COUNTY OF SAN DIEGO

VEGETATION MANAGEMENT REPORT

A Report on Vegetation Management in the Unincorporated Area of San Diego County

March 25, 2009

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EXECUTIVE SUMMARY

Since 2000, the County has experienced slightly over 100 wildfires (>100 acres in size) that burned approximately 950,000 acres. The October 2007 and October 2003 wildfires were of significant importance as they forced the evacuation of over 500,000 San Diego County residents, burned thousands of structures and hundreds of thousands of acres as well as killing two dozen people. Uncontrolled wildfires pose a threat to public health and safety, property, and recreational amenities, requiring emergency measures be taken in response. Species and their habitats are adversely affected by the human induced changes to the natural processes and characteristics of fire and therefore may require further human involvement to restore the natural system.

Following an assessment of the wildland and urban areas in unincorporated San Diego County, the Forest Area Safety Task Force (FAST) identified nine high fire risk areas totaling approximately 842,000 acres that require attention. The list of the areas of concern in order of priority include Palomar Mountain; Laguna Mountain east I-8 Corridor; Southeast County; Greater Julian; San Luis Rey West; Rancho; Santa Margarita; Northeast County – Warners; and, Cuyamaca--Laguna.

In order to reduce the risk of life and structure loss during wildfires and minimize the potential adverse impacts on the ecosystem following wildfires requires multiple approaches and solutions --- a type of 'Systems Approach' to addressing wildfire. These solutions can be categorized into one of six general topic areas: Fire Suppression; Damage Assessment, Building and Fire Codes, Vegetation Management, Land Use Planning, and, Education and Outreach. The County has and will continue to make policy changes that fall within all six topic areas. This report, however, only focuses on the area of vegetation management. The County understands that the management of vegetation by itself will not prevent fires from occurring or prevent structures from being destroyed in a wildfire. The County is also not proposing landscape level clearing or burning in the backcountry. Landscape level means broad expanses of vegetation consisting of multiple hundreds of acres. However, strategic fuels treatment[1] is a critical component to managing future wildfires and ensuring the health of our natural and manmade environments. Strategic fuel treatment areas do not directly protect homes and structures from wildfires, but they assist firefighters by reducing spread rate and intensity in their efforts to manage and eventually extinguish wildfires.

This report discusses multiple methods to effectively manage vegetation including hand treatment, mechanical treatment, biological treatment by grazing and browsing animals, prescribed fire treatment, and herbicides. A combination of these types of vegetation management techniques should be used as strategic fuels treatments in site-specific vegetation management plans. These treatments in combination with the County actions will likely reduce impacts of fires to homes and habitat.

[1] Strategic Fuels Treatment is generally defined as the reduction of plant biomass by either prescribed fire, mechanical or biochemical fuel treatments in strategic locations that would modify fire behavior to the extent that it would limit fire spread, protect identified values at risk, and/or allow control of a fire perimeter. See detailed definition in section 1.2.1 on page 7.

In general, the estimated cost to manage vegetation using all of these tools is approximately $2,500 per acre for vegetation management plan development and plan implementation. This cost estimate includes environmental review. Ongoing monitoring costs are estimated at $50 per acre and would be additional.

Government agencies at all three levels have and continue to implement actions to manage vegetation within the FAST target areas as summarized below.

		Treatment Amount (Acres)	
Agency	**Area Ownership (Acres)**	**Previous 5 years**	**Next 5 years**
Cleveland National Forest	320,000	≈24,000	≈17,000
Bureau of Land Management		≈1,300[1]	≈1,300[1]
National Resource Conservation Service (NRCS)	N/A	≈3,000	≈3,000[6]
CAL FIRE	N/A	≈16,000[2]	≈16,000
California State Park	45,810	≈1,500[3]	≈1,500
County of San Diego[4]	11,600	≈19,400[5]	≈30-40,000[6]

[1] Treatments focus on maintaining existing fuel breaks.
[2] Includes projects completed and in progress; 6,000 completed, 10,000 in progress.
[3] California State Parks activities performed by CAL FIRE in progress and completed.
[4] Includes County parks and dead, dying and tree removal program, which is a partnership with other agencies.
[5] Includes dead, dying and diseased tree program as well as County owned lands.
[6] NRCS and County Estimates assume additional Federal grants. Larger area projected for County because future activities are more shrub related which allows for more acres of treatment per dollar. This includes all acreages for dead and dying tree removal, road safety corridors, and defensible space near structures and is a total for all five years.

