For purposes of this MCCWPP, WUI shall mean those areas designated on the map in Appendix B-7, unless the local CWPP designates different areas as WUI, in which case the local CWPP shall prevail. In the absence of such mapping, section 101 (16) of the HFRA defines WUI as "(I) an area extending ½ mile from the boundary of an at-risk community; (II) an area within 1 ½ miles of the boundary of an at-risk community, including any land that (1) has a sustained steep slope that creates the potential for wildfire behavior endangering the at-risk community; (2) has a geographic feature that aids in creating an effective fire break, such as a road or ridge top; or (3) is in condition class 3, as documented by the Secretary in the project-specific environmental analysis; (III) an area that is adjacent to an evacuation route for an at-risk community that the Secretary determines, in cooperation with the at-risk community, requires hazardous fuels reduction to provide safer evacuation from the at-risk community." A CWPP offers the opportunity to establish a localized definition and boundary for the wildland-urban interface (HFRA, 16 USC 6511(16); *Preparing a Community Wildfire Protection Plan*, 2004.)

APPENDIX B

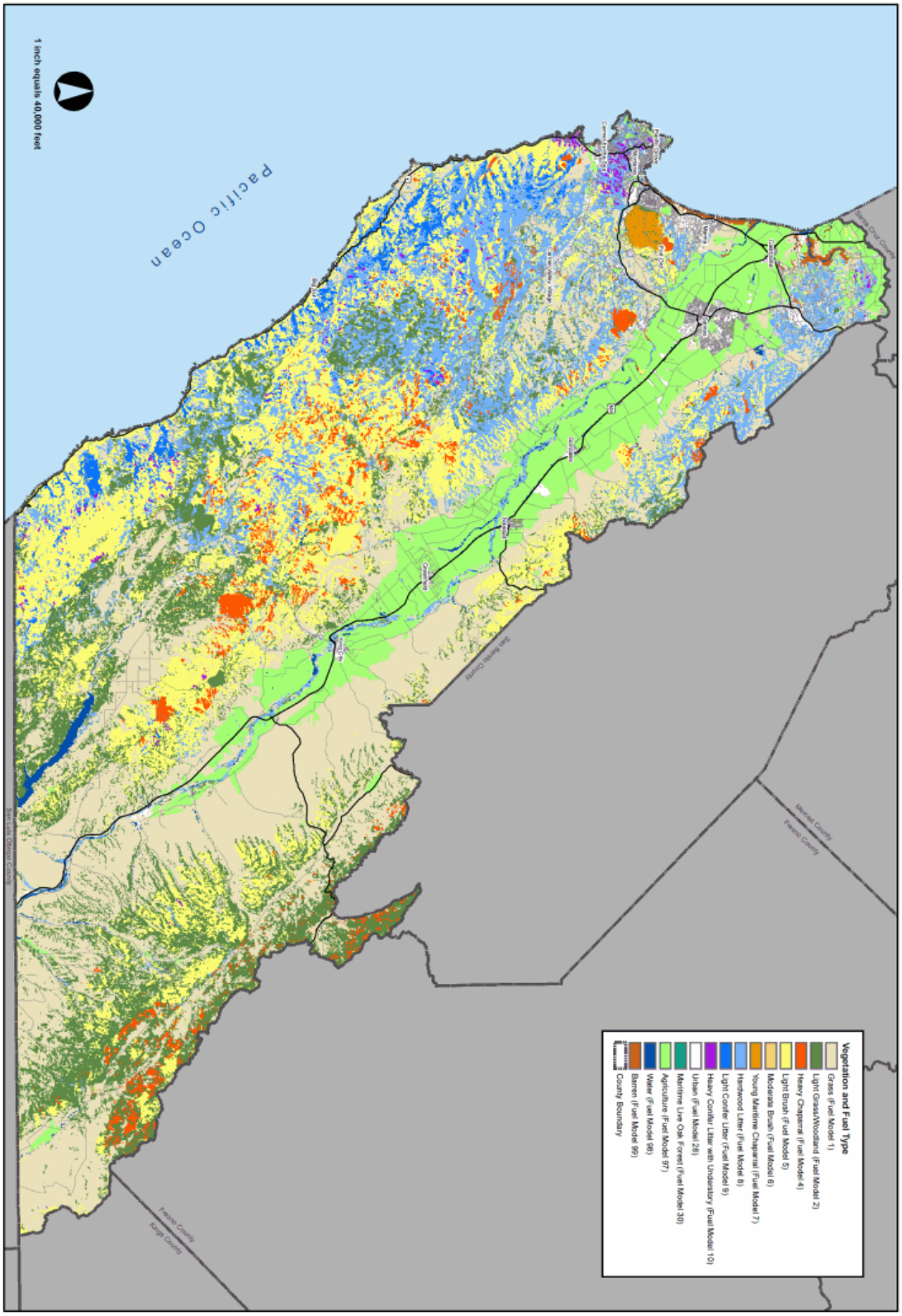
Monterey County Maps



Monterey County Community Wildfire Protection Plan

Monterey County Topography

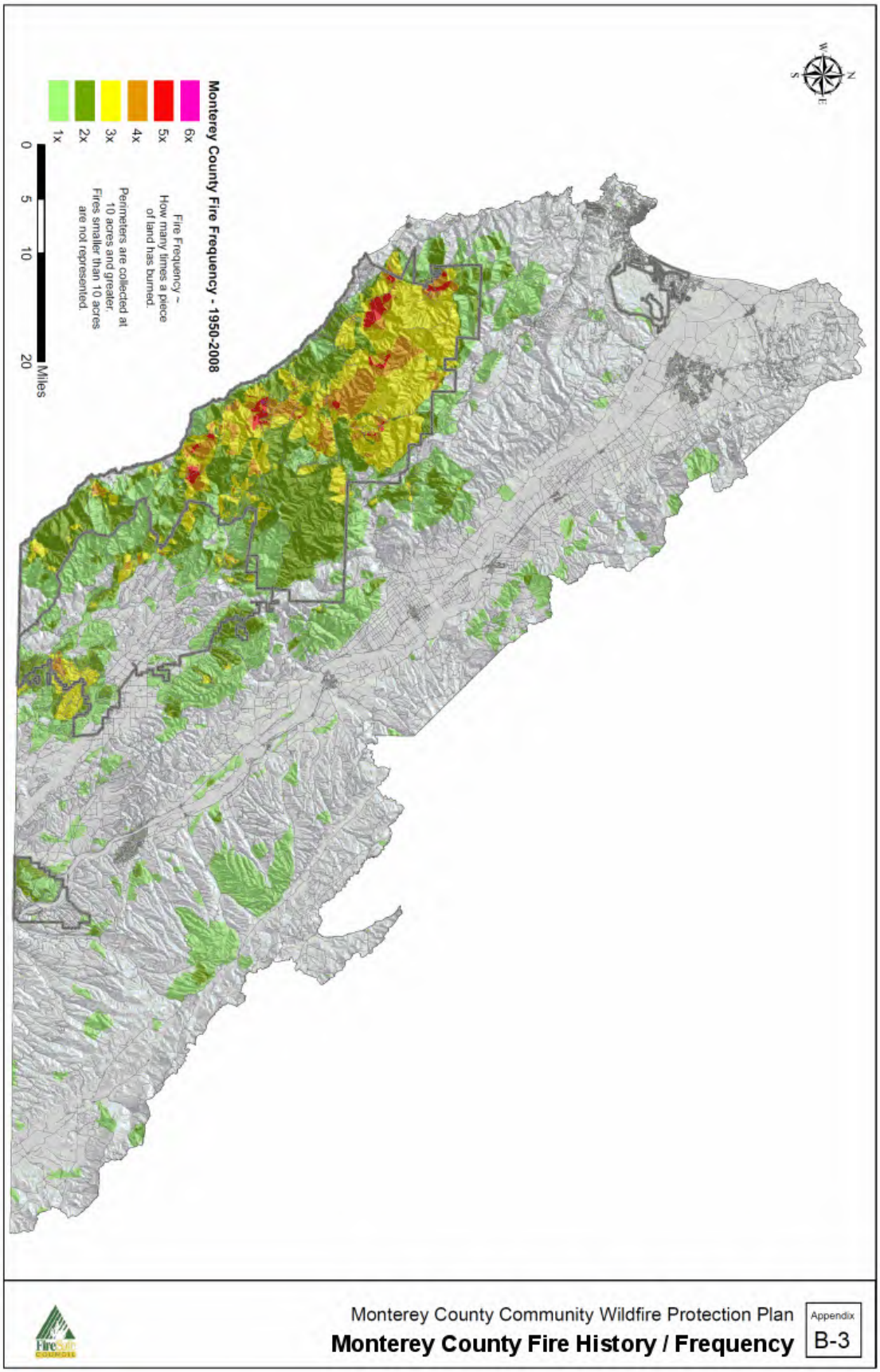
Appendix B-1

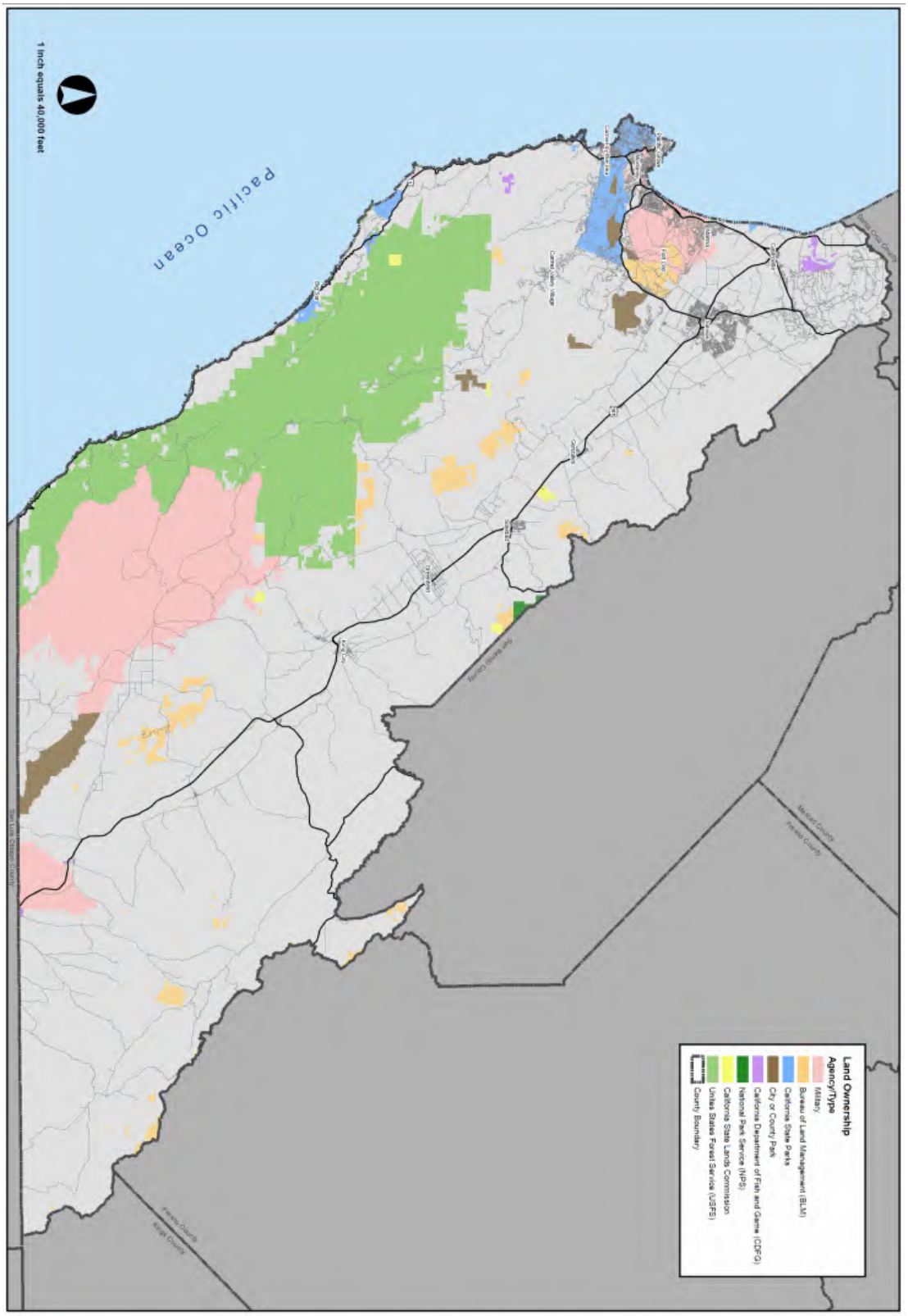


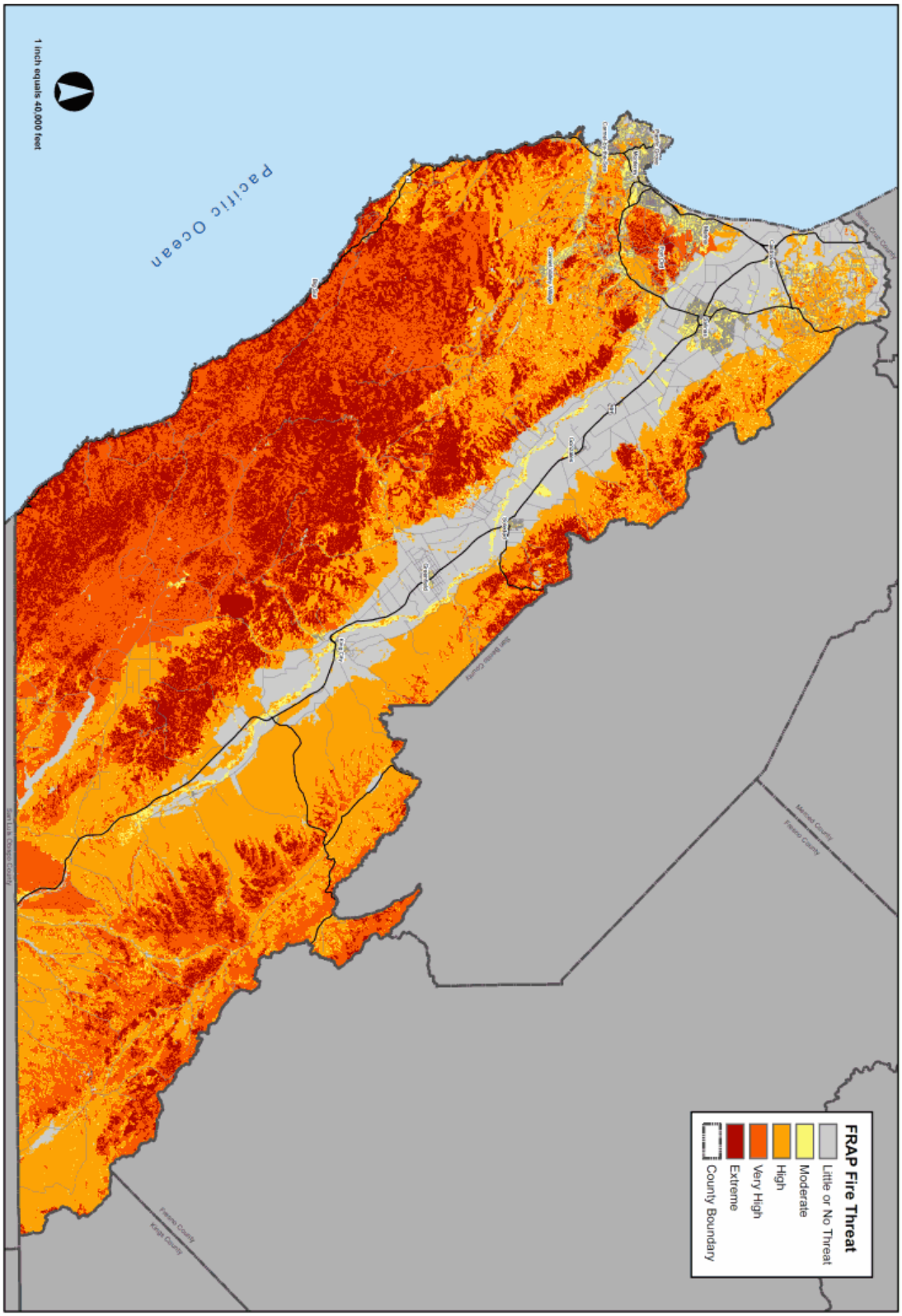
Monterey County Community Wildfire Protection Plan

Monterey County Vegetation/Fuels Distribution

Appendix B-2


Monterey County Fire Frequency - 1950-2008
6x
5x
4x
3x
2x
1x
Fire Frequency ~
How many times a piece
of land has burned.
Perimeters are collected at
10 acres and greater.
Fires smaller than 10 acres
are not represented.
0
5
10
20
Miles
N
W
E
S
Monterey County Community Wildfire Protection Plan
Monterey County Fire History / Frequency
Appendix
B-3

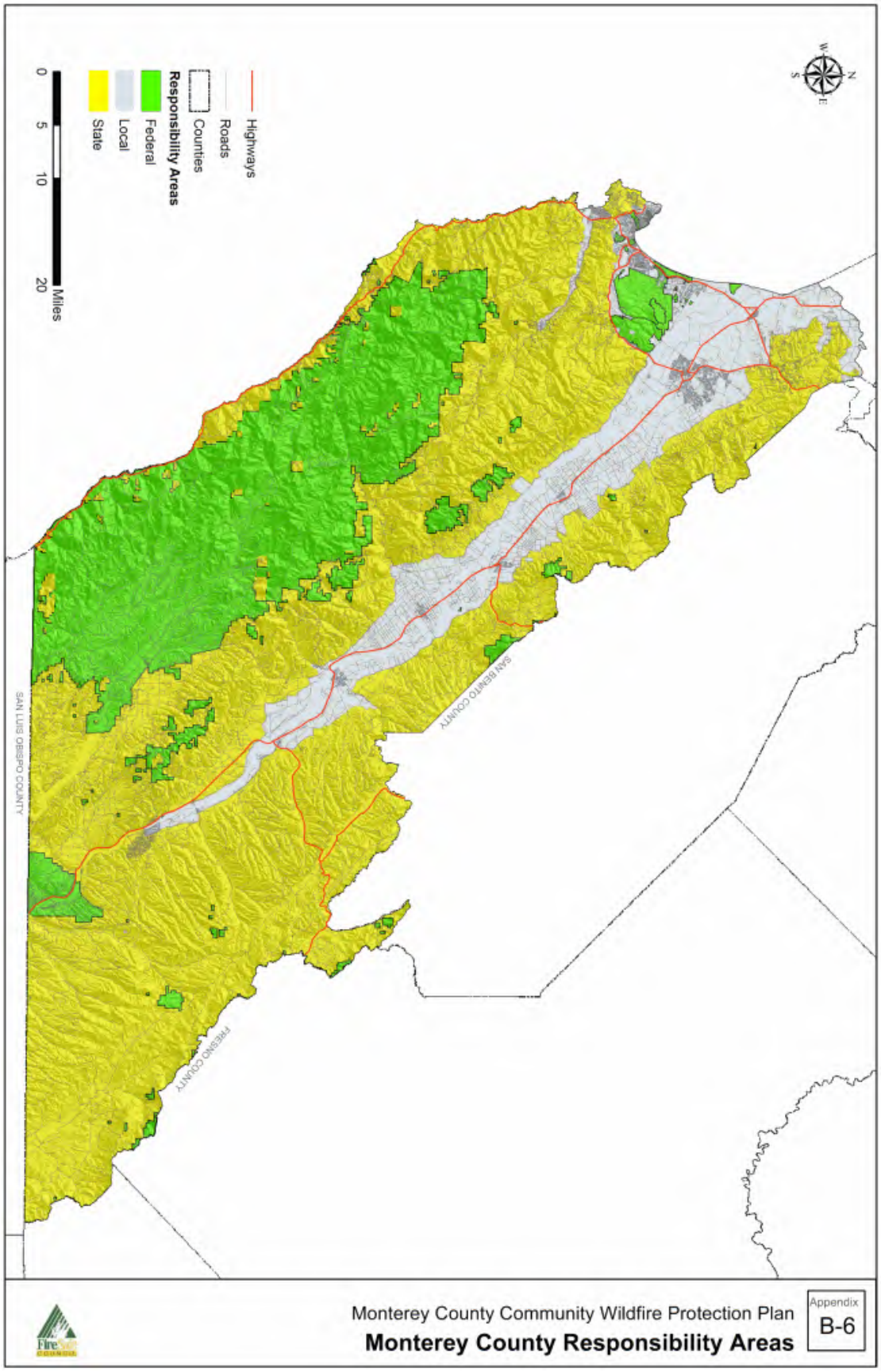

Land Ownership
Agency/Type
Military
Bureau of Land Management (BLM)
California State Parks
City or County Park
California Department of Fish and Game (CDFG)
National Park Service (NPS)
California State Lands Commission
United States Forest Service (USFS)
County Boundary
Pacific Ocean
1 inch equals 40,000 feet
Monterey County Community Wildfire Protection Plan
Monterey County Land Ownership Distribution
Appendix
B-4

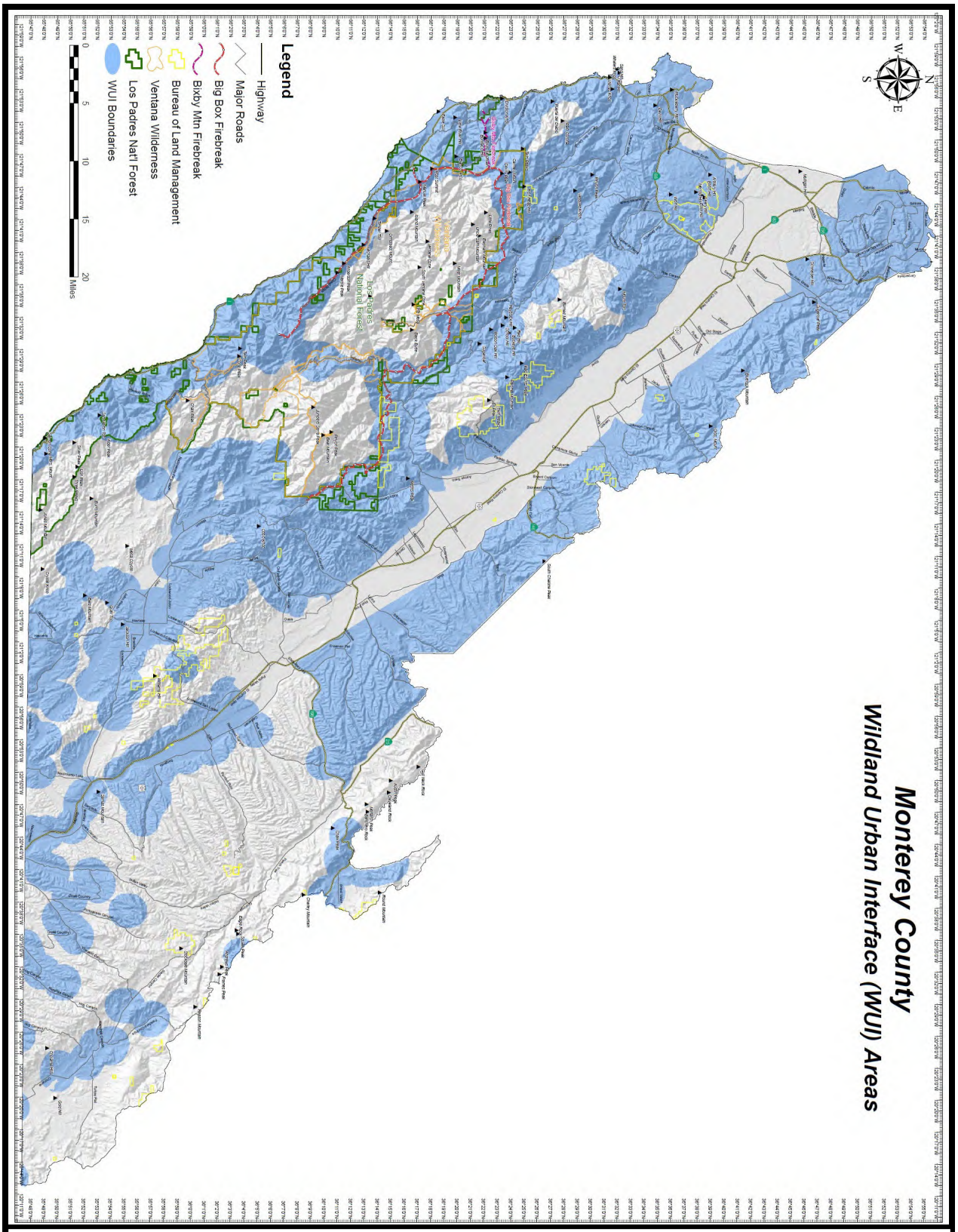


Monterey County Community Wildfire Protection Plan

Monterey County Fire Threat Rating

Appendix B-5

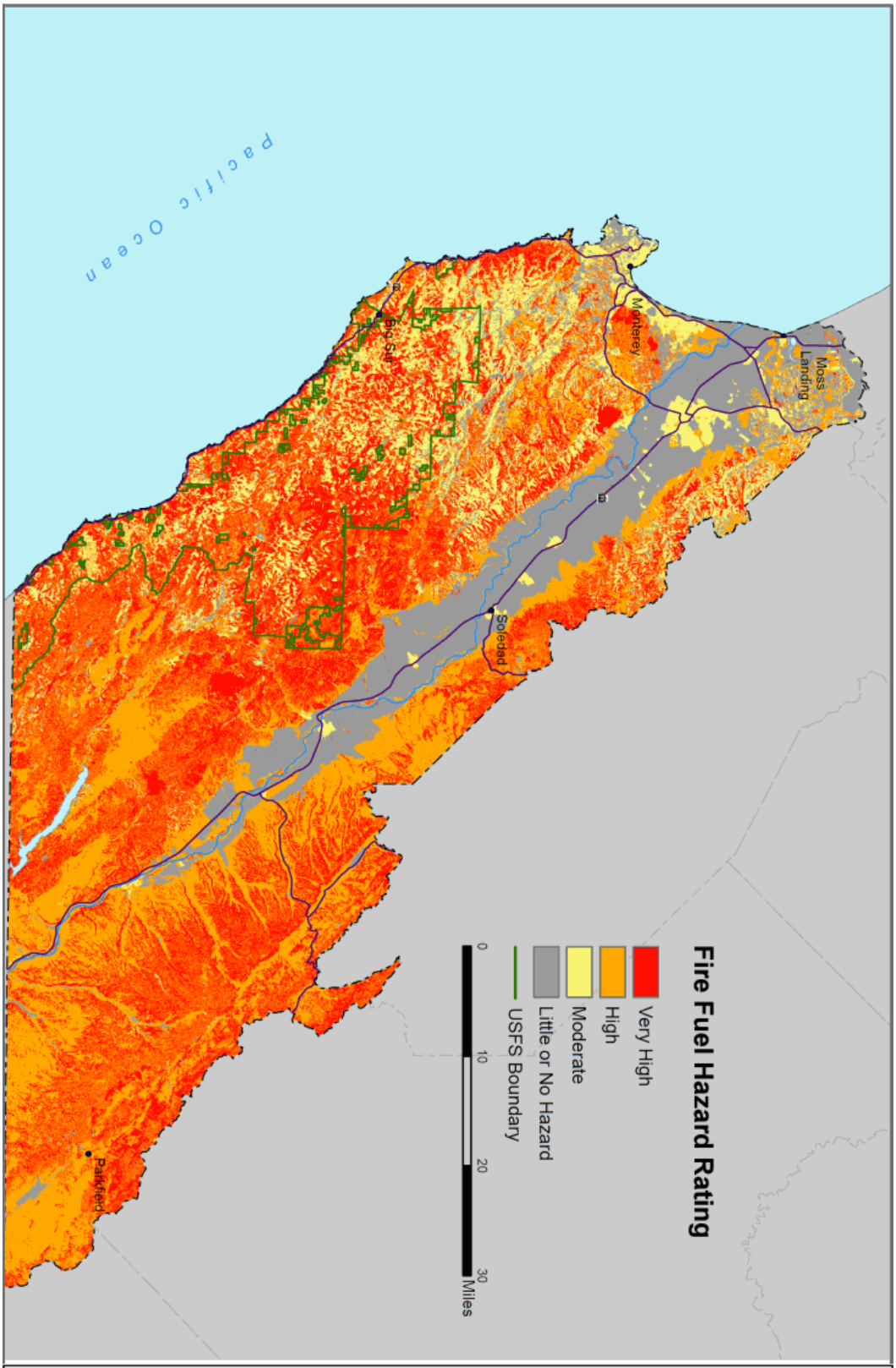

Highways
Roads
Counties
Responsibility Areas
Federal
Local
State
0 5 10 20 Miles
N
W
E
S
SAN LUIS OBISPO COUNTY
SAN BENITO COUNTY
FRESNO COUNTY
Monterey County Community Wildfire Protection Plan
Monterey County Responsibility Areas
Appendix
B-6



Monterey County Community Wildfire Protection Plan

Wildland Urban Interface (WUI) Areas

Appendix
B-7



Monterey County Community Wildfire Protection Plan

Monterey County Fire Fuel Hazard Rating

Appendix B-8

APPENDIX C

Ready, Set, Go!

May 14, 2009

Ready, Set,

Go!

Our vision for the future is that ...

> *Communities situated in high fire hazard environments are designed, constructed, retrofitted, managed, and maintained in a manner that may require little fire suppression assistance during wildfires. Residents these communities take personal responsibility for living in the Wildland Urban interface (WUI), possess the knowledge and skills to effectively prepare their home for survival when wildfire is threatening, evacuate early and safely when ordered, and if trapped, practice learned skills to survive the wildfire.*

Table of Contents

Introduction

"Changing climate and drought conditions, the build-up of hazardous fuels, and more homes in fire-prone landscapes are changing how we *experience wildfire in America."* International Association of Fire Chiefs, Wildland Fire Policy Committee, 2009.

Local government, like its State and Federal widland fire agency partners, have seen a dramatic increase in the severity, risks to life, property and the environment and costs associated with wildland fires over the past decade.

The Ready, Set, Go program is not an original message, it is a new approach at packaging existing public education to gain active public involvement toward reducing life and property loss associated with wildland fires. The program is presented in three steps:

1. **READY** - Prepare yourself, your family and your property.
2. **SET** - Monitor fire weather I activity and prepare to evacuate.
3. **GO** - Leave early when directed to by public safety officials.

A subsequent step is included to educate people how to survive, if trapped by a wildfire.

The Ready, Set, Go program is a collaborative process that is effective in improving coordination and communication between emergency response agencies and the community. Spending an adequate amount of time developing the Ready, Set, Go program in each community can help clarify and refine priorities to protect life, property, infrastructure, and valued resources.

The Ready, Set, Go program is organized in *seven* sections:

1. Background / Problem Statement
2. Program Goals
3. Factors for Success
4. Preparation of Structures and People
5. Human Understanding and Decision Making
6. Contingency Planning
7. Recommended Actions and Desired Results

Fire resources are maximized during major fire incidents, particularly during the initial attack, and the public must become part of the overall strategy provide community safety. This program is just one option to explore and it can be customized to work in any community as no one program will work everywhere.

1. Background / Problem Statement

The problem is that there is a higher frequency of wildfires occurring and weather projections indicate this trend is not changing soon. Research is showing that climate change is a major contributing factor. Weather combined with the ever growing fuels management issues; indicate that wildland fires will be part of our future.

The problem is that fires can be more costly to everyone in the Wildland Urban Interface (WUI) or the areas where homes are intermixed within forests and wildlands. An increasing number of homes are at risk from wildfire as residential development continues to encroach on forest and wildland areas.

The problem is that no two wildfires behave in the same manner and, during the past decade, these wildfires are acting more erratically and the deaths and property losses are escalating. The residents who choose to stay or get trapped also cause a safety issue for public safety officials who, with already limited resources, must now try to effect rescues during these wildfires.

Historically, the fire service has conducted public education efforts to try to get the public's support in reducing fire losses. This effort began with the Smokey Bear advertising campaign to prevent wildfires. Now the focus is on getting communities to become fire-ready. There are several national and local programs that teach these tenets to create Fire Adaptive Communities. The problem is how to get the public education message listened to and turned into action by the public.

The fire problem within the WUI areas consists of two primary fuel types:
accumulation of natural and exotic vegetation and the structures and ornamental landscaping that people create. Natural vegetation reduction or management is a long-term process that is becoming more difficult due to climate change and environmental conditions. This effort must continue to help restore our ecosystem and reduce fire size.

The structure fuel component is created as the population increases within traditional rural areas of the country. This structure fuel type is now greatly escalating the overall cost of wildland fires, both in terms of the fire suppression costs and property loss. New building codes and planning conditions are proving themselves to be effective at combating losses in new developments-but the existing structures in the WUI remain the biggest threat and the largest mitigation yield. Our greatest opportunity to reduce the impacts of wildfire lies in the implementation of "pre-fire activities", i.e., actions that take place before a wildfire occurs that improve the *survivability* of *people and their homes.* These actions on structural fuels are usually more permanent in nature than the recurring efforts required on natural fuels.

The problem is people tend to have the expectation that, when they call 911, they will get a response to fit their needs. With an increase in population that has not had a corresponding public safety service increase; fire managers may not be able to realistically meet those public expectations. The public must take personal responsibility

for the specific hazards associated within their choice of habitation. Government must also fund public services commensurate with growth.

Over time, there is a growing problem with the number of residents that defy evacuation orders. Some of these residents are successful in staying and defending their property, but have limited training or experience and have based their actions on past wildfire experiences. Some people who have stayed died in the face of a rapidly moving and destructive wildfire.

Evacuations are a local issue, based upon many factors (incident type, activity, number of people affected, fire preparedness level, road system, transportation system, relocation centers, available resources to implement plan, etc.), therefore evacuation alternatives must be determined locally. Fire and law enforcement incident commanders must evaluate all contributing factors when creating evacuation plans to achieve the highest level of public safety while balancing the challenges of a dynamic incident.

The problem is that there needs to be adequate evacuation resources, uniform and consistent evacuation terminology (refer to FIRESCOPE 2007 Field Operation Guide 420-1), model practices, notification ability and re-entry procedures so residents can re-enter as early and safely as possible.

2. Program Goals

A. Protect life and property by creating and maintaining Fire Adaptive Communities.
B. Improve evacuation procedures.
C. Improve firefighter and public safety.
D. Encourage personal responsibility toward the overall solution.
E. Acceptance of the strategy to: Prepare your property and yourself
F. leave early, follow evacuation orders and survive.

3. Factors for Success

Fire agencies have been providing public education messages for many years, so one might ask; "Why is Ready, Set, Go different from past efforts?" The following factors will be instrumental in gaining program effectiveness:

Collaboration between the public, government and neighbors. In 1997, FEMA established Project Impact to help communities reduce their disaster tolls by building partnerships among businesses, agencies, churches, neighborhoods and others. This effort showed that amazing things can happen when working in close partnerships with one another by making long-term changes in their disaster profiles. Project Impact identified common issues that communities face when dealing with tornados and hurricanes with the thought that, if they modify key factors that contribute to safety/damage, then the community would be better off when the next disaster occurs. Project Impact sought to change that culture to make hazard mitigation an integral part of the community and the people's lives.

Use of science - Home Ignition Zone research. Traditional beliefs that homes were

ignited by the flaming fire front are being disproved by scientific research studies. Jack Cohen (USFS Researcher) has done several field tests to determine how homes can be ignited and the results indicate that ember intrusion is the primary cause of home ignitions.

Target audience identification. Each fire agency must recognize their target audience to whom they intend to reach out to. This includes understanding the social, economic and demographic nature of these communities. Example, a rural community (intermix) may be more self sufficient than an urban home subdivision (interface) and the communication message needs to fit the character of the community so the target audience can readily relate. This applies to printed materials and visual graphics on videos. Fire agencies should also review the national public survey on how the public receives our current messages (PIFE study, 2008).

Recognition that government cannot be the answer all the time. The Community Emergency Response Team (CERT) training began as an offshoot of earthquake preparedness training. During a major earthquake, studies found that the limited emergency resources would be prioritized to critical infrastructure targets. This recognition of priorities also found that the CERT program would focus on neighbor helping neighbor and that the population needs to accept personal responsibility for their own preparedness and actions. It meant-that residents had to accept the premise of: If you choose to live in a hazard area, then you must become more self-sufficient.

Recognizing Long-Lasting Change Takes Time. The emotions-following a disaster are usually short-lived, recognizing this is paramount in allowing change agents to take advantage of this opportunity. Change management requires opportunities, perseverance and focus on the goal. One must be committed to the change being implemented, not be deterred easily and recognize that true change occurs over time, not immediately. Commitment builds trust among participants.

Setting Priorities. Stakeholders (public, fire agencies, law enforcement, media, disaster relief organizations, utility companies and local government) may have a limited budget and time commitment toward achieving the entire program tenets. Therefore, through local discussions, these stakeholders should reach consensus on their specific program priorities that will benefit their community. A phased-in program is better than no program at all.

Leave Early and Early Return. The public generally trusts public safety officials because of their training and experience. They should accept evacuation orders and leave early, but be ready for an early return if possible. Public safety officials will need to have re-entry plans developed as evacuation orders are issued, but they must assure the public's safety before re-entry is directed.

Understanding that no programs can be universally applied and there are clear, understandable messages. Public officials must issue direction based upon the general population. Specific direction and modifications can occur, but only when there are clear communications with the affected populace, usually in small groups with effective two-

way communications.

Creating Public Education Tools to Reach the Masses. There needs to be a variety of media tools to conduct outreach for the overall goals. Community group meetings will only obtain a small percentage of residents. We must understand the needs of our urban, suburban and rural communities and develop a variety of tools and methods to reach into each residence. It's usually not the strategy or principles that fail; it's the buy-in and action of the targeted stakeholders.

Focus on our Saves and not the Losses. After every emergency incident, the media carries the story of how many lives and property were lost because these are tangible numbers. What's harder to quantify are the number of homes and lives saved. Public officials need to identify these numbers and communicate this message better.

4. Preparation of Structures and People

In the Institute for Business and Home Safety (IBHS) Mega Fire Report (2008) following the Witch fire in San Diego, California, they reported the key to protecting lives and reducing property losses begins with hardening structures. Hardening structures focuses on new construction and/or retrofitting existing structures to modern building codes that recognize the wildland fire threat and .the installation of home fire sprinklers. Studies have shown that most structures within the wildland are not destroyed from direct flame impingement, but rather from the ember environment. Embers may precede the flaming fire-front, carried by the winds and distributing burning brands or embers over long distances. These embers fall, or are wind driven into receptive fuels at structures, often going undetected for some time. As the fire front passes, these-small-embers may ignite incipient fires that spread to the home and then from home to home in a neighborhood. Key retrofits include fire-safe roofs and vent rescreening to 1/8 inch mesh or approved vents.

In new developments, updated fire and building codes are addressing proper home locations and construction types. Older, existing residences need to make retrofits to improve-the structure's survivability. These actions need to include defensible space areas, water supply, access, identification and ornamental landscaping. There are also maintenance issues involved in living within the WUI. Residents should reduce the ability of embers to start small fires by cleaning leaves, pine needles, twigs and branches off roofs and rain gutters.

They should also remove combustibles near the structure like firewood stacked by the house, patio furniture, attached wood fences and ornamental landscaping.

People need to mentally prepare themselves to handle the stress of a wildfire. They need to create situational awareness of wildfires by understanding what the fire environment is like. Then they need to create their own Wildfire Action Plan with a checklist to enhance their preparedness status.

5. Human Understanding and Reaction

Researchers indicate that it takes a significant amount of mental preparation by homeowners to not panic and flee when flames are licking at their doors. "The noise alone of a wildfire front is phenomenal. Then the sun goes away, and the sky goes dark in the middle of the day. It's haunting and the people need to understand that before they ever think about staying."
(http://news.ucanr.orginewsstorymain.cfm?story=1180)

Ready, Set, Go is a program that tries to provide real-life wildfire situational awareness for the public. Fire agencies will instruct what it's like before, during and after a firestorm from a firefighter's perspective. The public will learn that even experienced firefighters never treat one fire like the next as fire, fuel and weather conditions constantly change, making every fire different. Hopefully, the public will learn from the firefighter's experience and when a trusted public safety official issues evacuation orders, the public will leave early so they don't become trapped.

Studies have shown that people who are taught about certain tactics and train on exercising those tactics have a higher level of repeating those skills as a reaction, not decision making during adverse conditions, based upon training and experience. The fire service cannot readily expect that the public with only limited training will act and make decisions as trained firefighters do during a firestorm condition. The "fight or flight" syndrome occurs during these times and may manifest itself as panic or irrational behavior. This is why this program focuses on the reaction to: **LEAVE EARLY!**

6. Contingency Planning (how to survive, if trapped)

Everyone who lives within a WUI area should have a contingency plan developed before a fire starts in case they can't, or are prevented, from evacuating. Fire service officials do not endorse anyone defying an evacuation order, but they realize some people may get trapped and should *have* basic survival skills. These skills are based upon public education information that provides the resident with some situational awareness, proper actions to take before, during and after a fire.

Some residents have experienced a wildfire and may have the expectation that one fire behaves like another. This false assumption can lead to complacency and reduce preparedness. Just as experienced firefighters know that every fire behaves differently, residents must be educated on fire behavior to understand its complexity and danger.

7. Recommended Actions and Desired Results

This program is just one option for a local government or fire agency to consider adopting. It is a generic baseline public education program that can be modified to fit a community's needs and desires. There also needs to be collaboration between stakeholder groups involved; public, law enforcement, media, disaster relief organizations, utility companies, government officials and the fire service.

Program implementation tools and processes include:

A. Conduct regional community meetings to provide an overview of the wildland fire problem and the basic tenets of Ready, Set, Go. An overview video message and the Wildfire Action Plan are available as educational resources. The program should be introduced by high ranking fire officials and public education specialists.

B. The next step is to begin to reach the masses by mailing Wildfire Action Plans to targeted groups and conducting small focus groups via CERT, FIREWISE groups, Fire Safe Councils, Community Wildfire Prevention Programs (CWPP), etc. These small group meetings are best instructed by the local fire company who has ties to these groups. The public relies on these firefighters every day and trust what they say. These firefighters are also the ones who can modify and/or provide specific information to these residents based on local conditions. A video message is available that shows the hands-on actions homeowners must take to implement the Ready, Set, Go program at their own home.

C. The public education program needs to have commitment of all stakeholder groups within the same media market, so there is a consistent message being transmitted to the public. This is not a one-time public education campaign. To be successful, it needs to be an on-going effort to reach residents who continue to relocate into WUI areas and may not have any experience with wildfires. The printed Wildfire Action Plans and video messages were designed as a more passive method to reach the masses and can be mailed or posted on fire agency Web sites.

Remember - There's only one action when ordered to evacuate - "LEAVE".

Links and Resources

General Resources

- California Fire Alliance-CWPP Resources: http://cafirealiiance.org/cwpp
- Firewise website: http://firewise.org
- Key Public Opinion Research Findings on the Ecological Role of Fire and the Benefits of Fire Management, Partners in Fire Education (PI FE) study, 2008
- The Healthy Forests Initiative and Healthy Forests Restoration Act: http://www.fsJed.us/projects/hfi/field-guide/web/page15.php
- International Association of Fire Chief's Leader's Guide for Developing a Community Wildfire Protection Plan: http://www.iafc.orgiassociations/4685/files/CWPP_rev062005.pdf
- National Database of State and Local Wildfire Mitigation Programs, a source for information on ordinances: http://ww.wildfireprograms.usda.gov
  Tribal Wildfire Resource Guide (2006), Intertribal Timber Council: http://www.itcnet.org/issues_projects/issues/forest_managementlreports.html
- Nevada's "Living with Fire" program
- BLM Partnership Web Site: http://www.blm.gov/partnerships/tools.htm
- Western Collaborative Assistance Network: http://westcanhelp.org/
- Forest Service Partnership Resource Center: http://www. partnershipresourcecenter .org/index.shtml
- FIRESCOPE 2007 Field Operations Guide ICS 420-1, Chapter 20 "Protection Action Guidelines)
- Project Impact 1997, FEMA
- Rural Voices for Conservation Coalition (Collaboration issue paper): http://www.sustainablenorthwest.org/quick-links/resources/rvcc-issue-papers
- Strategies for assisting low-income and underserved communities develop and implement CWPPs: http://ri.uoregon.edu/programs/CCE/communityfireplanning.html

Reducing Structural ignitability

- Australian Safe in Place Information: http://www.rfs.nsw.gov.au/dsp_content.cfm?CAT _ID=202 and http://www.rfs.nsw.gov.au/dsp_content.dm?caUd=515
- California Ignition-Resistant Building and Fire Codes: http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_codes.php
- Firewise Guide to Landscape and Construction, booklet: https://www.cmsassociates.comifirewise.nsflavcatalog?open
- Wildfire! Preventing Home Ignitions DVD, explains the research of Jack Cohen, USDA Forest Service, on how homes ignite and how to minimize potential for ignition: https://www.cmsassociates.com/firewise.nsf/avcatalog?open

Reducing Structural Ignitability: Articles and Publications

- Cohen, Jack. Structural Vulnerability and the Home Ignition Zone: The key to preventing residential fire disasters during extreme wildfire, letter from Jack Cohen to Douglas McDonald, Feb. 4, 2008
- Cohen J. 2001. Wildland-urban fire-a different approach. In: Proceedings of the Firefighter Safety Summit, Nov. 6-8, 2001, Missoula, MT. Fairfax, VA: International Association of Wildland Fire & other articles by Jack Cohen: http://www.nps.gov/fire/public/pub_publications.cfm.
- Institute for Business & Home Safety, (IBHS) 2008 Mega Fires - Witch Fire Study

- ICC, International Wildland-Urban Interface Code 2006, International Code Council, Country Club Hills, IL, 2006
- NFPA 1141, Standard for Fire Protection Infrastructure for Land Development in Suburban and Rural Areas, 2008 edition, National Fire Protection Association, Quincy, MA, 2007
- NFPA 1144, Standard for Reducing Structural Ignitions from Wildland Fire, 2008 edition, National Fire Protection Association, Quincy, MA, 2007

Fuels Reduction and Restoration Resources

- The National Association of State Foresters Field Guidance for Identifying and Prioritizing Communities at Risk:
  http://www.stateforesters.org/reports/COMMUNITIESATRISKFG.pdf
- Management Tools for CWPP Implementation: Stewardship Contracting and Biomass Utilization
  http://ri.uoregon.edu/programs/CCE/communityfireplanning.html
- Woody Biomass Utilization Desk Guide:
  http://www.forestsandrangelands.gov/Woody_Biomass/documents/biomass_deskguide.pdf
- USDA Forest Service Stewardship Contracting Resource page:
  http://www.fs.fed.us/forestmanagementiprojects/stewardship/index.shtml

Monitoring and Evaluation Resources

- Community Wildfire Protection Plan Monitoring and Evaluation Guide:
  http://ri.uoregon.edu/programs/CCE/communityfireplanning.html
- Public Response to Wildfire: Is the Australian "Stay and Defend or Leave Early" Approach an Option for Wildfire Management in the United States, 2008, Sarah M. McCaffrey and Alan Rhodes
- Multiparty Monitoring Resources:
  Rural Voices for Conservation Coalition-Multiparty Monitoring Issue Paper:
  http://ri.uoregon.edu/programs/CCE/communityfireplanning.html
- USDA Forest Service Collaborative Restoration Program-Multiparty Monitoring Guidelines:
  http://www.fs.fed.us/r3/spf/cfrp/monitoring/index.shtml
- Red Lodge Clearinghouse: http://www.redlodgeciearinghouse.org/resources/handbook full.htm

APPENDIX D

Recommended High Priority Hazardous Fuel Reduction Treatments

APPENDIX D

Recommended High Priority Hazardous Fuel Reduction Treatments

NOTE: This table may be updated by the FSCMC without approval from the signatories to this MCCWPP. Updated 3-1-2016. Order is alphabetical, not by priority. All treatments are a priority for initial work and for ongoing maintenance thereafter.