The Multiple Species Conservation Program (MSCP) plan also requires management of the habitat in the preserves to include measures to maintain specific species and habitat diversity. This may be accomplished by protecting the preserves from fire or by using various techniques including fire to manage them. A variety of properties under County ownership have specific resource management plans in place. These plans include vegetation management elements.

Purpose of the Report

- This report is intended to serve as a collection of information with options for future action. Action on this report does not authorize any vegetation management activities to occur.
- Provide a summary of the high priority areas as identified by the Forest Area Safety Task Force (FAST) that should be targeted for vegetation management planning.
- Provide a list of fuel management tools that should be considered by lead agencies when developing site-specific vegetation management plans that address vegetation modification.
- Provide an overview of the vegetation management requirements (including mechanical, biological and prescribed burns) required of all county owned lands as well as Multiple Species Conservation Program preserve lands.
- Provide a list of vegetation management projects sorted by FAST target area and lead agency --- what has been completed in the past five years and what is planned in the next five years;

- Provide recommendations to improve development and implementation of vegetation management including actions to reduce any negative impacts on resources and plant community responses from repeated use of these treatments.
- The area within the wildland urban interface is of particular concern for strategic fuels treatments provided that the sensitive habitats within those areas are adequately protected from degradation.

Recommendations for next steps.

- Work with public agencies, property owners and appropriate fire agencies to obtain grant monies in order to develop vegetation treatment plans for the FAST priority areas using the tools discussed in this report. These plans should include immediate action and longer term plan development and utilize strategic fuels treatment to assist in managing fire.
- Prepare for consideration by the Board of Supervisors a Board policy confirming that the use of the vegetation management tools discussed in Section II of this report should be considered in current and future site specific vegetation management plans.
- Pursue legislation changes with the State and other agencies to increase flexibility for the use of controlled burns including allowing their use to continue though there may be complaints about smoke. In addition, propose an exemption to the California Environmental Quality Act Guidelines for controlled burns subject to specified guidelines involving avoidance of impacts to sensitive areas, inclusion of monitoring requirements and appropriate fire seasonality restrictions. Legislation should also be included to provide funding for monitoring programs associated with treatment areas so that monitoring is designed into the program and occurs both before and after a treatment application.
- Create a Public Awareness campaign that includes a discussion on not only the need for strategic vegetation management, but clear guidance on how to conduct fuel clearing.
- Work with land use and state/federal government agencies on the concept of seasonal park closures during high fire risk periods.
- Consider regulations on urban fuels including ornamental landscaping that is planted near and around structures.
- Seek funds for and carry out research on fire behavior and ember production.

SECTION I: INTRODUCTION

1.1 Purpose of the Report

1.1.1 Board of Supervisor's Direction

On May 14, 2008 (6), the Board of Supervisors directed the Chief Administrative Officer to develop a comprehensive vegetation management program that would include mechanical, biological and prescribed burns to be incorporated into the land plans for all existing and future County owned lands and Multiple Species Conservation Program plans.

On September 24, 2008 (5) the Board received an overview of the vegetation management practices in development and currently being implemented by the County. Staff also provided a status report on the development of the County vegetation management report. At the conclusion of the hearing, the Board confirmed that development and implementation of the vegetation management practices as presented were consistent with previous Board direction. The Board also directed staff to report back in 180 days on the results of the management report.

1.1.2 Report 'Take Away'

The critical points or purpose of this report can be summarized below:

- Provide a summary of the high priority areas as identified by the Forest Area Safety Task Force (FAST) that should be targeted for vegetation management planning.

- Provide a list of fuel management tools that should be considered by lead agencies when developing site-specific vegetation management plans that address vegetation modification.

- Provide an overview of the vegetation management requirements (including mechanical, biological and prescribed burns) required of all county owned lands as well as Multiple Species Conservation Program.