At-Risk Community, Community At-Risk, or Area	Treatment	Agency/ Landowner	Funding Needs	Community Recommendation
All communities around Monterey Ranger District of the Los Padres NF	Ventana / Big Box Fuelbreak as described in MCCWPP recommendation 9.1.1.	USFS and Private	Agency budget and Grant funding	Yes
Aguajito/ Jack's Peak	Residential chipping program	Private	Agency budget	Yes
Aromas	Residential chipping program	Private	Agency budgets	Yes
Big Sur	Partington Ridge hazard fuel removal	Private	Grant funding	Yes
Big Sur	California Department of Parks and Recreation fuel reduction and fuelbreaks to help restore park lands to wildfire resilient condition and to protect lives and promote public safety in and around Andrew Molera State Park, Pfeiffer Big Sur State Park, Julia Pfeiffer Burns State Park, Limekiln State Park, and other CDP&R lands in Big Sur area	CDP&R	Grant funding/ Agency budget	Yes
Big Sur	Fuel Reduction	Private	Grant funding	Yes
Big Sur/ Palo Colorado	Green Ridge/ Twin Peaks/ Garrapata/ Rocky Creek/ Palo Colorado residential chipping, roadside fuel reduction, fuel break maintenance	Private	Grant funding	Yes
Big Sur/ Palo Colorado	Mescal Ridge/Bixby Mountain residential chipping, roadside fuel reduction, fuel break maintenance	Private and USFS	Grant funding and Agency budget	Yes
Big Sur/ Palo Colorado	Long Ridge residential chipping, roadside fuel reduction, fuel break maintenance	Private	Grant funding	Yes

At-Risk Community, Community At-Risk, or Area	Treatment	Agency/ Landowner	Funding Needs	Community Recommendation
Big Sur/ Palo Colorado	Garrapata Ridge Evacuation route, roadside fuel reduction, fuel break maintenance	Private	Grant funding	Yes
Big Sur/ Palo Colorado	Palo Colorado Wildfire Fuel Reduction Project	Private	Grant funding	Yes
Carmel Highlands/ Carmel Riviera	California Department of Parks and Recreation, defensible space around state structures, removal of dead and hazard trees, non-native trees and ladder fuels, and prescribed fire, fuel reduction and fuelbreaks to help restore park lands to wildfire resilient condition and to protect lives and promote public safety in and around Point Lobos State Natural Reserve, Garrapata State Park, and other CDP&R lands in the greater Carmel Highlands area	CDP&R	Grant funding/ Agency budget	Yes
Carmel Highlands	Residential Chipper Program	Private	Agency budget	Yes
Carmel Highlands	Empty Lot Program	Private	Grant funding	Yes
Carmel Highlands	Residential Chipper Program	Private	Grant funding	Yes
Carmel Valley	Carmel Views residential chipping, roadside fuel reduction	Private	Grant funding	Yes
Carmel Valley	Rancho Tierra Grande chipping	Private	Grant funding	Yes
Carmel Valley	White Rock Ridge fuel break maintenance	Private	Grant funding	Yes
Carmel Valley	Robinson Canyon roadside fuel reduction	Private	Grant funding	Yes
Carmel Valley	Rancho Rio Vista residential chipping, roadside fuel reduction	Private	Grant funding	Yes
Carmel Valley	Rancho Tierra Grande demonstration garden	Private	Grant funding	Yes
Carmel Valley/ Cachagua	Hennickson's Ridge residential chipping, roadside fuel reduction, fuel break maintenance	Private / USFS	Grant funding / Agency budget	Yes
Carmel Valley/ Cachagua	Tularcitos Ridge Strategic Fuelbreak; Rx Fire Treatments	Private	Private/Grant funding	Yes

At-Risk Community, Community At-Risk, or Area	Treatment	Agency/ Landowner	Funding Needs	Community Recommendation
Carmel Valley/ Cachagua	Tularcitos Ridge/Sky Ranch/Asoleado/Trampa Cyn residential chipping, roadside fuel reduction, fuel break maintenance	Private	Grant funding	Yes
Corral de Tierra	Fort Ord fuel reduction, mowing	BLM	Agency budget	Yes
Corral de Tierra	Lookout Ridge fuelbreak	BLM	Agency budget	Yes
County wide	Residential Chipper Program	CAL FIRE	Grant funding	Yes
Del Rey Oaks	Goat grazing	BLM	Agency funded	Yes
Del Rey Oaks	Henneken Road fuelbreak	BLM	Agency budget	Yes
Del Rey Oaks	Manzanita Road fuelbreak	BLM	Agency budget	Yes
Del Rey Oaks	Eucalyptus Road hazard fuel reduction, handwork	BLM	Agency budget	Yes
Del Rey Oaks	Fuelbreak	Private	Grant funding	Yes
Fort Ord Community	Henneken Road fuelbreak	BLM	Agency budget	Yes
Fort Ord Community	Barloy Road fuel reduction	BLM	Agency budget	Yes
Fort Ord Community	Three Sisters Road fuelbreak	BLM	Agency budget	Yes
Fort Ord Community	Fort Ord pile burning	BLM	Agency budget	Yes
Fort Ord Community	Eucalyptus Road fuelbreak	BLM	Agency budget	Yes
Fort Ord Community	Sandstone Ridge fuelbreak	BLM	Agency budget	No
Fort Ord Community	Barloy Road fuelbreak	BLM	Agency budget	Yes
Fort Ord Community	Fuelbreak hazard reduction	BLM	Agency budget	Yes
Gabilan Range	Strategic Fuelbreaks; Rx Fire Fuel Treatments	Private	Private	Yes

At-Risk Community, Community At-Risk, or Area	Treatment	Agency/ Landowner	Funding Needs	Community Recommendation
Hatton Canyon	California Department of Parks and Recreation, removal of dead and hazard trees, non-native trees and ladder fuels, and prescribed fire, fuel reduction and fuelbreaks to help restore lands to wildfire resilient condition and to protect lives and promote public safety in and around CDP&R lands in the Hatton Canyon area.	CDP&R	Grant funding/ Agency budget	Yes
Highway 68 / Laureles Grade	Ryan Ranch fuelbreak	Private	Grant funding	Yes
King City	Sierra de Salinas fuel treatment Strategic Fuelbreaks, Rx Fire Treatment	BLM/Private	Private	Yes
Lockwood, San Lucas Canyon and surrounding San Ardo Hills	Private and Public Land (BLM Williams Hill Recreation Area), chipping, roadside fuel reduction, removal of dead and/or hazardous accumulations of vegetation, fuel break maintenance	Private and BLM	Grant funding and Agency budget	Yes
Marina	Goat grazing	BLM	Agency funded	Yes
Marina	Crescent Bluff fuelbreak	BLM	Agency budget	Yes
Marina	Crescent Bluff hazard fuel reduction	BLM	Agency budget	Yes
Marina	Sandy Ridge Road fuelbreak	BLM	Agency budget	No
Marina	East Machine Gun Flats fuelbreak	BLM	Agency budget	Yes
Marina	Watkins Gate fuelbreak	BLM	Agency budget	Yes
Marina	Fort Ord mowing	BLM	Agency budget	Yes
Marina	Merill Road fuelbreak	BLM	Agency budget	Yes
Monterey	Chipping	Private	Grant funding	Yes
North County	Elkhorn/ Strawberry/ Las Lomas/ Prunedale residential chipping, roadside fuel reduction	Private	Grant funding	Yes
Pine Canyon/ Reliz Canyon	Strategic Fuelbreaks; Rx Fire Fuel Reduction, residential chipping, roadside fuel reduction, fuel break maintenance	Private/USFS	Private	Yes

At-Risk Community, Community At-Risk, or Area	Treatment	Agency/ Landowner	Funding Needs	Community Recommendation
Reliz Canyon	Fuelbreak	USFS/Private	Grant funding	Yes
Salinas	Reservation roadside hazard reduction	BLM	Agency budget	Yes
San Antonio Valley	Bryson-Hesperia, Pleyto, Copperhead, Jolon/Argyle, Lockwood, Sapaque and Fort Hunter Liggett residential chipping, roadside fuel reduction, and fuel break maintenance.	Private and USDOD	Grant funding and Agency budget	Yes
Seaside	Goat grazing	BLM	Agency funded	Yes
Seaside	Watkins Gate fuelbreak	BLM	Agency budget	No
Seaside	Watkins Gate hazard fuel reduction, handwork	BLM	Agency budget	Yes
Seaside	Sheep grazing	BLM	Agency budget	Yes
Seaside	Barloy Road fuelbreak	BLM	Agency budget	Yes
Seaside	Guidotti Bridge hazard fuel reduction	BLM	Agency budget	Yes
Seaside	Engineer Canyon hazard fuel reduction. Handwork	BLM	Agency budget	Yes
Sierra de Salinas	Strategic Fuelbreaks; Rx Fire Fuel Reduction	Private/BLM	Private	Yes
Tassajara Rd. (Jamesburg)	Residential chipping, roadside fuel reduction	Private	Grant Funding	Yes
Tassajara Zen Mountain Center	hazardous fire fuel reduction, reduced fuel zones, safety zones	Private and USFS	Grant funding/ Agency budget	Yes
Toro County Park	Recreation Sites hazard fuel reduction	Monterey County	Agency budget	Yes
Toro Park Estates	Fuelbreak	Private	Grant funding	Yes
Toro Park Estates	Creekside Condo hazard fuel reduction	BLM	Agency budget	Yes
White Rock	Strategic Fuelbreaks; Rx Fire Fuel Treatments	Private	Private	Yes

APPENDIX E

General Guidelines for Creating Defensible Space Guidelines

General Guidelines for Creating Defensible Space

State Board of Forestry and Fire Protection (BOF)
California Department of Forestry and Fire Protection

Adopted by BOF on February 8, 2006
Pending Filing with Office of Administrative Law

Contents

A. Purpose of Guidelines

Effective defensible space

Recent changes to Public Resources Code (PRC) 4291 expand the defensible space clearance requirement maintained around buildings and structures from 30 feet to a distance of 100 feet. These guidelines are intended to provide property owners with examples of fuel modification measures that can be used to create an area around buildings or structures to create defensible space. A defensible space perimeter around buildings and structures provide firefighters a working environment that allows them to protect buildings and structures from encroaching wildfires as well as minimizing the chance that a structure fire will escape to the surrounding wildland. These guidelines apply to any person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, and located within a State Responsibility Area.

The vegetation surrounding a building or structure is fuel for a fire. Even the building or structure itself is considered fuel. Research and experience have shown that fuel reduction around a building or structure increases the probability of it surviving a wildfire. Good defensible space allows firefighters to protect and save buildings or structures safely without facing unacceptable risk to their lives. Fuel reduction through vegetation management is the key to creating good defensible space.

Terrain, climate conditions and vegetation interact to affect fire behavior and fuel reduction standards. The diversity of California's geography also influences fire behavior and fuel reduction standards as well. While fuel reduction standards will vary throughout the State, there are some common practices that guide fuel modification treatments to ensure creation of adequate defensible space:

- Properties with greater fire hazards will require more clearing. Clearing requirements will be greater for those lands with steeper terrain, larger and denser fuels, fuels that are highly volatile, and in locations subject to frequent fires.

- Creation of defensible space through vegetation management usually means reducing the amount of fuel around the building or structure, providing separation between fuels, and or reshaping retained fuels by trimming. Defensible space can be created removing dead vegetation, separating fuels, and pruning lower limbs.

- In all cases, fuel reduction means arranging the tree, shrubs and other fuels sources in a way that makes it difficult for fire to transfer from one fuel source to another. It does not mean cutting down all trees and shrubs, or creating a bare ring of earth across the property.

- A homeowner's clearing responsibility is limited to 100 feet away from his or her building or structure or to the property line, which ever is less, and limited to their land. While individual property owners are not required to clear beyond 100 feet, groups of property owners are encouraged to extend clearances beyond the 100 foot requirement in order to create community-wide defensible spaces.

- Homeowners who do fuel reduction activities that remove or dispose of vegetation are required to comply with all federal, state or local environmental protection laws and obtain permits when necessary. Environmental protection laws include, but are not limited to, threatened and endangered species, water quality, air quality, and cultural/archeological resources. For example, trees removed for fuel reduction that are used for commercial purposes require permits from the

California Department of Forestry and Fire Protection. Also, many counties and towns require tree removal permits when cutting trees over a specified size. Contact your local resource or planning agency officials to ensure compliance.

The methods used to manage fuel can be important in the safe creation of defensible space. Care should be taken with the use of equipment when creating your defensible space zone. Internal combustion engines must have an approved spark arresters and metal cutting blades (lawn mowers or weed trimmers) should be used with caution to prevent starting fires during periods of high fire danger. A metal blade striking a rock can create a spark and start a fire, a common cause of fires during summertime.

Vegetation removal can also cause soil disturbance, soil erosion, regrowth of new vegetation, and introduce non-native invasive plants. Always keep soil disturbance to a minimum, especially on steep slopes. Erosion control techniques such as minimizing use of heavy equipment, avoiding stream or gully crossings, using mobile equipment during dry conditions, and covering exposed disturbed soil areas will help reduce soil erosion and plant regrowth.

Areas near water (riparian areas), such as streams or ponds, are a particular concern for protection of water quality. To help protect water quality in riparian areas, avoid removing vegetation associated with water, avoid using heavy equipment, and do not clear vegetation to bare mineral soil.

B. Definitions

Defensible space: The area within the perimeter of a parcel where basic wildfire protection practices are implemented, providing the key point of defense from an approaching wildfire or escaping structure fire. The area is characterized by the establishment and maintenance of emergency vehicle access, emergency water reserves, street names and building identification, and fuel modification measures.

Aerial fuels: All live and dead vegetation in the forest canopy or above surface fuels, including tree branches, twigs and cones, snags, moss, and high brush. Examples include trees and large bushes.

Building or structure: Any structure used for support or shelter of any use or occupancy.

Flammable and combustible vegetation: Fuel as defined in these guidelines.

Fuel Vegetative material, live or dead, which is combustible during normal summer weather. For the purposes of these guidelines, it does not include fences, decks, woodpiles, trash, etc.

Homeowner: Any person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, and located within a State Responsibility Area.

Ladder Fuels: Fuels that can carry a fire vertically between or within a fuel type.

Reduced Fuel Zone: The area that extends out from 30 to 100 feet away from the building or structure (or to the property line, whichever is nearer to the building or structure).

Surface fuels: Loose surface litter on the soil surface, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches that have not yet decayed enough to lose their identity; also grasses, forbs, low and medium shrubs, tree seedlings, heavier branches and downed logs.

C. Fuel Treatment Guidelines

The following fuel treatment guidelines comply with the requirements of 14 CCR 1299 and PRC 4291. **All persons using these guidelines to comply with CCR 1299 and PRC 4291 shall implement General Guidelines 1., 2., 3., and either 4a or 4b., as described below.**

General Guidelines:

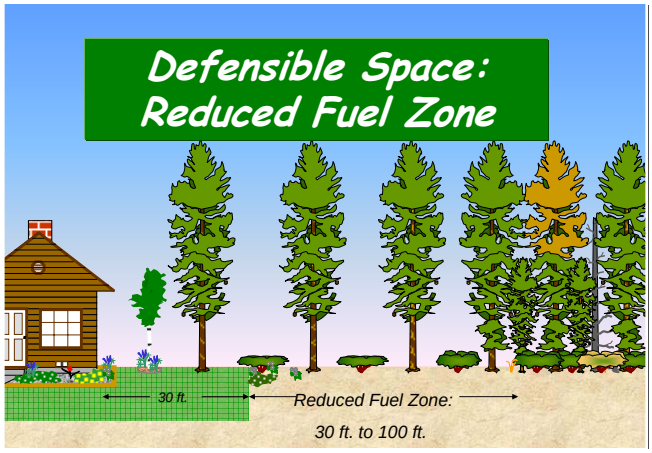
1. Maintain a firebreak by removing and clearing away all flammable vegetation and other combustible growth within 30 feet of each building or structure, with certain exceptions pursuant to PRC §4291(a). Single specimens of trees or other vegetation may be retained provided they are well-spaced, well-pruned,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

2. Dead and dying woody surface fuels and aerial fuels within the Reduced Fuel Zone shall be removed. Loose surface litter, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches, shall be permitted to a depth of 3 inches. This guideline is primarily intended to eliminate trees, bushes, shrubs and surface debris that are completely dead or with substantial amounts of dead branches or leaves/needles that would readily burn.

3. Down logs or stumps anywhere within 100 feet from the building or structure, when embedded in the soil, may be retained when isolated from other vegetation. Occasional (approximately one per acre) standing dead trees (snags) that are well-space from other vegetation and which will not fall on buildings or structures or on roadways/driveways may be retained.

4. Within the Reduced Fuel Zone, one of the following fuel treatments (4a. or 4b.) shall be implemented. Properties with greater fire hazards will require greater clearing treatments. Combinations of the methods may be acceptable under §1299(c) as long as the intent of these guidelines is met.

4a. Reduced Fuel Zone: Fuel Separation



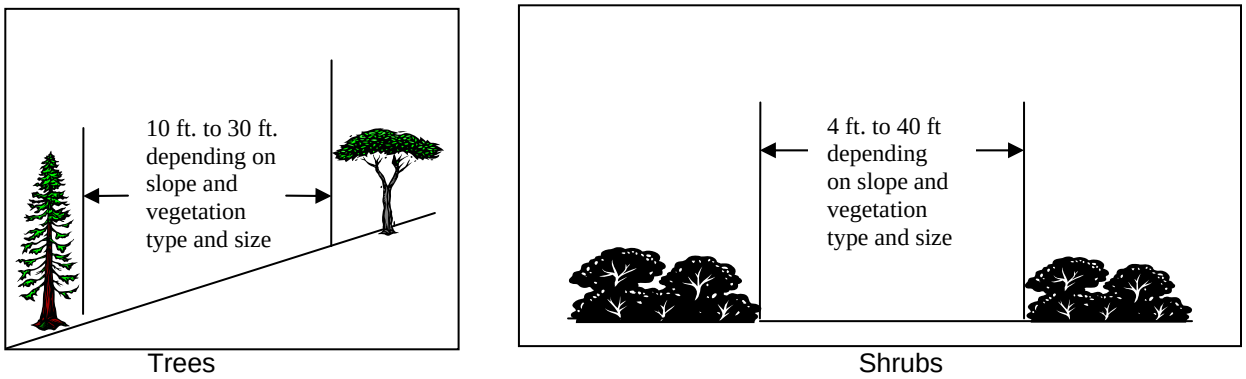
In conjunction with General Guidelines 1., 2., and 3., above, minimum clearance between fuels surrounding each building or structure will range from 4 feet to 40 feet in all directions, both horizontally and vertically.

Clearance distances between vegetation will depend on the slope, vegetation size, vegetation type (brush, grass, trees), and other fuel characteristics (fuel compaction, chemical content etc.). Properties with greater fire hazards will require greater separation between fuels. For example, properties on steep slopes having large sized vegetation will require greater spacing between individual trees and bushes (see Plant Spacing Guidelines and Case Examples below). Groups of vegetation (numerous plants growing together less than 10 feet in total foliage width) may be treated as a single plant. For example, three individual manzanita plants growing together with a total foliage width of eight feet can be “grouped” and considered as one plant and spaced according to the Plant Spacing Guidelines in this document.

Grass generally should not exceed 4 inches in height. However, homeowners may keep grass and other forbs less than 18 inches in height above the ground when these grasses are isolated from other fuels or where necessary to stabilize the soil and prevent erosion.

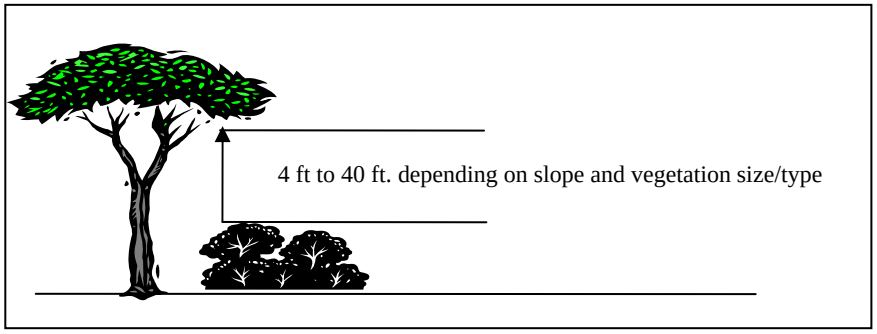
Clearance requirements include:

- Horizontal clearance between aerial fuels, such as the outside edge of the tree crowns or high brush. Horizontal clearance helps stop the spread of fire from one fuel to the next.



Horizontal clearance between aerial fuels

- Vertical clearance between lower limbs of aerial fuels and the nearest surface fuels and grass/weeds. Vertical clearance removes *ladder fuels* and helps prevent a fire from moving from the shorter fuels to the taller fuels.



Vertical clearance between aerial fuels

Effective vertical and horizontal fuel separation
Photo Courtesy Plumas Fire Safe Council.

Plant Spacing Guidelines Guidelines are designed to break the continuity of fuels and be used as a “rule of thumb” for achieving compliance with Regulation 14 CCR 1299.		
Trees	**Minimum horizontal space from edge of one tree canopy to the edge of the next**	
	Slope	Spacing
	0% to 20 %	10 feet
	20% to 40%	20 feet
	Greater than 40%	30 feet
Shrubs	**Minimum horizontal space between edges of shrub**	
	Slope	Spacing
	0% to 20 %	2 times the height of the shrub
	20% to 40%	4 times the height of the shrub
	Greater than 40%	6 times the height of the shrub
Vertical Space	**Minimum vertical space between top of shrub and bottom of lower tree branches:** 3 times the height of the shrub	

Adapted from: Gilmer, M. 1994. California Wildfire LandscapingLandscaping

Case Example of Fuel Separation: Sierra Nevada conifer forests

Conifer forests intermixed with rural housing present a hazardous fire situation. Dense vegetation, long fire seasons, and ample ignition sources related to human access and lightning, makes this home vulnerable to wildfires. This home is located on gentle slopes (less than 20%), and is surrounded by large mature tree overstory and intermixed small to medium size brush (three to four feet in height).

Application of the guideline under 4a. would result in horizontal spacing between large tree branches of 10 feet; removal of many of the smaller trees to create vertical space between large trees and smaller trees and horizontal spacing between brush of six to eight feet (calculated by using 2 times the height of brush).

Case Example of Fuel Separation: Southern California chaparral

Mature, dense and continuous chaparral brush fields on steep slopes found in Southern California represents one of the most hazardous fuel situations in the United States. Chaparral grows in an unbroken sea of dense vegetation creating a fuel-rich path which spreads fire rapidly. Chaparral shrubs burn hot and produce tall flames. From the flames come burning embers which can ignite homes and plants. (Gilmer, 1994). All these factors results in a setting where aggressive defensible space clearing requirements are necessary.

Steep slopes (greater than 40%) and tall, old brush (greater than 7 feet tall), need significant modification. These settings require aggressive clearing to create defensible space, and would require maximum spacing. Application of the guidelines would result in 42 feet horizontal spacing (calculated as 6 times the height of the brush) between retained groups of chaparral.

Case Example of Fuel Separation: Oak Woodlands

Oak woodlands, the combination of oak trees and other hardwood tree species with a continuous grass ground cover, are found on more than 10 million acres in California. Wildfire in this setting is very common, with fire behavior dominated by rapid spread through burning grass.

Given a setting of moderate slopes (between 20% and 40%), wide spacing between trees, and continuous dense grass, treatment of the grass is the primary fuel reduction concern. Property owners using these guidelines would cut grass to a maximum 4 inches in height, remove the clippings, and consider creating 20 feet spacing between trees.

4b. Reduced Fuel Zone: Defensible Space with Continuous Tree Canopy

To achieve defensible space while retaining a stand of larger trees with a continuous tree canopy apply the following treatments:

- Generally, remove all surface fuels greater than 4 inches in height. Single specimens of trees or other vegetation may be retained provided they are well-spaced, well-pruned, and create a condition that avoids spread of fire to other vegetation or to a building or structure.

- Remove lower limbs of trees ("prune") to at least 6 feet up to 15 feet (or the lower 1/3 branches for small trees). Properties with greater fire hazards, such as steeper slopes or more severe fire danger, will require pruning heights in the upper end of this range.

Defensible Space retaining continuous trees

Photo Courtesy Plumas Fire Safe Council.

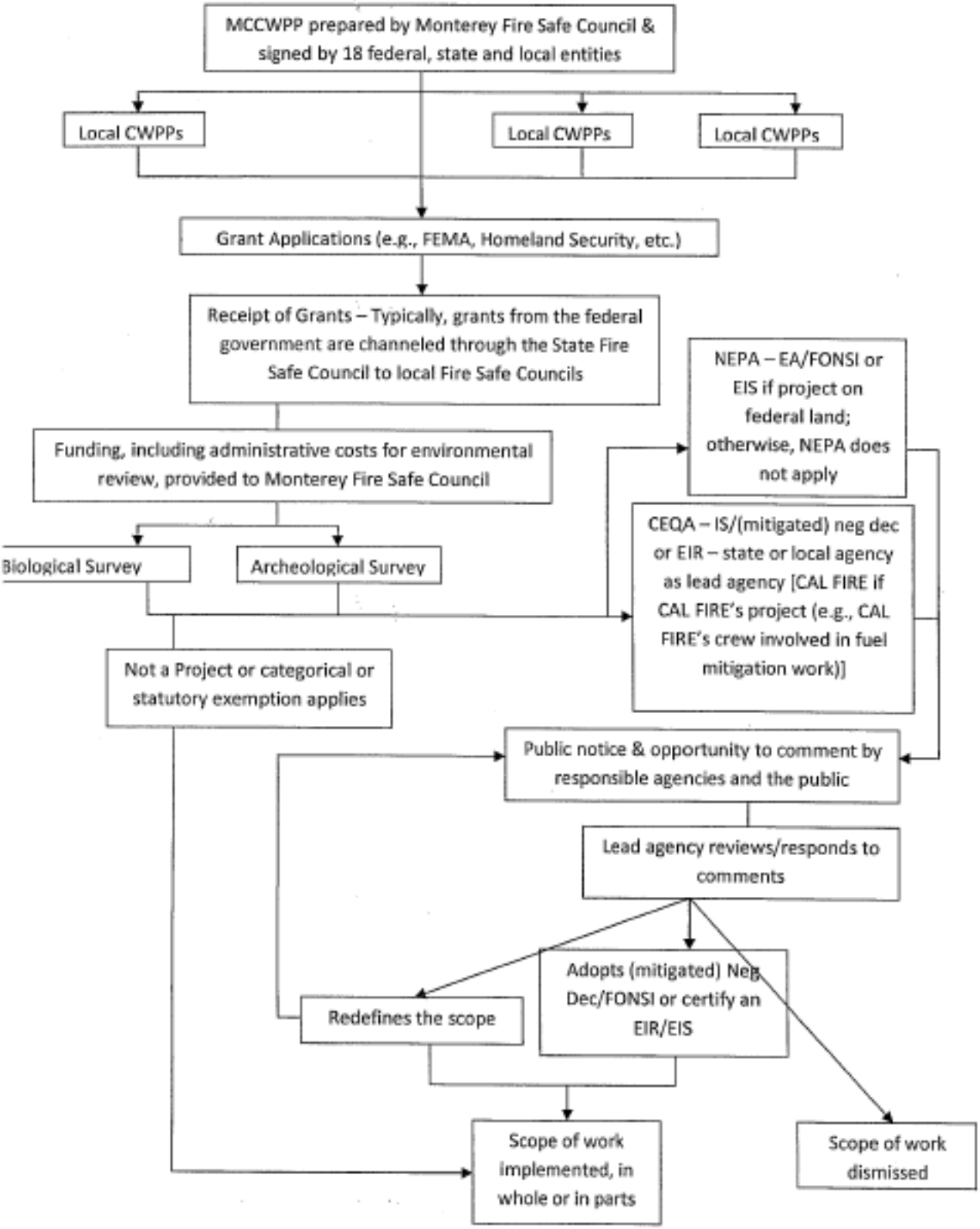
Defensible space with continuous tree canopy by clearing understory and pruning

Authority cited: Section 4102, 4291, 4125-4128.5, Public Resource Code. Reference: 4291, Public Resource Code; 14 CCR 1299 (d).

APPENDIX F

CEQA Flowchart

Monterey County Community Wildfire Protection Plan Through the Healthy Forests Restoration Act of 2003



APPENDIX G

Forest Practice Rules Checklist

APPENDIX G – Forest Practice Rules Checklist

Revised: June 4, 2008 updated with post fire documents on 8/20/08

TREE REMOVAL INFORMATION COMMONLY ASSOCIATED WITH BUILDING PERMITS AND OTHER DEVELOPMENT PROJECTS

STATE REGULATIONS

In addition to Fire Code Regulations for State Responsibility Areas noted in the 4290 Checklist, the California Department of Forestry and Fire Protection (CAL FIRE) is responsible for administering Timber Harvesting Regulations conducted throughout California on all non-federal timberland. This applies regardless of zoning and includes lands inside of city limits. The removal of California native "commercial" timber species from forested lots, areas of pending new construction, and from around existing structures is included under these regulations. The following information is compiled from Title 14, California Code of Regulations and the Public Resources Code to assist in the determination of the necessity of a Timber Harvest Plan (THP), Timberland Conversion Permit (TCP), or other type of timber harvest plan exemption or emergency document.

The following checklist can be used to determine if a permit is required from CAL FIRE for removal of trees.

Determining if a harvesting permit is required from CAL FIRE:

1. Is the project occurring on timberland?

Yes….Go to question #2. In Monterey and San Benito Counties, qualifying commercial timber species include Coast Redwood, Douglas Fir, Monterey Pine, Coulter Pine, Ponderosa Pine, Jeffrey Pine, White Alder, Cottonwood, Pacific Madrone, California Black Oak and Tanoak. Timberland includes areas where the above species are now growing naturally or have grown naturally in the recorded past, even if not currently present.

No….This does not constitute timber operations and a THP or other harvest document is NOT required by CAL FIRE. STOP HERE

2. Are you cutting trees and plan to sell, barter, exchange or trade any type of wood product?

Yes…. A THP or other timber harvest plan exemption document is required by CAL FIRE prior to cutting any trees. Refer to Section II titled "Types of Harvest Documents."

No…. A THP or other timber harvest plan exemption document may still be required by CAL FIRE. Go to question #3.

3. Are you cutting or removing trees from timberland, and converting the area to a non-timber use? NOTE: These requirements apply even if the wood products are not sold commercially or the trees aren't of merchantable size.

a) **Yes**, and the area involved is less than three acres… Do not harvest without an approved Less than 3-acre conversion exemption (14 CCR 1104.1)

b) **Yes**, and the area involved is greater than three acres…A TCP and THP are required.

c) **Yes**, and the area is an approved subdivision under the Subdivision Map Act ... An Exemption for Conversion of Non-TPZ[137] Land for Subdivision Development (14 CCR 1104.2) can meet the TCP requirement and either a THP or Less than 3-acre conversion exemption are required.

d) **No**…. If questions number 1, 2, and 3 above are answered no, a THP or other harvest document is not required by CAL FIRE.

NOTE: In San Benito and Monterey Counties, the most common examples of conversions include commercial developments or construction of individual residential structures on lands classified as timberland.

Types of Harvest Documents:

Timber Harvest Plans are detailed documents that allow timber operations and provide analysis of environmental impacts, and will not be discussed in detail. The harvest documents required for Timberland Conversions are addressed in Section I, question 3 above. The following list describes the most commonly used harvest exemptions and emergencies from Title 14 of the California Code of Regulations.

1. §1038(c)[138] Removal of Fire Hazard Trees Within 150 Feet of a Structure Exemption

This exemption is required for the cutting or removal of trees in compliance with sections 4290 and 4291 from within 150 feet of existing permitted structures which is intended to reduce the fuels and fire hazard. This exemption is required only if wood products are offered for sale, barter, exchange or trade. A Registered Professional Forester services are not required, however a Licensed Timber Operator must be listed on the exemption. Extensive slash disposal requirements apply and the exemption is valid for one year. See 14 CCR 1038 (c).

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[137] TPZ: Zoning classified as Timberland Production Zone.

[138] (14 CCR 961.2) Notwithstanding 14 CCR 1038, exemptions from plan filing requirements in the Coastal Commission Special Treatment Areas shall only be allowed for minor operations where no live trees are cut.

2. §1038(a) and (b) Christmas Tree; Dead, Dying, or Diseased; Fuelwood or Split Products Exemption

This exemption is required when removing trees that are dead or are obviously dying from insect attack or disease (harvest can not exceed 10 percent of the average volume per acre), or when removing fuelwood or other miscellaneous products such as Christmas trees, fencing, etc. This exemption is required only if wood products are offered for sale, barter, exchange or trade. Registered Professional Forester services are not required, however a Licensed Timber Operator must be listed on the exemption. The exemption is valid for one year. See 14 CCR 1038 (a & b).

3. §1104.1(a) Less Than Three Acre Conversion Exemption

This one-time exemption is required for property owners who intend to cut or remove trees for structures and other needed improvements. This exemption is required whether or not wood products are offered for sale, barter, exchange or trade. A Registered Professional Forester must prepare this exemption. Building contractors are ineligible to perform this work, unless they are also a Licensed Timber Operator. The exemption is valid for one year. See 14 CCR 1104.1.

4. §1104.1(b) and (c) Public Agency, Public and Private Utility Right of Way Exemptions

These exemptions are used for construction or maintenance of right-of-way by a public agency on its own or any other public property; or the clearing of trees from timberland by a private or public utility for construction of gas, water, sewer, oil, electric, and communications (transmitted by wire, television, radio, or microwave) rights-of-way, and for maintenance and repair of the utility and right-of-way. This exemption can only be used to remove trees that are marked or felled as hazard trees in established utility right-of-ways, or for construction of right of ways that have been approved by the county.

5. §1052 Emergency

Before cutting or removing timber on an emergency basis, a Registered Professional Forester (RPF) on behalf of a timber owner or operator shall submit a Notice of Emergency Timber Operations to the Director. A Notice of Emergency Timber Operations can be filed for removal of damaged, dead, or dying trees due to fire. Per the 14 CCR 895.1 definition of "dying trees," it is up to the RPF to designate dying trees for harvest. Given the provisions of this definition, it would be the RPF's responsibility to designate only those trees that are likely to die within one year.

Some of the applicable laws and regulations that apply are summarized on the following pages. The rules cited may not be quoted, and are not intended to be authoritative. The code section has been included to provide reference to the official law or rule language can be found at www.leginfo.ca.gov/calaw.html, or the official publications by *Barclays Official California Code of Regulations* (1-800-888-3600).

If you have any questions or need additional information on the different types of harvest documents that may be applicable to your project, please contact the Unit Forester or the Area Forester where the project is located.

Area	**Forester**	**Telephone**	
All of San Benito and Monterey Counties	Jonathan Pangburn	(831)	333-2600
or contact	Mike Bacca – Forest Practice Manager Southern Region	(559)	243-4114

Z'berg-Nejedly Forest Practice Act of 1973

CAL FIRE has enforcement responsibility for the Z'berg-Nejedly Forest Practice Act of 1973. CAL FIRE is also the lead agency for those parts of projects involving the scope of the Forest Practice Act. This involves the regulation of "Timber Operations", as defined in Section 4527 of the Public Resources Code (PRC), on all non-federal private lands.

PRC 4526 – Timberland

"Timberland" means land, other than land owned by the federal government, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees.

PRC 4527 - Timber Operations

"Timber Operations" means the cutting or removal or both of timber or other solid wood forest products, including Christmas trees, from timberlands for commercial purposes, together with all the work incidental thereto, including, but not limited to, construction and maintenance of roads, fuelbreaks, stream crossings, landings, and skid trails. "Commercial purposes" includes (1) The cutting or removal of trees which are processed into logs, lumber, or other wood products and offered for sale, barter, exchange or trade, or; (2) The cutting or removal of trees or other forest products during the conversion of timberlands to land uses other than the growing of timber which are subject to the provisions of Section 4621, including, but not limited to, residential or commercial developments, production of other agricultural crops, recreational developments, ski developments, water development projects, and transportation projects. Removal or harvest of incidental vegetation from timberlands, such as berries, ferns, greenery, mistletoe, herbs, and other products, which action cannot normally be expected to result in a threat to forest, air, water, or soil resources, does not constitute timber operations.

PRC 4581 – Necessity of timber harvest plan

No person shall conduct timber operations unless a timber harvesting plan prepared by a registered professional forester has been submitted for such operations.

Other pertinent rule sections regarding conversion of timberlands: 14 CCR 1100-1110 and PRC 4621.

APPENDIX H

Sample Threat Assessment Study Summaries

APPENDIX H – Special Study Areas: FRAP Fire Behavior Modeling and Threat Assessment Protocol

Three representative areas within Monterey County were selected for special study: Fort Ord, Carmel Valley, and the North County. Fire behavior modeling was conducted by FRAP utilizing the refined topography and fuels data, and refined local 3D wind modeling data obtained from the Monterey Naval Postgraduate School Meteorology Section. Employing FlamMap and FARSITE computer based models, simulations were conducted for each area. Two ignition scenarios and two weather scenarios (moderate and severe) were evaluated to assess fire behavior potential. The following summarizes the FRAP findings for each area, based on modeling results, and the field validation performed by the fire threat assessment team.

A. Former Fort Ord

During severe weather conditions, wildfire in maritime chaparral on Fort Ord is expected to produce high spread rates, moderate to high intensity, and typically close range and long range spotting of up to one mile (BEHAVE, Jim Bishop, 2002; Barry Callenberger, 2006). Due to the distribution of flammable maritime chaparral and sage fire fuel types and rapidly fluctuating winds and relative humidities in combination with solar preheating, Fort Ord presents a unique and challenging fire threat.

Historical fire suppression experience at Fort Ord documents difficulty of control for fires occurring under moderate weather with limited tactical effectiveness against fires not contained by first responders. Of concern is the capability of a fire to leave the Fort Ord property, affecting adjacent properties and assets. Modeling results indicate this potential under moderate and severe weather conditions. Recommendations resulting from FARSITE modeling efforts and field validation indicate that a 200-300 foot wide linear fuelbreak along South Boundary Road somewhat slows the frontal spread of the accelerating fire front of an uncontrolled wildland fire, but does little to reduce spotting and escaped spot fires. Direct attack is unsafe and is neither recommended nor effective.

The presence of Unexploded Ordnance (UXO) in substantial portions of the Fort Ord maritime chaparral fuel beds presents a danger to direct attack suppression and the deployment of tactical air support in those areas, most significantly at Del Rey Oaks, where UXO is present proximate to the development boundary. UXO fragmentation distance can be up to 1,701 feet. Nevertheless, current policy allows tactical air support down to 100 feet in these areas.

A comprehensive system of interconnected Strategic Fuelbreaks, Defensible Polygons, and a reduced fire fuel reduction buffer zone maintained by rotational prescribed burn application of one to ten years of Fort Ord's chaparral fuel bed is indicated by the Bureau of Land Management's and US Army's Fire Management Plans. Coordination of attack strategy and community evacuation from within adjacent fire jurisdictions in the pre attack and County Emergency Operational Plan (EOP) is essential.

Documented ground level wind streams have the potential to drive uncontrolled wildland fire to identified topographical decision points at Laguna Seca/Pasadera/York School/Ryan Ranch, Canyon Del Rey, East Garrison, "The Bluffs," and Seaside.

(See FRAP Figures 14 and 15 at the end of this appendix.)

B. Carmel Valley

Modeling efforts evaluated assume ignitions along the Laureles Grade with variations in wind and fuel moisture conditions. Under severe weather conditions, fires burn rapidly in light, flashy fuels. Those in light and heavier shrub fuels progress slightly slower, although high heat intensity and short- and mid-range spotting are problematic making direct attack ineffective. Of note is the slowing of fire progression when encountering oak woodland/forest vegetation types under both weather conditions, although the benefit is usually offset by the increasing number of miles of uncontained flaming fire perimeter threatening residences, structures, and steep watershed in a short period of time.

(See FRAP Figures 10 and 11 at the end of this appendix.)

C. North County

Simulations for the North County area indicate potential fire growth in annual grasslands assumed to be rested from grazing pressure. Under severe weather conditions, fire spread is rapid in light, flashy fuels, but slows when it reaches closed-canopy oak forests. Presence of significant stands of manzanita and Eucalyptus tree torching and fire brand spotting encourage fire growth. Of note in this area is the potential for a relatively broad fire front and significant fire perimeter distance. Issues of evacuation routes, timing, and large fire potential may receive further consideration.

(See FRAP Figures 12 and 13 at the end of this appendix.)

MCCWPP Fire Threat Assessment Protocol

To complement the FRAP analysis, the fire threat assessment team provided field verification of threat, including identification of :

- Factors of fire behavior change (fuels, slope, topography, weather).
- Fire behavior decision points (predetermined locations (i.e. proximity to structures, change in slope, etc.) or set of meteorological thresholds that may require a change in tactics to deal with changing conditions (location or weather)).
- Fire severity alignment scenarios (situations in which the slope, fuels, and/or weather align to create an increase in fire activity and subsequent fire severity and possibly fire intensity).
- Direction of fire spread (influenced by prevailing winds, topography, and fuels).
- Tactical suppression thresholds of control (identification of potential wildfire control lines or anchor points, such as ridges, roads, and drainages).
- Fire history (the number and geographic extent of previous fires in a given area).
- Tactical fire suppression capacity (level of firefighting resources available).

Fire behavior prediction tools such as BEHAVE, FARSITE, and Campbell Prediction System (CPS) are utilized.

MCWPP Interagency Fire Threat Assessment Team

Chris Orman	*MoCo Fire Chiefs*	*Fire Chief, North County Fire*
Tom Plymale	*USFS*	*Division Chief, Monterey District*
Mario Marquez	*BLM*	*Fire Management Officer*
Jonathan Pangburn	*CALFIRE*	*Registered Professional Forester*
Jack Riso	*POM/Fort Ord*	*Fire Chief*
Steve Davis	*USFS*	*Fuels Chief, LPNF*
Bob Nunes	*MBUAPCD*	*Meteorologist*
Wendell Nuss	*NPS*	*Meteorologist*
Joe Rawitzer	*MC2WG*	*Fire Behavior Specialist*

With technical assistance provided by Mark Rosenberg and Dave Sapsis, FRAP Fire Scientists, and Doug Campbell, Fire Behavior Analyst.