- Provide a list of vegetation management projects sorted by FAST target area and lead agency --- what has been completed in the past five years and what is planned in the next three years;

- Provide recommendations to improve development and implementation of vegetation management including actions to reduce any negative impacts on resources and plant community responses from non-judicial use of these treatments.

This report is designed to serve as a guidance document concerning vegetation management in San Diego County. It is a stand alone document, and will guide management of vegetation within County MSCP preserve lands and other lands in the unincorporated area of the County. Vegetation management plans prepared for County owned MSCP lands are reviewed by the wildlife agencies. The goals and requirements of the MSCP for covered species and their habitats will direct the application of strategic fuels treatments. Vegetation management will be discussed in the County MSCP Plans for the North County area as well as the East County and vegetation management will be implemented in accordance with the existing South County

MSCP Framework Management Plan. Furthermore, it is intended that this document assist in working with the County partners for vegetation management including the United States Forest Service, Natural Resource Conservation Service, Bureau of Land Management, CAL FIRE, California Department of Fish and Game, California State Parks and others. Management plans associated with the MSCP implementation require wildlife agency review.

1.2 Fire Issues in San Diego County

1.2.1 Regional Issue

San Diego County has suffered unprecedented losses of lives and structures as a result of wildfires. Impacts of recent wildfires to the natural resources of Southern California are not yet completely understood and evaluated, however habitat alteration, type conversion, and loss are evident. During the peak of the fire events of the last five years, fire has spread at more than 10,000 acres per hour consuming a total of 778,000 acres. The rapid rates of spread of the fires and the volatility of the vegetation combined have limited the ability to apply direct fire defense mechanisms to slow or stop the fires. During these fires, more than 3,800 homes have burned and 24 people have lost their lives with a likelihood of additional undocumented deaths. In addition, much of the County's old growth forests with trees 500 to 1000 years old has been lost and old age stands of chaparral have been burned. See Appendix A for a map of the fires in the last 10 years and Appendices D and E for the change in fuel age as a result of the large fires.

Vegetation management is but one of a number of tools that the County is undertaking to assist in the reduction of loss of lives and property from wildfires. Other actions that the County has implemented include continually updating the building codes both before and after the 2003 fires in order to reduce the combustibility of houses, evaluating the layout of new subdivisions with regard to vulnerability to fires, and regulating landscaping materials and layout. Additionally, there is a strong emphasis on insuring that new developments have included defensible space within the development boundaries and have secondary routes for emergency escape as well as resources for protection of homes and property. These are necessary in the case that escape routes have been compromised and firefighting personnel are not able to reach a property. Refer to section 1.3 for more information on other actions taken by the County to address wildfires.

The management of vegetation by itself will not prevent fires from occurring. It is apparent in this region that fire is part of the landscape. The goal of this report is to act as an initial step so that planning takes place to strategically treat vegetation to serve the purposes of assisting in the protection of lives and property, and managing the health of the natural ecosystems.

There is no intention associated with this plan or any of the other agencies to conduct landscape level habitat treatment or conversion in San Diego County. Any treatments that are applied would be applied in a strategic manner in order to minimize the areas affected as well as reduce the cost of vegetation management. As modified from the definition in the Santa Monica Mountains Fire Management Plan, Strategic Fuels Treatment is defined as follows:

> "…means reduction of plant biomass by either prescribed fire, mechanical or biochemical fuel treatments in strategic locations that would modify fire behavior to the extent that it would limit fire spread, protect identified values at risk, or allow control of a fire perimeter. Such spatially limited treatment areas if selected as part of a carefully designed tactical plan may assist in controlling a fires

perimeter through providing access, serving as anchor points and offer opportunities for backfiring during fire suppression actions. Unlike defensible space adjacent to individual homes, with the exception of specific established areas, it is not the intent that these areas become sacrifice zones in which the vegetation is permanently altered. "

It is additionally defined as creating spatially limited breaks of low fuel volume in topographically advantageous locations where they can be helpful in providing access, serve as anchor points, and offer opportunities for backfiring during fire suppression actions. Furthermore, with the exception of specific established areas, it is not the intent that these areas become sacrifice zones in which the vegetation is permanently altered.