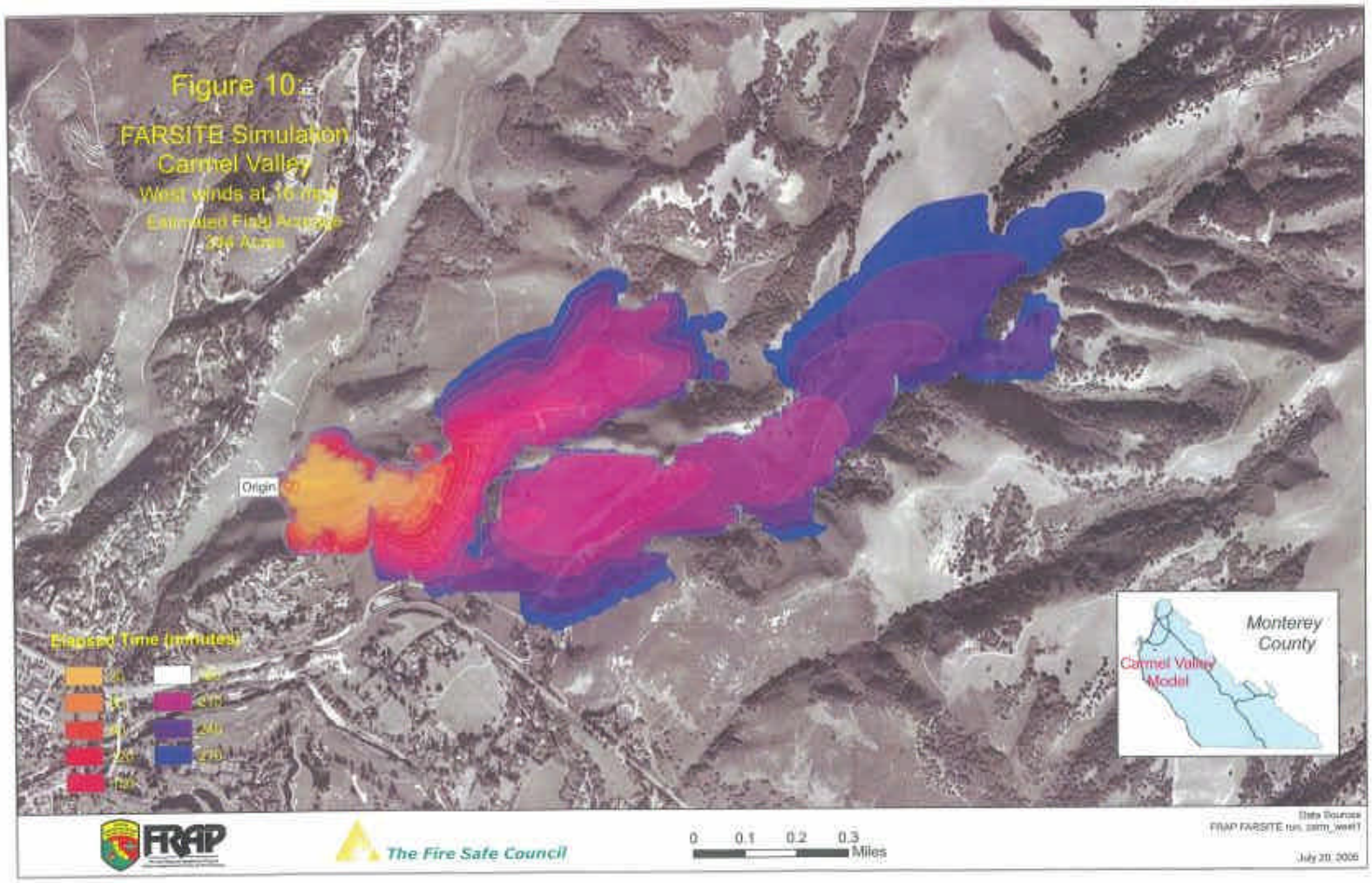


Figure 10:
FARSITE Simulation
Carmel Valley
West winds at 16 mph
Estimated Final Acreage
306 Acres
Origin
Elapsed Time (minutes)
Monterey County
Carmel Valley Model
0 0.1 0.2 0.3 Miles
Data Sources
FRAP FARSITE run, carm_west1
July 20, 2006
FRAP
The Fire Safe Council

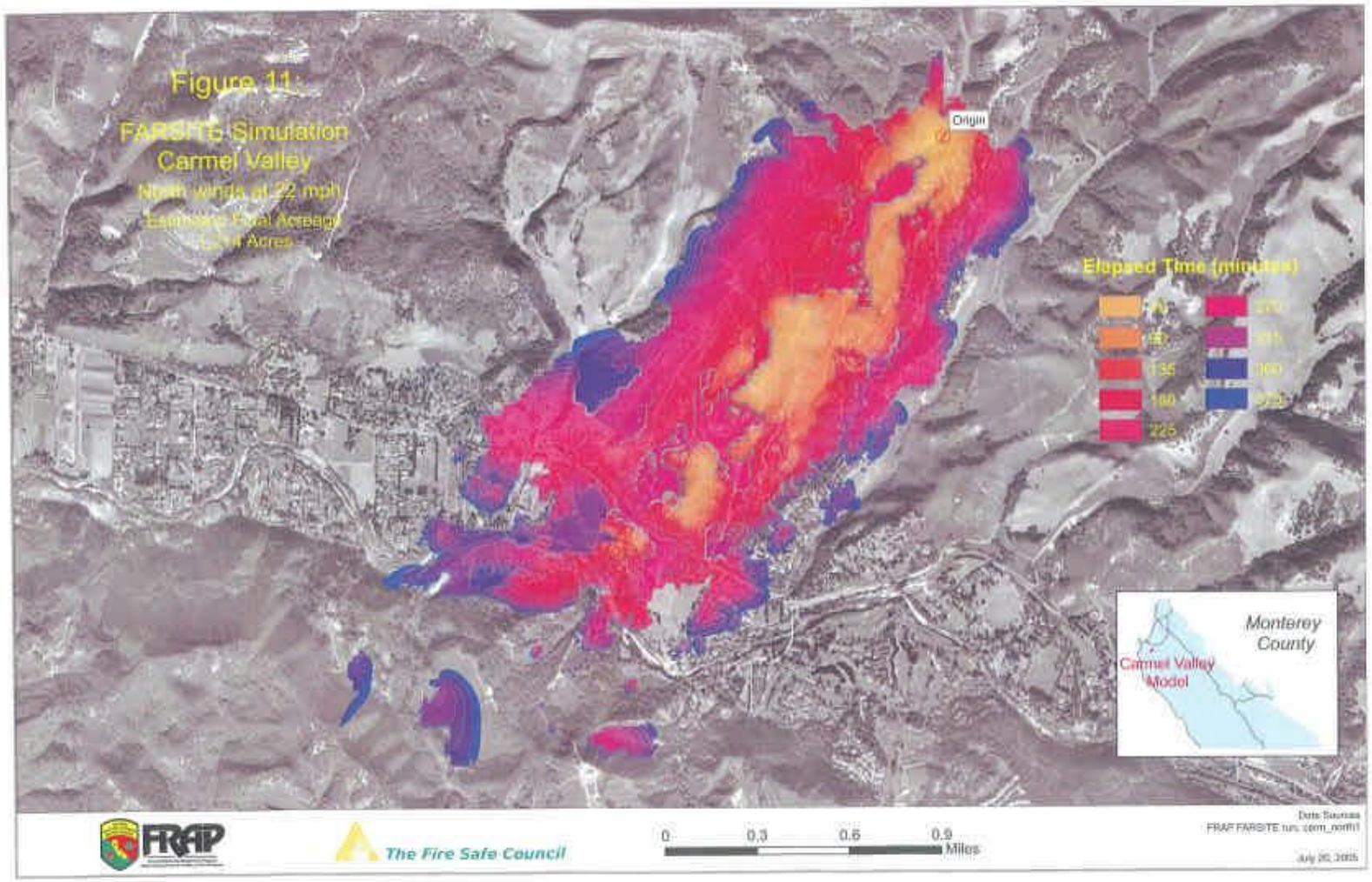


Figure 11:
FARSITE Simulation
Carmel Valley
North winds at 22 mph
Estimated Final Acreage
1,214 Acres
Origin
Elapsed Time (minutes)
135
180
225
Monterey County
Carmel Valley Model
0
0.3
0.6
0.9
Miles
The Fire Safe Council
FRAP
Data Sources
FRAP FARSITE run: carm_north1
July 20, 2005

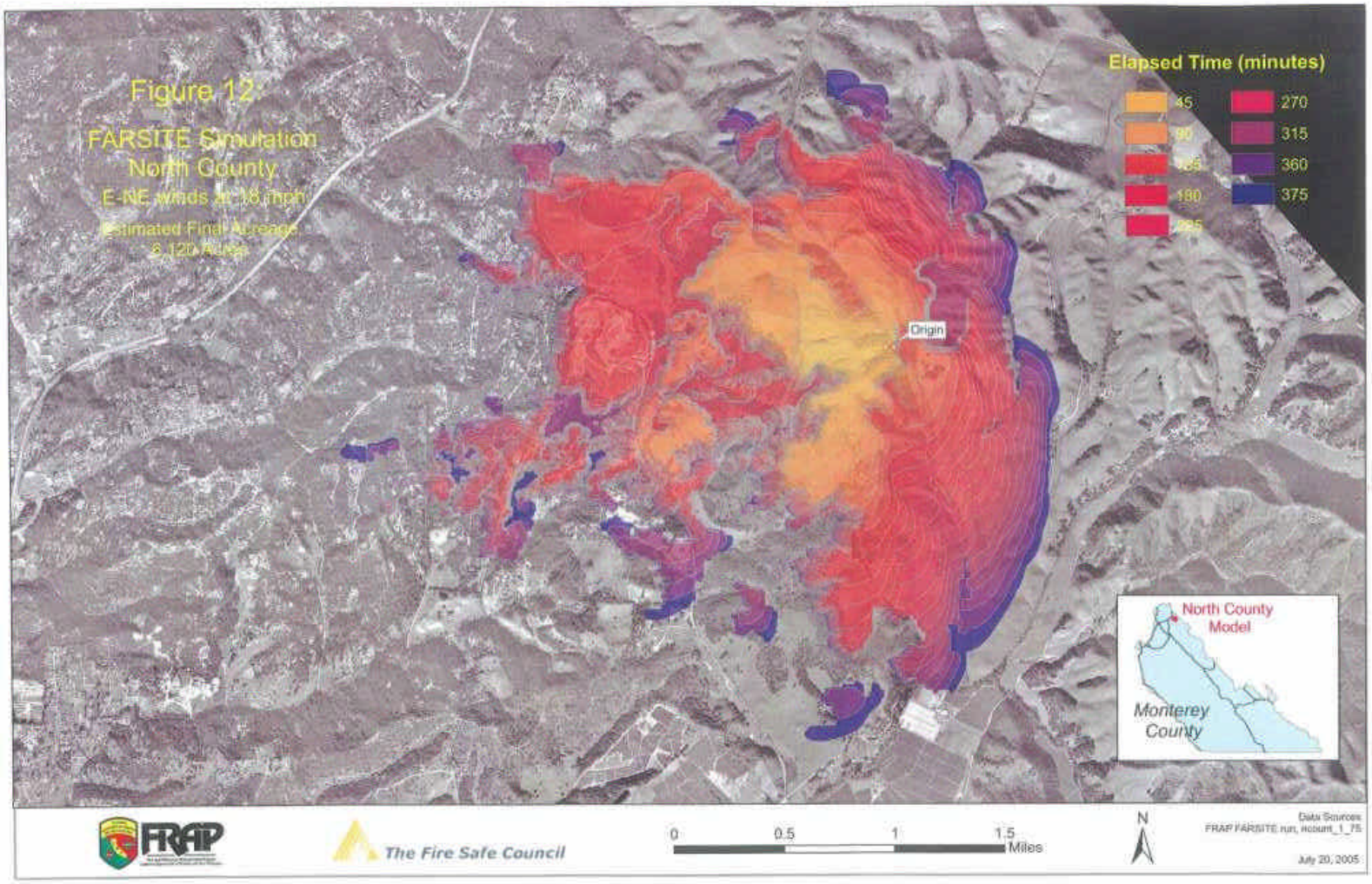
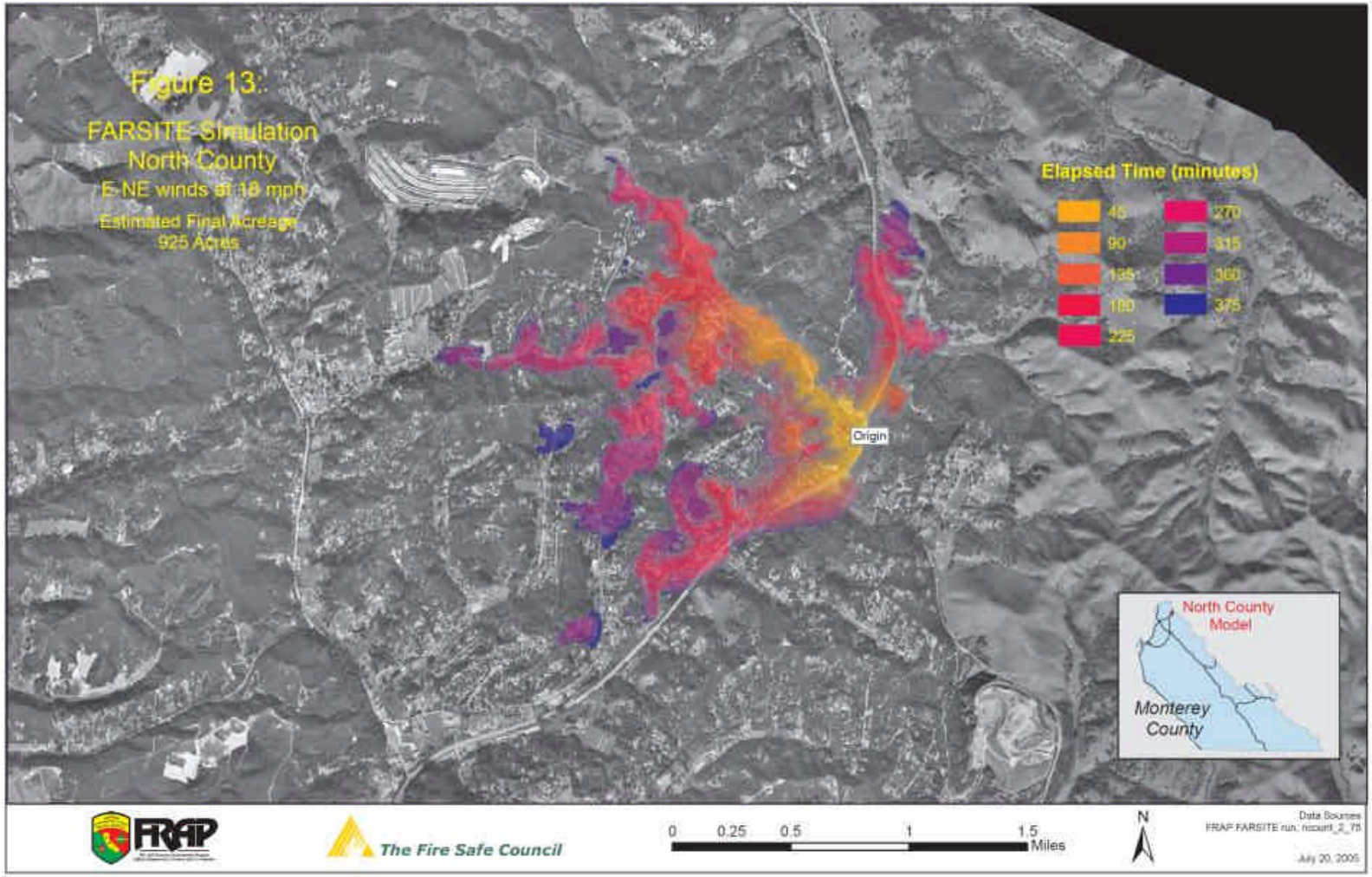
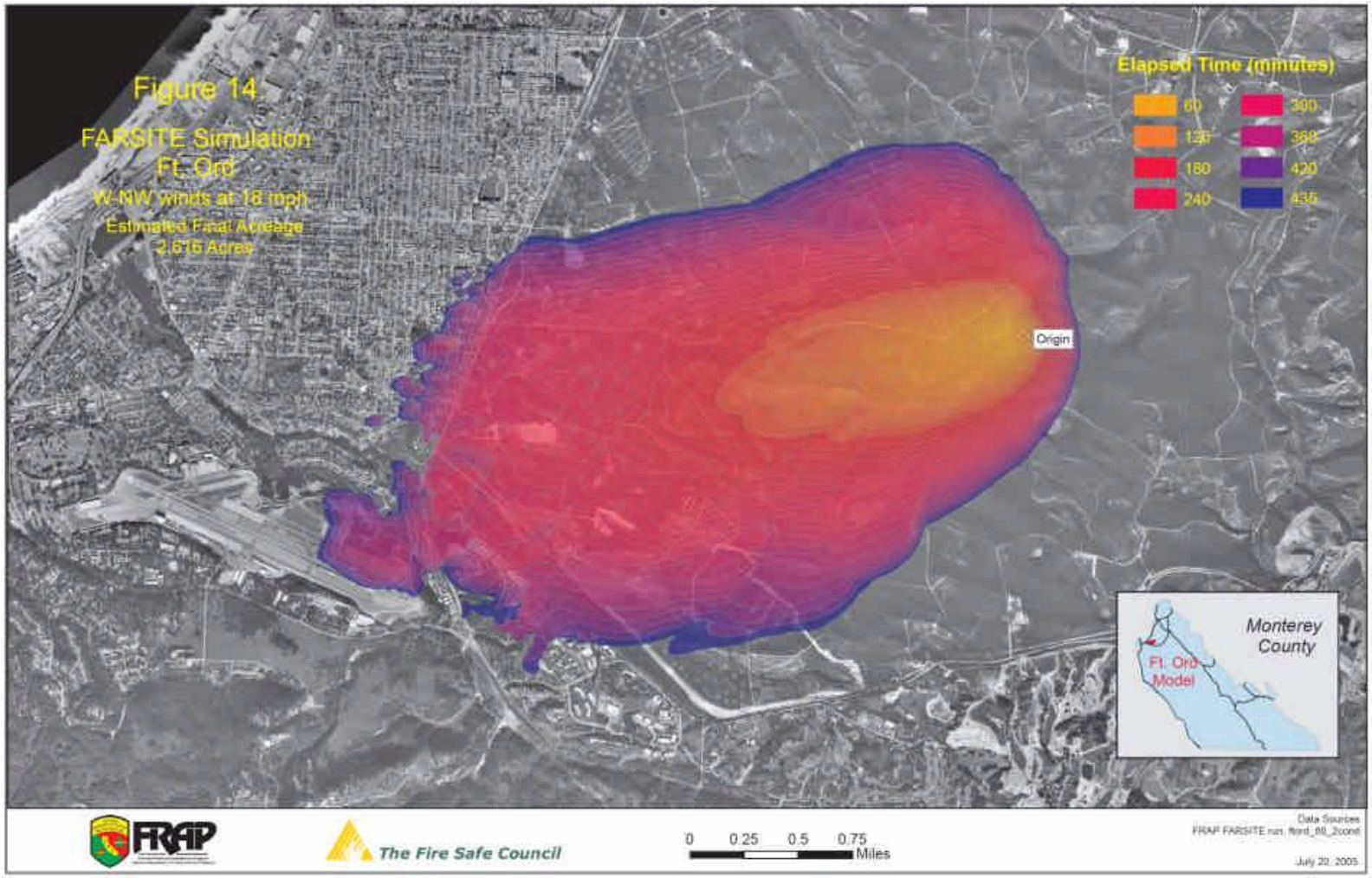


Figure 12:
FARSITE Simulation
North County
E-NE winds at 18 mph
Estimated Final Acreage
8,125 Acres
Elapsed Time (minutes)
45
90
135
180
225
270
315
360
375
Origin
North County Model
Monterey County
0
0.5
1
1.5
Miles
N
Data Sources:
FRAP FARSITE run, incount_1_75
July 20, 2005
The Fire Safe Council



FRAP

The Fire Safe Council



FRAP

The Fire Safe Council

0 0.25 0.5 0.75 Miles

Data Sources
FRAP FARSITE run: ford_60_2cond

July 20, 2005

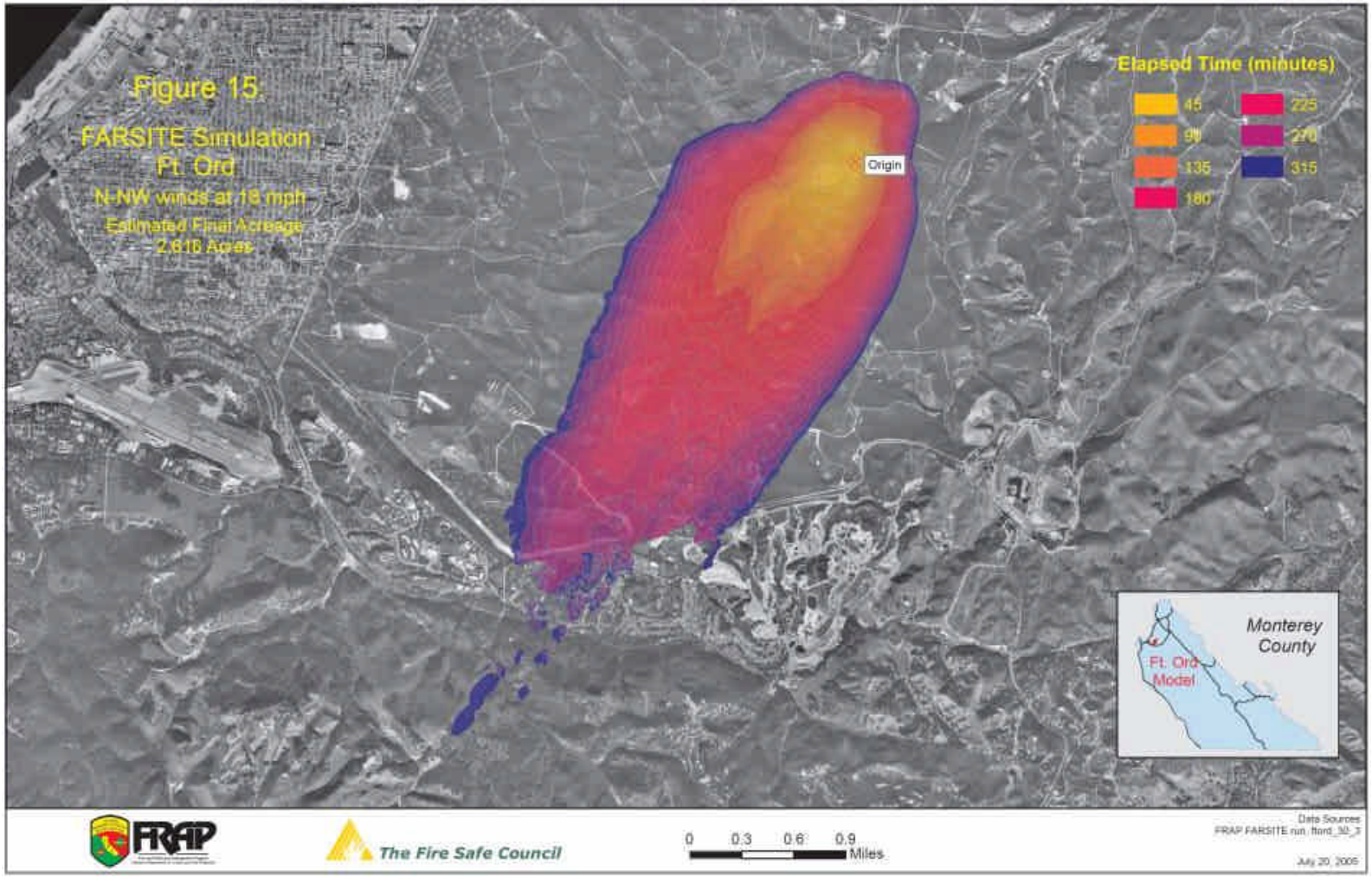


Figure 15
FARSITE Simulation
Ft. Ord
N-NW winds at 18 mph
Estimated Final Acreage
= 2,618 Acres
Origin
Elapsed Time (minutes)
45
90
135
180
225
270
315
Monterey County
Ft. Ord Model
0 0.3 0.6 0.9
Miles
Data Sources
FRAP FARSITE run: ford_30_3
July 20, 2005

APPENDIX I

Detailed Priority Threat Descriptions

APPENDIX I - Detailed Priority Threat Descriptions

The following areas are listed in alphabetical order. See the map at the end of this appendix for the location of the following areas.

A. Bryson-Hesperia

Bryson Hesperia in southwest Monterey County is adjacent to San Antonio and Nacimiento Resevoirs in a rural suburban WUI intermixed with grass, dense chaparral, and oak woodland. Bryson Hesperia borders Los Padres National Forest and Fort Hunter Liggett. Project includes creation of defensible space around structures, ingress and egress, neighborhood fuel reduction, and a series of cooperative interconnecting Strategic Fuelbreaks, Defensible Polygons, and hazardous fuel reduction prescribed burns.

B. Former Fort Ord

The Former Fort Ord Lands are encircled with WUI boundaries of Monterey, Del Rey Oaks, Seaside, Marina, East Garrison, Toro Park/Serra Village, Los Laureles, Laguna Seca, Pasadera, Ryan Ranch, Hidden Hills, and Highway 68. These undeveloped lands may present the single greatest hazardous fuel and fire threat to WUI in Monterey County. The area is currently divided into two federal jurisdictions, although local governments also manage some of the undeveloped lands in these areas. The federal lands include: 1) lands that BLM manages and controls (i.e. about 7,200 acres), and 2) lands that the Army manages and controls (i.e. about 6,500 acres) until such time they are transferred to the BLM. Lands managed and controlled by the Army will likely continue to be managed by the Army until 2020-2025 while the Army conducts a munitions and explosives of concern (MEC) remediation of these former range areas under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). After the lands have been remediated, the BLM has indicated an interest in managing these former range lands for the Army as part of the base closure process.

The highest fire threat in the area consists of the 6,500 acres of maritime chaparral within the former Fort Ord Multi Range Area (MRA) where the presence of MEC hampers tactical firefighting effectiveness and presents additional life threat to firefighters and the public, especially at Del Rey Oaks and Seaside. Within the MRA, the Army maintains a system of fuelbreak roads that facilitate prescribed burning as part of the steps to remove brush for MEC remediation. The Army intends to prescribe burn up to 800 acres per year in the MRA to facilitate the MEC remediation. Generally, the Army maintains 15 foot wide roads with 15 feet of vegetation cutting on both sides of each fuelbreak road. Some of these roads are in poor and/or sandy condition and wildfire suppression efforts can be hampered. The Army is working to gravel many of these roads and/or road segments in coordination with the BLM. Around individual burn units, the Army has generally mechanically cut 200 feet of vegetation along primary containment lines to support the burning of standing vegetation, with width depending upon the age/expected flame lengths of the adjoining vegetation, however, secondary and tertiary containment lines are generally 15 foot wide roads with 15 feet of vegetation cutting on both sides of the road.

Along General Jim Moore Boulevard, the City of Seaside and Del Rey Oaks have land that is adjacent to the Army's former MRA. These lands will require careful firewise planning as developments are being contemplated. These parcels currently require a 200 foot setback from the Army lands (i.e. future BLM lands) where flammable structures may not be developed without preparation and approval of a firewise plan. The Healthy Forests Restoration Act provides that at-risk communities may recommend in a CWPP that fuel reduction work be performed on lands administered by the Bureau of Land Management, which may enable this problem to be addressed by fuel reduction work on Federal land rather than by restricting use of private land.

After the MRA lands are remediated and transferred to the BLM, the lands will be managed in perpetuity as a habitat reserve under the BLM's Resource Management Plan (RMP) and the Army's Habitat Management Plan (HMP). The HCP/RMP dictate a change in the historical vegetation distribution at Fort Ord. Until 1991, the majority of maritime and coastal chaparral has burned at one to ten year intervals in defensible polygon mosaics. According to the HCP, the frequent fire interval mosaics will be replaced by a mixed age distribution. This will increase the average age class from 1-10 years with average fire fuel loads of 1 to7 tons per acre, to 10 to50+ years, with average fire fuel loads of 5 to 35 tons per acre. Without the historic mosaic and firebreaks, the threat from both wind driven fires and fuel driven fires that progress beyond initial attack increases significantly.

Management as a habitat reserve will involve the BLM promulgating a mixed-age structure of maritime chaparral and periodic prescribed burning. The BLM anticipates that this prescribed burning may treat up to 1,500 acres each decade. The BLM intends to use the Army's fuelbreak roads in long-term management of the area, and may develop new fuelbreaks to support future prescribed burning operations.

Failure to assertively maintain reduced hazardous fuel zones, with prescribed burning or other means, will increase the likelihood of high-intensity uncontrolled wildland fires under severe fire weather conditions. Uncontrolled wildland fires originating at former Fort Ord threaten the Highway 68 corridor, specifically at Ryan Ranch, York School, Pasadera, Laguna Seca, and Hidden Hills. Del Rey Oaks, Monterey, Seaside, and the Bluffs off Reservation Road as well are identified in the county wide fire threat assessment, and document the at-risk community fire threat profile.

C. Highway 68

Wildland fires originating at Fort Ord and Laguna Seca threaten the areas contiguous to the Highway 68 corridor. Ryan Ranch, York School, Pasadera, Hidden Hills, Corral de Tierra, Toro Park, Del Rey Oaks, Monterey, Seaside, and the Bluffs are indicated as high threat by modeled FARSITE fire growth projections and fire threat assessment team evaluations. BLM land adjacent to Creekside and Toro Creek near Reservation Road has also been identified as a high priority for treatment.

D. North County

Presence of significant stands of manzanita and Eucalyptus trees subject to torching and fire brand spotting encourage fire growth in North County. Royal Oaks subdivision, Manzanita Park, Elkhorn Slough, Pesante Canyon, Mallory Canyon, and Long Valley present a complex of fire problems and public safety issues. Fire models and field verification for the North County area indicate rapid fire growth and a relatively broad fire front and asymmetric fire perimeter under severe fire weather conditions. Neighborhood-level evacuation routes, timing, safety zones, and large fire potential may receive further consideration and evaluation by the fire threat assessment team. Project includes enforcement of PRC 4291 defensible space around structures, providing improved ingress, egress, and evacuation planning, neighborhood fuel reduction, and a series of cooperative interconnecting strategic fuelbreaks, identification of defensible polygons, and hazardous fuel reduction prescribed burns.

E. Pine Canyon (South)

Pine Canyon west of King City is a rural suburban WUI intermixed with dense chaparral. The upper reaches of Reliz Canyon joins the upper watershed of Pine Canyon at the border of Ventana Wilderness, Department of Defense (Fort Hunter Liggett), and multiple private ownerships. A series of cooperative interconnecting strategic fuelbreaks, defensible polygons, and hazardous fuel reduction prescribed burns are planned. Cooperating agencies: CAL FIRE, USFS, BLM, FHLFD, NRCS, AND MBUAPCD.

F. Santa Lucia Fire Defense System (in Progress)

WUI occurs in and near the LPNF and Ventana Wilderness in Monterey County, at multiple locations where the wilderness boundary and/or LPNF boundary occur within the boundaries of an at-risk community's WUI. In the event of wildfire, at-risk communities such as Big Sur, Palo Colorado, White Rock, Carmel Valley, Jamesburg-Cachagua, Arroyo Seco, Reliz Canyon, Pine Canyon (South), Sierra de Salinas, Bryson Hesperia, and South Coast are threatened by and are threats to the LPNF and Ventana Wilderness, depending upon the fire's origin. Maintenance of historic and present firebreaks, fuelbreaks and hazardous fuel reduction zones both within and outside the LPNF/Ventana Wilderness is determined to be a high priority by this MCCWPP, and this MCCWPP makes recommendations in Section 9 and Appendix D accordingly.

The Santa Lucia Fire Defense System (in progress) is a network of interconnecting fire lines and fuelbreaks that protects at-risk communities from fires originating in the LPNF, and protects the LPNF from fires originating in at-risk communities. Development of the Santa Lucia Fire Defense System (SLFDS) is supported by private landowners adjacent to LPNF and BLM threat areas. Initial work was started on the SLFDS as part of the USFS Monterey Defensible Fuel Profile Zone (DFPZ) and the BLM Sierra de Salinas-Gabilan Fuel Reduction Project and Strategic Fuel Break System.

G. Sierra De Salinas-Gabilan Fuel Reduction Project and Strategic Fuelbreak System

The Sierra de Salinas rises on the west side of the Salinas Valley and extends from Fort Ord and Toro Park to Arroyo Seco in the north, continuing through Reliz Canyon to Camp Roberts in the south.

The ridge top of the northern Sierra de Salinas has historically been a Strategic Fuelbreak and is known as the Paloma Ridge Fire Trail. Ownership is principally private, with approximately 8,000 acres of Bureau of Land Management jurisdiction intermingled. BLM and landowners are cooperatively managing hazardous fuel reduction treatments. Structures and high value world class vineyards are at risk from high intensity wildfire, smoke damage, and erosion due to hazardously overgrown contiguous brush fields in the watershed. Stakeholders, fire districts, CAL FIRE, and the Bureau of Land Management are planning and defining interconnecting hazardous fuel treatment defensible polygons from Fort Ord and Toro Park south to the Jolon Grade.

The Gabilan Range runs on the east side of the Salinas Valley from the San Juan Grade in the north, south to the San Luis Obispo county line. In some locations the ridge top of the Gabilan Range is the Monterey-San Benito county line, part of which has historically been a Strategic Fuelbreak and fire access road. BLM has designated treatment within the Sierra de Salinas-Gabilan Fuel Reduction and Strategic Fuel Break Project. Stakeholders and agencies have cooperatively delineated contiguous strategic fuel breaks and prescribed fire units forming Defensible Polygons from San Juan Grade south to the Topo Ranch and Pinnacles National Park.

Prioritization is given to hazardous fuel reduction and annual maintenance of strategic fuelbreaks and defensible polygons with manual and mechanical treatments, livestock grazing, and frequent controlled burns. The Bureau of Land Management is in the process of establishing a permit procedure to allow adjacent private landowners to maintain fuelbreaks, conduct prescribed burns to include BLM lands, and to ultimately form strategic management response agreements between landowners and agencies for the project area.

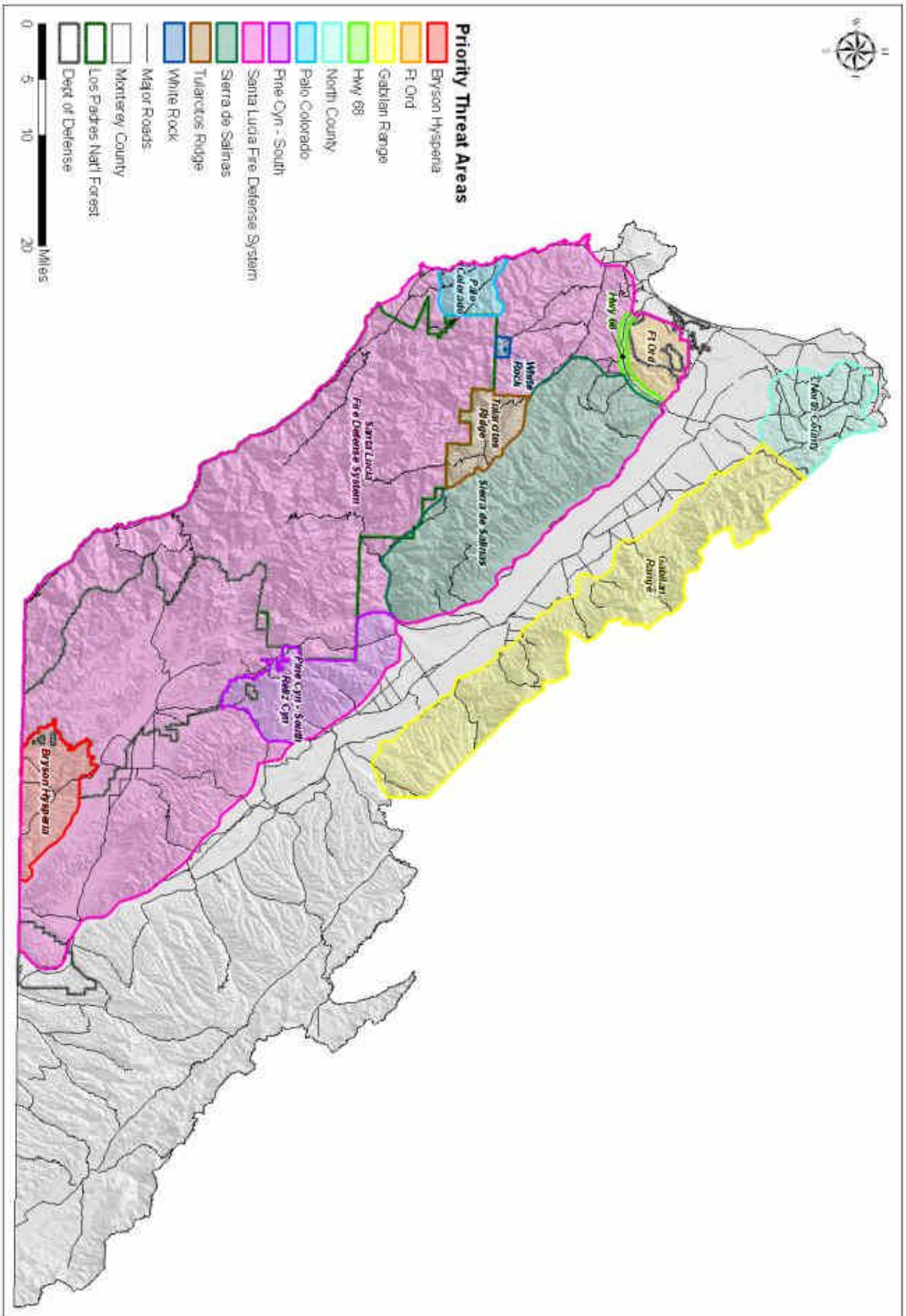
A combination of cooperative Range Improvement burn projects and Vegetation Management Program projects are planned with the objective of treating 10,000 acres annually.

H. Tularcitos Ridge

Tularcitos Ridge in the Jamesburg-Cachagua community is adjacent to Los Padres National Forest in a rural suburban WUI intermixed with dense chaparral and heavy mixed woodland. The project is subdivided into Tularcitos Ridge North, which extends from Sky Ranch to Rancho Galante, and Tularcitos Ridge South, which extends from Rancho Galante to Trampa Canyon and Tassajara Road. Project includes maintenance of defensible space around structures, ingress and egress, neighborhood fuel reduction, and a series of cooperative interconnecting Strategic Fuelbreaks, Defensible Polygons, and hazardous fuel reduction prescribed burns are planned.

I. White Rock

White Rock consists of approximately 100 residences at the confluence of White Rock Creek and Black rock Creek adjacent to the LPNF Ventana Wilderness boundary in the Carmel Valley area. Fuel reduction in the White Rock area may include maintenance of strategic fuelbreaks and hazardous fire fuel reduction projects, fire and non-fire.



Monterey County Community Wildfire Protection Plan

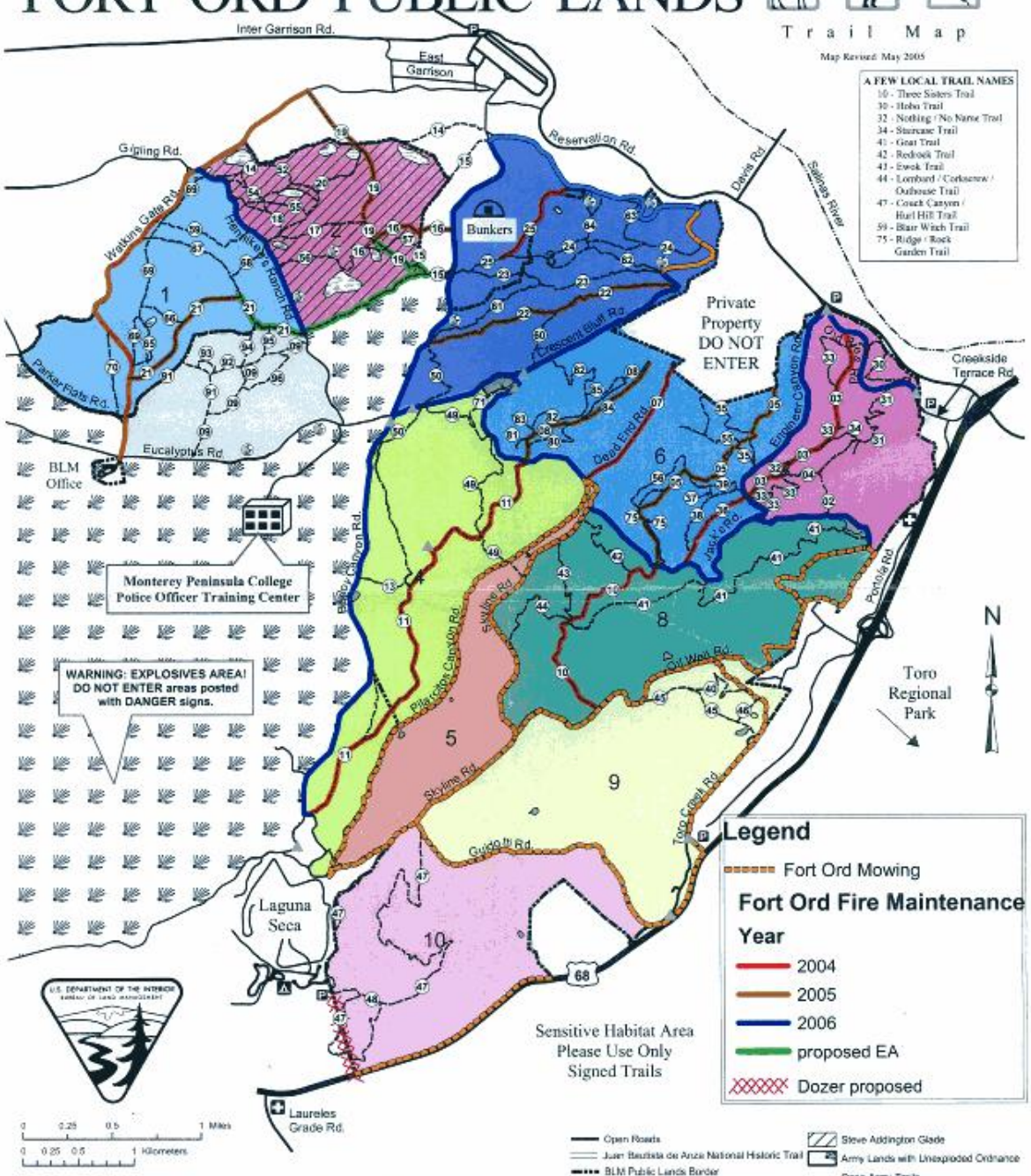
Monterey County Priority Threat Areas

Appendix I

FORT ORD PUBLIC LANDS

Trail Map

Map Revised: May 2005



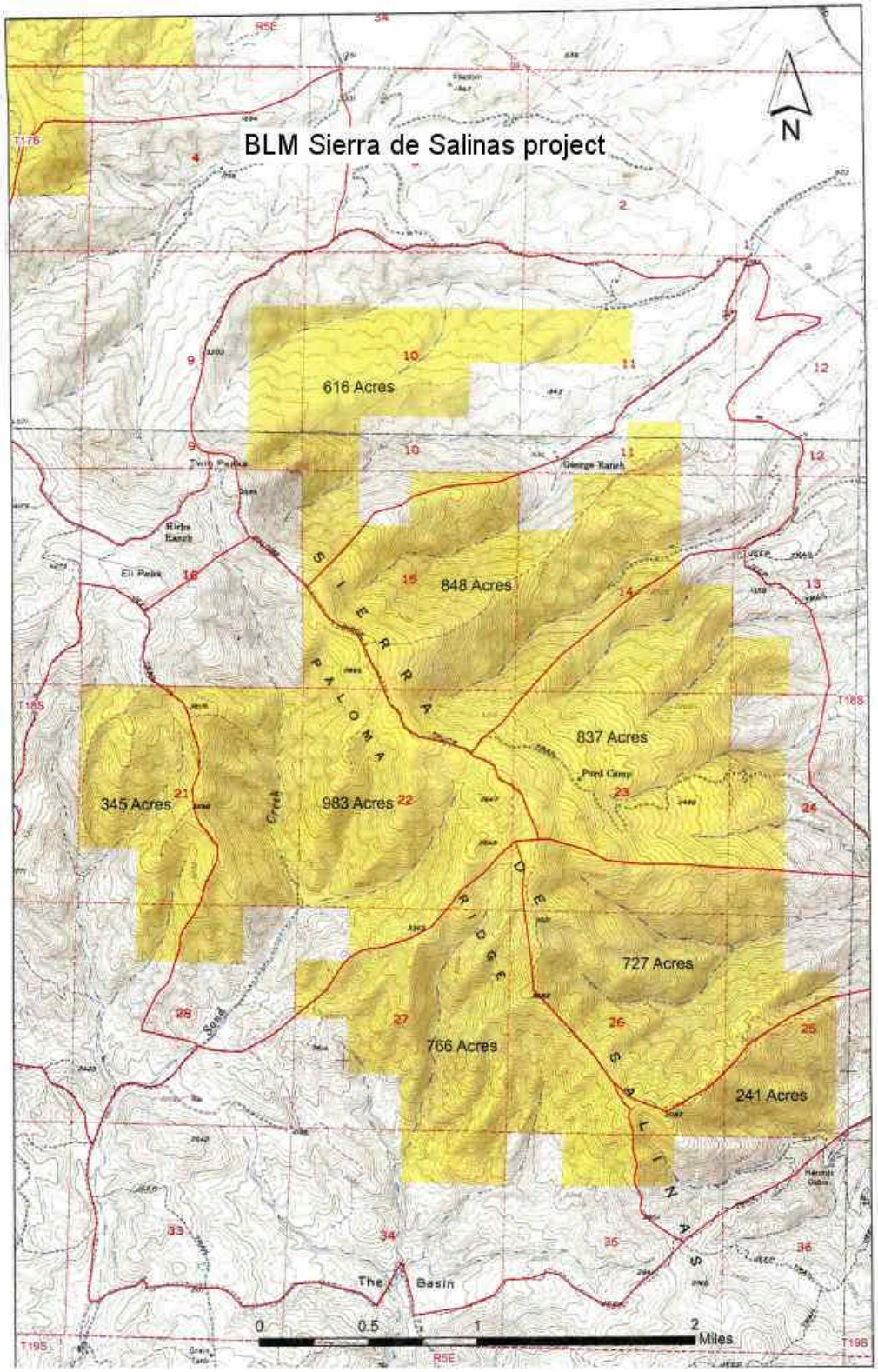
A FEW LOCAL TRAIL NAMES

10 - Three Sisters Trail
30 - Hobo Trail
32 - Nothing / No Name Trail
34 - Staircase Trail
41 - Goat Trail
42 - Redrock Trail
43 - Ewok Trail
44 - Lombard / Corkscrew / Outhouse Trail
47 - Couch Canyon / Hurl Hill Trail
59 - Blair Winch Trail
75 - Ridge / Rock Garden Trail

About Explosives at Former Fort Ord...

While every effort has and is being made to clear dangerous materials, 60 years of military occupation make it possible that live rounds and explosives may remain in public areas as well as posted areas.

DO NOT TOUCH unfamiliar objects, especially metal.
Instead, MARK THE LOCATION and CALL THE FEDERAL POLICE at (831) 242-7851 or (831) 242-7919.


BLM Sierra de Salinas project
N
616 Acres
848 Acres
837 Acres
345 Acres
983 Acres
727 Acres
766 Acres
241 Acres
SIERRA PALOMA
DEL RIO DE SALINAS
Sand Creek
Twin Peaks
George Ranch
Eli Peak
Pond Camp
The Basin
0 0.5 1 2 Miles
R5E
T17S
T18S
T19S

APPENDIX J

Comments on the 2010 MCCWPP

Monterey Fire Safe Council

2221 GARDEN ROAD, MONTEREY, CA 93940 (831) 333-2606 info@firesafemonterey.org

Protecting lives and property from harm by wildfire, we pledge our expertise, attention and support for fire safe projects throughout Monterey County.

November 20, 2010
Honorable Simon Salinas
Chair, Monterey County Board of Supervisors
168 West Alisal St., 3rd Floor
Salinas, CA 93901

Dear Chairman Salinas and Members of the Board:

The Monterey Fire Safe Council (MFSC) is the author of the enclosed Monterey County Community Wildfire Protection Plan (MCCWPP). The November 2010 MCCWPP has been significantly revised at the request of the Ventana Wilderness Alliance, Ventana Chapter of the Sierra Club, LandWatch, California Chaparral Institute, Monterey County staff and other interest groups, and differs significantly in principle and content from the original January 2010 and September 2010 MCCWPPs that had already been signed by the current 18 signatories of the November 2010 MCCWPP.

Notwithstanding the foregoing, the MFSC continues to fully support the discussions and recommendations that were removed from the January 2010 and September 2010 MCCWPPs to obtain Monterey County's signature on the November 2010 MCCWPP. The MFSC objects to the removal of those discussions and recommendations, which were intended to encourage the maintenance of firebreaks and reduce regulatory burdens that hinder hazardous fuel reduction work, in order to better protect life, property, and the environment, in that order of priority.

In order to foster continued discourse on the need to maintain firebreaks and the need to change laws and policies to expedite the hazardous fuel reduction work recommended in the MCCWPP, the MFSC is providing herewith the discussions and recommendations that were changed or removed from the January 2010 and September 2010 MCCWPPs as they were edited to the November 2010 MCCWPP. The MFSC believes that these discussions and recommendations are essential components in solving the problem of wildfire protection/prevention in Monterey County.

We ask that you carefully consider these discussions and recommendations during your deliberation on the November 2010 MCCWPP, and accordingly, direct your staff to work with the MFSC to solve the indicated problems.

The MFSC is supported in its position by the wildfire protection agencies that have joined the MFSC in signing this letter.

Discussions and Recommendations Changed in and/or Removed from the November 2010 MCCWPP to Obtain Monterey County's Signature on the MCCWPP

I. Note on the Collaborative Process used to write the MCCWPP

The MCCWPP was developed by a committee of the Monterey Fire Safe Council (MFSC) using Wildland Fire Leadership Council's *Preparing a Community Wildfire Protection Plan, A Handbook for Wildland-Urban Interface Communities*, (Handbook) as a guide, and accordingly, the development process was an open and collaborative process.

The MCCWPP was written over the course of years. Table 4 of the MCCWPP lists organizations that were sent letters of intent to develop the MCCWPP, and invited to participate in drafting it. Some groups that were not included in the original notice were added as the MFSC became aware of their interest. Participants in this process included fire professionals, concerned citizens, and representatives from various organizations including homeowners associations and conservation groups.

During this collaborative process, the working draft was placed on the Internet in an on-line document collaboration application (Acrobat Buzzword), and invitations to participate and enter comments were sent out to a lengthy email list of interested parties, thus affording interested parties an opportunity to collaborate using this convenient and accessible interface.

The January 2010 MCCWPP, which was signed by 18 agencies including CAL FIRE; the Monterey County Fire Chiefs Association and local fire districts, departments and volunteer fire brigades; USFS; BLM; the Presidio of Monterey/Fort Ord; and the California Department of Parks and Recreation), contained recommendations to amend local, state and federal laws and regulations to expedite fuel mitigation and fire preparedness efforts, to better protect lives, property and the environment, in that order of priority.

However, after the MCCWPP was finalized and signed by these 18 agencies, comments on the January 2010 MCCWPP were received from various environmental groups, some of which were invited to the meetings and had access to the document for submitting comments in Acrobat Buzzword. These late comments by some who chose not to participate during the two year collaborative process, included a request to remove the recommendations to change laws from the MCCWPP and strongly implied litigation against Monterey County if it signed the MCCWPP as then drafted.

In response to these comments, the MCCWPP was revised in the September 2010 MCCWPP. During Monterey County's review of the September 2010 MCCWPP, Monterey County staff and various environmental organizations requested additional changes to the document such as removing the following key discussions and recommendations from the MCCWPP: (1) recommended changes to laws to avoid hindrance of fuel reduction work, (2) recommendations that firebreaks be maintained, (3) the priority of protecting life, property and the environment in that order, (4) recommendations to Monterey County and other governmental agencies to interpret all laws and regulations to expedite hazardous fuel reduction work, and (5) fire science discussion. In order to help ensure signing of the MCCWPP by Monterey County to complete the document under the Healthy Forests Restoration Act (HFRA), revisions were made

that compromised the basic principles of the MFSC and potentially reduce the protection of life, property and the environment from wildfires in Monterey County.

II. Protecting Life Property and the Environment, in that Order of Priority

The January 2010 and September 2010 MCCWPPs contained numerous references to the need for all laws and regulations to be interpreted in the manner that is most protective of lives, property and the environment, in that order of priority. This important concept has been removed from the November MCCWPP at the request of environmental groups and Monterey County staff.

This order of priorities was inspired by *The Emergency California-Nevada Tahoe Basin Fire Commission Report to the governors of California and Nevada*, prepared by the Tahoe Basin Fire Commission in 2008 after the Angora Fire, which destroyed 254 homes. The Commission found that a contributing factor to the devastation was overregulation of vegetation removal by various agencies. For example, see Finding 7 on page 22 of the report, which can be found at http://resources.ca.gov/TahoeFireCommission/downloads/Final%20Docs/TahoeReport.pdf. The Commission repeatedly states the need for this order of priorities (i.e., life, property, and the environment). For example, see Category 5 (page 10 in the report), Recommendation 16 (page 79), Recommendation 74 (page 104), Recommendation 89 (page 110), Finding 2 (page 122), Finding 47 (page 224).

The MFSC recommends that Monterey County and other regulatory agencies adopt this order of priorities, and implement it, to reduce regulatory hindrances to performance of hazardous fuel reduction work to the minimum required by state and federal law.

III. Discussion of Vegetation/Fuels in Monterey County

Vegetation (or fuel) (as well as weather and topography) plays a major role in affecting fire behavior and shaping fire hazard potential. Vegetation distribution throughout the County varies by location and topography, with dramatic differences observed between coastal and inland regions. Current land cover/fuels distribution within the County is characterized by fourteen different vegetation/fuel types, as presented in the table below. Dominant vegetative cover within Monterey County is herbaceous or grassland cover (31.3 percent), distributed primarily in the low-lying valley areas along the Highway 101 corridor. While this fuel type can burn quickly under strong, dry wind patterns, it does not produce the high heat intensity and high flame lengths associated with chaparral fuel types. Other significant vegetative cover types include light brush (21.3 percent), light grass/woodland (14.8 percent), and hardwood litter (13.1 percent). These vegetation types are primarily associated with the steeper, upland areas in the southern, western, and northern portions of the County. Fire behavior in brush fuel types produces flame lengths greater than 12 feet, and resistance to control is high. Fire behavior in woodlands is variable, depending on surface fuel conditions and the presence of ladder fuels. However, crown fire is common if slope and wind conditions are favorable to allowing fire to enter into the crowns.

The distribution of fuels in Monterey County is graphically presented in Appendix B-2 of the MCCWPP.[1]

Table - Monterey County Land Cover/Fuels Distribution*

Fuel Model** Number	Description	Approximate Acreage	Percent Cover
1	Grass	662,270	31.3%
5	Light Brush	450,958	21.3%
2	Light Grass/Woodland	312,639	14.8%
8	Hardwood Litter	276,924	13.1%
97	Agriculture	240,714	11.4%
4	Heavy Chaparral	58,945	2.8%
28	Urban	43,525	2.1%
9	Light Conifer Litter	35,039	1.7%
98	Water	15,033	0.7%
10	Heavy Conifer Litter w/ Understory	9,007	0.4%
7	Young Maritime Chaparral	6,209	0.3%
99	Barren	5,698	0.3%
30	Maritime Live Oak Forest	95	0.0%
6	Moderate Brush	70	0.0%
	Total:	2,117,126	100.0%

**FRAP Monterey Fire Risk Analysis, 2006*
*** Fuel Model is a rating of vegetation and dead woody material and their volume, type, condition, arrangement, distribution and location.*

Variations in vegetative cover type and species composition have a direct effect on fire behavior. Some vegetation types and their associated plant species have increased flammability based on plant physiology (resin content), biological function (flowering, retention of dead plant material), physical structure (leaf size, branching patterns), and overall fuel loading. For

[1] Higher resolution vegetation cover maps are currently under development by CAL FIRE (FRAP), USGS and local universities. Due to the small scale patch mosaic characteristics of Monterey County's landscape, these maps may provide a more accurate representation of forest and vegetation cover than those currently available. The Watershed Institute at CSUMB has produced a 30 meter resolution map of the Central Coast Bioregion. The map is being edited to provide GIS data and ground cover percentages limited to the boundaries of Monterey County. First approximations suggest that both Mixed Conifer/Montane Forests and Oak Woodland/Mixed Forest cover may be greater than current estimates due to the lower resolution used in current maps.

example, the overgrowth of native shrub species that compose chaparral vegetation types present a high potential hazard based on such criteria.[2]

Vegetation type and condition plays a significant role in fire behavior. A critical factor to consider is the dynamic nature of vegetation types. Fire presence and absence at varying cycles or regimes affects vegetation type succession. Biomass and associated fuel loading will increase over time, assuming that fire disturbance does not occur or hazardous fuel reduction efforts are not implemented.

Over the past century, public policy has required the active suppression of fires, which has resulted in large contiguous areas of overgrown and overmature hazardous fuel beds with a large concentration of down-dead fuel that contribute to high-cost, suppression-resistant, high intensity wildfires, thereby threatening communities, natural vegetation types, wildlife habitat and lives and property. On balance, current fire suppression policy is beneficial, however, it has resulted in hazardous fuel loads that should be reduced to lower the risk of high intensity wildfires.[3]

Lack of fire has changed habitat that is critical for certain wildlife species. When the number and extent of forest openings, or gaps, is reduced as forest density increases due to fire suppression, key shade-intolerant herbaceous and shrub species are also diminished (particularly nitrogen fixers such as *Ceanothus* spp.). Wildlife that depends on these plants, such as deer, has less available habitat.[4]

These overgrowth conditions affect the abundance and diversity of wildlife species directly by creating unfavorable habitat conditions for some species. For example, dense understory growth may adversely affect habitat quality for California spotted owls and northern goshawks by limiting their access to prey.[5]

Problems associated with vegetation changes that increase the risk of unnatural high-intensity wildland fires tend to be especially prevalent at elevations common in mountainous

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[2] Griffin, J.R. 1978. The Marble-Cone fire ten months later. Fremontia 6(2):8–14.

Hanson & Usner 1993. The Natural History of Big Sur. University of California Press, Berkeley, pp. 232-238.

Minnich, R.A., and Chou, Y.H. 1997. Wildland fire patch dynamics in the chaparral of southern California and northern Baja California. Int. J. Wildland Fire 7, 221–248.

[3] Agee, J. K. 1993. Fire ecology of Pacific Northwest forests. Island Press, Wash., D.C. p. 493.

Agee, J.K. 2002. The fallacy of passive management: managing for firesafe forest reserves. Conservation Biology in Practice 3(1):18-25.

Franklin, J.F. & Agee, J.K. 2003. Forging a Science-Based National Forest Fire Policy. Issues in Science and Technology. Fall 2003 pp. 1-8.

Moghaddas, J.J 2006. A Fuel Treatment Reduces Potential Fire Severity and Increases Suppression Efficiency in a Sierran Mixed Conifer Forest. In: Andrews, Patricia L.; Butler, Bret W., comps. 2006. Fuels Management—How to Measure Success: Conference Proceedings. 28-30 March 2006; Portland, OR. Proceedings RMRS-P-41. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

[4] Page I-6, Environmental Impact Statement, Final Yosemite [National Park] Fire Management Plan (Yosemite EIS)*;* citing Bonnicksen and Stone 1982; www.nps.gov/archive/yose/planning/fire/pdf/fire.pdf. This paragraph and the following three paragraphs are taken almost verbatim from the above referenced document.

[5] Yosemite EIS, page IV-34; citing Weatherspoon *et al*. 1992, Maurer 2000.

areas of Monterey County. There, the natural mosaic of diverse vegetation types and ages can be replaced by dense, continuous stands of shrubs and trees because of the success of fire suppression.[6]

The density of trees and shrubs can create a hazardous arrangement, both horizontally and vertically, of closely-standing burnable vegetation, or fuel ladders, in the understory. Fuel ladders help fires ascend into the larger trees, or overstory. This combination of fuel ladders and a high density of fuels can also increase the potential for insect and pathogen infestations which, if they cause tree die-off, increase the potential for fire. In the event of high-intensity uncontrolled wildfire, whole landscapes can be denuded and reverted to shrub communities, watershed processes can be compromised, and other environmental values can be greatly altered.[7]

California is a fire-adapted ecosystem. However, abnormal high-intensity wildfire disturbances can have dramatic impacts on plants and plant composition.

The normal post-fire response to moderate and low-intensity fire for most species is diverse vegetative reproduction and desirable stimulation of flowering and fruiting. However, fire suppression can contribute to high vegetation density, which in turn increases fire intensity in the event of a wildfire. Unnaturally high heat intensity fires alter natural processes and can result in hydrophobic layers in soils, vegetation type-conversion and loss of habitat. The combustion of aboveground biomass alters seedbeds and temporarily eliminates competition for moisture, nutrients, heat, and light. Species that can rapidly take advantage of the available resources will flourish.

Hydrophobic soil conditions resulting from unnatural high intensity wildfires can cause debris flows and mudflows, which have potential to alter streambed and riverbed conditions and water turbidity. Altered streambed and water quality conditions can in turn result in adverse impacts on species that rely on natural streambed conditions and water quality for survival.

For purposes of establishing new, or maintaining historic Strategic Fuelbreaks and wildfire buffer zones in overgrown areas in and around at-risk communities, it is possible to alter successional pathways to reduce fire intensity for varying vegetation types through applied vegetation management, prescribed fire application, manual and mechanical alteration, and prescribed grazing, restoring an approximation of natural conditions. This concept is a key component in the overall establishment and maintenance of the Strategic Fuelbreaks, Mitigation Zones, and other hazardous fuel reduction measures included in this MCCWPP.

Sudden Oak Death - Of concern within Monterey County is the presence of the Sudden Oak Death (SOD) pathogen (*Phytophthora ramorum*) that primarily affects tanoaks (*Lithocarpus densiflorus*), coast live oaks (*Quercus agrifolia*), and other oak and tree species found in forest and woodland environments, both coastal and inland. Other affected species include California bay trees (*Umbellularia californica*), rhododendron, coast redwood (*Sequoia sempervirens*) and many other tree and plant species. The potential for SOD is concentrated primarily in the coastal

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[6] Yosemite EIS, page I-7.

[7] Yosemite EIS, page I-7.

portions of Monterey County, as the pathogen is a water mold that requires moist environments for survival and spore dissemination. The SOD pathogen infects the water flow system of susceptible trees and shrubs, eventually blocking this flow and resulting in rapid plant/tree mortality. Precautions must be used when handling infected plant material and/or tools used in trimming/removal of infected wood if they will be transported outside Monterey County. More information on SOD can be found via the California Oak Mortality Task Force (http://www.suddenoakdeath.org/index.html).

Pitch Canker - Also of concern is the continuing effect of pitch canker disease on the pine forests in Monterey County. Although the disease affects a number of pine species, the largest impact is on the signature Monterey pine trees *(Pinus radiata)* in the forested coastal areas of the County. Pitch canker occurs in response to a fungal infection and is characterized by resinous cankers on the trunk, branches or roots accompanied by needle wilt, limb dieback and eventual tree mortality. Monterey Pines in close association with disturbed or developed areas have a higher disease rate than native stands. The fungus (*Fusarium circinatum*) is spread through distribution of the fungal spores by contact with infected material and by insect vectors including several species of bark, twig and cone beetles. A management and research program was adopted in 1995 under the direction of the Pine Pitch Canker Task Force (http://frap.cdf.ca.gov/pitch_canker/). Precautions to prevent the spread of the disease were developed as part of the Pitch Canker Action Plan (available at the above website) and are similar to those outlined in the above discussion of Sudden Oak Death.

The implication of these forest diseases and insect infestations in relation to fire prevention and protection is the relatively rapid mortality that occurs, resulting in increased dead fuel loads. Standing dead fuels contribute to increased wildfire hazard and require treatment and/or removal, especially within wildland-urban interface areas.

The Wilderness Act provides a special provision for "fire, insects and diseases" that lists exceptions to the act's prohibitions, which includes among others, the use of mechanized equipment within wilderness when needed to address these problems.[8]

IV. Regulatory Framework Discussion and Interpretation of Laws and Regulations

The MFSC recommends that the complex framework of federal, state and local laws and regulations that affect the ability to perform wildfire fuel reduction work be interpreted by all regulatory agencies in the manner most favorable to allowing and facilitating such work where it is needed to protect lives, property or the environment, in that order of priority.

Long term benefits to plants and wildlife from wildfire fuel reduction outweigh short-term impacts that may result from vegetation management activities. Vegetation in some areas has not burned for multiple natural fire-return intervals, which, together with regulations that may make it difficult and costly to remove excess vegetation, can result in hazardous overgrowth. Such overgrowth can adversely impact the ability of wildlife to forage, and threatens all species, including protected species, with unnatural high heat intensity wildfire when fire inevitably occurs.

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[8] 16 USC 1133(d)(1) and *Sierra Club v. Lyng* (1987) 663 F.Supp. 556.

The goal is to enable and encourage landowners to perform the essential task of managing vegetation, to advance and foster much needed wildfire fuel reduction work as expeditiously as possible. To the extent that favorable interpretation of regulations is not adequate to avoid regulatory hindrances, the MFSC recommends changes to law to allow and facilitate reduction of hazardous fuel loads in Monterey County.

In order to understand this complex regulatory framework, applicable federal, state and local laws are summarized below.

A. Applicable Federal Laws

1. Healthy Forests Restoration Act

Devastating wildfires in the western United States at the turn of this century resulted in action by the Western Governors Association in concert with the Secretaries of Agriculture and Interior, counties, southern governors, and tribes, to address the wildfire fuel overgrowth problem at a national level. In 2002, the Western Governors Association agreed on a plan called *A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Strategy*.

In 2003, Congress enacted the Healthy Forests Restoration Act of 2003 (HFRA). The HFRA improves the ability of the United States Secretary of Agriculture and Secretary of Interior to conduct hazardous fuel reduction projects on National Forest System lands and BLM lands, to protect communities, watersheds, and infrastructure from catastrophic wildfire. The major provisions of the HFRA include the following: (1) a streamlined National Environmental Policy Act (NEPA) process for wildfire fuel treatments and other activities that would reduce hazardous wildfire fuels on Federal land and, (2) incentives for local communities to prepare Community Wildfire Protection Plans (CWPP) that prioritize where fuel reduction should take place on Federal lands, and where federal fuel reduction funds should be expended on private lands (e.g., fuel reduction grants).

The MCCWPP was prepared pursuant to provisions of the HFRA, recognizing that certain large federal land holdings influence wildfire risk to nearby state, county and private lands, and local communities. In accordance with section 101 of the HFRA, this MCCWPP: (1) identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment on federal and non-federal land that will protect at-risk communities, watersheds and essential infrastructure; and (2) recommends measures to reduce structural ignitability throughout at-risk communities. Pursuant to section 103 of the HFRA, through the preparation of the MCCWPP and subsequent community-specific CWPPs, federal fuel reduction funding priorities on federal and non-federal land should be allocated to protecting those at-risk communities described in the MCCWPP and local CWPPs, and to those fuel reduction projects prioritized in Appendix D of the MCCWPP.

2. Wilderness Acts

Approximately 86 percent of the Monterey Ranger District of the LPNF is designated as wilderness, totaling about 263,000 acres or 12.5 percent of Monterey County's land area.

The wilderness is designated as two areas, (1) the Ventana Wilderness and (2) the Silver Peak Wilderness. Each wilderness area has been the subject of multiple acts of Congress. Congress has repeatedly stated its intent that exceptions are made to wilderness prohibitions so these wilderness areas can and will be managed to protect communities and watersheds from wildfire.

2.1. Wilderness Act of 1964

The Wilderness Act of 1964 (Wilderness Act) generally prohibits use of motor vehicles and motorized equipment within wilderness areas.

However, the Wilderness Act also provides a special provision for "fire, insects and diseases" as exceptions to its prohibitions, including, among others, the use of mechanized equipment within wilderness areas to plan for and combat these specific dangers.[9]

The MFSC recommends to the Secretary of Agriculture that certain firebreaks and fuelbreaks in the LPNF be maintained year round. Some of these firebreaks and fuelbreaks are in wilderness, hence this exception to Wilderness Act prohibitions on use of motorized equipment is important to the protection of lives, property and the environment.

2.2. The Endangered American Wilderness Act of 1978

The Endangered American Wilderness Act of 1978 (Wilderness Act of 1978) builds upon the above referenced exceptions in the Wilderness Act, applying additional exceptions for fire presuppression measures and techniques specifically to the Ventana Wilderness to guarantee the continued viability of watersheds and the continued health and safety of communities. The Wilderness Act of 1978 authorizes the USFS to take whatever appropriate actions are necessary for fire prevention, reading in pertinent part:[10]

> In order to guarantee the continued viability of the Ventana watershed and to insure the continued health and safety of the communities serviced by such watershed, the management plan for the Ventana area to be prepared following designation as wilderness shall authorize the Forest Service to take whatever appropriate actions are necessary for fire prevention and watershed protection including, but not limited to, acceptable fire presuppression and fire suppression measures and techniques. Any special provisions contained in the management plan for the Ventana Wilderness area shall be incorporated in the planning for the Los Padres National Forest. …

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[9] See, 16 USC 1133(d)(1) and, *Sierra Club v. Lyng* (1987) 663 F.Supp. 556.

[10] See, the Endangered American Wilderness Act of 1974, section 2(d).

The legislative history of the Wilderness Act of 1978 clarifies that Congress intended the above language to allow exceptions to wilderness prohibitions due to the extreme hazard of forest fires in the LPNF. The report on the Wilderness Act of 1978 by the Senate Committee on Energy and Natural Resources reads in pertinent part as follows:[11]

> Due to the extreme hazard of forest fires in the Los Padres National Forest, the committee adopted the special management language for the Santa Lucia and Ventana Wilderness areas approved by the House authorizing the Forest Service "to take whatever appropriate actions are necessary for fire prevention and watershed protection included [*sic*] but not limited to acceptable fire pre-suppression and fire suppression measures and techniques."

2.3. The California Wilderness Act of 1984

The California Wilderness Act of 1984 (Wilderness Act of 1984) expanded the Ventana Wilderness, and section 103(b)(2) of this Act referenced the following exception in the Wilderness Act for the control of fire:[12]

> As provided in subsection 4(d)(l) of the Wilderness Act, the Secretary concerned may take such measures as are necessary in the control of fire, insects, and diseases, subject to such conditions as he deems desirable. …

Legislative history on the Wilderness Act of 1984 explains that the intent of Congress was to emphasize the authority of the Secretary of Agriculture to address the threat of fire in whatever manner the USFS determines to be necessary in California wilderness areas due to overgrown forests and California's arid climate. Expressing this intent, the report by the House Committee on Interior and Insular Affairs on the Wilderness Act of 1984 reads in pertinent part as follows:[13]

> Fire management—Due to the arid climate, high seasonal temperatures and buildup of fuel that exists in so many California roadless areas, especially in Southern California, fire management is a key concern. … Not only does the threat of wildfire pose a danger to public safety, but uncontrolled fires can also cause severe damage to watersheds, water quality and other beneficial wilderness values.
>
> To address this concern in the [Wilderness Act of 1984], the Committee reiterated the fire provisions of Section 4(d)(1) of the Wilderness Act. … As the Committee stressed … this provision is intended to grant the Forest Service with the means of utilizing such measures or tools as it deems "necessary" and "desirable" in the control of [*sic*] presuppression of fire in

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[11] See, Senate Report 95-490 on H.R. 3454 (The Endangered American Wilderness Act of 1978), 95th Congress 1st session October 11, 1977, Senate Committee on Energy and Natural Resources.

[12] 16 USC 1133.

[13] See, House Report 98-40 on H.R. 1437 (P.L. 98-425), 98th Congress 1st session, March 18, 1983, House Committee on Interior and Insular Affairs.

> wilderness areas. In some instances, the Forest Service has exercised this broad authority [for] fire roads, fuel breaks or other management. … The major point to be made however, is that the Wilderness Act permits the Forest Service to utilize measures necessary to control wildfire, or the threat of fire, in wilderness areas. Obviously, such measures should, to the maximum extent practicable, be implemented consistent with maintaining the wilderness character of areas, while at the same time protecting the public health and safety and protecting private property located immediately adjacent to wilderness areas.

2.4. Los Padres Condor Range and River Protection Act (1992)

The Los Padres Condor Range and River Protection Act (Los Padres Act of 1992) expanded the Ventana Wilderness and created the Silver Peak Wilderness in Monterey County. In the Act, Congress again reiterated exceptions to the Wilderness Act prohibitions which allow for fire presuppression measures within wilderness in order to protect watersheds and communities. Section 3(b) of the Los Padres Act of 1992 reads as follows:

> FIRE PREVENTION AND WATERSHED PROTECTION —In order to guarantee the continued viability of the watersheds of the wilderness areas designated by this Act and to ensure the continued health and safety of the communities serviced by such watersheds, the Secretary of Agriculture may take such measures as are necessary for fire prevention and watershed protection including, but not limited to, acceptable fire presuppression and fire suppression measures and techniques.

2.5. Big Sur Wilderness and Conservation Act of 2002

The Big Sur Wilderness and Conservation Act of 2002 (Wilderness Act of 2002) expanded the Ventana Wilderness and the Silver Peak Wilderness. Congress again provided exceptions to wilderness prohibitions to allow for fire presuppression measures and techniques. Section 4 of the Wilderness Act of 2002 reads as follows:

> SEC. 4. WILDERNESS FIRE MANAGEMENT.
>
> (a) REVISION OF MANAGEMENT PLANS.—The Secretary of Agriculture shall, by not later than 1 year after the date of the enactment of this Act, amend the management plans that apply to each of the Ventana Wilderness and the Silver Peak Wilderness, respectively, to authorize the Forest Supervisor of the Los Padres National Forest to take whatever appropriate actions in such wilderness areas are necessary for fire prevention and watershed protection consistent with wilderness values, including best management practices for fire presuppression and fire suppression measures and techniques.
>
> (b) INCORPORATION INTO FOREST PLANNING.—Any special provisions contained in the management plan for the Ventana Wilderness

> and Silver Peak Wilderness pursuant to subsection (a) shall be incorporated into the management plan for the Los Padres National Forest.

2.6. Los Padres National Forest Management Plan (LPNF Management Plan)

Consistent with the Wilderness Act of 1978 and the Wilderness Act of 2002, the USFS prepared the LPNF Management Plan. An EIS and a ROD was adopted for the LPNF Management Plan in April 2006. The ROD includes the following language to describe the overall intent of the plan:

> [W]e will be doing fuels work in the Wildland/Urban Interface (WUI) Defense and Threat zones for community protection. In these areas, the emphasis is on vegetation treatments that are expected to create conditions allowing fire fighters to work safely in the area. Wildlife habitat requirements are still an emphasis. However, to be absolutely clear, the protection of human life and property is our highest priority. While we do the work in the WUI Defense and Threat zones, we will try to maintain habitat in a condition that will support the species that live there, but we will meet the criteria for community defense. If there is a trade-off, human life and property will be the priority.[14]

The LPNF Management Plan describes the WUI and WUI zones as follows:

> There are extensive areas within and adjacent to the national forests of southern California meeting the definition of Wildland/Urban Interface (WUI) as described in the Healthy Forests Restoration Act of 2003. WUI (as defined by the Act) is a variable width … as defined in individual community fire protection plans. This forest plan further identifies a direct protection zone (WUI Defense Zone) and an indirect protection zone (WUI Threat Zone) that fall within the broader definition of WUI. A WUI Defense Zone is the area directly adjoining structures and evacuation routes that is converted to a less-flammable state to increase defensible space and firefighter safety. The WUI Threat Zone is an additional strip of vegetation modified to reduce flame heights and radiant heat. The Threat Zone generally extends approximately 1 1/4 miles out from the Defense Zone boundary. Yet, actual extents of Threat Zones are based on fire history, local fuel conditions, weather, topography, existing and proposed fuel treatments, and natural barriers to fire and community protection plans, and therefore could extend well beyond the 1 1/4 mile. The two zones together are designed to make most structures more defendable.[15]

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[14] Record of Decision, Los Padres National Forest Land Management Plan, page 11

[15] Appendix K, Guidelines for Development and Maintenance of WUI Defense and Threat Zones, page 81 in Part 3, Design Criteria for Southern California National Forests, of the Land Management Plan [for the Los Padres National Forest, 2005].

Thus, the LPNF Management Plan provides for fire presuppression measures in WUI areas, where the WUI areas are defined in the MCCWPP and local CWPPs, including WUI that is within the national forest.

Moreover, the EIS for the LPNF Management Plan analyzed impacts from constructing fuelbreaks at distances up to 7.5 miles from structures, or more, depending upon the distance fire may burn in the area during a 24 hour period (calling this area the "WUI environment"):

> Fuelbreak construction and maintenance … usually would occur outside the Defense zones, in both the WUI Threat zone and in the WUI environment (a distance of up to 7.5 miles from developments, or the distance that fires may burn in a 24-hour period during normal summer conditions).[16]

The LPNF Management Plan includes fire and fuel management planning. Forest Goal 1.2 discusses community protection through vegetation treatment in the WUI and strategically located fuelbreaks and associated burns. The LPNF Management Plan also states that existing fuelbreaks are to be maintained using prescribed fire, fireline explosives, grazing, herbicide or mechanical methods.[17] As explained above, such measures in the LPNF Management Plan are allowed in wilderness (it is specifically mandated), pursuant to the wilderness acts and the express intent of Congress, to the extent they are needed to protect communities and watersheds from wildfire.

3. National Environmental Policy Act (NEPA)

Any proposed fuel treatment projects on federal land or requiring federal discretionary approval will require compliance with NEPA. Fuel reduction treatments on non-federal land that do not use federal funding and do not require federal discretionary approval generally do not require NEPA review. If NEPA review applies, projects implementing a fuel reduction recommendation in a CWPP on Federal land, that is within a WUI, or within 1.5 miles of an at-risk community, are afforded expedited NEPA review under the HFRA.

Moreover, fuel reduction treatments recommended for USFS and BLM land in a CWPP must be considered in the NEPA analysis by the USFS or BLM as an alternative to the agency's proposed project. As provided by the HFRA, if a federal fuel reduction project is within a WUI, but more than 1.5 miles from the at-risk community's boundary, the USFS and BLM are required to consider only one alternative other than the proposed project.[18] If the fuel reduction project is within 1.5 miles of the boundary of the at-risk community, the USFS and BLM are not required to consider any alternative to the proposed project. This expedited NEPA process does not apply to certain fuel reduction treatments within wilderness areas. As discussed previously, the USFS prepared the LPNF Management Plan and an associated EIS, and a ROD was issued in April

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[16] Final Environmental Impact Statement, Volume 1, Land Management Plan [for the Southern California National Forests], page 315,

[17] See, page 22, Los Padres National Forest Land Management Plan, Part 2, Los Padres National Forest Strategy.

[18] Note that without this provision, 2 or more alternatives must be considered, one of which must be a "no action" alternative.

2006. The key community protection factors in the ROD for the LPNF Management Plan are listed below:[19]

- Emphasizes the protection of lives and property;
- Includes the flexibility to adjust WUIs according to CWPPs; and
- Retains access.

As noted above, the LPNF Management Plan also discusses the maintenance of existing fuelbreaks using prescribed fire, fireline explosives, grazing, herbicides or mechanical methods. Herbicide use may delay need for mechanical treatment, especially when there is a diminished workforce. Most of the fuelbreaks are in high-hazard chaparral areas and are designed to limit wildland fire size and provide firefighter access and improve firefighter safety. A few of the fuelbreaks are in coniferous forest and serve to limit fire spread from or towards communities or timber stands in poor condition. Most of the existing fuelbreaks are on ridgetops or along roads.[20] The potential environmental impacts associated with the following activities were fully analyzed in the EIS and, therefore, comply with NEPA: (1) the establishment of WUIs, (2) fuel reduction activities, and (3) the maintenance of existing fuelbreaks in the LPNF, as described in the LPNF Management Plan.

The Departments of Agriculture and Interior enacted categorical exclusions to NEPA for hazardous fuel reduction activities and rehabilitation activities for lands and infrastructure impacted by fires or fire suppression.[21] The categorical exclusions are limited to (1) those activities identified through a collaborative framework as described in the 10-Year Comprehensive Strategy Implementation Plan; (2) fuel reduction activities that are within a WUI, or, if outside the WUI, in Condition Classes 2 or 3 in Fire Regime Groups I, II, or III; (3) hazardous fuels reduction activities using fire, limited to 4,500 acres; (4) mechanical hazardous fuels reduction activities, limited to 1,000 acres; (5) fuel reduction and rehabilitation activities that are not in wilderness areas or where they would impair the suitability of wilderness study areas for preservation as wilderness; and (6) fire rehabilitation activities of not more than 4,200 acres.

4. Federal Endangered Species Act (ESA)

In accordance with the ESA, fuel reduction activities proposed in the MCCWPP must avoid a take of federally listed threatened or endangered species, or, if a take cannot be avoided, the take must be authorized pursuant to the ESA. The USFWS has the authority to expressly authorize the take of threatened or endangered species or impacts to their critical habitat incidental to fire prevention/protection activities. Such authorization may be received pursuant to a memorandum of understanding between the USFWS, fire authorities, and other interested entities, as demonstrated in the memorandum of understanding (MOU) executed by and between USFWS, the California Department of Fish and Game (CDFG), CAL FIRE and other fire

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[19] Record of Decision, Los Padres National Forest Land Management Plan, page 5.

[20] See, Los Padres National Forest Land Management Plan, Part 2 Los Padres National Forest Strategy, page 22.

[21] See, Federal Register, Vol. 68, No. 108, June 5, 2003.

agencies and districts for fuel reduction activities in San Diego County. The purpose of San Diego County's memorandum of understanding (San Diego MOU) is,

> [T]o establish guidelines by which the CDF, Fire Chiefs and the Districts can continue to protect lives and property from the threat of fire by requiring the abatement of flammable vegetation pursuant to State Law, County and District ordinances and Cities' municipal codes and to establish a cooperative mechanism whereby the [US Fish and Wildlife] Service and [the] Department [of Fish and Game] may assess, minimize, and help account for potential adverse impacts to sensitive species and habitats resulting from vegetation abatement activities.[22]

In addition to creation of defensible space, the San Diego MOU states:

> The management purposes for which this San Diego MOU is issued are:
>
> ***
>
> 4. Any measures as deemed necessary by the Fire Chief and in accordance with the Guideline section of this MOU.

The San Diego MOU also provides in section IV:

> Property owners, their lessees, [CAL FIRE], fire districts and cities shall not be required to perform biological surveys as a condition precedent to performance of the fire protection activities established by the guidelines set forth in Section 1.

Because the MCCWPP aims to ensure that wildfire fuel reduction work that is needed to protect lives, property or the environment, in that order of priority, can be achieved with as little regulatory hindrance as possible, the MCCWPP recommends that a similar MOU be entered into by and between applicable regulatory agencies to allow the take of listed species and impacts to critical habitats incidental to the fuel reduction activities described in the MCCWPP and in local CWPPs, without requiring biological surveys, incidental take permits, mitigation measures, conservation plans, or other requirements as a condition to performance of such activities.

B. Applicable State Laws

1. California Constitution

Article 1, Section 1 of the California Constitution reads as follows:

> All people are by nature free and independent and have inalienable rights. Among these are enjoying and defending life and liberty, acquiring, possessing, and protecting property, and pursuing and obtaining safety, happiness, and privacy.

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[22] San Diego MOU can be found at the following link:
http://www.co.san-diego.ca.us/dplu/docs/MemoofUnder.pdf

While no rights are absolute, fundamental rights such as the rights to defend life, protect property, and pursue and obtain safety, may be infringed only to the minimum extent necessary to promote a compelling government interest. The MFSC recognizes that wildfire fuel overgrowth is a threat to lives, property and the environment, and seeks to help residents of hazardously overgrown areas in Monterey County exercise their right to defend their lives, protect their property, and pursue and obtain safety by enabling them to complete wildfire fuel reduction work and provide for emergency ingress and egress with the least regulatory hindrance permissible under law.

2. Division 4 of California Public Resources Code (PRC) – Forests, Forestry and Range and Forage Lands

2.1 Title 14 CCR 1299 and Defensible Space Guidelines

In 2006, the Board of Forestry and Fire Protection, which a government-appointed body within CAL FIRE, promulgated a regulation to implement the defensible space provisions of PRC section 4291. The regulation was codified in Title 14, section 1299 of the California Code of Regulations (14 CCR 1299).

14 CCR 1299(b) provides the following specific mandatory language: "Any vegetation fuels identified as a fire hazard by the fire inspection official of the authority having jurisdiction shall be removed or modified provided it is required by subsection (a)(1) & (a)(2)."

Subsections (a)(1) and (a)(2) state as follows:

> (a) A person that owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, and is within State Responsibility Area, shall do the following:
>
> (1) Within 30 feet from each building or structure maintain a firebreak by removing and clearing away all flammable vegetation and other combustible growth pursuant to PRC § 4291(a). Single specimens of trees or other vegetation may be retained provided they are well-spaced, well-pruned, and create a condition that avoids spread of fire to other vegetation or to a building or structure.
>
> (2) Within the 30 feet to 100 feet zone (Reduced Fuel Zone) from each building or structure (or to the property line, whichever is nearer to the structure), provide a fuelbreak by disrupting the vertical and/or horizontal continuity of flammable and combustible vegetation with the goal of reducing fire intensity, inhibiting fire in the crowns of trees, reducing the rate of fire spread, and providing a safer environment for firefighters to suppress wildfire pursuant to PRC § 4291(b).

Subsection (c) broadens and adds flexibility to CAL FIRE's authority by stating the following:

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

The mandatory language provided in 14 CCR 1299 does not provide or allow for any discretion by any other agency to prohibit or disapprove the defensible space activities required under 14 CCR 1299. That is, the creation of defensible space is an absolute requirement and not subject to any discretionary approval.

14 CCR 1299(c) also references a guidance document for implementation of this regulation, which is entitled, General Guidelines for Creating Defensible Space (Guidelines), as published by the Board of Forestry by resolution adopted on February 8, 2006. The Guidelines provide criteria intended to instruct individuals and fire officials on acceptable ways to comply with 14 CCR 1299, and are incorporated into section 14 CCR 1299 by reference. See Appendix J for the Guidelines.

2.1.1 California Environmental Quality Act (CEQA) Review of 14 CCR 1299 and Guidelines

The Board of Forestry considered adoption of 14 CCR 1299 and its associated Guidelines a "project" subject to CEQA (Project), and the scope of the CEQA review was the Project's ultimate effect on the environment. Generally, CEQA defines the term "project" as an activity carried out, supported by, or authorized by a public agency, "which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. ..."[23] CEQA is discussed further in Section 3.3.2.4 of this MCCWPP.

CAL FIRE[24] is the lead agency for the Project, because it has the principal responsibility for carrying out or approving the Project. CAL FIRE, as the lead agency, is responsible for preparing the appropriate CEQA review for the Project.[25]

An initial CEQA review[26] concluded that the Project was categorically exempt from CEQA. This initial review considered impacts to water quality, fish, wildlife and plant habitat, and aesthetic settings. The Board of Forestry then published a Notice of Public Hearing on January 24, 2006. As part of the Notice, the Board of Forestry discussed the possibility that the Project may fall within exceptions to the categorical exemption due to the Project's potential to cause significant adverse environmental effects.

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[23] PRC section 21065; 14 CCR 15378(a).

[24] The Board of Forestry is a government-appointed body within CAL-FIRE.

[25] See, PRC section 21067; 14 CCR 15050.

[26] Initial Statement of Reasons, published on October 28, 2005.

CAL FIRE then conducted further, more detailed environmental review of the Project's "potential significant effects to arthropod species and invasion [*sic*] native plants from fuel modification, air quality impacts, cumulative effects of treatment, historical or archeological impacts, significant effects from unusual circumstances, and Scenic Highways."[27] It is important to note that CEQA does not require findings of the nonexistence of each of the exceptions to a categorical exemption. Rather, where there is some information or evidence in the record that the project might have a significant environmental effect, CEQA requires the lead agency to consider the issue of significant effects and cumulative impacts of a proposed project in determining whether the project is exempt from CEQA.[28]

The preliminary environmental review process included consultations with various responsible agencies.[29] For example, the Board of Forestry consulted with the CDFG to evaluate the Project's potential to impact ground cover and understory habitats. Upon consultation with the CDFG, the Board of Forestry concluded as follows: "The clearing requirements under this law, regulation and guidelines have been brought to the attention of the California Department of Fish and Game, the responsible agency to [*sic*] for considering effects of regulations proposed by the Board of Forestry on the state's fish and wildlife resources. The agency has reply [*sic*] that the activity is not of concern to CDFG staff."[30]

The Board of Forestry noted in its Public Comment and Preliminary Response that the Project does not relieve landowner responsibility for complying with other environmental protection laws such as the ESA and Migratory Bird Treaty Act. However, in discussing a "take" issue associated with soil disturbance in impaired watersheds, the Board of Forestry concluded the following: "Treatments within riparian zone, particularly for watercourses listed … as impaired … is determined by the [Forestry] Board not to be a Take, as the term means the actual harm to a species, not a general degradation of habitat unless that degradation has a direct adverse impact on a species." To support this conclusion, the Board of Forestry discussed recent case law (although it did not cite the specific case) where challenges to projects based on a "take" of critical habitat were overturned because no harm to a species was demonstrated.[31]

Upon completing the preliminary environmental review, the Board of Forestry determined the Project to be categorically exempt under CEQA under the Class 4(i) exemption, minor alterations to land, water, or vegetation. Subsection (i) states as follows:

> Fuel management activities within 30 feet of structures to reduce the volume of flammable vegetation, provided that the activities

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[27] Page 6, Notice.

[28] See, *Association for Protection etc. Values v. City of Ukiah*, 2 Cal. App. 4th 720, 732.

[29] Public Comment and Preliminary Response, dated January 11, 2006.

[30] Page 19, Public Comment and Preliminary Response.

[31] Pages 42-43, Public Comment and Preliminary Response.

> will not result in the taking of endangered, rare, or threatened plant or animal species or significant erosion and sedimentation of surface waters. This exemption shall apply to fuel management activities within 100 feet of a structure if the public agency having fire protection responsibility for the area has determined that 100 feet of fuel clearance is required due to extra hazardous fire conditions.

The Board of Forestry also concluded that the Project does not fall within an exception to the categorical exemption.

The Board of Forestry further determined that the proposed activities in 14 CCR 1299 and the Guidelines are necessary "to prevent or mitigate an emergency." The Board of Forestry stated "that an emergency exists and the activity proposed is necessary to prevent or mitigate forest fire emergencies."[32] Using this basis, the Board of Forestry referenced PRC section 21080(b)(4). Section 21080 lists "specific actions necessary to prevent or mitigate an emergency" as an exemption to the environmental review requirements of the PRC's environmental quality division.

At the time of the Board of Forestry's adoption of the Guidelines on February 8, 2006, the Board of Forestry deliberated on the issue of CEQA and concluded not only that the categorical exemption applies, but also that the Project "is consistent with the CEQA statutory exemption under section 21080(b)(4) specifying that actions [are] necessary to prevent or mitigate an emergency."[33]

2.1.2 14 CCR 1299 and Guidelines – CEQA Determination

The Board of Forestry concluded that the activities proposed pursuant to 14 CCR 1299 and the Guidelines are categorically exempt, and that an exception to the categorical exemption does not apply. The Board of Forestry also concluded that an emergency exists, that the Project is necessary to avoid the emergency, and that the Project is exempt from environmental review under a statutory exemption and under PRC 21080.

It is important to note that if a project is subject to a categorical exemption, no formal environmental evaluation is required.[34] An activity that is categorically exempt may be implemented without any CEQA compliance whatsoever.[35]

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[32] Page 8, Notice.

[33] Item 9 of Meeting Minutes.

[34] *City of Pasadena v. State* (1993) 14 CA4th 81.

[35] *Association for Protection of Envrt'l Values v. City of Ukiah* (1991) 2 CA4th 720, 726.

Other agencies such as Monterey County can be considered a "responsible agency" for the Project's CEQA review. Responsible agencies are bound by certain decisions made by the lead agency, including the decision on whether an Environmental Impact Report (EIR) should be prepared for a proposed project.[36] Once the lead agency has acted, the responsible agencies generally rely on the lead agency's CEQA conclusion and ordinarily are not allowed to prepare a separate EIR or negative declaration.[37] Here, CAL FIRE, as the lead agency, made the CEQA determination that can be relied upon by Monterey County. If the County decides to allow the fuel modification activities described in 14 CCR 1299 and the Guidelines, no further review is required by CEQA for that decision.

2.2 Public Resources Code Section 4291 (PRC 4291)

PRC 4291 requires that any person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material, shall maintain defensible space of 100 feet from each side and from the front and rear of the structure, or as further provided in PRC 4291, but not beyond the property line unless allowed by state law, local ordinance, or regulation, and with the consent of the adjacent landowner.

The statute provides that the amount of fuel modification necessary shall take into account the flammability of the structure as affected by building material, building standards, location, and type of vegetation.

PRC 4291 provides that a distance greater than 100 feet may be required by state law, local ordinance, rule, or regulation, with limitations on requiring fuel modification beyond the property line, including consent by the adjacent landowner.

PRC 4291 also provides that an insurance company that insures an occupied dwelling or occupied structure may require a greater distance if a fire expert, designated by the Director of Forestry and Fire Protection, provides findings that such fuel reduction is necessary to significantly reduce the risk of transmission of flame or heat sufficient to ignite the structure, and there is no other feasible mitigation measure possible to reduce the risk of ignition or spread of wildfire to the structure. The greater distance may not be beyond the property line unless allowed by state law, local ordinance, rule, or regulation. The statute also requires other fuel reduction measures, such as a minimum distance of 10 feet between trees and the outlet of a chimney or stovepipe.

PRC 4291 further provides that the Director of Forestry and Fire Protection may authorize removal of vegetation that is not consistent with the standards of PRC 4291.

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[36] PRC section 21080.1(a); 14 CCR 15050(c).

[37] *Bakman v. Department of Transp*. (1979) 99 CA3d 665.

According to *People v. Rhoades*,[38] PRC 4291 is a regulatory measure designed to preserve California's forests from uncontrolled wildland fires. Thus, fuel reduction pursuant to PRC 4291 protects not only California's vegetated lands, but also structures from wildfires.

PRC section 4291.1 describes the penalties for PRC 4291 violations. Penalties range from a fine of not less than $100, to not less than $500, depending upon the number of violations during a five year period. PRC section 4291.1 also provides that under certain conditions, CAL FIRE may contract to have fuel reduction work done and bill the person convicted of the violation for the cost of the work.

3. California Coastal Act (CCA) and Local Coastal Programs

The California Coastal Commission (CCC), in partnership with coastal cities and counties, plans and regulates the use of land in the coastal zone. The Coastal Coastal Act (CCA) provides that land uses that meet its definition of "development"[39] require a coastal development permit (CDP) from either the CCC or the local government that has been delegated permitting authority.[40] As relevant here, the term "development" in the CCA includes the following definition: "Development" means… the removal or harvesting of major vegetation …[41] (Emphasis added.)

Monterey County has been delegated CDP permitting authority through the adoption and certification of Local Coastal Programs (LCP). However, the CCC retains appellate authority. The need for a CDP is reviewed against the policies of the certified LCP. Monterey County has divided its portion of the coastal zone into four separate coastal planning areas: (1) Big Sur, (2) North County, (3) Carmel, and (4) Del Monte Forest. Each coastal planning area has its own coastal land use plan and coastal implementation plan. When adopted and certified, these coastal plans underwent environmental review that was the functional equivalent of CEQA, and CEQA review was therefore not required.[42] The following sections discuss these four coastal land use plans, which are in certified LCPs.

3.1 Big Sur Coast Land Use Plan (Big Sur LUP) and Implementation Plan (Big Sur CIP)

As stated above, the term "development" in the CCA includes the removal or harvesting of major vegetation. However, the Big Sur LUP expressly states that certain vegetation removal activities will not be considered removal of major vegetation. Because these certain vegetation removal activities are not considered removal of major

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[38] *People v. Rhoades* (1970) 12 Cal App 3d 720.

[39] See, PRC section 30106 for the CCA's definition of development.

[40] See, PRC sections 30106, 30101.5 and 30600(a).

[41] PRC section 30106

[42] The CCC obtained certification from the Secretary of Resources that its regulatory program is the functional equivalent of CEQA in 1979, and the LCP approval process has been exempt from EIR requirements ever since. *Santa Barbara County Flower and Nursery Growers Association, Inc. v. County of Santa Barbara*, (2004) 121 Cal.App.4th 864; Title 14 CCR section 15251, subdivision (f); Title 14 CCR section 15265.

vegetation, these activities do not fall within the CCA's definition of "development" and no CDP is required to implement them.

Big Sur LUP Policy 5.4.2.13 states as follows:

> A coastal development permit must be obtained for the removal of trees and other major vegetation. <u>However</u>, in the Big Sur Coast area, <u>the following will not be considered as removal of major vegetation</u>:
>
> a. Removal of non-native or planted trees, except where this would result [in] the exposure of structures in the critical viewshed;
>
> b. Removal of hazardous trees which pose an imminent danger to life or property, or threaten contagion of nearby forested areas, subject to verification by the County <u>or</u> California Department of Forestry;
>
> c. Thinning of small (less than 12" diameter) or dead trees from density [*sic*] forested areas, especially as needed to reduce unsafe fuel accumulations adjacent to existing occupied buildings; and
>
> d. Prescribed burning, crushing, lopping or other methods of brush clearing which do not materially disturb underlying soils.
>
> (Emphasis added.)

The exception to the exemption provided in subsection (a) (i.e., critical viewshed) indicates that the drafters intended to call out exceptions where they apply. Here, Policy 5.4.2.13 did not call out any other exception to the exemption, such as vegetation removal in environmentally sensitive habitat areas. Thus, the only applicable exception to this exemption can be interpreted to be the removal of non-native or planted trees that would result in the exposure of structures in the critical viewshed.

The Big Sur CIP mimics the language of Policy 5.4.2.13 in its Forest Resources Development Standards (Big Sur CIP section 20.145.060.) The Big Sur CIP's Forest Resources Development Standards provide development standards for the protection and maintenance of Big Sur's forest resources. Section 20.145.060 of the Forest Resources Development Standards states as follows: "A coastal development permit must be obtained for the removal of trees and other major vegetation <u>with the following exceptions….</u>" (Emphasis added.) The same subsections (a through d) provided in Policy 5.4.2.13 of the Big Sur LUP follows that sentence.[43]

The following paraphrases the activities that are not "removal of major vegetation" under Big Sur LUP Policy 5.4.2.13 and the Big Sur CIP's Forest Resources Development Standards, and therefore, are not classified as "development" in the Big Sur coastal planning area: 1) the removal of nonnative, planted, and hazardous trees; (2) thinning of live trees that are 12 inches or less in diameter, and all dead trees, in densely forested areas; and (3) brush clearance which does not materially disturb the underlying soil. Essentially all of the fuel modification activities needed to create defensible space, and most other fuel reduction work

[43] To the extent the language in the CIP fails to implement the language in the LUP, the language in the LUP controls.

described in the MCCWPP, can be accomplished in a manner which falls within the above described CDP exemptions.

Because these fuel modification activities are specifically removed from the CCA's definition of "development," a CDP cannot be required for performing these activities. Moreover, the CCA's definition of "development" refers to "removal" of vegetation. For this reason, selective trimming and limbing of vegetation that leaves roots intact should not require a CDP. In summary, the Big Sur LUP and Coastal Implementation Plan may reasonably be interpreted not to require a CDP for removal or trimming of vegetation for the creation of defensible space and other wildfire fuel reduction measures when accomplished in the manner described in the stated CDP exemptions.