The patterns of major fires can be delineated (See Appendix C). In this area, the majority of the very large fires occur during northeast wind or Santa Ana events with extremely low humidity and sometimes greater than hurricane strength wind speed. These forces cause fires that may ignite in the eastern portions of the County to be carried dozens of miles to the urbanized areas, consuming rural communities on the way. Understanding patterns of vegetation age and wind direction provides the opportunity to estimate future fires and predict their paths. In the past five years, five fires have followed predictable paths that had been delineated by fire professionals for San Diego County.

1.2.2 F.A.S.T. Target Areas

County staff has been working closely with the San Diego Forest Safety Task Force (FAST) to create a risk assessment of vegetative fuels in the unincorporated County. FAST is a cooperative partnership of federal, state, county, and municipal governments, coupled with the citizen-based Fire Safe Councils (FSC) in the greater San Diego county area. This group was formed in 2002 to aggressively address the problem of removing the over-abundance of dead timber and hazardous fuels in and around communities throughout the county.

The County's adopted Multiple Species Conservation Program (MSCP) is presently limited to the southern area of the county and covers approximately 242,000 acres of public and private lands (the north and east County MSCP programs are still being developed and not adopted by the Board). Furthermore, County owned properties are sporadically located throughout the County and often intermingled with private lands. Since the threat of wildfires is a County-wide issue that does not differentiate between public and private property, effective vegetation management must be expanded beyond that of the MSCP and County owned property and should focus on critical high risk areas and linkages to form a system of protection for life, property and the environment.

In late April 2008, FAST released a draft Fuels Assessment Map for the unincorporated area of the county. Pursuant to their assessment, FAST identified target areas or regions of dangerous fuel loads with specific projects to be considered in those areas (listed in priority order; also see Appendices B1-B9). It is prudent for the County lands and Multiple Species Conservation Program (MSCP) lands to be included in this broad planning process.

1. Palomar Mountain
2. Laguna East I-8 Corridor
3. Southeast County
4. Greater Julian
5. San Luis Rey West
6. Rancho
7. Santa Margarita
8. Northeast County – Warners
9. Cuyamaca-Laguna

Additional information on these priority areas can be found in Section III: Fuel Management Priorities.

1.3 System Approach to Wildfires

Fire prevention is still the key to limiting the adverse effects of fire on vegetation and property. There are a number of actions that can be undertaken to assist in the accidental ignition of fires such as constructing roads with berms and curbs. Education and awareness of the sources of fire ignitions is another important component of fire prevention. Fire prevention including the use of fire prevention campaigns will continue to be a major emphasis in any regional fire management program.

Developing policies aimed at reducing the risk of wildfires and improving the chances of people and structures surviving a wildfire is a County priority. However, it is a complex issue that cannot be solved by implementing one or two policy changes. The system generally involves six major categories or elements as shown in the exhibit below, with each element addressing unique and specific needs related to wildfire and fire protection.

EXHIBIT 1.1: Systems Approach to Address Wildfires

- Fire Suppression --- The resources needed to improve fire response and the ability of fire agencies to adequately respond to an emergency. This may include staffing, operation and/or administrative improvements, equipment needs, etc).

- Damage Assessment --- An assessment of the destroyed, damaged, and saved homes following a wildfire to ascertain the 'why.' The information from this assessment feeds into the remaining elements.

- Building and Fire Codes --- Codes and ordinance improvements necessary to increase the chances of a structure surviving a wildfire.

- Vegetation Management --- The management of open space around structures and within and/or around open space areas

- Land Use Planning --- Design strategies that make new subdivisions safer for homeowners in the event of a wildfire.

- Education and Outreach --- The public's responsibility to improve their chances of surviving a wildfire.

Following the 2003 wildfires, the County of San Diego implemented numerous actions that fall within these six elements. A summary of what has been completed to date --- by element --- is provided in the subsections below.

1.3.1 Fire Suppression

- Year-Round Fire Protection. Starting in 2004, San Diego County and CAL FIRE signed contracts to provide year-round, 24-7 coverage in remote areas of the rural backcountry.

- Reorganization. In June 2008, the BOS approved a plan to consolidate fire and life safety services in 1.56M acres of the unincorporated rural backcountry.

- New Fire Suppression Equipment. To date, 30 pieces of suppression equipment were purchased including 13 Water Tenders and 13 Type II Engines and provided to the various volunteer fire companies and CAL FIRE.

- Super Scoopers. In May 2008, the BOS leased two CL-415 Superscoopers and one air tactical aircraft, which communicates with the incident commander on the ground to decide where, when and how fires should be attacked from above. The planes provide support to any jurisdiction within the County of San Diego.

- Night Flying Capabilities. Starting in September 2008, actions were implemented to allow for night aerial fire detection and suppression activities.

1.3.2 Damage Assessment

- Damage Assessment. Working on behalf of CAL FIRE, the County's Building Division has been in charge of assessing all damage caused by major wildfires since 1996. Several agencies rely upon our damage assessments to help their own work. They include the Red Cross (to distribute food and clothing); FEMA (to provide shelter for victims); insurance companies (to expedite claims); the Building Department (rebuild); and the Assessor's Office (to adjust tax rolls). Planning agencies also use the damage reports to figure out how to improve building codes so that future fires will cause less damage.

1.3.3 Fire and Building Codes

- Building Code Updates. In 2004 County leaders improved the local building codes by adding new requirements to use more ignition-resistant materials. That meant not just using Class A roofing, but non-combustible material such as stucco for exterior walls, and dual-paned windows. It also meant building attic and foundation vents in locations that would deter burning embers from entering structures. And, for those structures built in the most fire-prone areas, the requirements were ratcheted up even further. Skylights had to be made of tempered glass; rain gutters must be metal instead of plastic; outside doors must be solid-core or

noncombustible; eaves had to be made from ignition-resistant materials or heavy timber, and untreated small dimension wood patios, decks, and fences could not be attached to houses.

1.3.4 Vegetation Management

- 3D Program. The County and local agencies spent nearly $47 million to remove about 530,000 dead, dying and diseased trees in the Palomar Mountain and greater Julian areas. The focus was along evacuation roads and exit corridors (roughly 244 total road miles). The County is actively seeking an additional $45 million to complete work in Palomar and Greater Julian areas over the next four years.

- Combustible Vegetation Ordinance. Before 2004, the County's codes required builders and homeowners to keep "weeds" in check in the immediate 30 feet to 100 feet around structures. The County improved those codes in two ways. First, we dropped the "30 feet" and simply made the 100-foot requirement the standard. Then we clarified the vague "weeds" terminology, explaining that vegetation management included not just weeds, but combustible vegetation such as shrubs, green waste, dead and dying trees.

- Codes Partnership. The Department of Planning and Land Use (DPLU), working with local fire districts, CAL FIRE, and U.S. Forest Service, developed a combustible vegetation inspection program for the unincorporated area of the county. About 15,000 inspections are conducted annually, with 90% of the residents complying with the first notification.

- FAST. The Forest Area Safety Task Force (FAST), an organization made up of federal, State and local agencies has identified nine target areas of dangerous fuel loads and is currently developing specific projects to be considered in those areas.

1.3.5 Land Use Planning

- Guidelines for Determining Significance. Until 2007, builders in San Diego County faced a confusing collection of fire codes from the state and local fire agencies. To fix that, the County created a wildfire and fire protection section for its "Guidelines to Determine Significance" ---- a document that tells builders how to assess the environmental impacts of their projects. The section spells out what the County expects from developers to make their projects as fire-safe as possible. Failing to comply could create a "significant" environmental impact that could jeopardize the project's approval.

- Fire Protection Plans. All discretionary projects must submit Fire Protection Plans for their specific sites. The plans answer questions: How close are emergency responders? How quickly could they arrive? What water supplies are available? And they address code requirements about: fire sprinklers, ignition-resistant construction; defensible-space; and long-term vegetation management.

1.3.6 Education and Outreach

- Wildfire Public Awareness Campaign A Wildfire Awareness Guide was mailed to County residents providing information on creating defensible space, landscaping to reduce fire risk, a fire resistant plant guide and steps to safeguard homes.