3.2 North County Land Use Plan (North County LUP) and Implementation Plan (North County CIP)

Similar to the exemption to CDP requirement provided in the Big Sur LUP and CIP, North County CIP Policy 20.144.050.A.1 provides the following exceptions to the CDP requirement for major vegetation removal activities as they relate to fuel mitigation:

> A coastal development permit must be obtained for the removal of trees and other major vegetation <u>with the following exceptions</u>:
>
> a. Removal of non-native or planted trees, except where this would be ridgeline tree removal as per Section 20.144.050.D.8 or where the trees are considered to be of significant or landmark status, as defined in Section 20.144.050.D.1;
>
> b. Removal of hazardous trees which pose an immediate danger to life or structures;
>
> c. Removal of native trees less than 12" diameter when measured at breast height, or removal of oak trees less than 6" in diameter measured 2 feet above the ground, or removal of marine trees less than 6" in diameter measured at breast height; and prescribed burning, crushing, lopping, or other methods of clearing brush which do not materially disturb underlying soils.
>
> (Emphasis added.)

The exceptions to the CDP exception provided in subsection (a) (i.e., ridgeline trees or trees of significant or landmark status) indicate that the drafters intended to call out exceptions where they apply. Here, section 20.144.050.A.1 did not call out any other exception to the exemption, such as major vegetation removal in environmentally sensitive habitat areas. Thus, the only applicable exceptions to this CDP exception appear to be the removal of ridgeline trees or trees of significant or landmark status.

The above listed vegetation removal activities apply to essentially all of the fuel modification activities needed to create defensible space, and for most other fuel reduction work described in the MCCWPP. The North County CIP may reasonably be interpreted not to require a CDP for removal or trimming of vegetation for the creation of defensible space and other

wildfire fuel reduction measures when accomplished in the manner described in the stated CDP exception.

3.3 Carmel Area Land Use Plan (Carmel LUP) and Implementation Plan (Carmel CIP)

Similar to the provisions in the Big Sur and North County CIPs, Carmel CIP Policy 20.146.060.A.1 provides exceptions to the CDP requirement for major vegetation removal activities as they relate to fuel mitigation:

> A coastal development permit must be obtained for the removal of trees and other major vegetation with the following exceptions:
>
> a. Removal of non-native or planted trees, except where this would result in the exposure of structures in the critical view shed area; where defined as habitat; where previously protected by coastal permit or forest management plan or scenic/conservation easement;
>
> b. Removal of hazardous trees which pose an immediate danger to life or structures;
>
> c. Thinning of small (less than 12" in diameter) or dead trees from densely forested areas, especially as needed to reduce unsafe fuel accumulations adjacent to existing occupied buildings;
>
> d. Prescribed burning, crushing, lopping or other methods of brush clearing which do not materially disturb underlying soils.
>
> (Emphasis Added.)

The exceptions to the CDP exception provided in subsection (a) indicate that the drafters intended to call out exceptions where they apply. Thus, the only applicable exceptions to this CDP exception can be interpreted to be as follows: exposure of structures in the critical view shed area; where defined as habitat; and where previously protected by coastal permit or forest management plan or scenic/conservation easement.

The above listed vegetation removal activities apply to essentially all of the fuel modification activities needed to create defensible space, and for most other fuel reduction work described in the MCCWPP. The Carmel CIP may reasonably be interpreted not to require a CDP for removal or trimming of vegetation for the creation of defensible space and other wildfire fuel reduction measures when accomplished in the manner described in the stated CDP exception.

3.4 Del Monte Forest Land Use Plan (Del Monte LUP) and Implementation Plan (Del Monte CIP)

Similar to the provisions in the Big Sur, North County, and Carmel CIPs, Del Monte CIP Policy 20.147.050.A.1 provides exceptions to the CDP requirement for major vegetation removal activities as they relate to fuel mitigation:

> A coastal development permit must be obtained for the removal of trees and other major vegetation <u>with the following exceptions</u>:
>
> a. Removal of non-native or planted trees, except where this would result in the exposure of structures in the critical viewshed area; where defined as habitat; where previously protected by coastal permit or forest management plan or scenic/conservation easement;
>
> b. Removal of hazardous trees which pose an immediate danger to life or structures or where a diseased tree is determined by a qualified professional forester to represent a severe and serious infection hazard to the rest of the forest; and
>
> c. Except for Monterey Cypress in its indigenous range, thinning of small (less than 12" in diameter) or dead trees from densely forested areas, especially as needed to reduce unsafe fuel accumulations adjacent to existing occupied buildings; and
>
> d. Prescribed burning, crushing, lopping or other methods of brush clearing which do not materially disturb underlying soils.
>
> (Emphasis added.)

The exceptions to the CDP exception provided in subsections (a) and (c) indicate that the drafters intended to call out exceptions where they apply. Thus, the only applicable exceptions to this CDP exception can be interpreted to be as follows: exposure of structures in the critical view shed area; where defined as habitat; where previously protected by coastal permit or forest management plan or scenic/conservation easement; and for Monterey Cypress in its indigenous range.

The above listed vegetation removal activities apply to essentially all of the fuel modification activities needed to create defensible space, and for most other fuel reduction work described in the MCCWPP. The Del Monte CIP may reasonably be interpreted not to require a CDP for removal or trimming of vegetation for the creation of defensible space and other wildfire fuel reduction measures when accomplished in the manner described in the stated CDP exception.

4. California Environmental Quality Act (CEQA)

A public agency must comply with the California Environmental Quality Act (CEQA) when the agency undertakes an activity defined by CEQA as a "project." PRC section 21065 defines a "project" subject to CEQA as follows:

"Project" means an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following:

(a) An activity directly undertaken by any public agency.

(b) An activity undertaken by a person which is supported, in whole or in part, through contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.

(c) An activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

If the activity does not meet the definition of a "project" above, the California Environmental Quality Act (CEQA) does not apply and CEQA analysis is not required. Even if the activity qualifies as a project, CEQA analysis may not be required. The legislature has exempted many types of projects from CEQA by statute. Because CEQA is a legislative enactment, the legislature is free to create exemptions regardless of their consistency with CEQA's environmental purposes.[44] Statutory exemptions are enacted to lift the burden of environmental review from specified classes of projects that may have significant effects; limiting a statutory exemption to projects that will not adversely affect the environment would defeat the purpose of the exemption.[45]

CEQA also requires the Secretary of the Resources Agency to designate in the CEQA Guidelines classes of projects that the Secretary has found do not have a significant effect on the environment.[46] These exemptions are generally referred to as "categorical exemptions."[47] Public agencies may not require preparation of an environmental document for a project that is categorically exempt unless the activity falls within one of the exceptions to the categorical exemption.[48]

4.1 MCCWPP Not a Project Subject to CEQA

The MCCWPP is a voluntary guideline and comprises recommendations by the community to various governmental agencies. The MCCWPP does not legally commit any agency to a specific course of action, including by the act of signing the MCCWPP. The MCCWPP is not a project subject to CEQA or NEPA.

4.2 Implementation of MCCWPP

Implementation of vegetation management activities recommended in the MCCWPP might be a project subject to CEQA, unless:

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[44] See *Napa Valley Wine Train, Inc. v. PUC* (1990) 50 C3d 370, 381.

[45] See, e.g., *Surfrider Found. V. California Coastal Commission* (1994) 26 CA4th 151.

[46] PRC 21979(b)(1), 21084(a).

[47] 14 CCR 15354.

[48] 14 CCR 15300.2 & 15300.4

- An environmental review has already been completed that can be relied upon by an agency or agencies,
- A statutory or categorical exemption applies to the activity, or,
- The project does not involve any discretionary approval by a public agency, does not involve public funding, and will not be carried out by a public agency.

4.2.1 Monterey County a Responsible Agency

As discussed in above, CAL FIRE promulgated a regulation necessary to implement a legislative amendment to PRC 4291. The implementing regulation is found at 14 CCR 1299. 14 CCR 1299 includes, by reference, a document entitled, General Guidelines for Creating Defensible Space (Guidelines).[49] The Guidelines provide criteria intended to instruct individuals and fire officials on acceptable ways to comply with PRC 4291. Hereafter, 14 CCR 1299 and the Guidelines, together, are called the Defensible Space Regulations.

CAL FIRE considered adoption of the Defensible Space Regulations a "project" subject to CEQA (Project), and the scope of the CEQA review is the Project's ultimate effect on the environment, including creation of defensible space throughout California, consistent with the Defensible Space Regulations. Accordingly, CAL FIRE conducted an environmental review of the ultimate effect of the Project on the environment. Upon completing its initial review, CAL FIRE concluded that the activities proposed pursuant to the Defensible Space Regulations are categorically exempt, and that an exception to the categorical exemption does not apply. This categorical exemption is discussed further above. CAL FIRE also concluded that an emergency exists; that the Project is necessary to avoid the emergency; and that the Project is exempt from environmental review under a statutory exemption and under PRC section 21080. This statutory exemption is discussed further below.

CAL FIRE is the lead agency for the Project because it has the principal responsibility for carrying out or approving the Project. Monterey County, on the other hand, can be considered a "responsible agency" for the Project's CEQA review. Responsible agencies are bound by certain decisions made by the lead agency, including the decision on whether an EIR should be prepared for a proposed project.[50] Once the lead agency has acted, the responsible agencies

[49] See, Title 14 CCR 1299(d), which reads, "Guidance for implementation of this regulation is contained in the publication: 'General Guidelines for Creating Defensible Space' as published by the Board of Forestry and Fire Protection by resolution adopted on February 8, 2006." Also see the Initial Statement of Reasons, which states, "The guideline document describes criteria for conformance with proposed regulation and existing statute. This document is incorporated by reference pursuant to Title 1, California Code of Regulations (CCR), Regulation General Provisions, and section 20."

[50] PRC section 21080.1(a); 14 CCR 15050(c).

generally rely on the lead agency's CEQA conclusion and ordinarily are not allowed to prepare a separate EIR or negative declaration.[51]

That is, CAL FIRE, as the lead agency, made the CEQA determination which can be relied upon by Monterey County. If the County decides to allow the fuel modification activities described in the Defensible Space Regulations, no further review is required by CEQA for that decision.

4.2.2 Statutory Exemption

PRC section 21080(b)(4) and 14 CCR 15269(c) provide a statutory exemption for specific actions necessary to prevent or mitigate an emergency. This statutory exemption may apply to mitigating hazardous fuel loads and work needed to maintain emergency access.

As discussed in the coastal land use plans/local coastal programs, many areas of Monterey County are hazardously overgrown and specific actions are necessary to prevent or mitigate emergencies caused by wildfires. The statutory exemption should apply to those areas of Monterey County that are hazardously overgrown as determined by the Fire Authority Having Jurisdiction (FAHJ).

As discussed above, the authority to make this determination was granted to the FAHJ under 14 CCR 1299(b), which provides the following mandatory language:

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

4.2.3 Categorical Exemption

The Class 4 categorical exemption, i.e., minor alteration to land, may apply to fuel reduction and fire access maintenance activities. Class 4 activities consist of minor public or private alterations in the condition of land, water, and/or vegetation. As relevant to fuel mitigation activities, subsection (I) of Class 4 states as follows:

> Fuel management activities within 30 feet of structures to reduce the volume of flammable vegetation, provided that the activities will not result in the taking of endangered, rare, or threatened plant or animal species or significant erosion and sedimentation of surface waters. This exemption shall apply to fuel management activities within 100 feet of a structure if the public agency having fire protection responsibility for the area has determined that 100

[51] *Bachman v. Department of Tramps*. (1979) 99 CA3d 665.

> feet of fuel clearance is required due to extra hazardous fire conditions.

If a project is found by the lead agency to be subject to a categorical exemption (which occurred with the Defensible Space Regulations), no formal environmental evaluation is required.[52] An activity that is determined to be categorically exempt may be implemented without any further CEQA compliance.[53]

5. California Endangered Species Act (CESA) and Native Plant Protection Act (NPPA)

The California Endangered Species Act (CESA)[54] generally parallels the main provisions of the federal Endangered Species Act and is administered by the CDFG. A lead agency is required to consult with CDFG if any action it undertakes is likely to jeopardize the continued existence of any endangered or threatened species.

The California Native Plant Protection Act (NPPA) was "enacted to preserve, protect and enhance endangered or rare native plants of this state." The NPPA authorizes the California Fish and Game Commission to designate species of native plants as endangered or rare. The NPPA provides:

The NPPA grants authority to the Commission to adopt regulations governing the taking of any endangered or rare native plants.[55] However, the NPPA also includes specific provisions that provide exclusions from the NPPA regulation.

Section 1912 of the Fish and Game Code states that the provisions of this chapter "shall <u>not</u> be applicable to emergency work necessary to protect life or property."[56] As stated above, CAL FIRE, in promulgating the Defensible Space Regulations, determined that an emergency exists and that the fuel modification activities proposed are necessary to prevent or mitigate this emergency. Accordingly, the activities pursuant to the Defensible Space Regulations may be considered emergency work and fall within the exclusion provision of Fish and Game Code section 1912.

The NPPA also states:

> [T]he provisions of this chapter are not intended and shall <u>not</u> be construed as authorizing any public agency to mandate, prescribe, or <u>otherwise</u>

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[52] *City of Pasadena v. State* (1993) 14 CA4th 81.

[53] *Association for Protection of Evart's Values v. City of Ukiah* (1991) 2 CA4th 720, 726.

[54] Fish & Game Code section 2050, *et seq.*

[55] California Fish & Game Code §1907(a).

[56] Section 1912 includes the following notification requirement: "[N]notification by the person or agency performing such emergency work shall be made to the department within 14 days of the commencement of such work."

> regulate management practices, including [among others] … clearing of land for … fire control measures."[57] (Emphasis added.)

Under the provisions of Fish and Game Code sections 1912 and 1913, emergency work and land clearing for fire control measures are excluded from NPPA regulation. Fuel modification activities to create defensible space and those proposed in the MCCWPP are land clearing for fire control measures, and as such are excluded from the NPPA regulatory requirements.

This interpretation is supported by the Attorney General's Published Opinion No. 98-105.[58] Former California Assembly member Keith Oberg requested the Attorney General's opinion on the following question: "Under what circumstances may a landowner destroy a plant on his property that is listed as threatened or endangered under the California Endangered Species Act?" Opinion No. 98-105 cites section 2080 of CESA. Section 2080 states as follows:

> No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (Chapter 10 (commencing with Section 1900) of this code), or the California Desert Native Plants Act (Division 23 (commencing with Section 80001) of the Food and Agricultural Code)). (Emphasis Added.)

Opinion No. 98-105 then cites the above mentioned NPPA provisions that provide the exclusions from the NPPA regulations, concluding that threatened and endangered plants may be destroyed[59] by a landowner as authorized by CESA or NPPA. Opinion No. 98-105 concludes as follows:

> We thus conclude in answer to the … question that a landowner may destroy a plant on his property that is listed as threatened or endangered under CESA when … (7) incidental to specified emergency projects, or (8) incidental to … the clearing of certain property under the provisions of NPPA.

Thus, the NPPA provides express allowance to take endangered and rare plant species for the purposes of fire control measures, which provision may be applicable to fuel reduction work. Further (as discussed previously), the emergency work exception may be applicable to fuel reduction work in those areas determined by the FAHJ to be hazardously overgrown.

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[57] California Fish and Game Code §1913(a).

[58] 81 Ops. Cal. Atty. Gen. 222.

[59] With reference to plants, the term "take" as used in section 2080 means to destroy. (§ 96 ["'Take' means … kill …"]; see *Department of Fish & Game* v. *Anderson-Cottonwood Irrigation Dist.* (81 Ops. Cal. Atty. Gen. 222.)

V. Firebreaks, Fuelbreaks and Wilderness Discussion

A. Firebreaks

Comments to the January 2010 MCCWPP included concerns over the use of the term, "firebreak" instead of the term "fuelbreak". Unpaved rural roads in Monterey County are essentially the same as firebreaks except for their lack of strategic placement, and some strategically located roads double as firebreaks (e.g., the North Coast Ridge Road). As with unpaved roads, existing firebreaks may be maintained year round at low cost with little environmental impact by use of suitable techniques. Miles of trails are maintained in Monterey County each year, including in wilderness areas, some up to 4 feet wide and constructed much like narrow firebreaks, with all vegetation removed. Though trails in wilderness serve relatively few users and are typically for recreational use, a Ventana Firebreak located on the existing Big Box Firebreak would serve to protect the lives and homes of thousands of residents in at-risk communities around the LPNF. Firebreaks could also help protect the Monterey Peninsula's tourist economy by helping protect Highway 1 south of Carmel from closure, and could help protect Monterey County's wine grape economy from impacts by smoke taint.

B. Sierra Club's Expert's Support for Maintaining Existing Firebreaks

As part of the comments on the January 2010 MCCWPP,[60] the Ventana Chapter of the Sierra Club included as an exhibit, an opinion memo by Dr. Scott Stephens, Associate Professor of fire Science at the University of California, Berkeley. Mr. Stephens stated in his memo the following: "The CWPP specifies where existing fire and fuel breaks are located throughout the county (Pg 72, 73, 74). Since these are already installed maintaining them into the future makes sense. They can act as anchor points for fire suppression operations and safety areas for fire fighters." As acknowledged by Dr. Stephens, the existing Big Box/Ventana Fuelbreak/Firebreak should be maintained, before fire starts, and treatments should be provided on each side to help ensure the fuelbreak/firebreak can be safely manned and effectively used during wildfires.

C. Use of Fuelbreaks

Fuelbreaks typically contain vegetation, though at reduced volume. Fuelbreaks are generally maintained over substantially wider distance than firebreaks, depending upon such factors as topography and vegetation type and density. Due to their vegetation, fuelbreaks are less likely to stop the spread of fire, and are primarily used to slow fires and lower fire intensity, making it safer for firefighters to be present on firebreaks during wildfires and for increasing firebreak defensibility and effectiveness.

Fuelbreaks may be improved with heavy equipment to be firebreaks during fires, if time allows and resources are available. During catastrophic events like the 2008 Lightning Siege in California, which started over 2,000 fires statewide[61] including the Basin Fire, availability of resources can be problematic.

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[60] July 13, 2010 Letter to Monterey Fire Safe Council from Lippe Gaffney Wagner LLP.

[61] http://www.fire.ca.gov/index_incidents_overview.php

D. Wilderness Expansions

The Ventana Wilderness was created in 1969 encompassing approximately 98,000 acres.[62] The 1968 report from the Secretary of Agriculture to President Johnson on the proposed Ventana Wilderness states, "The boundary of this proposed Wilderness is very important and has been intentionally established wherever possible to allow the construction of peripheral fuelbreaks, and fire control access. Approximately 70 percent of the boundary of this area would be located 250 feet below the crest of the ridge to permit the machine construction of effective fuelbreaks."[63] The boundary of the Ventana Wilderness has been expanded four times, and now encompasses over 236,000 acres.

In 2002, wilderness boundaries in the Monterey Ranger District of the LPNF were moved in twelve areas, in some locations to within 30 to 100 feet of roads. Some of the roads serve as escape routes in event of fire and some double as firebreaks. In at least one location, wilderness was expanded over the Big Box Firebreak. These 2002 wilderness expansions are said to have blocked the USFS from conducting 8 out of 10 fuel reduction projects[64] that were part of what was called the Monterey Defensible Fuel Profile Zone. The Monterey Defensible Fuel Profile Zone was being scoped in 2001, and was intended to make use of roads as escape routes safer during wildfires. The Coast Ridge Road was such an escape route and is also part of the Big Box Firebreak.[65] All of the fuel reduction projects in the Monterey Defensible Space Fuel Profile Zone were outside wilderness prior to 2002.[66]

During the Basin Fire in 2008, wilderness designation appears to have caused delays opening portions of the Big Box Firebreak due to prohibitions against use of heavy equipment in wilderness without approval from up the USFS's chain of command.[67] In one critical location the Basin Fire crossed over the Big Box Firebreak where wilderness was moved over the firebreak in 2002. Work was started to improve the firebreak with handcrews, but not completed in time.[68] After crossing the Big Box Firebreak, the Basin Fire went on to threaten over 300 homes in the Palo Colorado, Bixby,

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[62] Public law 91-58, August 18, 1969.

[63] 90th Congress, 2d Session, House Document No, 292, Part 9.

[64] Statement of former Executive Director of the MFSC who was active in 2001 during scoping of the Monterey Defensible Fuel Profile Zone project.

[65] The project scoping letter for the Monterey Defensible Fuel Profile Zone is included in Appendix K, which states, "Trained specialists with the Forest Service are planning to apply fuels reduction treatments to establish defensible fuel profile zones (DFPZs) within ten identified units that cover a total of approximately 18,760 acres. Primary focuses for this project are travel corridors (roads and trails), campgrounds, National Forest System Lands adjacent to private property, administrative sites, and existing firelines." Page 1, USFS project scoping letter, August 13, 2001.

[66] "Forest Service personnel are preparing to conduct an analysis of the proposed project area within the boundary of the Monterey Ranger District on selected lands outside the Ventana and Silver Peak Wilderness areas." Page 1, USFS project scoping letter, August 13, 2001 (underline added), see Appendix K.

[67] Statement of CAL FIRE official who worked on the Basin Fire.

[68] USFS East Basin Complex Final Rehab Map (Rehab Map), showing a hand line (near helispot H-26) continuing off from the dozer line where the Big Box Firebreak enters the Ventana Wilderness, at the location where wilderness was expanded over the Big Box Firebreak in 2002 by the Condor Range and River Protection Act. The Basin Fire crossed over this area before the Big Box Firebreak could be reopened with hand crews, where a dozer line veered to bypass the wilderness.

Garrapata and Rocky Creek watersheds and was stopped at the sole backup firebreak on Bixby Mountain.

VI. Recommendations

A. Recommendations to the Secretary of Agriculture

1. Maintain the Ventana Fuelbreak/Firebreak (Big Box Firebreak)

Recommendation: Reduce the risk to communities by maintaining the Ventana Fuelbreak/Firebreak, and treatment on both sides of it, at all times, in a condition that will result in a high probability that the fuelbreak/firebreak will serve to allow firefighters to work safely in the area, to change fire direction and spread, to drop fire to the ground, and to stop the spread of wildfire under adverse fire conditions. The width of treatment should be determined utilizing such factors as fuel loads, topography, predominant winds, values at risk and fire behavior modeling. To the extent the Ventana Fuelbreak/Firebreak and the treatments on both sides of it are on non-federal land, this recommendation should be construed as recommending that federal funds be made available for their maintenance (e.g., through grants). The location of the Ventana Fuelbreak/Firebreak is shown on the map in Appendix B-7 by the line representing the Big Box Firebreak.

Rationale: The Big Box Firebreak was used to protect at-risk communities surrounding the LPNF from the 178,000 acre Marble Cone Fire in 1977, the 86,000 acre Kirk Complex Fire in 1999, and the 163,000 acre Basin Fire and 81,000 acre Indians Fire in 2008. The Basin Fire burned on the west side of an 8 mile segment of the western portion of the Big Box Firebreak, consuming 26 homes and 32 other structures in the Big Sur at-risk community, and threatening approximately 300 homes in the Palo Colorado at-risk community. Maintaining and defending the Ventana Fuelbreak/Firebreak and treatments on both sides of it will reduce the threat of harm to firefighters and to the communities surrounding the Los Padres National Forest. As noted in a Congressional committee report,[69] "Due to the extreme hazard of fires in the Los Padres National Forest" Congress has provided special management language for wilderness areas in the Los Padres National Forest, including allowing pre-suppression measures such as those recommended in this MCCWPP. [70] The recommendation to maintain the Ventana Fuelbreak/Firebreak and its side-treatments before fire starts is to help ensure they can be used effectively and safely without delay to stop the spread of fire, to protect lives, property and the environment.

2. Maintain the Bixby Mountain Fuelbreak/Firebreak

Recommendation: Reduce the risk to communities by maintaining the Bixby Mountain Fuelbreak/Firebreak, and treatments on both sides of it, at all times, in a condition that will result in a high probability that the fuelbreak/firebreak will serve to allow firefighters to work safely in the area, to change fire direction and spread, to drop fire to the ground, and to stop the spread of wildfire under adverse fire conditions. The width of treatment should be

[69] Senate Report 95-490 on H.R. 3454 (The Endangered American Wilderness Act of 1978), 95th Congress 1st session October 11, 1977, Senate Committee on Energy and Natural Resources.

[70] Section 3.3.1.2.2, quoting Senate Report 95-490 on H.R. 3454 (The Endangered American Wilderness Act of 1978), 95th Congress 1st session October 11, 1977, Senate Committee on Energy and Natural Resources.

determined utilizing such factors as fuel loads, topography, predominant winds, values at risk and fire behavior modeling. This recommendation includes lands that may be acquired by the USFS in the future, on which the Bixby Mountain Fuelbreak/Firebreak or its side-treatments are located. To the extent the Bixby Mountain Fuelbreak/Firebreak or its side-treatments are on non-federal land, this recommendation should be construed as recommending that federal funds be made available for their maintenance (e.g., through grants). The location of the Bixby Mountain Fuelbreak/Firebreak is shown on the map in Appendix B-7 as the Bixby Mountain Firebreak.

Rationale: The Bixby Mountain Firebreak protected the Palo Colorado at-risk community from the Basin Fire in 2008. This community contains almost half the residential population in the greater Big Sur at-risk community. Much of the land on which the Bixby Mountain Firebreak is located is currently in private ownership. However, the USFS has acquired land in the area, including the 1,200 acre Brazil Ranch and about 460 acres of neighboring Rancho Calera. A third ranch, Rancho Aguilla, makes up much of the remaining private land between the LPNF and the Brazil Ranch, and much of the Bixby Mountain Firebreak is on Rancho Aguilla. The Bixby Mountain Fuelbreak/Firebreak is the "backup" firebreak referred to in the rationale for Section 9.1.1, which was used to stop the Basin Fire from burning into the greater Palo Colorado area. As a result of the 2002 wilderness expansions the Bixby Mountain Firebreak effectively became the only firebreak for wildfires burning north from the Los Padres National Forest southeast of Bixby Mountain. Recommendation 9.1.1 would restore the Bixby Mountain Fuelbreak/Firebreak to its historic role as a backup/secondary fuelbreak/firebreak. For additional explanation, see the rationale discussion for the Ventana Fuelbreak/Firebreak above.

B. Recommendations to Congress

1. Enact Legislation to Enable and Require Firebreaks to be Maintained

Recommendation: Should the fuelbreaks/firebreaks and side-treatments described in Sections V.A.1 and V.A.ll above not be installed, maintained and defended as recommended, within three years from the date the MCCWPP is signed by the signatories required by the HFRA, it is recommended that Congress enact legislation to clearly enable and require the recommendations in Sections V.A.1 and V.A.ll.

Rationale: Though Congressional documents, for decades, have repeatedly stated that the USFS is free to use whatever presuppression methods and techniques it finds are necessary to manage wildfire fuels to protect communities near California's wilderness areas, and the Ventana Wilderness and Silver Peak Wilderness areas in particular,[71] little or no such preparation has taken place. When wildfires come, communities remain vulnerable, with their survival depending almost entirely on the weather and the location of random lightning strikes.

After fire starts, bulldozers, hydraulic excavators, trucks, chainsaws, and other motorized equipment must be approved for use in areas designated as wilderness. Obtaining such

[71] See Section 3.3.1.2 in the MCCWPP, Wilderness Acts, for acts of Congress and Congressional reports related to wilderness areas in Monterey County.

approval can be delayed as fire spreads.[72] Once approval is obtained motorized equipment is used in a race to reopen overgrown firebreaks and fuelbreaks. However, depending on the weather and where lightning strikes, there is no assurance that work can be done in time. This scenario plays out every 10 to 20 years in the Monterey Ranger District of the LPNF (e.g., Marble Cone Fire (1977), Kirk Fire (1999), Basin Fire (2008)).

2. Statutory Exemption From the Endangered Species Act (ESA) for Wildfire Fuel Reduction Work

Recommendation: Provide a statutory exemption from the ESA for wildfire fuel reduction work in Monterey County.

Rationale: We heavily regulate and limit logging and other vegetation removal in much of our nation, and we suppress wildfires. Under these conditions vegetation grows without man-made or natural controls. Congress has acknowledged that the resulting hazardous overgrowth, including high-intensity catastrophic wildfires that result, is a national problem, especially in the western states. It is certainly a problem in Monterey County.

Hazardous overgrowth threatens lives, property and the environment, including protected species. The cost, time and limitations required to comply with species protection laws preclude or discourage landowners and agencies from doing fuel reduction work to properly care for their land. This encourages more overgrowth, which increases the threat to species, again, including protected species. The problem inevitably grows worse every year. The long term benefits to species from appropriate fuel reduction work outweighs the chance of short-term harm to species from such work. Congress should address this problem by providing a statutory exemption to the ESA.

C. Recommendations to the California Legislature and the Governor

Various state laws lack clarity with regard to allowance of fuel reduction work, or otherwise discourage or preclude such work. The MFSC recommends that such laws be changed to ensure that wildfire fuel reduction work is allowed and facilitated in areas where hazardous overgrowth threatens lives, property or the environment.

State laws should acknowledge that Californians have fundamental inalienable rights, pursuant to Article 1, Section 1 of the California Constitution,[73] to defend life, protect property, and pursue and obtain safety, and that hazardous overgrowth assaults each of these rights if individuals are not free to address it.

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[72] Fire professionals who worked on the Basin Fire have reported that delays of several days occurred before approval for use of heavy equipment could be obtained for some areas.

[73] Article 1, section 1 reads as follows, "All people are by nature free and independent and have inalienable rights. Among these are enjoying and defending life and liberty, acquiring, possessing, and protecting property, and pursuing and obtaining safety, happiness, and privacy."

1. Governor's Proclamation of a State of Emergency and for Planning and Regulatory Streamlining Improvements

Recommendation: The MFSC recommends that the Governor of the State of California issue a Proclamation of a State of Emergency for Monterey County similar to the Proclamation of Emergency made for Placer and El Dorado counties on May 27, 2008,[74] modified to apply to Monterey County, to (1) provide immediate attention to regulations and procedures "to eliminate or otherwise reduce the adverse effects of confusing, overlapping, or unnecessarily restrictive regulations and regulatory procedures" and (2) advocate planning and regulatory streamlining improvements to immediately empower Monterey County residents to begin mitigating the threat of catastrophic wildfire by removing hazardous fuel without regulatory hindrance.

Rationale: The Proclamation of Emergency made by the Governor for Placer and El Dorado counties, states the following:

> The current regulatory environment within the Basin for fuels treatment projects is confusing, overly complex and often incompatible with the immediate need to mitigate the threat of catastrophic wildfire, and that such regulations and procedures require the immediate attention of agencies and authorities having jurisdiction over the health and conditions of the forests of the Basin including, but not limited to, the Tahoe Regional Planning Agency (TRPA), in order to eliminate or otherwise reduce the adverse effects of confusing, overlapping, or unnecessarily restrictive regulations and regulatory procedures.

Monterey County has a similar regulatory environment, with confusing, overly complex, unwritten and often incompatible regulations that interfere with the immediate need to mitigate the threat of catastrophic wildfire. The Proclamation recognized that the Tahoe Basin is "badly in need of dramatic and urgent wildfire mitigation actions across a wide spectrum of fire suppression, fuels management, planning and regulatory streamlining improvements."

Monterey County faces the same urgency, and accordingly, the MFSC advocates planning and regulatory streamlining improvements to immediately mitigate the threat of catastrophic wildfire, and asks the Governor to issue a Proclamation in support of changes to policy comparable to his Proclamation of Emergency for Placer and El Dorado counties, modified to address regulatory problems in Monterey County.

2. Amend the California Coastal Act (CCA) to Allow and Facilitate Wildfire Fuel Reduction Work

Recommendation: Amend the CCA to expressly state that wildfire fuel reduction work is allowed in Environmentally Sensitive Habitat Areas (ESHA), and in other areas in the

[74] See Appendix N for the Governor's Proclamation for Placer and El Dorado counties.

coastal zone, without the need for permits, studies, mitigation or other requirements that may discourage or preclude performance of such work.

Rationale: Monterey County's coastal land use plans allow removal of hazardous overgrowth without the need for a coastal permit.[75] However, it has been argued that the CCA should be interpreted to not allow this work in ESHA and other areas. The CCC has held that vast areas of vegetation are ESHA.[76] If wildfire fuel reduction work is not allowed in ESHA and other coastal areas without regulatory hindrance, lives, property and the environment will be jeopardized by hazardous overgrowth. The CCA should be amended to avoid threats of litigation that may discourage or preclude wildfire fuel reduction work, by clearly stating such work is allowed in ESHA and elsewhere in the coastal zone without the need for permits, studies, mitigation or other requirements.

3. Amend the California Endangered Species Act (CESA) to Allow Incidental Take of Protected Species for Wildfire Fuel Reduction Work

Recommendation: Amend the CESA to allow incidental take of California protected species for wildfire fuel reduction work without the need for permits, studies, mitigation or other requirements that may discourage or preclude performance of such work.

Rationale: As previously discussed, hazardous overgrowth threatens species and habitat, including protected species, and also threatens lives and property. In the 1990s, several counties were able to obtain a memorandum of understanding (MOU) pursuant to an early version of section 2081 of the Fish and Game Code (F&GC), to allow an incidental take of protected species for wildfire fuel reduction work. The opportunity to obtain such an MOU was effectively eliminated when the legislature amended F&GC 2081, and added section 2081.1. As a result, such MOUs either have to have been approved before January 1, 1998, or, must meet the requirements of the amended F&GC 2081, which now requires mitigation and other measures that add cost, delay and limitations that discourage or preclude wildfire fuel reduction work. To enable wildfire fuel reduction work to proceed as quickly as possible with the least potential for litigation and other delays, the legislature should directly address this issue by providing a clear statutory exemption from the CESA for fuel reduction work.

4. Amend the California Environmental Quality Act (CEQA) to Provide a Statutory Exemption for Wildfire Fuel Reduction Work

Recommendation: Amend CEQA to provide a statutory exemption for wildfire fuel reduction work, without the need for permits, studies, mitigation, or other requirements that may discourage or preclude performance of such work.

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[75] See, Section 3.3.2.2.2 of this MCCWPP.

[76] For example, the Commission has found that maritime chaparral in central California is ESHA, and a California Department of Fish and Game maritime chaparral expert has said that essentially all chaparral in California's coastal zone is maritime chaparral, with few exceptions.

Rationale: The CEQA Guidelines currently provide a categorical exemption for fuel management activities in areas within 30 to 100 feet from structures.[77] However, the exemption provides it applies only if the activities do not result in the take of threatened, rare or endangered species. To know if such species are present may require a biological survey, adding cost and delay to projects. Moreover, the exemption does not apply to other defensible space measures, such as emergency access routes over 100 feet from structures, or under conditions where distances greater than 100 feet are needed to protect lives or structures. Nor does the exemption apply to other fuel reduction work that may be needed further than 100 feet from structures, such as community fuelbreaks. A statutory exemption from CEQA is needed for wildfire fuel reduction work to ensure that CEQA does not threaten lives, property or the environment by hindering fuel reduction work.

B. Recommendations to All Governmental Agencies

1. Interpret All Federal, State and Local Laws to Allow and Facilitate Hazardous Fuel Reduction Work

Recommendation: The MFSC advocates that all federal, state and local regulatory entities interpret all federal, state and local laws in the manner most conducive to allowing and facilitating safe hazardous fuel reduction work in Hazardous Fuel Reduction Zones, to protect life, property, or the environment.

Rationale: Some statutes, regulations, rules, policies, ordinances and court opinions may be interpreted to have more than one meaning. Under one interpretation, they may have the effect of discouraging or precluding hazardous fuel reduction work, and under another interpretation, they may have the effect of allowing and/or facilitating hazardous fuel reduction work. Hazardous fuel may adversely impact wildlife and habitat, including threatened and endangered species. Moreover, such fuel makes suppressing and controlling wildfires more difficult, and, in the event of wildfire, threatens lives, property and the environment with high intensity fire. In order to avoid such threats from hazardous fuel, the MFSC recommends that where laws are subject to more than one interpretation, all regulatory entities interpret the law in the manner that will act to allow and facilitate hazardous fuel reduction work.

2. Memorandum of Understanding (MOU) to Allow Incidental Take of Protected Species in HFRZ for Fuel Reduction Work

Recommendation: The FAHJ, USFWS and CDFG should enter into an MOU or other agreement to allow the incidental take of protected species within Hazardous Fuel Restricted Zones (FRZ) in Monterey County and for creation of defensible space and other wildfire fuel reduction work, without the need for mitigation, studies or other measures that may discourage or preclude such work.

[77] See, CEQA Guidelines, Title 14, California Code of Regulations, section 15304(i).

Rationale: The MCCWPP acknowledges that vegetation overgrowth is a threat to lives, property and the environment, including protected species. Hazardous overgrowth can adversely and directly impact protected species by interfering with foraging and by converting habitat to other vegetation types. Hazardous overgrowth can further cause adverse impacts on protected species by supporting unnatural, high heat intensity wildfires, which can kill wildlife and convert habitat types. Short term impacts from wildfire fuel reduction work are outweighed by long term benefits to species. It is counterproductive to long term species protection goals to discourage or preclude wildfire fuel reduction work due to the chance of short term harm to species.

C. Recommendations to Monterey County and to Municipalities and Districts Within Monterey County

1. Include Language to Allow and Facilitate Hazardous Fuel Reduction Work in all Planning Documents, Ordinances, Rules and Regulations

Recommendation: The MFSC recommends that Monterey County and all municipalities and districts with jurisdiction in Monterey County include in planning documents, ordinances, rules, regulations and department policies, language to allow and facilitate hazardous fuel reduction work wherever it would advance protecting lives, property or the environment, in that order of priority. Both removal and disposal of hazardous fuels need accommodation. It is further recommended that Monterey County (1) clarify county policies and modify ordinances to remove any permit or fee requirements for hazardous fuel modification activities approved by the FAHJ, and (2) clarify that the FAHJ has authority to authorize removal of hazardous fuels in areas where hazardous fuels present a potential threat to lives, communities, structures, infrastructure, access roads and/or watersheds in the event of wildfire.

Rationale: The source of the police power that justifies the existence of local and regional government entities is the protection of public health and safety. Various well intentioned planning policies, ordinances, rules and regulations can have the consequence of adding costs, delays and limitations that discourage or preclude hazardous fuel reduction work where it is needed to protect lives, property or the environment. In order to allow and facilitate hazardous fuel reduction work, it is critical that all plans, ordinances, rules and regulations include allowances for hazardous fuel reduction work to facilitate and expedite such work with the least amount of regulatory hindrance permissible under state and federal law. It is important to understand that the intent is to restore areas with hazardous fuels to an approximation of the fuel loads they would have had fire suppression not been practiced in the area, as determined by the FAHJ.

2. Include Language to Allow and Facilitate Wildfire Fuel Reduction Work in all Planning Documents, Ordinances, Rules and Regulations

Recommendation: The MFSC recommends that Monterey County and all municipalities and districts with jurisdiction in Monterey County include in all planning documents, ordinances, rules and regulations, language to allow and facilitate safe wildfire fuel reduction work wherever it would advance protecting lives, property or the

environment, in that order of priority, from the threat of hazardous vegetation overgrowth. Both removal and disposal of vegetation needs accommodation.

Rationale: The source of the police power that justifies the existence of local and regional government entities is the protection of public health and safety. However, various well intentioned planning policies, ordinances, rules and regulations have the consequence of adding costs, delays and limitations that discourage or preclude wildfire fuel reduction work where it is needed to protect lives, property or the environment, thereby threatening public health and safety and the environment. In order to allow and facilitate wildfire fuel reduction work, it is critical that all plans, ordinances, rules and regulations be amended to avoid hindering the performance of such work.

Thank you for your consideration of the foregoing. The Monterey Fire Safe Council strongly supports these discussions and recommendations and looks forward to working with the County to implement these concepts at all levels of government, to enable citizens and agencies to perform needed hazardous fuel reduction work with the least regulatory encumbrance and at the lowest cost possible under applicable state and federal law.

Sincerely,

Kelly Erin O'Brien, President
Monterey Fire Safe Council

Richard C. Hutchinson Jr., Unit/Fire Chief
San Benito-Monterey Unit, CAL FIRE
Aromas Tri-County FPD, Carmel Highlands FPD
Pebble Beach CSD Fire Department, Cypress FPD
South Monterey County FPD

Michael Urquides, President/Fire Chief
Monterey County Fire Chiefs Association
Carmel Valley FPD
Monterey County Regional FPD

Chris Orman, Chief
North County Fire Protection District

Martha Karstens, Chief
Big Sur Volunteer Fire Brigade

Cheryl Goetz, Chief
Mid Coast Fire Brigade

Roderic McMahan, Chief
Cachagua FPD

CENTER *for* BIOLOGICAL DIVERSITY

via electronic and U.S. mail

December 2, 2010

Gail T. Borkowski
Monterey County Board of Supervisors
P.O. Box 1728
Salinas, CA 93902

Re: (Revised) Monterey County Community Wildfire Protection Plan ("CWPP")
For consideration at the December 7, 2010 Board Meeting

Dear Ms. Borkowski and Members of the Board:

This letter is a follow-up to our August 24, 2010 letter to the Monterey County Board of Supervisors and Monterey FireSafe Council regarding the Community Wildfire Protection Plan ("CWPP") for Monterey County.

The Center is encouraged by the reported progress that has been made toward a compromise plan to provide both effective and practical wildfire protection while preserving the ecological integrity of Monterey County wildlands, native habitat and wildlife.

However, the retention of various recommendations seeking to weaken the Endangered Species Act, the California Coastal Act, the California Endangered Species Act, and the California Environmental Quality Act (now contained in "Appendix N") remains a grave concern. We are not aware of any other jurisdiction in the United States that has adopted a Community Wildfire Protection Plan that includes such extreme recommendations. The Board's approval of the current draft plan with, Appendix N intact, would establish Monterey County as an advocate for the grievous weakening of long-established environmental regulation and policy.

Appendix 'N' appears to be a stand-alone document that the rest of the CWPP does not rely upon for any legal or policy positions. As such, the Appendix's inclusion appears to be a separate, back-door attempt by the FireSafe Council to include the very recommendations and rationale in the CWPP which made the previous version of the Plan legally deficient. If the FireSafe Council insists on including the Appendix in the revised CWPP, then we recommend the Board specifically exclude the Appendix from its approval. Should the Board majority want to make these recommendations to Congress and the California Legislature, we strongly urge it to do so as a standalone resolution separate from its adoption of the Monterey Community Wildfire Protection Plan.

Sincerely,

Adam Lazar

Arizona • California • Nevada • New Mexico • Alaska • Oregon • Minnesota • Vermont • Washington, DC

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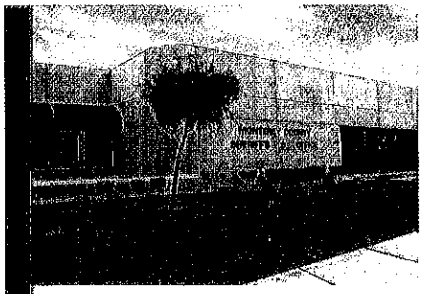

OFFICE OF THE SHERIFF
MONTEREY COUNTY, CALIFORNIA

October 12, 2010

Supervisor Dave Potter
1200 Aguajito Road, Suite 1
Monterey, CA 93940

Dear Supervisor Potter:

I would like to take this opportunity to offer my support for the Monterey County Community Wildfire Protection Plan for Big Sur. This protection plan is a vital component of a comprehensive fire prevention program for the Big Sur area.

As you recall, the Big Sur fire of 2008 destroyed structures and burned over 200,000 acres. We were fortunate lives were not lost in the devastating fire. One of the many methods used to combat the devastating fire and stop its spread was through the use of historic firebreaks.

The Monterey County Community Wildfire Protection Plan for Big Sur will enable the Big Sur Community to maintain these critical fire breaks. Maintenance of these firebreaks is essential for the protection of the community and Big Sur's critical infrastructure from future wild land fire. In addition to the fire breaks, the Protection Plan calls for vegetation clearing around structures in accordance with CalFire's 100' defensible space plan to help protect the structures from wildfires.

The Monterey County Community Wildfire Protection Plan for Big Sur is a positive step that will allow the Big Sur community to be proactive in their efforts to mitigate the effect of a fire that threatens their community. Again, I support the Big Sur community effort in their attempts to make their community fire safe.

Thank you,

Mike Kanalakis

Mike Kanalakis
Sheriff-Coroner

cc: Supervisor Simon Salinas, Chair
Lew Bauman, County Administrative Officer

Mike Kanalakis, Sheriff - Coroner
(831) 755-3700 1414 Natividad Road, Salinas, CA 93906 www.co.monterey.ca.us/sheriff

CALIFORNIA
CHAPARRAL
INSTITUTE
...the voice of the chaparral

Monterey County Board of Supervisors
PO Box 1728
Salinas, CA 93902

October 7, 2010

Dear Supervisors,

It was a privilege to testify before you last month concerning the draft Monterey County Community Wildfire Protection Plan (MCCWPP).

We wanted to write a follow up letter because of a document presented to you by Michael Emmett entitled, *Response to Comments from Environmental Organizations with a Review of the Scientific Bases for the MCCWPP*.

We have found Mr. Emmett's analysis to be highly subjective and lacking the rigor necessary to objectively review scientific research. He depends heavily on non-peer reviewed publications, some of which are more political than science based, especially the Salmon et al. (2007) white paper. In addition, Mr. Emmett doesn't seem to understand that science is an ongoing process that continually incorporates new data, builds new understandings based on that data, and rejects outdated ideas. We do not know Mr. Emmett's qualifications but we question his ability to properly evaluate the statistical work of University of California scientists who have been researching wildfire for decades.

Confusing Chaparral with Forests

Most importantly, Mr. Emmett frequently cites papers and opinions that are specifically concerned with forested ecosystems and have nothing to do with native shrublands, the dominant vegetation type impacted by the MCCWPP. This is a common error because of the public's general misunderstanding of California's native plant communities. Mr. Emmett highlights his misunderstanding by underlining the word "Forest" to make a point when describing the Los Padres National Forest on page 4 of his letter. As with the other National Forests in Central and Southern California, most of the Los Padres National Forest is covered by native shrublands (64% according to the USFS) not "forests." Mistakenly classifying shrublands as forests can have profound land management consequences because applying forest management practices to chaparral can result in the unnecessary destruction of habitat and increased fire risk.

There is no question that some higher elevation forests have accumulated unnatural levels of vegetation due to fire suppression. In such systems, it is appropriate to conduct fuel management

activities like understory burning, tree thinning, and pile burning. These activities can help reduce fire risk and offer ecological benefits as well. This is consistent with research conducted by the US Forest Service's own Regional Ecologist, Hugh Safford, showing that while 20th century burning in the Los Padres National Forest has increased beyond natural levels in lower elevation chaparral, it is probably less in forests.

Subjective Review of the Literature

Mr. Emmett's dismissal of Dr. Max Moritz's analysis of wildfires on the Los Padres National Forest and his decision to ignore the 150,000 acre fire in 1906 that scorched the same area burned in the 1977 Marble Cone Fire indicates that he ignoring contrary data in order to support favored theories.

Anyone can read enough literature to support just about any argument if there is no concern for relevance or timeliness. For example, Mr. Emmett cites Richard Minnich's old Baja/Southern California mosaic hypothesis to support his contention that that mixed-aged mosaics are the natural condition of chaparral and that mosaics are effective in preventing large wildfires. He does this despite his claim that studies (and scientists) from Southern California are not relevant to Monterey County. Mr. Emmett also attempts to characterize the evidence against the mosaic idea as merely one side of a debate between two people. This is a gross mischaracterization.

Over the past two decades, essentially all the scientists who have done research on Southern California fires have rejected the mosaic hypothesis, disagreeing with the conclusion that large fires are the result of fire suppression in the region. It is not due to the work of a single individual as Mr. Emmett claims.

Some of these scientists include:

Max Moritz (UC Berkeley)
Ed Johnson (University of Calgary)
Susan Conard (head of USFS research in Washington until her retirement this year)
David Weise (head of the USFS Riverside Fire Lab)
Paul Zedler (University of Wisconsin)
Scott Mensing (University of Nevada)
Jon E. Keeley (research scientist for USGS)
Keith Lombardo (National Park Service, Cabrillo Monument)

Keith Lombardo's (2009) work is particularly relevant because he has clear and irrefutable evidence that large fires occurred long before fire suppression and this work was done on the Los Padres National Forest. He concluded, "*The historical and modern records both imply that large, landscape-scale fires are inevitable in chaparral landscapes.*" The paper can be downloaded here: http://www.californiachaparral.org/images/Lombardo_Big_Cone_Doug_Fir_Chaparral.pdf

In short, multiple labs have confirmed the research showing that infrequent, large crown fires are inevitable and natural for chaparral in California. The notion that chaparral is somehow overgrown

or unnatural is Monterey County has no scientific merit. Regarding the mosaic approach to fire risk reduction, we reference the quote by lead USFS scientists that we placed in our previous letter: "*landscape mosaics are impractical, unnecessary, and probably not particularly effective.*" For a thorough examination of this issue, please see the following document: http://www.californiachaparral.org/images/Resolving_the_Controversy_Updated.pdf

We strongly support fuel reduction in forests that have been negatively impacted by fire suppression, strategic fuel breaks to protect communities, and programs that help citizens understand the importance of creating a fire safe environment in and around their homes. The methods promoted by Mr. Emmett, on the other hand, will cause unnecessary damage to the natural environment, will waste public funds, and will likely increase fire risk in the long run.

Please feel free to contact us if you have any additional questions. We would be more than happy to help you in any way we can.

Sincerely,

Richard W. Halsey
Director
760-822-00239

U. S. Department of the Interior
U.S. Geological Survey
Western Ecological Research Center
Sequoia-Kings Canyon Field Station
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Monterey County Board of Supervisors 5 October 2010

Dear Board of Supervisors,

I have been asked by numerous stakeholders to comment on your fire management plan. I have declined largely because of a very heavy work load and a lack of knowledge of many specifics about your plan. I am writing now though because someone forwarded a report by Michael Emmett that I find rather misleading. I don't know this person and this is the first thing I have read by him. He makes it very clear he has read a number of scientific papers dealing with fire science. However, he conveys some very incorrect ideas. The most important issue that the Board needs to understand if you are going make the right decisions is that there is no single answer on how to manage all landscapes. Emmett's comments imply that fuel treatments are known everywhere to be valuable. It isn't that simple. Some landscapes may benefit from fuel treatments, but that does not translate into all landscapes will benefit. Monterey County is a very special part of the world in that it captures an extraordinary amount of California's landscape diversity and with it, some very diverse fire regimes with different histories, and rather different responses to fuel treatments.

I work in Sequoia National Park and our fire managers have an active fuel treatment program designed to return giant sequoia groves and associated mixed conifer forests to the fuel conditions present at the time the National Park Service took control. There is a very simple model being applied that is applicable to many forests in the western United States. Some, but not all forests owe their existence to a very long history of low intensity understory fires that have kept fuel loads low enough to keep fire from spreading into the canopy and burning down the forest. This fire regime has proven amenable to fire suppression and as a result many forests in Sequoia have gone for over 125 yrs without any natural understory burns and as a consequence understory fuel loads are anomalously high. Prescription burning and other fuel treatments are necessary to prevent unnaturally intense crown fires, and because this forest ecosystem has evolved in the context of such a fire regime, species in this community are well adapted to frequent prescription burning.

However, Sequoia National Park comprises many lower elevation foothill plant communities that do not share that same historical fire regime. Chaparral for example never burns in low intensity surface fires and the typical high intensity crown fires in these shrublands have generally proven very difficult to control. Thus, despite a similar policy of fire suppression, fire has never been successfully excluded and as a result fuels in these systems are not outside of their historical range of variability. This is true for the vast majority of lower elevation chaparral dominated landscapes in California. In fact there are very good data for the southern half of the state showing that burning on chaparral dominated landscapes occurred more frequently during the 20th century than historically was the case (contact Dr. Hugh Safford, Region 5 Ecologist, USFS). Because of inherent characteristics of chaparral, fuel treatments are far less effective in altering fire behavior than in conifer forests. Also, unlike conifer forests, the chaparral ecosystem is not very resilient to frequent fires or other disturbances

and an important resource issue is the potential loss of species resulting from frequent prescription burning.

It is surprising that despite a very long history of fuel treatment implementation on many federal lands, there has been relatively little study of their effectiveness. Our research group has recently completed a study of the effectiveness of fuel breaks on the southern half of the Los Padres National Forest during the last 35 years. What our study found was that fuel breaks seldom act to stop fire spread and are primarily a factor when they provide fire fighter access for back fires and other actions. Remote back country fuel breaks with limited access are not very useful, illustrating the importance of strategic planning in their placement. The same applies to prescription burning and mechanical mastication. When strategically placed to provide defensible space for fire fighters they have proven value. However, the notion that creating a mosaic of different fuel class ages will alter fire behavior in ways that eliminate large catastrophic fires has only limited support in forested ecosystems, and has been largely disproven for non-forested landscapes such as California chaparral. Indeed, mosaic fuel patterns were the basic model of fire management on USFS lands in the southern half of the state for a brief period in the 1990s but in their most recent (2005) fire management plans this idea has been abandoned.

One issue raised by Emmett is the notion that large fire events in chaparral covered landscapes are a modern artifact of fire suppression. He resorts to looking at fire patterns in Baja California, but frankly those studies are of very little relevance to Monterey County. Baja fire patterns are almost entirely due to human ignitions and the fact that most communities do not practice fire prevention and there is a very large rural agricultural population that is free to ignite fires at will. This is not the model Monterey County should be striving to fit.

Today Monterey County is periodically subjected to large chaparral fires. However, historically this was true as well, illustrated by a recent study completed by the Tree Ring Laboratory at the University of Arizona on the southern half of the Los Padres (published last year in the on-line open journal Fire Ecology by Lombardo et al.). Their fire-scarred tree record in moderate elevation chaparral showed that over the past 400 years very large fire events occurred at 35 to 75 year intervals. Thus, modern fire suppression has neither stopped them nor made them any worse. There are many lines of evidence suggesting that no matter what level of fuel treatments are done in chaparral, it will not be sufficient to eliminate the threat of large fires. However, when placed strategically, such fuel treatments may provide fire fighter access for community protection.

In summary, I won't make any suggestions about where fuel treatments are appropriate in your county but suggest a few generalizations that should be considered. Treatments should be evaluated based on costs vs benefits, and the costs include natural resources as well as financial resources. For example, frequent burning and mastication is known to be detrimental to many chaparral species and promotes non-native invasive species. This cost may be justifiable where there is good proof of effectiveness at reducing fire risk for communities. In these cases you need to think of frequent fuel treatments in chaparral as 'resource sacrifice' for longterm fire security. In more remote areas or those not immediately accessible during fires, any perceived benefits may not outweigh the resource costs.

If you have further questions I would be happy to answer them. Feel free to contact me further if the need arises.

Sincerely yours,

Jon E. Keeley, Research Scientist
jon_keeley@usgs.gov, (559) 565-3170 (office)

S-4

LandWatch
monterey county

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September 20, 2010

Via Hand Delivery and E-mail

Board of Supervisors
County of Monterey
168 West Alisal Street
Salinas, CA 93902
E-mail: CTTB@co.monterey.ca.us

Re: Monterey County Community Wildfire Protection Plan

Dear Chairman Salinas and Members of the Board:

LandWatch Monterey County has carefully reviewed the Monterey County Community Wildfire Protection Plan (MCCWPP) dated January, 2010. LandWatch opposes adoption of this plan by the Monterey County Board of Supervisors.

The MCCWPP, an egregious example of overreaching, recommends the following:

- Removal of all permit requirements for fire reduction activities within a 100-foot perimeter around structures;
- Extension of the 100-foot perimeter to 1 ¼ mile and, in some instances, 7 ½ miles;
- Designation of *60% of Monterey County* as "Wildfire Urban Interface" (WUI);
- Waiver of the permitting requirements for vegetation modification activities in the entire WUI;
- Amendment of the Endangered Species Act to obtain exemptions for vegetation modification reduction activities;
- Adoption of the goal of *completing vegetation modification on 65,000 acres per year* by all federal, state, and local entities operating in Monterey County;
- Establishment of Overgrowth Hazard Zones (OHZ) and authorization by local fire districts to approve vegetation modification activities on private properties in the OHZ;
- Adoption of a policy statement that *all laws and regulations* will be interpreted in the manner most conducive to vegetation modification activities;
- Creation of an MOU regarding the incidental take of species similar to a San Diego example cited in the MCCWPP;

- Amendment to Monterey Unified Air Pollution Control District (MUAPCD) regulations in order to allow burning of large piles of debris with the least amount of "regulatory hindrance";
- Authorization for CAL FIRE to set a goal and *conduct controlled burns on 20,000 acres per year;*
- Amendment of state laws (CESA, Coastal Act, CEQA) to provide exemptions for vegetation modification activities;
- Inclusion of statements in State law that protecting life and property from fire is an "inalienable right" under the California Constitution;
- Adoption by local jurisdictions of such declarations in their ordinances;
- Amendment of all municipal and county regulations in order to "allow and facilitate" vegetation modification.

The MCCWPP has consequences for the General Plan the Board of Supervisors is currently considering for adoption.

1. **The 2010 General Plan requires County participation in development of CWPPs.**

In its 2010 General Plan, Monterey County commits, under Policy S-5.1, to participation in the development of Community Wildfire Protection Plans (CWPPs). Given the fact that the January, 2010 MCCWPP advocates amendment or waiver of all county policies, ordinances and regulations which may hinder vegetation modification, LandWatch seriously doubts county staff has been an engaged and active participant in the proposed plan's development. Outright adoption of the MCCWPP at the workshop would be contrary to General Plan policy S-5.1, which requires county participation in the plan's development.

2. **To ensure internal consistency, the 2010 General Plan should balance Policy S-5.1 with protection of biological and water resources**

Furthermore, Policy S-5.1 should require balance with biological resource protection policies. This is especially important in light of the fact that the MCCWPP asserts that protection of life and property are absolute priorities as compared to environmental resource protection. In addition, requiring balance would ensure that Policy S-5.1 is consistent with all other General Plan policies. LandWatch suggests the addition of the following language to Policy S-5.1: *The County shall ensure that the plans are consistent with policies in the General Plan that are protective of biological and water resources.*

3. **Policy S-4.31 should not bar the county from regulation of Fuel Modification Zones.**

Policy S-4.31 provides: "A zone that can inhibit the spread of wildland fire shall be required of new development in fire hazard areas. Such zones shall consider irrigated greenbelts, streets, and/or Fuel Modification Zones in addition to other suitable methods that may be used to protect development. The County shall not preclude or discourage a

landowner from modifying fuel within the Fuel Modification Zone, or accept any open space easement or other easement over land within a Fuel Modification Zone that would have that effect."

The emphasized language goes well beyond the state law requirement and appears to abandon the County's discretion and responsibility to regulate land clearance activity that may have significant impacts to biological or water resources.

First, Fuel Modification Zones are inadequately defined. The GP glossary states that they are "an area where the fuel loading has been reduced by converting one vegetative cover for another, trimming, or cutting vegetation." The glossary definition does not limit the extent of FMZ's. Under this language, a landowner could define a FMZ as large as he wanted.

It appears that the FMZ *may* be intended to represent the 100 foot defensible space area required by PRC section 4291 (enacted 1/05), which requires defensible space around a structure in a "State Responsibility Area" (per PRC section 4102, the area where state is primarily responsible for fire responses) if surrounded by forest, grass, shrubs, or flammable material. Cal Fire regulations implementing this statute at 14 CCR 1299 mandate a fuel break in a "Reduced Fuel Zone" (the outer 70 feet of the defensible space) and mandate removal of fuels identified as a fire hazard by the fire inspection official. The regulation also permits the fire inspection official to approve "alternative practices" if they are as effective.

Or the FMZ *may* be intended to comprise the areas subject to "fuel reduction treatments" in the CWPP's which are authorized under the Healthy Forest Restoration Act. These areas are not bounded by the federal statute other than by the criteria for the Wildland-Urban Interface.

If the FMZ were intended to include all WUI lands, and if the County were to adopt the MCCWPP which defines 60% of the County as WUI area, Policy S-4.31 would prevent the County from interfering with any land clearing activity. As a policy, it would presumably trump existing land-clearance ordinances which regulate some but not all land clearing in the County. [Coastal Land Use Plans (Big Sur, Carmel, Del Monte Forest, North County); Coastal Implementation Plans (Big Sur, Carmel, Del Monte Forest, North County); County Code, Chapter 20.66.020 (Environmentally Sensitive Habitats, coastal); County Code, Chapter 21.64.260 MCC (Oaks Preservation, inland); County Code, Chapter 21.66.020 (Environmentally Sensitive Habitats, inland); County Code, Chapter 16.60 MCC (Oak Trees, county-wide)]

Finally, it is not clear why the County requires FMZ's for all structures when the state regulations permit "alternative practices" where approved by the local fire inspection officials. Because Policy S-4.32 requires the FMZ approach, it interferes with the fire official's discretion to approve alternative methods.

The County should:

- Map the potential extent of FMZs because the term is not adequately defined in the glossary;
- Explain what statutory requirements the term is supposed to reflect, if any, because the term suggests a connection with at least two statutes, but is ambiguous;
- Strike the sentence barring the County from regulating fuel modification because the County should not give landowners carte blanche to conduct environmentally destructive activities without oversight;
- Provide for alternative methods of compliance

4. Policy S-4.20, which calls for regulation of development, lacks standards

Policy S 4.20 provides, "Reduce fire hazard risks to an acceptable level by regulating the type, density, location, and/or design and construction of development." Because the policy lacks an agent (e.g., "the County shall reduce . . . or "the county should reduce... or "the county may reduce . . .) it is impossible to determine if it is mandatory, directory, or permissive. This should be clarified, especially in view of the failure of the MCCWPP to address the planning tools available to the County to avoid risk from wildfires. The policy lacks any guidance or standards, so it is essentially unenforceable by the public. It represents nothing more than a potentially arbitrarily exercised tool.

5. The 2010 General Plan does not describe or evaluate the impacts of fire protection activities.

The EIR for the 2010 General Plan does not describe the extent or impacts of fire protection activities, including specific requirements for FMZs, fire roads, and unspecified utility precautions (e.g., clear-cutting the right of way for power lines). These impacts should be evaluated now because these policies will have environmental consequences and because some of the policies foreclose alternatives (e.g., the reliance on FMZ's rather than alternative methods and the right to clear out an unspecified FMZ without county oversight).

Thank you for the opportunity to comment on the MCCWPP. LandWatch urges the Board to reject adoption of the MCCWPP and direct staff to independently initiate and collaboratively develop Monterey County's future CWPPs. Finally, LandWatch urges the Board to amend Policies S-5.1, S-4.20, S-4.31 and to fully evaluate the impacts of fire protection activities prior to adoption of the 2010 Monterey County General Plan.

Sincerely,

Amy L. White, Executive Director
LandWatch Monterey County

THE WILDERNESS SOCIETY

Monterey County Board of Supervisors
168 West Alisal Street
Salinas, CA 93901

August 30, 2010

RE: The Monterey County Community Wildfire Protection Plan

Dear Members of the Board of Supervisors

The Wilderness Society wishes to comment on the Monterey County Community Wildfire Protection Plan. The Wilderness Society is a national, non-profit conservation organization with over 86,000 members and supporters in California.

The Wilderness Society has consistently supported fuel treatment and other forms of fire prevention throughout California, including fuel treatment in Wilderness. For example, in 2006 we wrote a letter to the Forest Service in support of a 9,000 acre fuel treatment in the South Sierra Wilderness. In addition, we have long supported fire suppression in Wilderness, especially in cases where fires have potential to affect lives and property.

We have significant concerns about the draft Monterey County Community Wildfire Protection Plan (CWPP). As written, the plan is based on erroneous fire science and is counterproductive to the goal of fire safe communities. Further, we strongly oppose the CWPP's claim to exemption from the Endangered Species Act and other environmental laws and its proposal to use bulldozers to cut firebreaks in designated Wilderness.

We will briefly cite specific examples of how the CWPP document fails to use fire science, how it may well reduce the amount of federal funding available for fuel treatment and how it may actually exacerbate fire rate of spread.

The CWPP fails to use the science of fire ecology and fire behavior appropriately. For example, the document bases much of its approach on the Tahoe Commission Report regarding the science of fire behavior and fire ecology. This Tahoe Report makes recommendations for the mixed conifer forest, a type that has a demonstrated problem with fuels built up during the suppression era. However, the conclusions of the Tahoe

Commission report are not relevant here because the vegetation analyzed in the Tahoe Report is approximately 85% mixed conifer. Monterey County is less than 5% mixed conifer. Fire behavior and fire ecology are markedly different in Monterey County.

A major premise of this CWPP is that an unnatural fuel buildup has taken place. However, the fuel buildup premise is unproven. We quote from a study done on the Los Padres National Forest in 2004:

"Thus, instead of increasing sharply with age, the majority of shrublands exhibited a hazard of burning near a constant rate (about 2.7% per year) or not far above it. Historical fire patterns and quantitative measures of hazard therefore refute the common assumption that fire probabilities in shrublands are strongly driven by vegetation age, and that large fires are necessarily caused by a buildup of older fuels[i].

The CWPP is a misuse of the Healthy Forests Restoration Act. The CWPP relies on bulldozed firebreaks scraped to mineral soil and up to 40 feet wide, in many cases running for miles through designated Wilderness.

Section 102 5(d) 1 of the Healthy Forests Restoration Act (HFRA) states that:
"The Secretary may not conduct an authorized hazardous fuel reduction project that would occur on a component of the National Wilderness Preservation System…"

Any project that includes bulldozers in Wilderness cannot legally receive HFRA money, a major source of federal funding for projects designed to protect communities from wildfire.

Mechanical Firebreaks may actually increase fire rate of spread. Mineral soil fire breaks may actually exacerbate fire problems by becoming corridors for noxious weeds, many of which are annuals, which cure early in the fire season and exhibit rapid rates of spread.[ii iii]

The CWPP recommends mechanical fuel treatment almost exclusively. To quote the document: "…this MCCWPP emphasizes fuel modification as the primary means of addressing the destructive force of wildfire in hazardously overgrown areas."

Mechanical fuel treatment costs often run $1,000 per acre or more. The county is 2,125,431 acres. A one-time treatment of half those acres would cost over a billion dollars. There are many other ways of addressing risk to life and property from wildfire. The CWPP chose one of the most expensive.

Conclusion
The CWPP document is not implementable under current law. The CWPP is based on inaccurate assumptions regarding fuels management and would not effectively reduce wildfire risk.

We stand ready to participate in any attempt to make this CWPP into a legal defensible, scientifically credible vehicle for reducing the fire threat to life and property in Monterey County.

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[i] *Testing a basic assumption of shrubland fire management: how important is fuel age?* Max A Moritz, Jon E Keeley, Edward A Johnson, and Andrew A Schaffner, Front Ecol Environ 2004; 2(2): 67–72

[ii] http://pubs.water.usgs.gov/sir20065185

[iii] *Merriam, K.E., Keeley, J.E., and Beyers, J.L., 2007,* ***The role of fuel breaks in the invasion of nonnative plants:*** *U.S. Geological Survey Scientific Investigations Report 2006-5185, 69 p.*

Sincerely;

Rich Fairbanks
Fire Program Associate
California Nevada Region
The Wilderness Society
9651 Sterling Creek Road
Jacksonville OR
97530

CENTER *for* BIOLOGICAL DIVERSITY

via electronic and U.S. mail

August 24, 2010

Gail T. Borkowski
Monterey County Board of Supervisors
P.O. Box 1728
Salinas, CA 93902

Rob Thompson
Monterey FireSafe Council
2221 Garden Rd
Monterey, CA 93940

Re: Monterey County Community Wildfire Protection Plan ("CWPP")
(Scheduled for September 21, 2010 Board Meeting.)

Dear Board Members and FireSafe Council:

I write on behalf of the Center for Biological Diversity ("the Center") and Los Padres ForestWatch ("ForestWatch") to express concern with the proposed Community Wildfire Protection Plan ("CWPP") for Monterey County. Both groups are membership-based, public interest non-profit organizations, dedicated to preservation and protection of native habitat and wildlife. For the following reasons, the Center and ForestWatch urge the Board to reject approval of the CWPP until it has undergone the appropriate environmental review, and until such time as major revisions are made to its policies and recommendations by the Monterey County FireSafe Council ("FireSafe").

I. The Monterey County CWPP Compares Poorly With Other CWPP's

The Monterey County CWPP is a world apart from other recent CWPP's passed by Santa Cruz/San Mateo, San Benito and Santa Clara Counties. This conclusion is supported by an independent analysis performed for the Ventana Chapter of the Sierra Club by Jodi Frediani, attached to the July 13, 2010 comments from the Sierra Club as "Exhibit 3."

In contrast to other CWPP's, the Monterey County CWPP:

- Impermissibly excludes itself from environmental review;
- Defines "Wildland Urban Interface" lands when they do not qualify;
- Encourages harm to threatened and endangered wildlife, habitat and plant species;
- Improperly defines large areas as "hazardous overgrowth zones" without any scientific basis for doing so;
- Relies almost exclusively on fuelbreaks which often run through designated wilderness.

The Center and ForestWatch ask FireSafe and the Board of Supervisors to consider similar plans from other counties that treat these issues in a markedly different form, and to recommend adjustments to the Monterey County CWPP accordingly.

Adam Lazar, Staff Attorney • 351 California St., Suite 600 • San Francisco, CA 94104
Phone: (415) 436-9682 x320 • Fax: (415) 436-9683 • E-mail: alazar@biologicaldiversity.org

II. The CWPP Improperly Excludes Itself from Environmental Review

The Center and ForestWatch are both concerned that the Plan improperly excuses itself from review and/or oversight under multiple state and federal environmental laws. (*See, e.g.*, Sections 8.3.2; 8.4.3; 8.4.4) In part, FireSafe attempts to excuse itself by arguing that the state and federal governments should create statutory exemptions for CWPP's. (*See* Section 8, where the CWPP "recommends" creating such exclusions.) The Board of Supervisors should recognize that an agency cannot comply with the law merely by asking that the legislature create an exemption. To the contrary, such a request affirms that FireSafe views the plan as subject to the very laws it seeks to be excluded from. The Board should also reject the CWPP on the basis that it contains political statements that extend far beyond the purposes of the Plan. At minimum, the Board should require that these portions of Section 8 to be removed from the Plan.

No CEQA Exemption Applies.

Prominent among the CWPP's denials is that the Plan is not subject to review under the California Environmental Quality Act ("CEQA"). This is simply untrue. CEQA applies where there is an "activity that may either cause a direct physical change or a reasonably foreseeable indirect physical change to the environment." (Pub. Resources Code § 21065.) Certainly, the fire management practices described in the CWPP will cause physical changes to the environment. To mention only a few physical changes, the Plan prescribes massive reductions in shrubbery and undergrowth, maintaining groups of shrubs to provide a "mosaic" pattern, and regular "fuel treatments," a euphemism for setting controlled fires.

The CWPP wrongly concludes that the Plan is not a "project" under CEQA because it "does not legally commit an agency to a specific course of action." (p.43.) However, the Monterey County CWPP does indeed commit agencies to specific courses of action. Creation of the CWPP is allows local agencies to apply for federal grants for fire-risk reduction projects in the Wildland Urban Interface ("WUI") zones. The CWPP establishes the geographical boundaries of the WUI zones and enables reduced environmental oversight of projects under the National Environmental Policy Act ("NEPA"). Thus the CWPP commits agencies to funding projects within a specific geographical boundary in order to obtain federal funds, and enables reduced environmental review. The CWPP's designation of WUI zones is therefore a "specific course of action" that requires environmental review under CEQA. The CWPP is clearly a "project" under CEQA because it is "an essential step leading to environmental impacts." (*Muzzy Ranch Co. v. Solano County Airport Land Use Comm.*, 41 Cal. 4th 372, 383 (Cal. 2007))

No CEQA 4(i) Exemption

The Monterey County CWPP erroneously claims that it is exempt from CEQA under "exemption 4(i)," which applies to "minor alterations" to the environment, including fuel management activities that are performed within 30 or 100 feet of structures. (p.33) (*citing* CEQA Guidelines, 14 Cal. Code Regs. § 15304(i).) A project whose <u>only</u> purpose was to perform fuel management within 30 or 100 feet of structures <u>might</u> qualify for this exemption, <u>if</u> it was only a minor land disturbance, and if it was not likely to harm endangered species or habitat. But the Monterey County CWPP is not limited to fuel reduction, and recommends "fuel management" well outside of a 30 or 100-foot boundary around structures. The FireSafe Council apparently does not intend to restrict the CWPP uses to a 30- or 100-foot boundary around structures. As a result, the CWPP does not qualify as "minor alterations" to land under § 15304. This interpretation was confirmed by a California appeals court in *California Farm Bureau Federation v. California Wildlife Conservation Bd.*, 143 Cal. App. 4th 173, 191 (Cal. App. 3d Dist. 2006). The entirety

of the CWPP does not qualify for such a limited exemption under CEQA. Further, the exemption under § 15304(i) only applies "provided that the activities will not result in the taking of endangered, rare or threatened plant species." But the California Chaparral Institute has warned the FireSafe Council that "burning maritime chaparral at such frequencies will inevitably destroy [that threatened plant's] habitat." (CCI comments to FireSafe, May 21, 2010 at p.7). Given the assured destruction (or "taking") of threatened plant species, the CWPP again fails to qualify for an exemption under 4(i).

No "Emergency" Exemption

The FireSafe council also makes the faulty claim that the CWPP is exempt from CEQA because the CWPP responds to an emergency. Yet the CWPP does not provide any indication whatsoever of what that emergency might be. Further, nothing in the CWPP laws suggest that the creation of CWPP's constitutes an emergency. In a recent opinion on CEQA's "emergency exemption," a California court found that the emergency exemption did not apply where the government had not made a sufficient showing of an impending emergency being "sudden, unexpected, clear, imminent, and demanding immediate action." (*Butte Environmental Council v. Department of Water Resources,* Alameda Co. Sup. Ct. No. RG09446708 (April 16, 2010)). No such finding has been made here as to the "sudden" and "unexpected" nature of the as-yet-undefined emergency, so that the "extremely narrow" emergency exemption cannot withstand legal scrutiny as applied to the CWPP. Yet even if the CWPP did cite some "immediate" "sudden" and "unexpected" need, such a recital without backing evidence is still insufficient under the law.

No Reliance on CalFire's Exclusion Decision

The Monterey County CWPP incorrectly claims that that the Board of Supervisors may rely on the Board of Forestry's determination that the project is exempt from CEQA. (p.33) Regardless of whether the CEQA exemption applies—and it doesn't—the Board of Supervisors may not rely on the Board of Forestry's conclusions to escape its responsibility to disapprove a project that lacks a required CEQA analysis. It is Monterey County, not the Board of Forestry, who is responsible for approving this CWPP, and it is the Board who will be liable for its failure to disapprove a project lacking a required CEQA review. The FireSafe Council acts as the planning agency in this context for the lead agency's final approval—and that approval must come from the Board of Supervisors. CalFire's Board of Forestry determination is further unreliable because it was not fact-specific to the Monterey County plan and was not subject to judicial challenge or review, making their assertion no more reliable than the (equally false) assertions of the FireSafe Council. There is also no evidence that CalFire considered itself as lead agency for the Monterey County CWPP. In fact, the opposite is suggested: FireSafe "recommends" that CalFire be considered the lead agency under CEQA—an admission that there has never been a determination that CalFire is, in fact, the lead agency for the Monterey County CWPP. It is well within the scope of authority of the Board of Supervisors to deny approval because of inadequate environmental review, and should do so here.

No CESA or ESA Exemption

The Monterey County CWPP violates the Healthy Forest Restoration Act requirement to "protect, restore and enhance forestry ecosystem components," that "promote the recovery of threatened and endangered species," and "improve biological diversity." (16 U.S.C. § 6501(6).) Instead of promoting or preserving biodiversity, the CWPP claims it should be exempt from the state and federal Endangered Species Acts. (p.45.) Monterey FireSafe (and apparently CalFire) argue that the CWPP is a not itself a "take" of endangered species, (p.33). Yet it is these very agencies, and not Monterey FireSafe, who possess the legal authority to conclude that there will be no harm to endangered and/or threatened species.

In contrast, FireSafe and CalFire lack the authority to make such a determination. If the CWPP causes the "take," or killing, of threatened or endangered species, the government body responsible for approving the plan can be held accountable under state and federal endangered species laws. Here, that body is the Monterey County Board of Supervisors. Again, the Board should not accept FireSafe's second-hand account of CalFire's generalized statements as shielding it from its very real responsibilities under environmental protection laws.

Ignoring U.S. Fish & Wildlife Service and Cal. Department of Fish and Game

The CWPP makes the dubious claim that the California Department of Fish and Game considers this document "not of concern to the agency staff." (p.32.) FireSafe has a similarly cavalier attitude towards the U.S. Fish and Wildlife Service as well. We challenge FireSafe and the Board to find *any* CDFG or USFWS employee who claims that the biological impacts caused to Monterey County by the burns recommended in this plan are "not of concern to agency staff." If the CWPP causes loss of habitat and promotes the "take" of endangered and threatened species, then CDFG is most definitely concerned. The Board should not approve the Monterey County CWPP without project-specific consideration by the responsible state and federal wildlife agencies.

III. The CWPP Improperly Designates Land as "Wildland Urban Interface."

One of the most critical components of a CWPP is the designation of land as Urban Wildland Interface. By doing so, the FireSafe council assures preference will be given to those lands for federal funding of fire protection projects under the Healthy Forest Restoration Act. The Monterey County CWPP designates nearly 60% (1.26 million acres) of Monterey County as "Wildland Urban Interface"("WUI") lands. (Appendix B-7 and Glossary p.9). A comparison of Appendices B-6 and B-7 show that FireSafe has designated almost the entire "state responsibility area" for fire protection in Monterey County as WUI lands. FireSafe does not explain why nearly 100% of non-federal land fits under the WUI category. As such, FireSafe's WUI designation for Monterey County is exaggerated to the point of absurdity. FireSafe must revise the WUI designations and provide reasoned explanations for why the designation is made before the CWPP is approved by the Board.

WUI lands are defined as "an area within or adjacent to an at-risk community that is identified in recommendations to the Secretary in a community wildfire protection plan," meaning that WUI-designated land must be within or adjacent to an "at risk community." (16 U.S.C. § 6511.) An "at risk community" is either previously listed in a January 4, 2001 federal notice, or "[is] a group of homes and other structures with basic infrastructure and services (such as utilities and collectively maintained transportation routes) within or adjacent to Federal land." (*Id.*) The land in Monterey County was not designated in the 2001 federal notice, and the FireSafe council has not explained why nearly 60% of the land in Monterey County should qualify as "within or adjacent to Federal land." This is particularly so when the federal statute considers only lands within ½ mile of an at-risk community as WUI when no CWPP is present. (*Id.*)

Even if a CWPP is "present" here, FireSafe does not account for the 60% designation. To the contrary, FireSafe boldly declares that no reason is required to designate land as WUI, because "a CWPP offers the opportunity to establish a localized definition and boundary." (Glossary p.9.) Unfortunately, FireSafe assumes here that "localized definition" means "carte blanche." This approach defies both the spirit and letter of what it means to be an "at-risk community" under the Healthy Forest Restoration Act. In contrast to the CWPP conclusions, the Sierra Club cites a Radeloff study concluding that only 153,786

acres of Monterey County should be designated—that is, just over 10% of the FireSafe determination.[1] The CWPP does not explain this discrepancy. The Board should reject the CWPP until the Plan contains a realistic determination of Wildland Urban Interface lands.

IV. The CWPP Uses an Unbalanced and Harmful Approach to Fire Management

Over-Dependence on Fuelbreaks

The CWPP for Monterey County relies almost exclusively on using fuelbreaks to the detriment of other practices, an antiquated strategy poorly equipped to deal with the post-burn vegetative landscape covering much of Monterey County. Use of fuelbreaks is the basis for nearly all of the "recommendations," from 8.1.1 to 8.1.4 and 8.2.1 to 8.2.5. These practices should be better balanced with a range of fire prevention practices.

The Center and ForestWatch agree that fuelbreaks may be used in an integrated approach to fire management, as staging areas for restorative prescribed fire, and for using unplanned ignitions for resource benefit (a.k.a. to let fires burn). In that case, fuel breaks can benefit safe operations with proper maintenance over time. Yet fire management specialist Jodi Frediani explains on behalf of the Sierra Club that the Monterey County CWPP should also emphasize the "reduction of ignitability of structures, and enhancement of opportunities for escape and avoidance in the event of a fire." (Sierra Club (Lippe) letter to FireSafe, July 13, 2010 at p.3).

The CWPP's dependence on fuel breaks ignores basic differences in fire management practices for different types of vegetative coverings. For example, the CWPP acknowledges that 244,000 acres of the forested area was consumed by fires in 2008, but in the same breath recommends the continued use of a massive firebreak. (§ 8.1.1) This fuel break emphasis might be appropriate for preventing the spread of fires in the old forests, but it is largely ineffective against spreading of fires among the shrubbery now present. Fuel breaks don't stop unplanned fires, and their effectiveness in suppression ops hinge on external investment of aerial applications of chemical fire retardant and "boots on the ground," often including hotshots who light backburns. Is it safe and economically feasible to deploy such resources in this terrain? The CWPP should address these concerns from viewpoints of both safety and the management of scarce resources.

Harm to Wildlife, Habitat and Plants

The CWPP's recommended burn practices could harm threatened and endangered species protected under state and federal law in Monterey County, particularly those unadapted to fire. Under CEQA, these impacts must be considered, analyzed and mitigated. In its letter to FireSafe, the California Chaparral Institute ("CCI") warns that the CWPP will harm endangered chaparral habitat. (CCI letter to FireSafe, May 21, 2010). Moreover, this destruction is "wasteful and ineffective" because the use of controlled burns to create "mosaic" patterns is "impractical, unnecessary, and probably not particularly effective." (*Id.*)

From a comparison of the lands designated as WUI in Appendix B-6 with the quadrant-by-quadrant listing of threatened and endangered species in Monterey County, it is clear that there are dozens of species of concern that are not considered or addressed in the CWPP. These species are listed in

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[1] Radeloff, V.C., et al., *The Wildland Urban Interface in the United States* (Ecological Applications 15: 799-805, 2005) *as cited in* Sierra Club (Lippe) letter to FireSafe (July 13, 2010) at p.2.

Exhibit 3, which contains 182 such examples from a query to the California Natural Diversity Database (CNDDB)[2]. The biological impacts analysis required under CEQA (see below) must include analysis of impacts on large-scale fire breaks on the California red-legged frog, vernal pool species and the Monterey Spineflower, all of which have designated critical habitat in Monterey County.

Promoting Invasive Species

In addition, the CWPP's recommendation to perform large-scale burning of undergrowth will encourage the introduction of exotic, non-native plant species. Particular species of concern include oat grass (*Avena spp.*), rip-gut brome (*Bromus tectorum*), French broom (*Genista monspessulana*), mustard (*Brassica spp.*), and various thistle and knapweeds (*Centaurea spp.*) known to exist in Monterrey County (see http://www.co.monterey.ca.us/ag/nox_weeds.htm). For additional information on life histories and fire adaptations of these and other noxious weeds whose competitive success and distribution may be affected by actions contemplated in the CWPP, see http://www.fs.fed.us/database/feis/plants/index.html. The CWPP's introduction and spread of non-native plants, as well as indirect and cumulative biological impacts to bird communities associated with grass, shrubland and forest habitats that may be displaced, should be addressed and to the fullest extent possible mitigated in the plan.

Improper Use of Term "Hazardous Growth"

The CWPP frequently veers into thinly-veiled tirades against "abusive regulations" rather than providing scientifically-based fire management practices. Nowhere is this more apparent than when the CWPP warns in a dozen separate instances of an "assault" by "hazardous overgrowth" on "fundamental inalienable rights." (Sections 3.3, 8.3, 8.3.2, 8.4.1, 8.4.2, 8.4.3, 8.4.5, 8.4.7, 8.6, 8.6.1, 8.6.2, 8.7.) The CWPP then asserts the "inalienable right" to control this flagrant "assault." Unfortunately, the "right" asserted here is essentially the right to burn the entire county of Monterey. This is because it is impossible to limit the scope of "hazardous overgrowth" because the CWPP never defines the term. This would appear to be intentional, as "hazardous overgrowth" is typically defined only in terms of its offensiveness to individual "freedoms" and "rights." Based on this view, it is conceivable that a "righteous" individual could consider the *entire county* to be covered in "hazardous overgrowth" because it offends some abstract right, and burn as much of it as he sees fit. At minimum, there must be a clear, science-based distinction made between vegetative growth, overgrowth, and "hazardous overgrowth" in the CWPP. To approve the CWPP's use of this concept without defining it and without any limitations would be an arbitrary and reckless act by the Board.

V. Conclusion

The Center and ForestWatch strongly support community involvement in protecting against wildfires. We encourage the Monterey FireSafe Council to prepare a competent and science-based Community Wildfire Protection Plan that complies with state and federal laws. The CWPP currently being considered must be improved before it achieves this goal.

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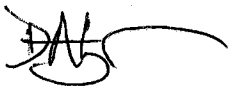
[2] *See* http://imaps.dfg.ca.gov/viewers/cnddb_quickviewer/app.asp. The CNDDB list includes the following endangered and threatened species in Monterey County: Santa Cruz long-toed salamander, California tiger salamander, bald eagle California clapper rail, western snowy plover, San Joaquin kit fox, least Bell's vireo, Smith's blue butterfly, Bay checkerspot butterfly, Santa Cruz tarplant, Contra Costa goldfields, beach layia, Menzies' wallflower, Yadon's wallflower, coastal dunes milk-vetch, Tidestrom's lupine, Monterey clover, Santa Lucia mint, robust spineflower, sand gilia, Hickman's cinquefoil, seaside bird's-beak, Gowen cypress, Santa Lucia purple amole, and Yadon's rein orchid.

Instead, the CWPP claims wholesale exemptions from the law. The FireSafe Council's political disagreements should not substitute for obeying the law, and approval of the CWPP in its present form creates a dangerous precedent. Again, we ask the Board to deny approval of the Monterey County Community Wildfire Protection Plan until a competent, scientifically sound and legally sufficient version is prepared by FireSafe, while supporting an active dialogue with state and federal wildlife management agencies.

Thank you for your time and consideration of our concerns in this matter. Should you have any questions, please do not hesitate to contact us. In addition, please keep us informed of any developments or revisions to the CWPP and any new future consideration of the plan by the Board of Supervisors.

Sincerely,



Adam Lazar
Center for Biological Diversity

On behalf of:
Jeff Kuyper
Executive Director
Los Padres ForestWatch

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The Center for Biological Diversity is a national, nonprofit conservation organization with more than 255,000 members and online activists dedicated to the protection of endangered species and wild places.

Los Padres ForestWatch is a local, independent nonprofit conservation organization with more than 800 members, headquartered in Santa Barbara, California. ForestWatch's mission is to protect wildlife habitat, wilderness landscapes, and outdoor recreation opportunities in the Los Padres National Forest, including in Monterey County. ForestWatch supports efforts to improve ecosystem health and protect communities from wildfire, and works to ensure that fuel management activities are undertaken with minimal impacts to water supplies, sensitive plants and animals, and other forest resources.

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July 20, 2010

Honorable Simon Salinas, Chair, and
Members of the Monterey County Board of Supervisors
P.O. Box 1728
Salinas, CA 93903

Re: *The Monterey Fire Safe Council's proposed Monterey County Community Wildfire Protection Plan*

Dear Chairman Salinas and Members of the Monterey County Board of Supervisors:

On behalf of Friends, Artists, Neighbors (FANS) of Elkhorn Slough, we are submitting the following letter on the proposed resolution from Monterey Fire Safe Council ("MFSC") President Rob Thompson requesting "that the Board of Supervisors consider the enclosed Resolution and authorize the Chair to sign the Monterey County Community Wildfire Protection Plan for Monterey County." FANS would like to commend the work of the MFSC in developing a strategy to help reduce fire risk in Monterey County through the Community Wildfire Protection Plan process. Nevertheless, while the importance of reducing fire risk is essential in California, fire management strategies cannot override all other important land planning and conservation concerns. To be effective, any fire plan must incorporate the values of all stakeholders. FANS' members are very concerned that the proposed fire plan for Monterey County has the potential of compromising the very natural resources that make the Elkhorn Slough watershed and other areas of Monterey County attractive and irreplaceable.

FANS incorporates the prior comments provided by Tom Lippe of Lippe Gaffney Wagner LLP in a July 13, 2010 letter to WFSC President Thompson on behalf of the Ventana Chapter of the Sierra Club and by Richard Halsey, Director of the California Chaparral Institute in its May 21, 2010 letter. Although well intended, FANS agrees that the MFSC's proposed fire plan:

1. Uses scientifically incorrect, value-laden assumptions that are likely to lead to significant loss of native habitat and increased fire risk.

2. Recommends spending scarce, taxpayer dollars on expensive, highly questionable fuel treatments in rural and remote areas far from where the fire risk is greatest.

3. Advocates modifying 1.3 million acres of native habitat in 20-year rotation cycles that will lead to the degradation of native shrub plant communities, potentially resulting in the conversion to non-native, even more flammable exotic species.

4. Recommends inappropriately and unwisely the suspension of numerous state laws that have been established over many years to protect citizens and the environment from poorly planned and capricious governmental and private actions.

5. Encourages the incorrect perception that any fuel treatment can and should be classified as responding to an "emergency" and, therefore, exempt from state environmental laws.

In order to be a "Community Wildfire Protection Plan" that represents the concerns and interests of all of the residents of Monterey County, FANS urges the Board of Supervisors not to adopt the MFSC's proposed resolution, but, instead, urge that the questionable fire management strategies highlighted by the Sierra Club and Chaparral Institute be re-evaluated in order to incorporate the latest fire science. FANS believes that this re-evaluation of the CWPP will result in a useful document that will help guide public and private activities in order to protect life, property and the valuable natural resources within the Monterey region.

Sincerely,

Bill Yeates

cc: Rob Thompson, President, MFSC

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July 13, 2010

Rob Thompson
President, Monterey Fire Safe Council
2221 Garden Rd
Monterey, CA 93940

Re: The Monterey Fire Safe Council's proposed Monterey County Community Wildfire Protection Plan

Dear Mr. Thompson:

This office represents the Ventana Chapter of the Sierra Club ("Sierra Club") with respect to the draft Monterey County Community Wildfire Protection Plan proposed by the Monterey Fire Safe Council ("MFSC"). The Sierra Club recently received a copy of the April 29, 2010 letter and proposed Resolution from MFSC President Rob Thompson requesting "that the Board of Supervisors consider the enclosed Resolution and authorize the Chair to sign the Monterey County Community Wildfire Protection Plan for Monterey County."

The Sierra Club strongly supports efforts to develop and adopt a reasonable Community Wildfire Protection Plan that reflects sound science and responsible environmental policy. Unfortunately, the MFSC proposal in its current form does not meet either standard. Therefore, the Sierra Club strongly opposes County adoption of the current MFSC proposal. The Sierra Club looks forward to working with the MFSC to develop a CWPP that the entire community can support.

1. The MFSC proposal improperly designates Wildland Urban Interface ("WUI") lands.

Under the federal Healthy Forest Restoration Act ("HFRA"), County adoption of a CWPP is a prerequisite to it being "legally effective." A "legally effective " CWPP has three primary legal effects:

- A CWPP allows federal agencies to use funds allocated by Congress for fire risk reduction projects in the Wildland Urban Interface ("WUI") zones established near federal lands by the CWPP. Thus, once a CWPP is adopted, the Fire Safe Council and other agencies may apply for federal funds to implement specific fire risk reduction measures in the WUI zones.

- The CWPP establishes the WUI zones in which these federal funds may be spent on fire risk reduction projects. (The MFSC proposal designates approximately 1,266,110 acres within the County (i.e., 59.8% of the County) as WUI lands.)

- Federal agency actions to fund or carry out fire risk reduction projects under the HFRA enjoy restricted environmental review under the National Environmental Policy Act.

Therefore, the designation of WUI lands is critical function of any CWPP.

For purposes of analyzing the MFSC proposal's designation of WUI lands, we retained Adelia Barber, a GIS specialist at UC Santa Cruz. Her analysis and results are attached hereto as Exhibit 1 (Barber). As noted above, the MFSC proposal designates approximately 1,266,110 acres within the County (i.e., 59.8% of the County) as WUI lands. These are lands that the MFSC proposal considers of sufficiently high fire risk in close enough proximity to human development to warrant fuel reduction treatment by vegetation removal as described in the proposed CWPP. However, the MFSC proposal does not disclose the criteria and methodology used to designate land as WUI .

In contrast, a peer-reviewed, nation-wide WUI designation by Radelhoff et. al. at the University of Wisconsin-Madison found that only 153,786 acres in Monterey County meet he definitions provided under federal law for designating land as WUI.[1] This acreage represents only 7.6% of the County. The Radelhoff analysis fully discloses its methodology and the fact that it faithfully applied the criteria for WUI lands specified in federal law. See Exhibit 1 (Barber).

In short, the CWPP grossly overreaches in its attempt to subject most of Monterey County to the provisions of the federal Healthy Forest Restoration Act.

2. The MFSC proposal's analysis of the causes of and remedies for increased fire risk in Monterey County contradicts well-accepted science.

For purposes of analyzing the MFSC proposal's analysis of the causes of and remedies for increased fire risk in Monterey County, we retained Dr. Scott Stephens, a fire ecologist at UC Berkeley. His analysis and results are attached hereto as Exhibit 2 (Stephens).

For fire risk assessment purposes, Dr. Stephens observed that the MFSC proposal describes Monterey County's wildlands as principally consisting of three broad primary vegetation communities, which occupy the following portions of the County's land area: shrublands (including chaparral): 24%; grasslands: 31%; and woodlands 28%. A fourth vegetation community, forests, occupies between 2% and 2.8% of the County's land area. See MFSC proposal, pp. 9-10, Table 5; see also Exhibit 2 (Stephens), p. 1. Dr. Stephens verified the reliability of these figures by reference to the California Department of Forestry and Fire Protection "FRAP" database, available at

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[1]Radeloff, V. C., R. B. Hammer, S. I Stewart, J. S. Fried, S. S. Holcomb, and J. F. McKeefry. 2005. The Wildland Urban Interface in the United States. Ecological Applications 15:799-805.

http://frap.cdf.ca.gov/data/frapgisdata/download.asp?rec=fveg02_2.[2] The County's woodlands may be further subdivided into grassland-dominated woodlands and shrub-dominated woodlands. Exhibit 2 (Stephens), pp. 1-3.

The most striking features of this CWPP is that it defines the fire risk "problem" in terms of fuel loading in the WUI zones with overmature and older vegetation and the fire risk reduction "solution" as removal of this vegetation. See e.g., MFSC proposal, pp. 2, 10, 11, 51. But as Dr. Stephens discusses, this diagnosis of the causes of increased fire risk is inapplicable to the County's shrublands because in this community vegetation age is only a "minor factor" and weather is a far more important variable determining the intensity and extent of wildfires. Exhibit 2 (Stephens), pp. 2-3. Thus, removing "overmature" or older vegetation in this vegetation community will be ineffective in reducing fire risk.

Similarly, the MFSC proposal also does not address the causes and remedies of fire risk in the County's grasslands and grassland-dominated woodlands. Exhibit 2 (Stephens), p.3.

As a result, the technical and scientific basis for the MFSC proposal's prescriptions for reducing fire risk are inapplicable to somewhere between 55% and 83% of the County, depending on how much woodland is grassland-dominated rather than shrub-dominated. Since 17% of the County is agricultural or urban land (15% agricultural and 2% urban), which would never be considered WUI land under any scenario, the MFSC proposal's prescriptions for reducing fire risk are inapplicable to somewhere between 72% and 100% of the County's wildlands, depending on how much woodland is grassland-dominated rather than shrub-dominated.

3. The MFSC's proposed CWPP compares unfavorably to other adopted CWPPs in California.

We retained Ms. Jodi Frediani to compare the MFSC's proposed CWPP with other adopted CWPPs in California. Her report is attached hereto as Exhibit 3 (Frediani). Ms. Frediani found that the MFSC proposal differs significantly from other CWPPs in several important respects.

For example, the MFSC proposal fails, in comparison to other CWPPs, to emphasize several modalities of fire risk reduction other than removal of older vegetation, including reduction of ignitability of structures, and enhancement of opportunities for escape and avoidance in the event of fire. Exhibit 3 (Frediani), p. 6-12.) In another example, the MFSC proposal appears to be unique, or at least unusual, in its recommendations for the wholesale exemption of fire risk reduction projects from environmental protection laws. Indeed, other CWPPs specifically recognize the

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[2]Ms. Barber also verified the reliability of these figures by reference to the database used by the County to produce Exhibit 4.9-1 of its General Plan update Draft EIR, though the General Plan EIR's breakdown of vegetation communities in the County is at a much finer scale and uses many more subcategories than either the MFSC proposal's or the FRAP database.

importance of complying with existing environmental laws when implementing fire risk reduction projects. Exhibit 3 (Frediani), p. 3-6.)

4. County adoption or "signing" of the MFSC proposal is a "Project" under CEQA requiring environmental review under CEQA.

The MFSC proposal asserts that the County's signing of the MFSC proposed CWPP is not a "project subject to CEQA," stating:

> "This MCCWPP is a voluntary guideline and comprises recommendations by the community to various governmental agencies. The MCCWPP does not legally commit any agency to a specific course of action, including by the act of signing the MCCWPP. The MCCWPP is not a project subject to CEQA or NEPA."

First, the fact that the MFSC proposal asserts that the County's signing of the proposal is not a "project subject to CEQA" is not relevant to, much less dispositive of, the question. As the California Supreme Court noted: "This is an issue of law which can be decided on undisputed data in the record [without] deference to agency discretion or review of substantiality of evidence." *Fullerton Joint Union High School Dist. v. State Bd. of Education* (1982) 32 Cal. 3d 779, 795 (*Fullerton*), cited with approval in *Muzzy Ranch Co. v. Solano County Airport Land Use Com.* (2007) 41 Cal. 4th 372, 382 (*Muzzy Ranch*).

CEQA defines "project" as "an activity that may cause either a direct physical change or a reasonably foreseeable indirect physical change in the environment." Pub. Res. Code § 21065. The CEQA Guidelines further define "project" as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." Guidelines § 15378(a). CEQA applies at the time a public agency proposes to "approve" a project. Guidelines, §15352, Discussion. "Approval" is defined as: "... the decision by a public agency which commits the agency to a definite course of action in regard to a project intended to be carried out by a person." Guidelines, § 15352(a) (emphasis added).

Applying these rules to the MFSC proposal is straightforward. Clearly, the MFSC proposal's designation of WUI lands is likely to lead to changes in the physical environment, because (1) fire risk reduction projects in WUI-designated areas are eligible for federal funding, and therefore, are more likely to occur with County adoption of the CWPP than without; and (2) if fire risk reduction projects in WUI designated areas are located on federal land, they will be entitled to restricted environmental review under NEPA. Thus, the designation of WUI lands commits the county to a "definite course of action."

Also, the CWPP's mistaken attribution of the causes of increased fire risk (i.e., the presence of older vegetation in shrublands, including chaparral, grasslands, and grassland-dominated woodlands,) is likely to lead to changes in the physical environment, because fire risk reduction projects will be more likely to focus on removing older vegetation, rather than other, actually

effective measures, such as hardening of structures.

Further, as a matter of policy, it makes sense to do environmental review now, at the CWPP level, because many future specific fire risk reduction projects will not require a discretionary County permit (e.g., projects on federal land or within cities) and, therefore, may never be subjected to environmental review under CEQA. (See discussion below.)

The MFSC has argued that its CWPP proposal is not a CEQA project because it does not authorize any change to the environment. This argument has been repeatedly rejected by the courts of this state. For example, in *Fullerton Joint Union High School Dist.*, the California Supreme Court held that the State Board of Education violated CEQA in approving a county committee's plan to form a new school district by dividing an existing one even though the new plan would have to be approved by the voters and it did not approve construction of any specific school in any specific location. In its recent *Muzzy Ranch* decision, the California Supreme Court summarized its previous decision in *Fullerton* as follows:

> We concluded that the Board of Education should have undertaken at least an initial environmental study of the secession plan's likely environmental impacts before approving it. (*Fullerton*, at p. 798.) In so doing, we expressly rejected the board's argument that its approval was not a CEQA project "merely because further decisions must be made before schools are actually constructed, bus routes changed, and pupils reassigned." (*Fullerton*, at p. 795.) That the board's approval of the plan was an essential step leading to potential environmental impacts, including construction of a new high school, was sufficient. (*Fullerton*, at p. 797.) Nor was the board's approval exempt from CEQA merely because it had to be ratified by the voters. (*Fullerton*, at p. 796.)

Muzzy Ranch Co. v. Solano County Airport Land Use Com., *supra*, 41 Cal. 4th at p. 383.

Similarly, in *Muzzy Ranch* the Supreme Court held that an airport land use commission decision to limit development near an airport was a CEQA project because it might cause development that would otherwise occur near the airport to be displaced to other locations. The Court rejected the commission's argument that its decision was not a CEQA project because it did not actually authorize any development.

The MFSC has also argued that its CWPP proposal is not a CEQA project because it contains merely "recommendations." In *Muzzy Ranch* the Supreme Court rejected a similar argument, stating: "The Commission repeatedly characterizes the TALUP as containing merely "recommendations," "requests" or "advice" to the affected jurisdictions. In so doing, the Commission errs.... Pursuant to the statutory scheme authorizing it, the TALUP carries significant, binding regulatory consequences for local government in Solano County. *Muzzy Ranch*, 41 Cal. 4th at p. 384. Similarly, as noted above, the MFSC proposal's designation of WUI lands "carries significant, binding regulatory consequences" under federal law that are likely to lead to changes

in the physical environment.[3]

The California Supreme Court recently had occasion to decide when an activity is a "project" under CEQA, holding that before conducting CEQA review, agencies must not "'take any action' that significantly furthers a project 'in a manner that forecloses alternatives or mitigation measures that would ordinarily be part of CEQA review of that public project.'" *Save Tara v. City of West Hollywood* (2008) 45 Cal. 4th 116, 138.) Here, designation of WUI lands would foreclose alternatives or mitigation measures consisting of alternative criteria for and designations of WUI lands on which fuel reduction projects could receive federal funding and that would "ordinarily be part of CEQA review of that public project."

Finally, a recent Court of Appeal decision applying the above authorities to a conditional development agreement held that "the contract's conditioning of final approval on CEQA compliance is relevant but not determinative" of the question whether a conditional development agreement is a CEQA project. *City of Santee v. County of San Diego*, 2010 Cal. App. LEXIS 994 (Cal. App. 4th Dist. June 7, 2010) Here, there are many scenarios in which future fuel reduction projects will not be subject to any environmental review under CEQA.

For example, removal of vegetation from land that does not qualify as "timberland" under the state Forest Practice Act does not require a Timber Harvest Plan permit and, therefore, will not undergo CEQA review by CalFire. Non-timberland generally includes all the County's shrublands, including chaparral, all the County's grasslands, and most of the County's woodlands, i.e., the vast majority of the County's wildlands.[4]

There are circumstances where vegetation removal projects as prescribed in the MFSC proposal will require a discretionary permit from the County. These circumstances include land clearing subject to regulation under the following ordinances:

- Coastal Land Use Plans (Big Sur, Carmel, Del Monte Forest, North County)
- Coastal Implementation Plans (Big Sur, Carmel, Del Monte Forest, North County)
- County Code, Chapter 20.66.020 (Environmentally Sensitive Habitats, coastal)
- County Code, Chapter 21.64.260 MCC (Oaks Preservation, inland)
- County Code, Chapter 21.66.020 (Environmentally Sensitive Habitats, inland)
- County Code, Chapter 16.60 MCC (Oak Trees, county-wide)

However, unless the vegetation removal project meets one of the threshold legal

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[3]With respect to whether, assuming CEQA applies, the County can rely, for purposes of its own compliance with CEQA, on CALFIRE's application of a CEQA exemption to its adoption of defensive space regulations implementing Public Resources Code § 4291, please see Gary Patton's August 31, 2009 letter on behalf of the Sierra Club.

[4]Se Public Respurces Code §§ 4526, 4527. California Code of Regulations, Title14, section 895.1, Definition of "commercial species."

requirements for one of these permits to apply, then the removal of vegetation will not undergo CEQA review. For example, while a permit is required under County ordinance to remove or substantially prune certain oak and other tree species in various unincorporated areas of the County (see County Code Chapter 16.60), these requirements do not and will not apply to many fuel reduction projects in shrublands, grasslands and woodlands that do not contain trees meeting the species and size criteria specified in the ordinance, and therefore, will not undergo CEQA. In another example, while a permit is required under County ordinance to conduct "land clearing" in excess of specified acreage criteria (see County Code Chapter 16.12, section 16.12.080), these requirements do not and will not apply to fuel reduction projects that do not meet the definition of "clearing" or the size criteria of this ordinance and, therefore, will not undergo CEQA review by the County.

In sum, adoption of the MFSC proposal will set the County on a definite course of action insofar as it will enable private landowners to apply for and obtain federal funding for fuel reduction projects in the County, many of which may not undergo CEQA review.

5. The MFSC proposal ignores "good planning" approaches to fire risk reduction.

The MFSC proposal entirely ignores the planning issues raised by local government permitting of development of homes and other structures in fire prone areas. The MFSC proposal simply assumes, without discussion, that structures built in the WUI zones are worthy of fire suppression efforts and the fire risk reduction measures outlined in the Plan. This bias leads to an extremely narrow definition of fire risk reduction measures, namely fuel reduction by vegetation management and fire break construction and maintenance. It entirely ignores the possibility of encouraging and assisting local governments to limit or condition permitting of new development in fire prone areas to reduce massive public expenditures on fire suppression and fire risk reduction efforts. The MFSC proposal's bias thus ignores the massive public subsidy, by way of CALFIRE fire suppression efforts and federal funding of fire risk reduction measures, of private development in California's wildlands.

6. Section 8 of the MFSC proposal should be deleted.

Section 8 of the MFSC proposal takes aim at just about every environmental law that requires public agencies to consider and avoid adverse environmental effects of fire risk reduction projects. As to each of these laws the MFSC proposal recommends to the legislative bodies that enacted the law and the executive agencies charged with their enforcement that they either amend the law or interpret it in a manner consistent with the CWPP's priority to protect "life, property and the environment" in that order, and in a manner that will not interfere with implementation of its recommended fire risk reduction strategies. As a result, the MFSC proposal represents an affirmative commitment by the County (and all other signatory agencies) to a specific, and one-sided, interpretation of all of these laws. As matter of sound public policy, the Sierra Club requests that the County not add its voice to this aspect of this proposal.

It is noteworthy that some of the MFSC proposal's statements regarding the laws it discusses are demonstrably false. For example, with respect to timber harvesting on private lands, the MFSC proposal states:

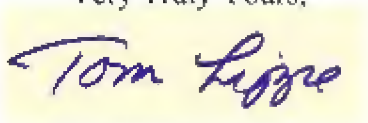
> "In 1976, the process established by the [Forest Practice] Rules was certified by the Secretary of Resources as being the functional equivalent of preparing an EIR pursuant to CEQA. *Since that time, activities conforming with the Rules require no CEQA analysis.* In some cases, landowners may choose to conform with the Rules to avoid the need for CEQA review for a fuel reduction project. See Appendix F for the checklist and more details"

(P. 47 [emphasis added].) The emphasized text is incorrect. Since 1976, over eight published Court of Appeal and Supreme Court decisions have held that timber harvesting plans approved by the Department of Forestry and Fire Protection must be analyzed pursuant to CEQA. *See* e.g., *Ebbetts Pass Forest Watch v. California Dept. of Forestry & Fire Protection* (2008) 43 Cal.4th 936; *Sierra Club v. State Board of Forestry* (1994) 7 Cal.4th 1215; *Ebbets Pass Forest Watch v. Dept. of Forestry and Fire Protection* (2004) 123 Cal.App.4th 1331; *Friends of the Old Trees v. Dept. of Forestry and Fire Protection* (1997) 52 Cal.App.4th 1383; *Californians for Native Salmon and Steelhead v. Department of Forestry* (1990) 221 Cal.App.3d 1419; *EPIC v. Johnson* (1985) 70 Cal.App.3d 604; *Gallegos v. State Board of Forestry* (1978) 76 Cal.App.3d 945; *Natural Resources Defense Council v. Arcata Nat. Corp.* (1976) 59 Cal.App.3d 959.

In conclusion, the Sierra Club requests that the Board of Supervisors decline to sign the MFSC CWPP proposal until it reflects better science and better wildland policy and until the County has completed environmental review of the project under CEQA.

Thank you for your attention to this matter.

Very Truly Yours,



Thomas N. Lippe

List of Exhibits

Exhibit 1: Letter dated July 9, 2010 Tom Lippe from Ms. Adelia Barber

Exhibit 2: Memorandum dated July 4, 2010 from Dr. Scott Stephens.

Exhibit 3: Letter dated July 1, 2010 to Tom Lippe from Ms. Jodi Frediani.

cc w/ enclosures:

Chairman Simon Salinas, County of Monterey, Board of Supervisors, P.O. Box 1728, Salinas, CA 93902

Charles McKee, County of Monterey, Office of the County Counsel, 168 West Alisal Street, 3rd Floor, Salinas, CA 93901

Carl Holm, Resource Management Agency, Planning Department, 168 W. Alisal Street, 2nd Floor, Salinas, CA 93901

Client

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UNIVERSITY OF CALIFORNIA, SANTA CRUZ

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO SANTA BARBARA • SANTA CRUZ

DEPARTMENT OF ECOLOGY & EVOLUTIONARY BIOLOGY
UNIVERSITY OF CALIFORNIA
1156 HIGH STREET
SANTA CRUZ, CALIFORNIA 95064

July 12, 2010

Direct Contact: Adelia L. Barber
adelia@biology.ucsc.edu

Tom Lippe
Lippe Gaffney Wagner LLP
329 Bryant Street, Suite 3D
San Francisco, CA 94107

Dear Mr. Lippe:

At your request, I have performed a review and analysis of several methods used to map Wildland-Urban Interface (WUI) in the County of Monterey.

I have compared the extent of mapped WUI as presented in the Monterey County Community Wildfire Protection Plan, Appendix B-7, to the extent of mapped WUI presented by a wildfire research group at the University of Wisconsin-Madison ("The Wildland-Urban Interface in the United States", V.C. Radeloff, et al, published in *Ecological Applications* 15(3) pp 799-805, 2005). These two maps are subsequently referred to as "CWPP" and "Radeloff", respectively.

Background on CWPP map:

This map is presented as Appendix B-7 in the Monterey County Community Wildfire Protection Plan as created by the Monterey Firesafe Council, January 2010. There is no stated methodology for the creation of this map, thus I have no basis for assessing whether this map adheres to any specific definition of WUI.

Background on Radeloff map:

A group of researchers specializing in wildfire research at the Univ. of Wisconsin Madison published the Radeloff study in 2005. The authors created their map with the expressed purpose of mapping wildland urban interface in the United States using the definition outlined by the Healthy Forest Restoration Act (HFRA) and the corresponding Federal Register notice (66 Fed. Reg. 753, January 4, 2001). Their goals were to make this data available to policy-makers who needed to understand

the extent of WUI in United States. The methodology used to create the map is detailed in a peer-reviewed publication in Ecological Applications and the data is available in several different formats online.

In the Federal Register, wildland-urban interface or wildland-urban intermix communities are defined using both specific housing density requirements and a requirement detailing the general characteristics of wildland fuel in the area. For clarification, both interface and intermix communities count as "WUI" for the purposes of comparing to the CWPP mapping. Wildland-urban interface communities must contain greater than 3 structures per acre and there must be a clear line of demarcation between developed areas and wildland fuels. Wildland-urban intermix communities must contain at least .025 housing units per acre (or 1 house/40 acres) and should be predominately wildland areas with scattered structures.

The authors of the Radeloff study attempted to differentiate between "interface WUI" and "intermix WUI" communities per the Federal Register. Intermix WUI was mapped as any census block (from the year 2000 census) that had both greater than 1 unit per 40 acres and greater than 50% wildland vegetation. Interface WUI was mapped as any census block that met the following 3 criteria: first, the census block had equal to or greater than 1 unit per 40 acres, second, the block had less than 50% wildland vegetation, and third, the block was within 1.5 miles of a heavily vegetated area (>75% wildland vegetation over a 2 sq. mile area). For greater accuracy, census blocks that were only partially within the 1.5 mile threshold were split so that some part of the block could count towards WUI and the rest towards other categories.

GIS Analysis Methods:

I obtained the CWPP map in .kml (Google Earth) format from the Monterey Firesafe Council Website (http://firesafemonterey.org/mccwpp.html). The kml file was converted to shapefile format using the program KMLer and imported into ArcView using the NAD 27 Albers projected coordinate system. Unfortunately, no information exists as to the coordinate system (projection and/or datum) used to build the CWPP map, leading to a slight displacement of county boundaries when compared to other data layers that I used for analysis. These alignment issues create a small discrepancy when the total county acreage is calculated from different layers (e.g., approximately a 1% difference in total acreage when calculated from the CWPP layer vs. the Radeloff layer). In the interest of accuracy, it would be best if the architects of the CWPP map could clarify their methods (including a description of the coordinate system) or provide the original shapefiles for analysis.

The Radeloff Wildland-Urban Interface map of California was downloaded from the Silvis Lab website (http://silvis.forest.wisc.edu/Library/WUILibrary.asp). This raster data layer was converted from the NAD 1983 Albers coordinate system to the

NAD 27 Albers coordinate system and clipped to the boundaries of Monterey County.

Vegetation data was obtained from both Monterey County GIS staff and the ecological consulting firm Rana Creek. This data was converted from the NAD 1983 State Plane California IV 0404 (Feet) coordinate system to the NAD 27 Albers system.

All calculations and conversions were performed using standard ArcGIS tools for shapefiles, Arc's Spatial Analyst toolbox for raster layers, and the Geospatial Modeling Environment toolbox for complex calculations. In the case of the CWPP map, all polygon boundaries were dissolved and integrated into a single polygon to eliminate problems with overlapping boundaries.

Results:

The Monterey County CWPP map defines 1,266,110 acres as WUI (59.8% of Monterey County). The Radeloff group defines 153,786 acres as WUI (7.6% of Monterey County-- of which, 1.8% of the County is "interface" and 5.5% is "intermix"). See Figure 1 for a map comparing the extent of the two layers.

The large discrepancy between the total area defined as WUI in these two maps can be attributed to the fact that the Radeloff group held strictly to the housing density requirements outlined in the Federal Register while the CWPP map includes large areas that are either completely undeveloped or sparsely developed. In total, 88.1% of the area mapped in the CWPP as "wildland urban interface" falls below the threshold population density of 1 unit per 40 acres (36.6% covering completely undeveloped census blocks and 52% covering census blocks with less than 1 unit per 40 acres). Therefore, only 12% of the area mapped in the CWPP (150915 acres) covers census blocks that meet the Federal Register WUI definition. See Figure 2 for a map of the CWPP WUI boundaries overlaid on housing densities from the 2000 census.

For further clarification, Figure 3 shows the CWPP WUI boundaries overlaid on the vegetation types of Monterey County. This figure demonstrates that the CWPP WUI boundaries overlap a significant portion of the agricultural area of the Salinas Valley, cover many lakes and riparian zones in the county, and extend into heavily vegetated zones many miles from urban or developed areas.

The Radeloff group defined WUI by census block using year 2000 data, which is currently the highest resolution housing density data available in a single layer. However, this mapping by census block leads to a certain coarseness of data quality. The HFRA defines WUI as an area extending .5 miles from the boundary of an at-risk community (1.5 miles in some special cases). In some census blocks, it is likely that the "at-risk community" is located somewhere within the interior of the census block, for other more densely developed blocks, the boundary of WUI perhaps should extend .5 miles from the exterior boundary of the census block. In an effort to simplify these issues, the Radeloff group simply mapped entire blocks as either

WUI or not WUI. As a result, some census blocks are probably "over-mapped" while others are "under-mapped" with respect to WUI. Therefore, in order to arrive at the least conservative estimate of WUI (e.g., greatest WUI acreage possible) while still somewhat abiding by the housing density and wildland fuel requirements in the Federal Register, I performed the exercise of expanding each census block mapped by Radeloff by .5 miles in each direction to create a "buffer" around each WUI interface or intermix census block. While this is likely an overestimate of WUI given the Federal Register definition, the resulting boundaries of WUI would cover 14% (301604 acres) of the County. These totals are still far below the area mapped in the CWPP as WUI, which covers 59.8% of Monterey County. As a result of this exercise, I have determined that the differences in total acreage between the two maps cannot be solely attributed to differences in the methods used to draw "buffers" around communities at risk.

In summary, the discrepancies in these two maps are largely due to differing definitions of "wildland-urban interface". The Radeloff group adhered closely to the definition outlined in the Federal Register while the methods used to create the CWPP map are unknown. If the methods used to create the WUI boundaries as drawn in the CWPP can be clarified, I will be able to compare the two methodologies directly and the differences between the two maps can be understood more fully. Please do not hesitate to contact me with questions; my academic CV is attached with a description of my GIS mapping qualifications and a list of recent projects.

Sincerely,

Adelia L. Barber
PhD. Candidate
University of California, Santa Cruz
Department of Ecology and Evolutionary Biology

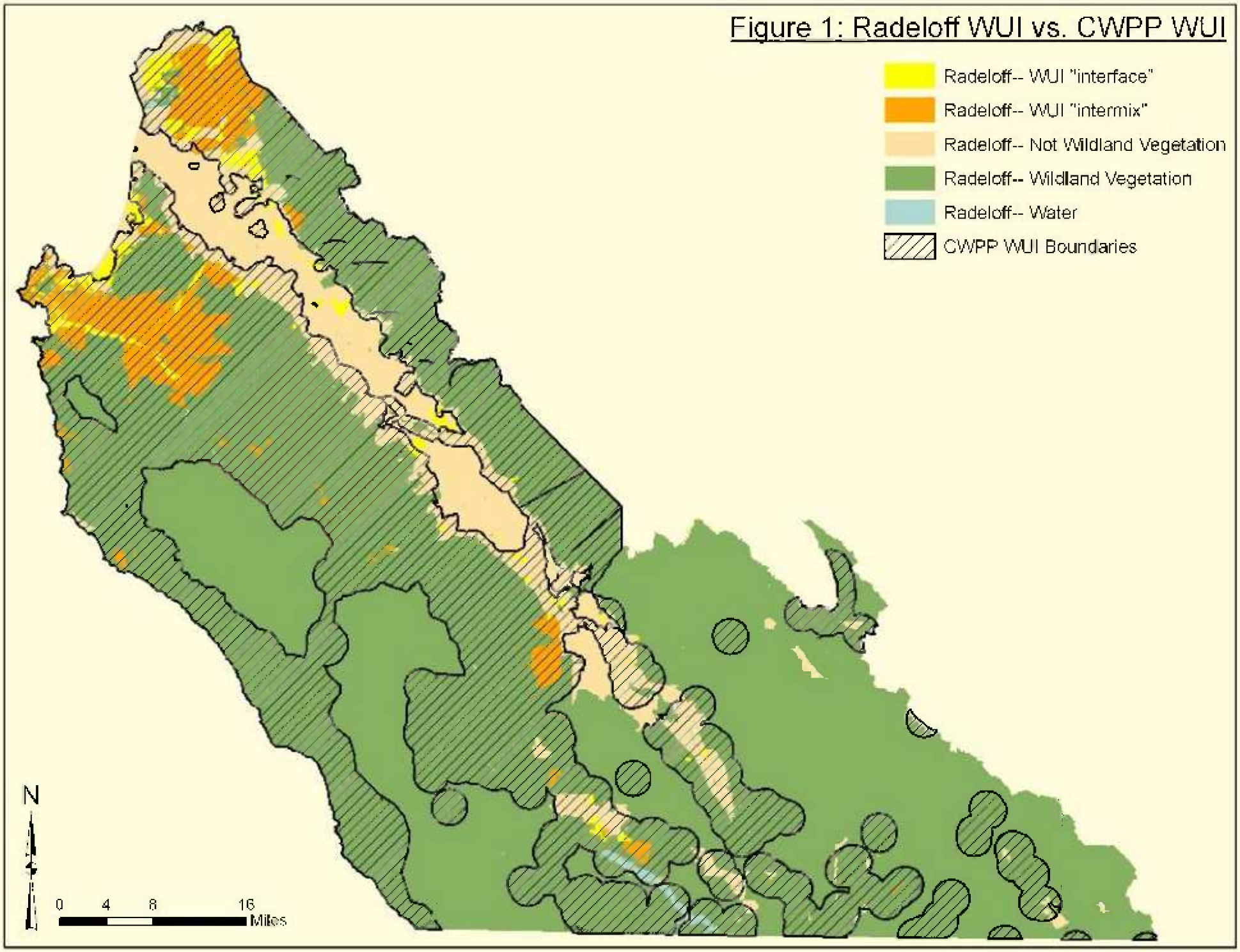


Figure 1: Radeloff WUI vs. CWPP WUI
Radeloff-- WUI "interface"
Radeloff-- WUI "intermix"
Radeloff-- Not Wildland Vegetation
Radeloff-- Wildland Vegetation
Radeloff-- Water
CWPP WUI Boundaries
N
0 4 8 16
Miles

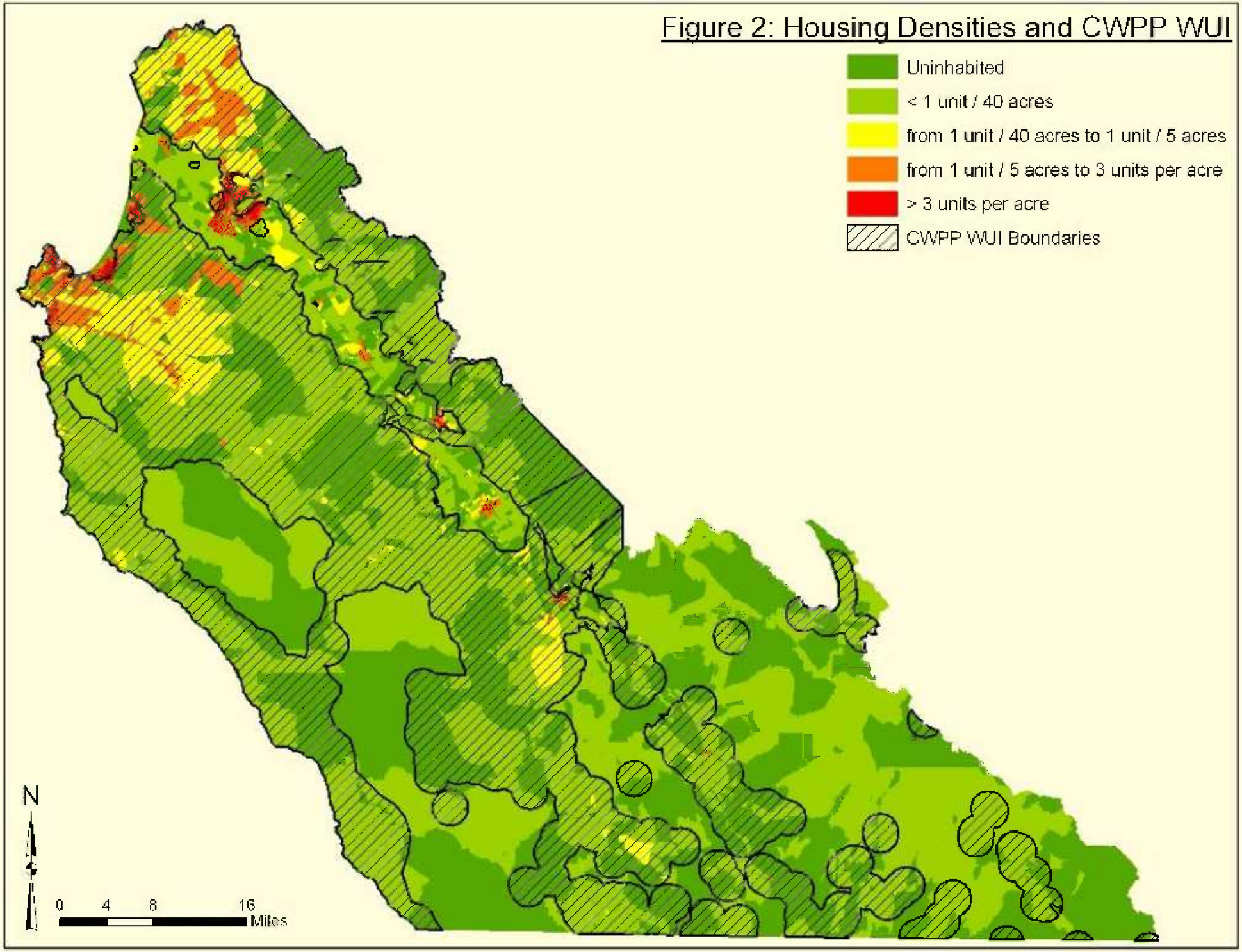
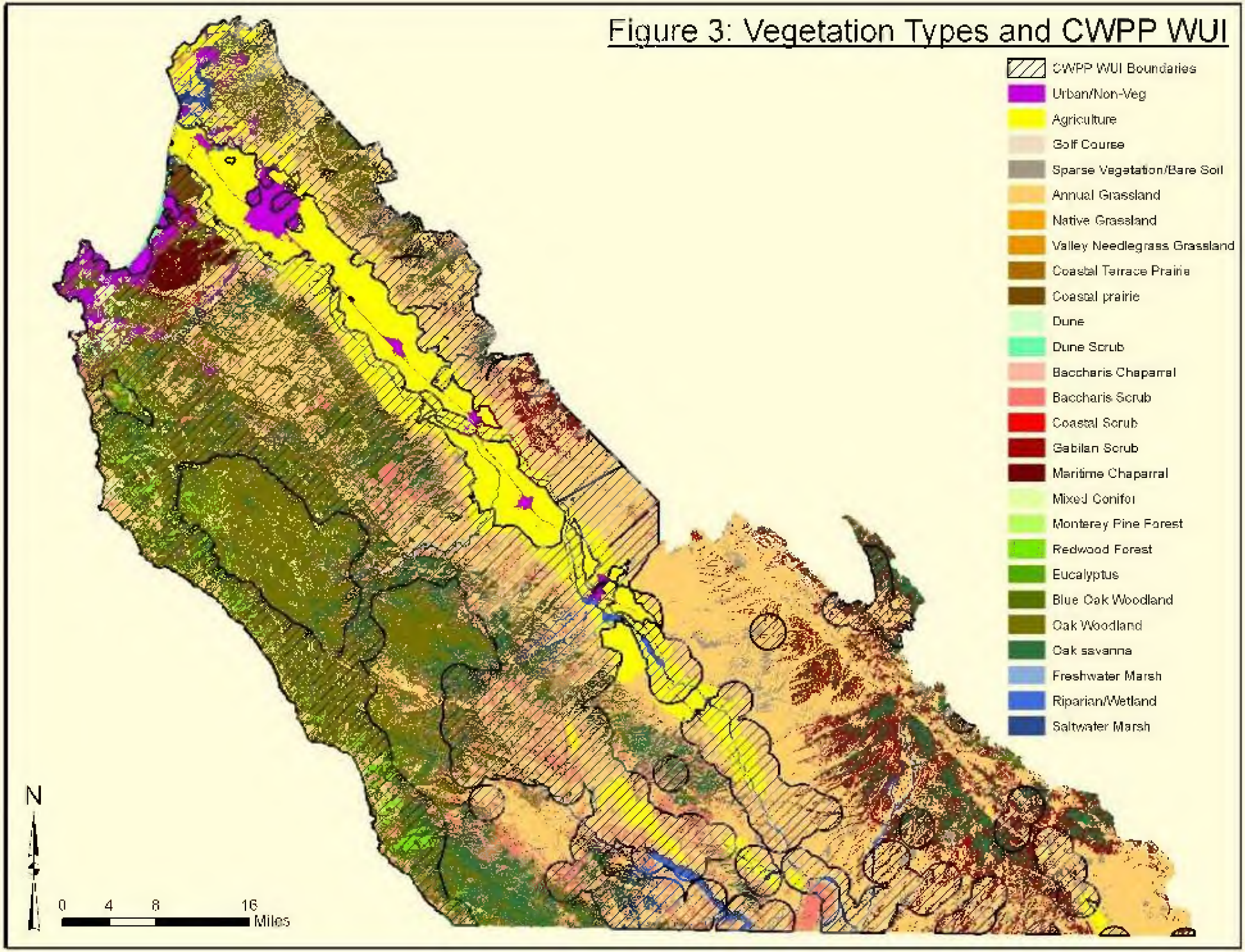


Figure 2: Housing Densities and CWPP WUI
Uninhabited
< 1 unit / 40 acres
from 1 unit / 40 acres to 1 unit / 5 acres
from 1 unit / 5 acres to 3 units per acre
> 3 units per acre
CWPP WUI Boundaries
N
0
4
8
16
Miles

Figure 3: Vegetation Types and CWPP WUI



CURRICULUM VITAE

ADELIA L. BARBER

Department of Ecology and Evolutionary Biology

Earth and Marine Sciences Building
University of California, Santa Cruz
Santa Cruz, CA 95062

adelia@biology.ucsc.edu

ACADEMIC HISTORY

PhD. Candidate in Ecology and Evolutionary Biology, University of California, Santa Cruz
Advisor: Dan Doak (2004 - current) *Advanced to Candidacy April 2007*

Brown University: Providence, RI (1997 - 2002)
4.0 GPA B.S. in Environmental Science
Magna cum laude with Honors

School for International Training, Arusha, Tanzania (2000)
Certificate in Wildlife Ecology

RESEARCH INTERESTS

Population dynamics and modeling of long-lived tree species, theory and empirical studies of plant life-histories, ecology of the genus *Pinus*, taxonomy of the genus *Trifolium*, dendrochronology, matrix modeling theory, conifer leaf physiology, spatial modeling using GIS

PROFESSIONAL AND TEACHING EXPERIENCE

- California State Coordinator of GLORIA - Global Observation Research Initiative in Alpine Environments, operated by the US Forest Service the University of CA (2009 – current)
- Co-Instructor for Biology 20B, Structure and Function of Organisms (305 students, 2007)
- Teaching Assistant for Plant Ecology, UC Santa Cruz, Professor Ingrid Parker (Fall 2006)
- Teaching Assistant for Quantitative Conservation Biology, UCSC, Prof. Doak (Winter 2005)
- Assistant Agricultural Researcher, UC Cooperative Extension Monterey (2003- 2004)
- Teaching Assistant for Conservation Biology, Brown University, Prof. Hughes (Fall 2001)
- Mentor and Trip Leader, Providence Outdoor Leadership Project (Fall, 1999- Fall 2001)
- Teaching Assistant for Applied Plant Ecology, Brown University, Prof. Schmitt (Spring 2001)
- Teaching Assistant for Environmental Science, Brown University, Prof. Hamburg (2001)
- Teaching Assistant for Plant Systematics, Brown University, Prof. Schmitt (Fall 2000 & 2001)
- Vegetation Researcher, Ndarakwai Wildlife Reserve, Tanzania (Fall 1999- Summer 2000)
- Laboratory and Field Technician, United States Geological Survey (Summer 1999)

- Seminar Coordinator for the Center for Environmental Studies, Brown Univ. (1998-1999)
- Intern for California State Assemblyman Fred Keeley, Santa Cruz, CA (Summer 1998)

GRANTS AND AWARDS

2010 UC Santa Cruz GAANN Fellowship
2009 ARCS Foundation Scholarship
2009 California Desert Research Fund Grant
2009 Elvander Scholarhip from the California Native Plant Society
2008 NSF Doctoral Dissertation Improvement Grant
2008, 2007, & 2006 White Mountain Research Station Graduate Student Grant
2004 STEPS Fellow in Interdisciplinary Environmental Research, MRC Greenwood Fellowship
2004 National Science Foundation Graduate Research Fellow
2004 UCSC President's Cota-Robles Scholarship
2001 Brown University Royce Fellowship Continuation Grant
2000 Brown University Royce Fellowship Grant (for work on the Santa Cruz Tarplant)

GUEST LECTURES & PRESENTATIONS

Invited Presentations:

Barber, A.L. "A Natural History of *Pinus longaeva*." Santa Cruz Chapter of the California Native Plant Society. Santa Cruz, CA (January 2010)

Barber, A.L. "Seven Millennia of Population Dynamics in a High-Altitude Population of Bristlecone Pine." California Native Plant Society Conservation Conference. Sacramento, CA (January 2009)

Barber, A.L. "Population Ecology of Long-Lived and Long-Dead Charismatic Megaflora." Climate, Ecosystems and Resources in Eastern California (CEREC) Symposium. Bishop, CA (November 2008)

Barber, A.L. "The Bristlecone Pine Ecosystem." White Mountain Research Station Open House, Barcroft Station. (August 2008)

Barber, A.L. "The Bristlecone Pine Ecosystem." Clark County Ecosystem Health Workshop, Desert Research Institute. Las Vegas, NV (January 2008)

Contributed Presentations and Guest Lectures:

Maher, C. and Barber, A.L. "The Effects of Herbivory and Habitat Amelioration on bristlecone pine (*Pinus longaeva*) Seedlings" Poster, STEPS Institute Annual SLGS Meeting. Santa Cruz, CA. (Febuary 2009) also displayed at Climate, Ecosystems and Resources in Eastern California (CEREC) Symposium. Bishop CA (November 2008)

Barber, A.L. "Modeling The Early Life-Stages of *Pinus longaeva*." UC Santa Cruz Plant Symposium. Santa Cruz, CA (January 2009)

Garcia, J. and Barber, A.L. "The Effect of mammalian and avian seed caching on bristlecone pine populations." Climate, Ecosystems and Resources in Eastern California (CEREC) Symposium. Bishop CA (November 2008)

Barber, A.L. "Population Ecology of Long-Lived and Long-Dead Charismatic Megaflora." Ecological Society of America Annual Meeting. San Jose, CA (July 2007) (also given to UC Davis Ecology Odyssey Field Course, White Mountain Research Station. September 2007 AND an ecology field course from Victor Valley College, White Mountain Research Station. August 2007)

Barber, A.L. "The Basics of Dendrochronology for Paleoclimate Reconstruction." The Fossil Record. UC Santa Cruz. Winter 2007

Barber, A.L. "Matrix Modeling for Plant Populations and Metapopulation Analysis." Plant Ecology, UC Santa Cruz. Fall 2006

Barber, A.L. "Environmental and demographic stochasticity in matrix modeling." Quantitative Conservation Biology, UC Santa Cruz. Winter 2006

Barber, A.L. "Long Term Population Dynamics: Competition and Facilitation in Bristlecone and Limber Pines." Stanford – UCSC Species Interaction Workshop. Santa Cruz, CA (December 2006)

Barber, A.L. "Mustard Cover Crops for Weed Control." Western Grower's Association Meeting. Salinas, CA. December 2003.

Barber, A.L. "Population Trends for the Santa Cruz Tarplant." The Coastal Training Program's Santa Cruz Tarplant Recovery Workshop, Monterey, CA. August 2003

Barber, A.L. "A Grower's Guide to Grass Identification." Salinas Valley Grower's Meeting. July 2003.

PUBLICATIONS & REPORTS

Barber, A.L. *IN PREP* "Five decades of recruitment in a high-altitude population of Bristlecone Pine". Will be submitted to Ecology in July 2010

Barber, A.L. and M.E. Barber. *Requested, In PREP* "A novel borer extraction device for field use." Will be submitted to Tree-Ring Research, July 2010

Morgan, R., Barber, A.L., and Velzy, J. *IN PREP* "*Trifolium piokowskii* (Leguminosae, Papilionoideae): A new species of clover from Northern California." Will be submitted to *Novon* in July 2010

Sattherthwaite, W. H., K. D. Holl, G. F. Hayes, and A. L. Barber. 2007. Seed Banks in Plant Conservation: Case Study of the Santa Cruz Tarplant Restoration. Biological Conservation 135:57-66.

Hane, E. N., S. P. Hamburg, A. L. Barber, and J. A. Plaut. 2003. Phytotoxicity of American beech leaf leachate to sugar maple seedlings in a greenhouse experiment. Canadian Journal of Forest Research 33: 814-821

A. L. Barber. 2001. Conservation of a Rare California Wildflower: A Case Study of the Santa Cruz Tarplant. Senior Thesis, Brown University Center for Environmental Studies.

A. L. Barber. 2000. The land-use and land-cover of Ndarakwai Wildlife Reserve: Vegetation change over ten years. Report Submitted to Ndarakwai Private Wildlife Reserve, Northern Tanzania

PUBLIC SERVICE, OUTREACH, SKILLS

- Google Earth Case Study: Ecological Research on the Ancient Pines (this case study is displayed on the Google Earth webpage and included in the downloadable program). http://earth.google.com/outreach/case_studies.html
- Graduate Student Member on the faculty search committee for the Dept. of Ecology and Evolutionary Biology, UC Santa Cruz (2009)
- Graduate Student Representative for the Dept. of Ecology of Evolutionary Biology, UC Santa Cruz (2007-2008)
- Volunteer Consultant for The Mountain Resources Group, Save the Bohemian Grove, and Neighbors Against Irresponsible Logging (2005-2009)
- Volunteer, Annual GLORIA Plant Surveys in Tahoe and the White Mountains (Global Observation Research Initiative in Alpine Environments) 2005-2008
- Proficient in Kiswahili and Spanish
- Reviewer for Acta Oecologia
- Alumni Interviewer for Brown University (2000 – 2009)
- Professional Societies: Ecological Society of America, California Native Plant Society

MENTORING EXPERIENCE (STUDENTS AND VOLUNTEERS)

Supervisor of Senior Theses 2008-2010

- Scott Jorgensen: "Abiotic limitations of the distributions of *Pinus flexilis* and *Pinus longaeva* in the White Mountains, California." Advised by Adelia Barber and Ingrid Parker 2010
- Meagan Oldfather: "Elevation-dependent Population Growth Rates of bristlecone pines (*Pinus longaeva*) as an indicator of a Changing Treeline in the White Mountains, California" Advised by Adelia Barber and Ingrid Parker 2010
- Rebecca Byrnes: "Making a usable data base for Trifolium fucatum." Advised by Adelia Barber 2010

- Colin Maher: "The Effects of Herbivory and Habitat Amelioration on bristlecone pine (Pinus longaeva) Seedlings." Advised by Adelia Barber and Prof. Ingrid Parker 2009
- Jeffrey Garcia: "The Effect of mammalian and avian seed caching on bristlecone pine populations." Advised by Adelia Barber and Prof. Daniel Doak 2009
- Marcos Grabiel: "Somatic Mutations in Bristlecone Pines: A Unique, Precise Approach." Advised by Adelia Barber and Prof. Kathleen Kay 2008
- Elizabeth Hoosiar: "A Shadow in Time: Using fallen cones to assess the long-term fecundity of Pinus longaeva." Advised by Adelia Barber and Prof. Mark Carr 2008

3 Non-Thesis Independent Study Students (2007 – 2009)
10 Elderly and Citizen Science Volunteers (2006 – 2009)
7 Other Student Volunteers (2007 – 2009)

MEDIA COMMENTARIES

- The Good Times Weekly, Santa Cruz. September 17, 2008. "Pining for the Bristlecone" http://www.gtweekly.com/20080917249727/good-times/covers/pining-for-the-bristlecone
- Los Angeles Times. September 25, 2006 "A Top Spot for Higher Education"
- San Francisco Chronicle. August 2, 2006 "Performing High-Altitude Research on Global Warming"

7/4/2010

From: Scott Stephens
Associate Professor of Fire Science
Department of Environmental Science, Policy, and Management
130 Mulford Hall
University of California, Berkeley
Berkeley, CA. 94720-3114 sstephens@berkeley.edu

Subject: Review of 'Monterey County Community Wildfire Protection Plan (CWPP)' written in January, 2010.

The goal this plan is to serve as a strategic framework to guide fire safe activities and policies throughout Monterey County. The plan includes information and ideas regarding the management of wildlands and the urban-wildland interface (UWI).

Monterey county encompasses over 2.1 million acres and over 70% of the land in county is privately owned. The area covered by specific fuel types is included in the plan and is summarized below (Pg 9-10):

Grasslands, 31% of county
Shrublands, 24% of county (includes chaparral and coastal sage scrub)
Woodlands, 28% of county (includes hardwood litter, light grass/woodland)
Forests, 2% of county (the hardwood litter category could include some conifer forests); however an analysis of a Monterey county vegetation map (FRAP 2002) resulted in 2.8% of the county in redwood, montane hardwood-conifer, closed cone pine-cypress, ponderosa pine, and Douglas-fir forests which is similar to the 2% value reported above.

The rest of the county is agricultural with 2% classified as urban. This data clearly demonstrate that forests are rare in Monterey county, most vegetative areas are grasslands, shrublands, or woodlands.

The CWPP would be improved if specific vegetation management proposals were tied to specific vegetation types (i.e. forests, shrublands, woodlands, grasslands). In the present form there is little distinction in the proposals for these diverse vegetation types. For example, an understory thinning followed by prescribed fire could be an effective method to reduce fire hazards in ponderosa pine forests but this would not be appropriate for shrublands.

The US federal government has enacted several fire policies since the mid 1990's including the Federal Fire Policy of 1995, National Fire Plan of 2000, Collaborative Approach for Reducing Wildfire Risks to Communities and the Environment: Ten-Year

Comprehensive Strategy in 2001, and the Healthy Forest Restoration Act of 2003 (Stephens and Ruth 2005). All of these acts seek to reduce fire hazards but are primarily targeted at forests.

Fire Hazards and Management in Forests

A scientific body of literature has been created regarding the reduction of fire hazards in forests that once burned frequently but have been under a policy of fire suppression for approximately 100 years and have been repeatedly harvested (Stephens 1998, Fule et al. 2001, Pollet and Omi 2002, Fiedler et al. 2004, Agee and Skinner 2005, Stephens and Moghaddas 2005, Agee and Lolley 2006, Schmidt et al. 2008, Youngblood et al. 2008, Stephens et al. 2009) (this literature is not included in the CWPP). There is scientific consensus that to reduce fire hazards in forests that once burned frequently fuels treatments should focus on surface, ladder, and then crown fuels. However with little forests in Monterey county much of this literature this inappropriate except for local forested areas with high fire hazards. In these relatively small forested areas in Monterey county the work cited in this paragraph is appropriate and the strategy of reducing surface, ladder, and crown fuels (in that order of priority) would reduce fire hazards.

Fire Hazards and Management in Shrublands

The CWPP states that much of the county is in a very hazardous fuel condition from overgrown and over-mature vegetation (Pg 10, 11, 51). However high fire hazards are common in areas dominated by shrublands in coastal California which can burn at high intensity when severe fire weather occurs (Moritz 1997, Keeley and Fotheringham 2001, Keeley et al. 2004) which is not in agreement with text in this plan (Pg 11). Chaparral re-grows relatively quickly after high intensity fire and can burn again in less than 5 years with moderate intensity.

Several papers have been written on chaparral fire regimes that include the federal lands in Monterey county, two of the most important papers are Moritz et al. 2004 and Moritz 2003. These papers worked to determine if wildfires in coastal shrublands are strongly influenced by the age of the shrubs (or time since last stand replacing fire) or if weather was the most important factor. Analysis presented in these papers concludes that shrubland fuel age is a relatively minor factor in fires in US Forest Service lands in Monterey county. This result is very important regarding what techniques could be implemented to reduce unwanted fire effects. In areas dominated by shrublands the best strategy would be to work in areas in close proximity to the UWI instead of creating a mosaic (patches of chaparral with different ages) of vegetation patches or fuel breaks. The UWI has enormous assets at risk and fuels treatments can be used to reduce the vulnerability to catastrophic losses. However I must point out that the risk will never be reduced to zero, it can be reduced but treatments must be maintained to remain effective. The CWPP correctly states that fire behavior under severe fire weather constitutes the greatest threat of destructive wildland fires and these are historically immune to planned

tactical responses (Pg 13). Reducing fuel loads along access roads to provide safe access for fire equipment and resident evacuation is a priority that the CWPP identifies (Pg 35) and I agree with this proposal.

Prescription parameters are included in the CWPP regarding chaparral prescribed fires (Appendix G). I recommend consulting two recent publications (Potts and Stephens 2009, Potts et al. 2010) regarding the trade offs of using prescribed fire and mechanical treatments (mastication) in different seasons to manage chaparral. These publications focus on the ecological effects of the most common fuel treatments used to manage chaparral and may be useful to this plan. Information in Appendix G is very general, the information from these two publications can allow managers to predict what could occur when burning in spring, fall, or winter or what would be expected after mastication alone.

Fire Hazards in Grasslands and Woodlands

The county has a large area of grasslands and woodlands. Most of these areas are dominated by exotic annual grasses that naturalized in California after European settlement. Since these plants grow and die annually the use of livestock grazing could be an effective method to reduce fuel loads. Years with higher rainfall (such as 2009-2010) would be periods where reduction of annual grass fuels near the UWI would be particularly important. The CWPP mentions grasslands very little but they are an important vegetation type in Monterey county.

Fire hazards in woodlands are also be connected to annual grasslands since they normally dominate the undestory of these ecosystems. Many woodlands also have shrubs that will be of varying cover and height. If woodlands have extensive shrub cover these could act as ladder fuels to the overstory, particularly when the overstory is coniferous (such as gray pine). In these areas, particularly near the UWI, removal of some of the larger shrubs (ladder fuels) might be appropriate. However if shrub cover in woodlands is clumpy or low it would not increase fire hazards significantly.

Fire in the Urban-Wildland Interface

To reduce losses in the UWI private land-owners will have to reduce the vulnerability of their assets (Stephens and Ruth 2005). The CWPP does a good job in this area, it includes quite a bit of language that clearly states that people need to reduce the chances of their homes or yards being ignited by flying embers (which is the primary ignition method in the UWI)(Pg 17, 50, 52, 59). The CWPP states it is possible that some communities may become trapped without the option to evacuate, forcing them to shelter in place and defend themselves (Pg 17). Discussing this possibility with residents in the UWI is important including what actions they need to do before and during such an event to reduces losses of life and property.

However the CWPP references CAL FIRE's policy of 'Ready, Set, Go' (pg 17, 83) and a document with this title is included at the end of the report (no sequential page numbers provided). While some of the basic principals outlined in this document are sound (working to reduce risks of home ignition, early evacuations) it does a poor job of citing the scientific literature in this area. It references one scientist, Jack Cohen (Pg 4 of the Ready, Set, Go document), but gives no citations. While Jack Cohen's work is good work done in Australia should be included in this report. The Australian's began working on this issue in the 1970's, well before anybody was doing similar work in the US. The document would be substantially improved if it connected to this literature. A couple of papers that can assist in this area are Stephens et al. 2009 and Gill and Stephens 2009. There are many others but this could provide a starting point for literature in the UWI. This document (Ready, Set, Go) has almost no scientific references which makes it of moderate usefulness. The 'Contingency Planning (how to survive, if trapped)' section on page 6 is inadequate. During severe fire weather it is likely that many people living in the UWI will be impacted by fire with little of no warning (as occurred in the 1991 Oakland Hills Fire) (Pg 17 in the CWPP states this as well). What should a home-owner do if suddenly impacted by a fire in the UWI? What can be done to reduce the chances for losses or injury during such an event? More information is needed in this critical area, the 'Ready, Set, Go' document does not cover this area well.

The CWPP discusses the use of fuel breaks, fire breaks, and strategically place landscape area treatments (SPLATs) (pg 50). The CWPP specifies where existing fire and fuel breaks are located throughout the county (Pg 72, 73, 74). Since these are already installed maintaining them into the future makes sense. They can act as anchor points for fire suppression operations and safety areas for fire fighters. How wide such fire breaks should be is an issue that is debated. Jack Cohen (2000) has written that the vegetation immediately near the homes (within 100-150 feet) is the critical area regarding safety in the UWI. I agree with this but embers can also be produced from areas further away and they can impact structures. However to reduce losses in the UWI it is more efficient to invest in measures to reduce the probability of home and urban-garden ignition from embers than to decrease vegetation fire hazards at long distance from the UWI.

Vegetation Management and Monitoring Proposals in the CWPP

The CWPP recommends an annual goal of 65,000 acres of fuel reduction work on private land in Monterey county (Pg 79). The rational for this number is there are 1.3 million acres of private land that is rated by the CAL FIRE FRAP program as high, very-high, or extreme threat from wildfire. Assuming that vegetation regrows to a mature condition within 20 years after fuel reduction work is performed, fuel reduction work needs to be performed on about 65,000 acres per year to perform such work on 1.3 million acres in a 20-year rotation. While the arithmetic of this approach is good I cannot support this goal in shrubland dominated ecosystems. Research has determined that some fuel treatments in chaparral can increase non-native species (Keeley et al. 2005, Potts and Stephens 2005, Keeley 2006) and this has the potential to change species composition and can substantially modify wildlife habitat. Type conversions (changes from chaparral to

grasslands) are possible because non-native grasses can increase fire frequency to the point where chaparral species cannot regenerate. Most fuels treatments in shrublands should target the UWI, not remote shrublands in this county. In the relatively rare forested areas with high fire hazards in Monterey county the general approach of treating a percentage of the landscape annually is an effective fire reduction technique (I recommend using a strategically placed landscape area treatments approach in forests which is discussed in Pg 72, 73, 74)). In grassland areas the use of livestock grazing may be an effect tool to reduce fuel loads.

I would not recommend creating a new set of fire breaks in chaparral shrublands that are not next to the UWI, as suggested in the plan (Pg 63). When shrublands burn under severe weather such fire breaks will not be effective in mitigating fire behavior. Most fire breaks are narrow and spotting embers will fly right over them, especially during severe weather. Unfortunately for many managers coastal shrublands burn at high intensity when we have strong, dry winds. In other areas steep topography alone can produce extreme fire behavior. A system of fire breaks or a mosaic of different aged chaparral will not be very effective in reducing landscape fire behavior. It is better to invest resources in areas adjacent to the UWI and to get private land owners to reduce the vulnerability of their structures and yards to ember ignition.

The CWPP mentions that annual monitoring of treated areas is recommended but gives no specifics (Pg 70). What species will be monitored? What methods? Will the methods used be reviewed by appropriate scientists and managers? Effective monitoring and adaptive management should be a central theme of this plan. In an era of changing climates adaptive management and monitoring will be a critical component of this CWPP (Miller et al. 2007). More effort is needed to develop this critical section and a funding source will be needed to do this critical work.

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July 1, 2010

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Re: Comparison of MCCWPP with other CWPPs re Environmental Regulation, Deficiencies, and Treatment of Structural Ignitability

Dear Tom,

As preparation for developing the following comments and recommendations I have reviewed the following Community Wildfire Protection Plans and other documents: Monterey County CWPP, January 2010; MCCWPP Dudek Draft; Preparing a Community Wildfire Protection Plan, A Handbook for Wildland-Urban Interface Communities; Tahoe Basin CWPP (Tahoe CWPP); Keswick CWPP; Fallen Leaf, Portion of Lake Tahoe Basin, California Portion CWPP and The Community Protection Zone: Defending Houses and Communities from the Threat of Forest Fire (Nowicki)[1].

I have also relied on knowledge gained from previous review of the Draft Santa Cruz-San Mateo CWPP for Central Coast Forest Watch and the Santa Cruz Group of the Sierra Club, Ventana Chapter and my participation in development of the Lexington Hills CWPP on behalf of Neighbors Against Irresponsible Logging. I have also reviewed several articles on chaparral and fire in preparation of the following comments. I chose the Keswick and Tahoe CWPPs because they were developed in communities adjacent to federal lands, had high fire incidences and similar considerations to Monterey County. The Lexington Hills area and Santa Cruz County have also experienced significant fires in recent years.

In this report, I will focus on two distinct areas: 1) significant differences between the MCCWPP and others relating to environmental regulations (Section A) and recommendations for hazardous fuel reduction projects, and 2) what is lacking in the

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[1] Nowicki, Intro: *"This paper includes an extensive review of all the available scientific literature in an effort to determine what is actually necessary and effective at protecting houses and communities from the threat of forest fire. WUI treatments that provide effective protection from forest fires can be implemented relatively quickly in and around the homesite (the house and its immediate surroundings), and with a minimum of impact on the wildland forest."*

MCCWPP, focusing on treatment of structural ignitability and site-specific documentation and recommendations (Sections B-E).

I am sure you are aware that the CWPP arose out of the Healthy Forest Restoration Act (HFRA) "*which builds on existing efforts to restore healthy forest conditions near communities and essential community infrastructure by authorizing expedited environmental assessment, administrative appeals, and legal review for hazardous fuels projects on federal land.*"[2] As such it tends to focus on forests, rather than chaparral, and as noted in the above quote, encourages 'expedited environmental assessment' on federal lands.

While the CWPP process is fairly broad and flexible and " *may address issues such as wildfire response, hazard mitigation, community preparedness, or structure protection—or all of the above*"[3], it must include:

MINIMUM REQUIREMENTS

The *minimum requirements* for a CWPP as described in the HFRA are:
(1) Collaboration: A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties.
(2) Prioritized Fuel Reduction: A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.
(3) Treatment of Structural Ignitability: A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.[4]

The MCCWPP apparently conducted minimal collaboration with 'other interested parties' (personal conversation with Rita Dalessio) [5], used an exceptionally broad brush on prioritizing fuel reduction projects (and defining it's WUI)[6], and minimized focus on reducing ignitability of structures.

The MCCWPP is so poorly organized that it fails to follow the three outlined minimum requirements as a foundation. Structural Ignitability is lumped under Fuel Hazard Reduction in one brief section (6.1, pg 59). The bulk of the document is essentially off topic, referencing other fire and planning documents and devising ways to get around environmental regulations.

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[2] Preparing a Community Wildfire Protection Plan, A Handbook for Wildland-Urban Interface Communities
[3] *ibid*
[4] *ibid*
[5] Rita indicated that the various stakeholder groups were not notified per the timeline in the CWPP and in some cases were not notified at all.
[6] *ibid*, pg 4, HRFA offers benefits: "the opportunity to establish a localized definition and boundary for the wildland-urban interface"

The MCCWPP also contains elements painted in broad strokes that would allow actions with the potential to create significant environmental harm while not accomplishing the stated goal of protection of life and property. For instance, the MCCWPP defines a huge swath of the County as WUI Defense and WUI Threat zone (Appendix B, Map B-7). Pg 26, 3.3.1.3 "*Fuelbreak construction and maintenance... usually would occur outside the Defense zones, in both the WUI Threat zone and in the WUI environment (a distance of* ***up to 7.5 miles from developments****, or the distance that fires may burn in a 24-hour period during normal summer conditions).*"

This statement is ambiguous at best, but at worst allows for actions that would provide a false sense of security to the community, while having the potential to create undue environmental harm. It appears to imply that creating fuelbreaks 'up to 7.5 miles from developments' is an appropriate action to be taken for protecting such developments from advancing fire. First, there is no definition of 'developments' in Appendix A, so there is no agreed upon way of determining just how many homes or buildings constitute a 'development'. Is one home a development that could trigger construction of a fuelbreak 7.5 miles away? Neither does the statement take into account how such a fuelbreak would protect the development from any fire starting inside the 7.5-mile zone. But of even greater import is the implication that construction of a fuelbreak at the distance 'that fires may burn in a 24-hour period' would protect life and property. This is inconsistent with the available science on the topic.

Nowicki says, " *The protection of the house depends entirely on treatment of the home ignition zone—the house itself and the area within 60 meters (200 feet) of the house. This is necessary to protect the house from the various forms of ignition present during forest fires, regardless of what treatments are implemented in the adjacent forest.*" and, " *The largest community protection zone required under maximal conditions is less than 500 meters (1640 feet) wide. However, most communities require treatment extending less than 400 meters (1312 feet) from the house.*"[7]

A. ENVIRONMENTAL REVIEW

The MCCWPP makes repeated statements about the need to prioritize protection of *'life, property and the environment in that order'*, and recommends an end run around environmental regulation at every pass.

Example: pg 20 3.3 "*To the extent that favorable interpretation of regulations is not adequate to avoid regulatory hindrances, this MCCWPP recommends changes to law to allow and facilitate reduction of hazardous fuel loads in Monterey County.*"

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[7] Nowicki, B., *The Community Protection Zone: Defending Houses and Communities from the Threat of Forest Fire*, 2002

"*The goal is to enable and encourage landowners to perform the essential task of managing vegetation, to advance and foster much needed wildfire fuel reduction work as expeditiously as possible.*"

The MCCWPP recommends an MOU that would lead to *'as little regulatory hindrance as possible'*. (pg 28, 3.3.2.5) Additional similar comments can be found: pg 29, 37, 38, 39, 46. Pg 61 seems to have been written by a different author and states: *"...this MCCWPP recommends that responsible parties who reduce fuel for defensible space comply with all applicable federal, state or local environmental protection laws and other laws, and obtain permits when required. Such laws include, but are not limited to, those that protect threatened and endangered species, water quality, air quality, and cultural/archeological resources."*

1) TAHOE CWPP - ENVIRONMENTAL REVIEW

The Tahoe CWPP includes this strong statement in its Introduction:

"This document is intended to provide district wide planning level information for identification of wildfire hazards and proposed fuel mitigation projects to address those hazards. It is not intended to circumvent the public review process for vegetation management treatments or address the environmental compliance measures necessary for each project. NEPA and CEQA compliance for fuel mitigation projects will be addressed with detailed project planning to be completed prior to implementation of each project."

"This plan is advisory and will not result in changes in the human environment without appropriate environmental planning, therefore is not subject to NEPA or CEQA." (emphasis added)

Pg 39, *6. Environmental Compliance*

"All individual projects designed to reduce fuel hazards that are proposed by public agencies, funded by public agencies, or that require federal, state, local, or local discretionary approval will be subject to federal, state, or regional environmental regulations. This plan is advisory and will not result in changes in the human environment without appropriate environmental planning, therefore is not subject to NEPA or CEQA."

Pg 39, 6.1 *National Environmental Policy Act*

"All fuel reduction projects funded by the federal government, that occur on federal land (e.g. LTBMU), or require a federal agency to issue a permit must comply with NEPA."

"The Healthy Forest Restoration Act only requires agencies to simplify the process by only

evaluating two alternative projects in a NEPA document. In some cases, federal agencies have determined that some projects are categorically exempt from NEPA. The Forest Service has recently determined that several types of fuel reduction projects are categorically exempt (Federal Register 68:33814 and 68:44598). Projects that meet these requirements only need to demonstrate that there are no extraordinary circumstances affected by the project, these include threatened or endangered species, cultural resources, wetlands, wilderness, or roadless areas."

6.2 CEQA *" Fuel reduction projects on private lands and some state lands that require approval by a local or state agency must comply with CEQA or a functionally equivalent program (e.g. the California Forest Practice Rules)"*

2) KESWICK CWPP - ENVIRONMENTAL REVIEW

Pg 59, Fish and Wildlife (discussion on listed species)

VI. FUEL TREATMENTS
The ability to implement fuel reduction projects typically comes down to the source of funds available, the cost of labor, ***the permitting process*** *to implement the project, and landowner cooperation.*

3) FALLEN LEAF (Portion of Lake Tahoe Basin, CA Portion CWPP) - ENVIRONMENTAL REVIEW

The following recommendations come from the Risk/Hazard Identification and Mitigation Project Worksheet for the Eastside Community. Similar language was found for other communities in the assessment area. Prior to conducting fuel reduction projects:

Identification of Protected Species or Other Critical Resources: *Describe any measures that must be taken to protect critical wildlife habitat, historic or culturally sensitive sites, artifacts or other resources, and plant and animal species protected by statute. The project contains sensitive areas, including a SEZ and Bailey Land Classifications 1A and 3. The current proposed prescription of mechanical treatment is in conflict with the operational constraints within Bailey Landuse Classifications and SEZ's. The SEZ and Bailey Land Class should be ground verified to ensure they apply to the project area.*

The mechanical treatments can be accomplished by avoiding the sensitive areas in the project.

TRPA and Lahontan require buffers for forestry activities near SEZs. Tree removal may be allowed within stream corridors and other SEZs under certain conditions if it is demonstrated that removal of the vegetation will benefit the SEZ vegetative community. Lodgepole removal generally falls into this category. Contact these agencies to discuss treatment options within SEZs.

Other wildlife habitat, critical species, and cultural resources may be present in the project area and require mitigation measures. Current wildlife habitat noise abatement measures may limit operations to a small window in the late summer and early fall. Project planning should include implementation of surveys and mitigation measures as dictated by regulatory statutes.

With all environmentally sensitive areas, identification and mitigation of potentially negative impacts is required. (pg 68-69)

Other Considerations: *Describe any other consideration that must be taken into account to successfully complete this project such as permits, clearances, approvals, etc.*

All proposed projects must comply with federal, state, and regional environmental regulations. Projects on federal land or on other lands with federal funding must comply with the National Environmental Policy Act. The Healthy Forest Restoration Act provides for a focused analysis of environmental impacts. Projects on private land and most state lands must comply with the California Environmental Quality Act or a functional equivalent (e.g. Forest Practice Act). All projects will require compliance with the TRPA's requirements and a waste discharge waiver from the Lahontan Regional Water Quality Control Board. (pg 70)

4) SANTA CRUZ CWPP - ENVIRONMENTAL REVIEW

The Santa Cruz San Mateo CWPP has 11 pages on Sensitive Habitats and Permitting (pgs 35-45).

SENSITIVE HABITATS AND PERMITTING
It's widely recognized that wildfires are a natural and vital force in maintaining biological diversity, including species, habitats, watersheds, nutrient cycles, and landscape patterns. However, high severity wildfires, like those experienced recently on the Central Coast, can result in loss of habitat and cause significant direct wildlife mortality. Thus, the state mandated defensible space guidelines have become increasingly important to implement not only for public safety, but for environmental protection as well. However, it is important to recognize that balance between habitat protection and degradation. This chapter aims to provide guidance on natural resource protection in conjunction with fuel load management.

B. TREATMENT OF STRUCTURAL IGNITABILITY (and other citizen actions)

1) TAHOE CWPP - TREATMENT OF STRUCTURAL IGNITABILITY

PG 24, 3, *Roles and Responsibilities*
"According to the Living with Fire in the Tahoe Basin publication, defensible space and use of the appropriate building materials are the most important defenses against loss of structures during a wildfire event. *<u>As such, private homeowners and</u>*

landowners constitute the most important group for limiting losses from a wildfire. Each homeowner has a responsibility, re-enforced by state and local codes, to create and maintain defensible space and use non-flammable building construction around their homes." (emphasis added)

2) KESWICK CWPP - TREATMENT OF STRUCTURAL IGNITABILITY

Pg 28, *2. STRUCTURAL IGNITABILITY*
Step 6b – Recommendations to Reduce Structural Ignitability:
Individuals and community members can reduce structural ignitability throughout the Keswick Basin planning area by implementing defensible space/Firewise Programs to include the following.

- *Assess risk/structure ignitability.*
- *Upgrade existing structures to fire safe building codes.*
- *Replace wood roofs with approved fire safe roofing.*
- *Consider fire resistant exterior siding.*
- *Maintain a minimum 100-foot defensible space around structures.*
- *Clean roofs and gutters annually.*
- *Develop a community phone tree in case of a fire emergency.*
- *Develop agreements with the County to use the reverse 911 system.*
- *Remove ladder fuels.*
- *Clean and screen chimney.*
- *Maintain green grass and fire resistant plants within 30 feet of house.*
- *Move all flammable material at least 30 feet from house.*
- *Remove dead, dying, or diseased shrubs trees, dried grass, fallen branches and dried leaves 100 feet around house.*
- *Attach a hose that can reach to all parts of the house.*

Pg 29 (includes # dwellings, $$ needs, time, priority rec. – high/medium/low)

- *Seek funding to identify absentee landowners and work with them to reduce fuels on undeveloped parcels.*
- *Develop a Wildland Fire Evacuation Plan for that portion of the Keswick Basin planning area outside of the current City of Shasta Lake Wildland Fire Evacuation Plan.*
- *Encourage and participate in the formation of defensible space/Firewise Program neighborhoods throughout the planning area.*

3) LEXINGTON HILLS CWPP - TREATMENT OF STRUCTURAL IGNITABILITY

ii "The report's main recommendations are organized to address five broad categories of fire mitigation: public education, structural ignitability/defensible space, water supply, access/evacuation, and street and home addressing. There are three landscape fuel breaks, ten major roadside thinning projects, and five evacuation route roadside thinning

projects recommended for the Lexington Hills study area."

Education includes such items as fire danger signs to be posted in various parks, riding stables, guidelines on proper burn pile technique, and use of the FireSafe Council website. (pg 13)

Structural Ignitability discussion covers seven pages (14-20) and includes roofing and siding materials, landscaping with native plants (websites listed for more info), creation of defensible space - detailed discussion with special consideration for redwood landscapes, address signage, hydrant signage and testing, PGE maintaining fuel clearances along power lines, cisterns with unobstructed access, access/evacuation routes.

Under Other Recommendations (pg 25), the LexHills CWPP includes this reference to future development:
1) Ensure a reliable source of water for fire suppression (meeting acceptable standards for minimum volume and duration of flow) for existing and new development.

4) FALLEN LEAF (Portion of Lake Tahoe Basin, CA Portion CWPP) - TREATMENT OF STRUCTURAL IGNITABILITY

This document is for a localized area in the southwestern portion of the Lake Tahoe Basin. It serves an area with 50 year round residents and up to 2,000 during peak summer recreational periods.

"*El Dorado County has adopted building ordinances requiring non-flammable roofing materials be used on new construction. Wood shake roofs, even treated with retardant are not allowed.*" (pg 49)

Structural Ignitibility
FLFD fire protection district personnel conducted an assessment of building materials and defensible space within the communities. Using sampling sheets provided by the consulting team, fire personnel reviewed (from the street) all of the lots in the FLFD communities, noting flammability of siding, roofing, and unenclosed features. They also assessed the effectiveness of defensible space around the homes.

The results indicate that many structures have appropriate roofing materials, but a significant number of structures lack non-flammable siding materials. Decks and overhanging unenclosed structures, where embers could be trapped and ignite a home, are also prevalent. Any of these building materials and construction issues could result in the loss of a home during a fire event. For a structure defense to be effective, all building materials must be non-flammable and openings that trap embers must be closed.

Defensible space is generally inadequate around structures with 71% of the structures lacking defensible space. (pg 49-50)

1.5 Mitigation Measures

Residents and Landowners

Residents and private landowners are the most effective group in mitigating wildfire hazards. Defensible space, building materials, and home construction guidelines are designed to reduce the risk of structure loss during a wildfire to less than 1%, according to Living with Fire in the Tahoe Basin publication (Smith 2004). If completed implemented, almost all structures within a community will survive a wildfire even if no community mitigation projects have been implemented. Landowners must take an active role in addressing these hazards on their property.

The **Sierra Forest Legacy** website (www.sierraforestlegacy.org) has a section on Protecting Communities in the Wildland-Urban Interface. The following is from that site:

Use Fire Resistant Building Material - "The Best Thing That You Can Do"

The roof and exterior structure of your dwelling should be constructed of non-combustible or fire resistant materials such as fire resistant roofing materials, tile, slate, sheet iron, aluminum, brick, or stone. Wood siding, cedar shakes, exterior wood paneling, and other highly combustible materials should be treated with fire retardant chemicals.

Maintain a Survivable Space - "Things you can do today"

Clean roof surfaces and gutters of pine needs, leaves, branches, etc., regularly to avoid accumulation of flammable materials.

Remove portions of any tree extending within 10 feet of the flue opening of any stove or chimney.

Maintain a screen constructed of non-flammable material over the flue opening of every chimney or stovepipe. Mesh openings of the screen should not exceed 1/2 inch.

Landscape vegetation should be spaced so that fire can not be carried to the structure or surrounding vegetation.

Remove branches from trees to height of 15 feet.

A fuel break should be maintained around all structures.

Dispose of stove or fireplace ashes and charcoal briquettes only after soaking them in a metal pail of water.

Store gasoline in an approved safety can away from occupied buildings.

Propane tanks should be far enough away from buildings for valves to be shut off in

case of fire. Keep area clear of flammable vegetation.

All combustibles such as firewood, picnic tables, boats, etc., should be kept away from structures.

Garden hose should be connected to outlet.

Addressing should be indicated at all intersections and on structures.

All roads and driveways should be at least 16 feet in width.

Have fire tools handy such as: ladder long enough to reach the roof, shovel, rake and bucket for water.

Each home should have at least two different entrance and exit routes.

C. FIRE ACCESS AND ESCAPE ROUTES

In addition to ignitability, other CWPPs put a lot of emphasis on escape routes. Most fuel hazard reduction is to create fuel breaks in strategic locations and along escape routes. Defensible space is created around individual homes and 'facilities' to be protected.

1) KESWICK CWPP - FIRE ACCESS AND ESCAPE ROUTES

Appendix A
VIII. FIRE ACCESS AND ESCAPE ROUTES (MAPS 8-8c)
Roads are an essential part of any fire and fuels management plan, providing the principal access to the communities, homes and wild places in the watershed. Additionally, roads may offer a defensible space from which firefighters can conduct direct attack on wildfires and also provide strategic locations for roadside shaded fuel breaks. Roadside shaded fuel breaks provide not only defensible space for firefighters, but also a safe escape route for residents in the event of a wildfire.

2) LEXINGTON HILLS CWPP - FIRE ACCESS AND ESCAPE ROUTES

Pg 21 Access/Evacuation Routes
"*All evacuation routes and dead-end roads should be marked with highly visible, non-flammable, reflective signage. Individuals should be made aware of the evacuation routes before an emergency occurs, but additional signage should be installed to help people get out safely. The importance of good signage should not be underestimated: the enormous stress and fear associated with an oncoming wildfire, not to mention the reduced visibility, can hinder residents' ability to escape in a timely manner. Early evacuation is critical because of the complexity and narrow nature of nature of many of the roads. While some roads have been recommended for improvement to be used as evacuation routes, it is recommended that the county and/or fire departments plan these routes officially. Communities should be in contact with these entities to resolve any confusion as*

to where their evacuation routes exist.

"Specific access route improvement recommendations can be found below, and in the individual community analyses."

Pg 25 Other Recommendations
3) Develop a defensible space vegetation program that includes the clearing or thinning of (a) non-fire resistive vegetation within 30 feet of access and evacuation roads and routes to critical facilities, or (b) all non-native species (such as eucalyptus and pine, but not necessarily oaks) within 30 feet of access and evacuation roads and routes to critical facilities.

3) FALLEN LEAF - FIRE ACCESS AND ESCAPE ROUTES

The following recommendation seems to be pretty standard in most of the CWPPs I have read, though I would consider it excessive in many areas, particularly where redwoods are the dominant tree species.

Roadside protection
Roadside protection would occur within a corridor that extends up to 100 feet out from either side of the road. This treatment is designed to protect evacuation routes for community residents and provide safety for firefighters entering a community to provide protection in the event of a wildfire. Brush and shrubs would have a spacing of 3 times the height of the residual plants and be removed immediately adjacent to the road to keep flames from directly impinging the roadway. Spacing between trees would be at least 20 feet between crowns of residual trees, with an average crown base height (distance from the ground to the base of the leaf [needle] crown) of at least 20 feet Trees immediately adjacent to the road would be few. Flame lengths would be less than 2 feet, with enough clearance to keep flames from traveling directly across the roadway. (pg 56)

This CWPP then presents the usual veg removal techniques, but identifies mastication as the preferred method as it leaves the treated material on site, to cover bare soil to prevent soil erosion. However, I was speaking to a DFG staffer last week who indicated that leaving the material on site does not slow fire. There is some very valuable info on this in the report on Fire Severity in Fuel Treatments, American River Complex fire, Tahoe National Forest, Calif., June 21 - August 1, 2008, where several different fuel treatments had occurred prior to a large wildfire. Here is one quote from the Executive Summary, "*Mastication is a cheaper alternative than complete removal of shrub and surface fuels from a site, but although it reduces available surface area and vertical extent of these fuels, it does not reduce local fuel loadings. In a number of cases, the presence of dry surface fuels in the masticated units appears to have abetted rather than resisted fire. Under wildfire conditions, fire modeling studies reported in the scientific literature predict high flame lengths and fireline intensities and high tree mortality in masticated stands.*"

D. GOALS

1) KESWICK CWPP - GOALS

A5-6, *The goals and objectives of this plan are to:*
• *Provide for personal safety and minimize property loss.*
• *Create fire safe corridors along Iron Mountain Road, Keswick Dam Road, Lake Boulevard, Highway 151, Quartz Hill Road, and several one-way escape routes on the eastside of the Sacramento River.*
• *Partner with the BLM and private landowners on strategic fuels reduction projects.*
• *Develop neighborhood fuel reduction projects.*
• *Protect ecological and landscape values through reduced ladder fuels so that large trees or other valued landscape vegetation can survive a low intensity fire.*
• *Minimize the risk of wildfire starts.*
• *Encourage safe burning practices for the reduction of fuels.*
• *Identify agency and landowner fire prevention responsibilities.*
• *Encourage and maintain multi-agency and landowner responsibilities in the implementation and maintenance of this plan.*

E. DOCUMENTATION

All the CWPPs I have reviewed include photographs of fuel types, problem areas, access issues, roads needing shaded fuel breaks, roads with shaded fuel breaks, site-specific maps (not simply county-wide maps), and graphs appropriately located within the body of the document, not isolated in appendices.

All in all, the MCCWPP diverges from the minimum requirements established by the HFRA and appears to substitute discussions on avoidance of environmental regulatory processes, for substantive actions to reduce structural ignitability, while focusing on scientifically indefensible fuel management recommendations.

Sincerely,

Jodi Frediani

Jodi Frediani
Forestry Consultant

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Weblink:

Sierra Forest Legacy
http://www.sierraforestlegacy.org/CF_CommunityProtection/ProtectingCommunitiesWUI.php

Monterey Bay Chapter

California Native Plant Society

2 Via Milpitas
Carmel Valley, CA 93924
June 20, 2010

The Honorable Simon Salinas, Chair
Monterey County Board of Supervisors
168 W. Alisal Street, 3rd Floor
Salinas, CA 93901

RE: Community Wildfire Protection Plan

Dear Supervisor Salinas:

Although the California Native Plant Society was recognized as a stakeholder in the current Community Wildfire Protection Plan process, we have never received any information or invitation to comment, even though both our state society and the Monterey Bay Chapter have been closely involved with fire issues in the past because of our mission to conserve native plant communities. We only recently learned of the matter through members of other public interest groups.

After examining a copy of the current version of the Monterey County Plan, allegedly written primarily by property owners in Big Sur, our chapter wishes to express our strong concern that there are a number of provisions that go beyond any scientific justification and are likely to result in unacceptable loss of sensitive plants, animals, and habitat without providing compensatory benefits. We urge that the following proposals be modified to conform to similar plans in neighboring areas:

1) A Firebreak is defined as "at least 10 feet wide, frequently 20 to 30 feet wide, and contains no vegetation or other combustible matter." A 200-foot-wide firebreak is recommended around Fort Ord. Exposing so much bare earth increases erosion, provides an avenue for invasive plants, dirt bike and ATV trespass, and disrupts natural ecological processes. Maintenance of existing firebreaks should be sufficient in all but worst-case scenarios,when flaming brands can carry over 1/4 mile and no firebreak is likely to be successful.

2) The plan invents a term "Overgrowth Hazard Zone" defined as an area where vegetation "presents an imminent threat to lives, property or the environment" without any scientific description or justification. This is an extreme example of overreaching that would likely result in wholesale damage to priceless biological, recreational, and scenic resources, the very features that attract people to live in and visit Monterey County in the first place.

3) The plan claims that excessive environmental regulation is hampering fire protection and proposes to exempt the plan from most environmental laws. Approval of such an aggressive and seemingly illegal plan would be likely to lead to the same type of destruction described above in (2), while incurring high costs and producing questionnable benefits.

CNPS has spent considerable time and resources researching and developing a Fire Policy that emphasizes scientifically valid vegetation modification, fire-proof or fire-resistant construction materials, and avoidance of development in high-risk areas (see cnps.org). Appropriately, Fire Plans in neighboring counties have agreed on policies that protect communities and habitat without degrading priceless natural resources. Monterey Co. deserves a much better, scientifically justified plan, and all concerned citizens have a stake in this effort, not just those who live in the wildlands-urban interface (WUI).

Thank you for your consideration of these comments. We would appreciate being placed on the mailing list for any public hearings or plan changes that may be proposed.

Sincerely yours,

Mary Ann Matthews
Conservation Chair

Dedicated to the preservation of California native flora

Ventana Wilderness Alliance

The mission of the Ventana Wilderness Alliance is to protect, preserve, and restore the wilderness qualities and biodiversity of the public lands within California's northern Santa Lucia Mountains and Big Sur coast.

May 3, 2010

Rob Thompson, President
Monterey Fire Safe Council
2221 Garden Road
Monterey, CA 93940

Dear Mr. Thompson,

Thank you for your letter of April 13, 2010. The Ventana Wilderness Alliance offers the following recommendations to the Monterey County Community Wildfire Protection Plan:

Firebreaks – At all locations, change "firebreak(s)" to "fuelbreak(s)". Delete second sentence in glossary definition of "Firebreak" to conform to standardized definition in *Glossary of Wildland Fire Terminology* published by the National Wildfire Coordinating Group.

Overgrowth Hazard Zones – Provide factual peer reviewed scientific basis for the existence of Overgrowth Hazard Zones in Monterey County. If factual basis cannot be provided, delete all references to Overgrowth Hazard Zones.

Section 8 Recommendations – Delete Section 8 in its entirety. A Community Wildfire Protection Plan is not an appropriate document to advocate for broad changes to environmental regulation and law.

I strongly encourage you to review CWPPs from other Central Coast areas and compare them with the MCCWPP. CWPPs that have been approved or are in final draft are readily available from Santa Cruz, San Mateo, Santa Clara and San Benito Counties.

It is important to note that none of the CWPPs from the four counties referenced above call for bare-earth firebreaks or include the notion of Overgrowth Hazard Zones. Similarly, none of the CWPPs referenced above claim an inability to provide fire safe communities due to existing environmental regulation and law.

If four nearby counties can produce and implement effective CWPPs for the protection of their rural citizens and rural communities without the extreme measures of bare-earth firebreaks, so-called Overgrowth Hazard Zones and the false claim of excessive environmental regulation, then so can Monterey County. The citizens of Monterey County deserve no less.

Sincerely,

Tom Hopkins

Tom Hopkins, President

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831-429-9010 WWW.VENTANAWILD.ORG TOM@VENTANAWILD.ORG

APPENDIX K

USFS Defensible Fuel Profile Zone Letter

United States Department of Agriculture

Forest Service

Los Padres National Forest

Monterey Ranger District
406 S. Mildred
King City, CA 93930
(831) 385-5434

File Code: 1950
Date: August 13, 2001

Dear Interested Party:

The Monterey Ranger District of the Los Padres National Forest is proposing to implement a defensible fuel profile zone (DFPZ) project (**Monterey DFPZ Project**) on National Forest system lands. Forest Service personnel are preparing to conduct an analysis of the proposed project area within the boundary of the Monterey Ranger District on selected lands outside the Ventana and Silver Peak Wilderness areas. Please see the enclosed map for a general location of the proposed project.

The purpose of this letter is to invite you to participate in the analysis process by providing your comments and any concerns you may have about this proposed project. To encourage your informed participation in this planning process, this letter includes a description of the proposed action and the purpose and need for action.

PROPOSED ACTION

Trained specialists with the Forest Service are planning to apply fuels reduction treatments to establish defensible fuel profile zones (DFPZs) within ten identified units that cover a total of approximately 18,760 acres. Primary focuses for this project are travel corridors (roads and trails), campgrounds, National Forest System Lands adjacent to private property, administrative sites, and existing firelines. Treatments used to establish DFPZs include:

- Pruning, clearing and chipping hazardous fuels;
- Burning of fuels using broadcast and spot burning methods;
- Establishment of shaded areas by planting native tree species; and
- Managing for native grasses.

Implementation would begin in the fall of 2001 and continue over the next ten years. Individual areas would be prioritized for burning to achieve desired results. Burning would be applied when moisture and air quality conditions meet prescription criteria. Prescription criteria are most likely to be met after fall season rains when moisture levels would limit fire severity and still be low enough to achieve desired levels of fuel consumption.

In general, fuel profiles would be changed to:

- Break-up horizontal and vertical continuity;
- Reduce fire prone live fuels by managing for: younger vegetation, native grasses, and trees;
- Reduce quantity of dead fuels; and
- Use Forest Service facilities (campgrounds and administrative sites) to create models of defensible space.

Defensible Space

DFPZs would be created on either side of roads, and around administrative and special use facilities to serve as safety zones, pre-attack zones, and escape routes during fire situations. A variable width buffer not to exceed 1,000 feet on each side of the road would be created by removing dead fuels, pruning live brush and trees, planting native trees, and managing for native grasses where appropriate. Treatments would vary depending on position on slope, soils conditions for plant establishment and growth, and aspect.

Fuels around campgrounds would be managed so they could serve as safety zones in the event of fire. A 1,000-foot buffer would be created by removing dead fuels, pruning live brush and trees, and managing for native grasses where appropriate. Measures would be taken to ensure that unlawful access to open areas is controlled around campgrounds.

Native grasses would be managed by burning and seeding where appropriate. This would be implemented in small (15 to 20 acre) areas over time in coordination with a qualified botanist. Natural seeding would be encouraged whenever possible. Where prescribed fire and/or reestablishment of native grasses are proposed, maintenance burning would be implemented about every seven years.

Shaded DFPZs would be established by planting native tree species. Species mix for tree planting would be based on types of trees found presently or historically in the vicinity. Species to be considered would be: ponderosa pine, incense-cedar, sugar pine, Santa Lucia fir, and madrone. Any seeding or planting that occurs would be done using locally collected seed.

The Forest Service would work with State and County Fire Departments in a cooperative effort to create safety zones around private homes and facilities.

Treatment Units

The following table describes proposed actions by treatment unit.

UNIT	ACRES	PROPOSED ACTION
Arroyo	1,630	Establish variable width DFPZs up to 1,000 feet on each side of road. Apply prescribed fire at regular intervals and reestablish native grasses around the Horse Bridge/Santa Lucia Creek area. Establish variable width DFPZs along trails outside of wilderness.
Carmel	165	Prescribed fire would be applied to provide buffering between the wilderness and private property.
Cone	2,605	Establish variable width DFPZs up to 1,000 feet on each side of road. Plant trees to develop shaded DFPZs as part of roadside corridor where appropriate.
Manuel	400	Manage dozer lines and safety zones to favor native grasses. Fuels profiles would be managed so line could be used without repeated dozer entry. At specific locations where conditions are favorable, reestablish native grasses and/or plant trees to create a shaded DFPZ over ¼ mile segments.
Park	2,630	Create and maintain 1,000-foot DFPZs around campgrounds. Use prescribed fire to discourage the spread of noxious weeds.
Piney	1,710	Burn on a regular basis in the winter after the road has been closed.

UNIT	ACRES	PROPOSED ACTION
Reliz	5,160	Continue on-going coordination with property owners to apply prescribed fire across ownership boundaries.
Ridge	1,975	Manage segments of existing dozer line for native grasses and shaded DFPZ. Establish a variable width DFPZ up to 1,000 feet on each side of road.
Skinner	700	Manage existing dozer line and safety zones as a long-term strategic facility. This would be achieved by treating small patches over time. Treatments include discouraging growth of non-native grasses through periodic burning, brush cutting, and reintroduction of native grasses.
Tassajara	1,785	Create variable width DFPZs up to 1,000 feet wide each side of road outside the wilderness area using a mix of the following methods: • Up to 100 acre prescribed fire projects, thinning, and brush piling; • Create a variable width road corridor with reduced amounts of large fuel by offering fuelwood sales for areas within 300 feet of the road; and • Manage for native grasses through periodic burning and seeding small areas where appropriate.

PURPOSE AND NEED FOR ACTION

The purpose of this project is to meet the following objectives:

- Protect highly valuable real estate within and adjacent to the National Forest boundary;
- Protect watershed values in the Carmel and Arroyo Seco watersheds;
- Reduce risk to private property;
- Reduce potential for damage to resources by reducing potential for high intensity fires;
- Implement small, strategically located projects that can provide anchor points, pre-attack zones, and areas of reduced intensity during unplanned fire events;
- Create corridors and safety zones around public use facilities such as roads, campgrounds, and special use permit sites;
- Provide evacuation routes to forest users and residents in the event of wildfire;
- Lower risk of fire ignition, reduce intensity once ignition occurs, and break-up continuity to inhibit and slow spread of wildfires;
- Limit the intensity of unplanned fires at strategic locations;
- Protect historic structures;
- Reduce risk of establishment and spread of noxious weeds; and
- Reduce risk of large fires by managing for younger vegetation and broken continuity.

COMMENTS

The proposed action will be fully analyzed prior to any decision on final project design. For this project to result in the best possible outcome for people and the environment please send us any issues, concerns, suggestions or information you may have relating to this proposal. Opinions and values will be noted, but the intent of the process is not to serve as a public opinion poll.

Purpose of This Letter:
To identify the range of issues and determine their significance.
An issue is:
A point of discussion, dispute or debate about the environmental effects.
Issues are Used:
To focus the analysis and determine if any alternatives to the proposed action need to be developed.

The Los Padres National Forest has hired Forest Service Environmental Assessment specialists located in Happy Camp, California to work closely with the local specialists, guiding the analysis and preparing the decision document. If you would like additional information please contact one of the following people:

Names	Address	Phone	Fax	email
Annie Buma	c/o Happy Camp Ranger District	530-493-1725	530-493-1775	abuma@fs.fed.us
Judy Hahn	P.O. Box 377	530-493-1721		jhahn@fs.fed.us
Fran Smith	Happy Camp, CA 96039	530-493-1788		fjsmith@fs.fed.us

Please send any issues or written comments to one of the individuals listed above at the indicated address by August 24, 2001. Comments are a matter of public record and as such may be provided to interested parties upon request.

Thank you for your participation in this process.

Sincerely,

JOHN S. BRADFORD
Acting District Ranger

encl.

APPENDIX L

Sample Fire Prescription

APPENDIX L – Sample Fire Prescription for Safe Controlled Burn in Chaparral

Rx Factors CHAPARRAL FUEL MODEL 4	Hot	Moderate	Cool
Fuel Load tons/acre	10	10	10
Relative Humidity %:	15%	18-25%	60%
Wind Speed (MFWS):	15	5-8	0
Wind Direction:	ALL	SSW	ALL
Temperature (Dry Bulb °)	95	70-75	40
Live Fuel Moisture%:	55	65-75	120
1 hr. T/L %:	4	5-7	10
10 hr. T/L:	5	6-8	14
100 hr. T/L	6	7-9	18
Soil/Duff Moisture %:	Dry	Dry/moist	Moist
Probability of Spot Fire Ignition	70	50-60	40
Flame Length (ft)	48	26	10
Effective Wind Speed (MPH)	12.6	6-8	1.9
Scorch Height (ft)	N/A	N/A	N/A
Forward Rate of Spread (chains/hour)	449.6	140	18.7
Backing Rate of Spread (chains/hour)	6.7	6.0	2.8
Spotting Distance (miles)	1.4	.2	0

APPENDIX M

Acronym Table

APPENDIX M – Acronym Table

ACRONYM	STANDS FOR
AMSL	Above Mean Sea Level
BEU	California Department of Forestry and Fire Protection San Benito-Monterey Unit
BLM	Bureau of Land Management
BLM FMU	Bureau of Land Management Fire Management Unit
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCA	California Coastal Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDF	California Department of Forestry (See CAL FIRE)
CDFG	California Department of Fish and Game
CDP	Coastal Development Permit
CDPR	California Department of Parks & Recreation
CEQA	California Environmental Quality Act
CERT	Community Emergency Response Team
CESA	California Endangered Species Act
CIP	Coastal Implementation Plan
CPOA	Coast Property Owners Association
CSD	Community Services District
CWPP	Community Wildfire Protection Plan
DFPZ	Defensible Fuel Profile Zone
DOD	Department of Defense

EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESHA	Environmentally Sensitive Habitat Area
F&GC	California Fish & Game Code
FAHJ	Fire Authority Having Jurisdiction
FANS	Friends, Artists and Neighbors of Elkhorn Slough
FARSITE	Fire behavior and growth simulating software
FlamMap	Fire behavior mapping and analysis software
FMP	Fire Management Plan
FMU	Fire Management Unit
FPD	Fire Protection District
FRAP	Fire & Resource Assessment Program
GIS	Geographic Information System
HCP	Habitat Conservation Plan
HFRA	Healthy Forest Restoration Act of 2003
HFRZ	Hazardous Fuel Reduction Zone
HMP	Habitat Management Plan
LCP	Local Coastal Program
LPNF	Los Padres National Forest
LUP	Land Use Plan (coastal)
MBUAPCD	Monterey Bay Unified Air Pollution Control District
MC2WG	Monterey County Wildfire Working Group
MCCWPP	Monterey County Community Wildfire Protection Plan
MFSC	Monterey Fire Safe Council
MIST	Minimum Impact Suppression Tactics
MOU	Memorandum of Understanding

NEPA	National Environmental Policy Act
NPPA	California Native Plant Protection Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
OES	Office of Emergency Services
PBCSD	Pebble Beach Community Services District
PNG	Prunedale Neighbors Group
PPA	Prunedale Preservation Alliance
PRC	Public Resources Code
PSDLE	Prepare, Stay and Defend, or Leave Early
ROD	Record of Decision
SLFDS	Santa Lucia Fire Defense System
SMP	Smoke Management Program
SOD	Sudden Oak Death
SPLATS	Strategically Placed Landscape Area Treatments
SPOTS	Strategic Placement of Treatments
SRA	State Responsibility Area
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish & Wildlife Service
VMP	Vegetation Management Program
WSA	Wilderness Study Area
WUI	Wildland-Urban Interface