- AlertSanDiego Registration A campaign is under way to register cell phones, Voice Over Internet Protocol and email to receive emergency notifications. Home telephone numbers are currently in the system, but cell phones are not. To register, log onto www.ReadySanDiego.org and click on the AlertSanDiego icon.

1.3.7 Overview

In October 2007, wildfires raged across San Diego County just as they did four years earlier in 2003, destroying thousands of homes and forcing hundreds of thousands of people to flee. But when the fires died, crews found signs of hope inside the charred perimeter — evidence that County action to improve building codes and policies had better protected people and property. The evidence lay in the wreckage, or rather, in the lack of it.

The 2007 fires destroyed 13 percent of all the structures trapped inside their boundaries. But they only destroyed 2 percent of those structures that had been built to the codes that County officials improved after the 2003 wildfires. Those code improvements, many adopted in 2004, focused on six areas previously discussed. The fact that the 2007 fires destroyed just 2 percent of the structures built to the improved codes and policies – opposed to the nearly 11 percent of the other structures – are evidence that the changes made a positive difference.

But we also know that we cannot rest. The County will continue to look at minimizing the risks from fires by finding new ways to improve the codes and policies that can make structures safer when fires hit.

It is understood that the management of vegetation by itself will not prevent fires from occurring or prevent structures from being destroyed in a wildfire. The goal of this report is to focus on the "Vegetation Management" element of the above discussed system and present an initial step to strategically treat vegetation to serve the purposes of assisting in the protection of lives and property, and managing the health of the natural ecosystems.

1.4 Vegetation Management Technical Committee

1.4.1 Committee and Workshops

In order to develop a report that was based on scientific data and practical application, a science-based technical committee was established. This committee met for two intensive, two-day workshops.

1.4.1.1 Committee Makeup

Scientists representing the various viewpoints of the interactions between vegetation and fire along with a group of fire practitioners from fire agencies were invited to discuss these issues in a workshop setting.

The meetings were conducted with a natural resource facilitator from the University of California, Berkeley. Members of the committee included two representatives from the County Planning Commission, CAL FIRE, Bureau of Land Management, United States Forest Service, California Department of Fish and Game, United States Fish and Wildlife Service, California State Parks, San Miguel Fire District, United States Geological Survey, University of California Riverside, California Chaparral Institute, United States Forest Service Riverside Fire Lab, Conservation Biology Institute, Chaparral Institute, San Diego County Department of Planning and Land Use Fire Services Section and Multiple Species Conservation Program Plan division. A complete list of the invitees and staff is included in the Appendix Q.

Prior to the meeting, extensive interviewing and questioning of the invitees was conducted by graduate students from the University of California Riverside.

1.4.1.2 Workshop Setting

Two workshops were held that focused on the following key elements:

- The basic aspects of the need to address vegetation;
- The potential to generate fires that impact property, lives and habitat; and,
- The tools that can be applied to reduce those impacts.

The subcommittee workshops were held on November 20 and December 2, 2008. The first workshop discussed a number of areas in which it appeared possible to obtain a consensus from all sides. The second workshop addressed the specific vegetation treatment tools and potential situations in which they might be used. The main points of discussion and consensus are listed below. These points have also been included in the specific relevant sections in the following report. Several will also be included in the options for the future section as well. Many of them are more specific than the discussion in this report, but can be applied to the priority areas that have been identified by the Forest Area Safety Task Force as treatment concepts are created for them.

1.4.2 Areas of Discussion and Consensus

There were a number of areas in which there appeared to be consensus among the participants and an area of discussion that includes some consensus but also differences of opinion regarding the effectiveness of vegetation treatments including controlled burns. The following is a list of topics and issues that many and sometimes all of the participants appeared to feel were representative of the factual situation:

1.4.2.1 Vegetation Considerations

Areas of Discussion

- One of the main topics of discussion concerned vegetation management in wildlands away from homes. There was a consensus that well planned, strategic actions could have the potential to lessen the impact of wildfires on lives and property in San Diego County. Fire agencies currently create these strategic plans based on expert opinion and past experience (fighting fires), typically governed by interagency consensus and funding opportunities. However, there are no universally accepted models of how to design these strategic actions across landscapes as large as the nine study areas, and

no empirical tests of the efficiency of any recently implemented strategic plans (e.g., Fire Management Plan for the Santa Monica Mountains National Recreation Area). Hence, strategic fuel breaks are used in shrublands but should be considered experimental because their conceptual underpinnings lie in the grey area between two accepted ideas. First, there is a consensus that Santa Ana wind events conceivably could develop enough energy to burn across almost any vegetation in any age class; second, that the intensity of a wildfire at any location is a function of it burnable biomass, which is a function of vegetation re-growth and time since fire. Strategic fuel management is an intermediate situation; fire intensity and rate of spread can be reduced for some period of time when fuels are reduced. Fire practitioners indicated biomass reduction in strategic areas can slow the rate of wildfire spread along the flanks of Santa Ana wind-driven fires, and slow the rate of spread at the head of fires at other times of year. Strategic treatment areas can provide locations from which firefighters may be better able to attack fires. Workshop participants raised concerns about balancing the potential to alter the path of a fire with the impact of strategic fuel modifications on ecosystem services (erosion control, water quality, hydrology, slope stability) and ecosystem persistence, structure (soil structure, species composition and potential spread of invasive species, species age (size) structure) and function (soil development, nutrient cycling, species succession).

Areas of Consensus

- The mixed conifer-hardwood forests on Palomar Mountain, Hot Springs Mountain, and other mountains in San Diego County could be lost to wildfires because of the high density of tree basal areas and accumulated surface fuels. San Diego County wildfires since 2002 have converted forests to shrublands in the Cuyamaca Mountains and the eastern/southern parts of the Palomar Mountains; there was a consensus that these forests may not recover in the foreseeable future if there is no intervention, given the ongoing drought and possible effects of global warming. The workgroup suggested that the remaining, unburned parts of Palomar Mountain were the highest priority for vegetation management. Furthermore it was suggested that these forests be thinned; however, no specific management methods were suggested by the group. An operational goal should be to reduce the forest understory and number of stems, and the level of treatment should be based on current needs. A proposal should be created and implemented following the “no regrets” concept.

- Treatments within the Wildland Urban Interface may provide some of the most effective means for slowing the spread of fire into urban and rural housing communities. These treatments would occur in addition to the mandatory fire clearing around structures. They would be designed to avoid negative impacts to the resources that exist within any preserved lands.

- Shrub vegetation appears to be vulnerable to impacts of frequent fires and should be treated carefully. The fire agency representatives indicated that by policy they would not knowingly convert vegetation communities. There was concern that invasive grass/herbaceous species in shrublands could increase fire frequency and convert remaining shrublands to grasslands. Treatment programs would need to be designed to prevent that from prescribed or accidental fires.

- Old age chaparral areas need to be identified and should be considered for protection under the vegetation management plan. Possible candidate areas include Indian Flats

(north of Warner Springs), McCain Valley, Guatay Mountain, and area near Mountain Empire High School. The value of these areas is unexplored, suggesting the precautionary principle should be employed in their management (O'Riordan and Cameron 1994). However, their intrinsic and aesthetic values should be considered. Measures for their protection may involve techniques such as mastication, prescribed burn perimeter rings or something of that nature.

1.4.2.2 Overall Approach to Vegetation Management:

- There is a limited knowledge base on the efficiency, environmental costs, or consequences of large-scale vegetation management actions across the nine priority areas identified by the Forest Area Safety Task Force (FAST: these areas are described later). However, there was agreement among the fire practitioners and scientists that any treatment of vegetation should have a feedback mechanism that informs agency staff about treatment success and consequences. Many workshop participants considered the proposed vegetation treatments to be experimental. There was consensus that an iterative process, where each management action informs the next action, was the best means of allowing management to go forward with the least damage to wildland ecosystems. In order to maintain a "No Regrets Policy", the vegetative management plan should follow the tenets of Adaptive Management. This type of feedback may require changes in legislation such as the Public Resources Code to provide funding for CAL FIRE to perform such design and monitoring programs. There needs to be a specific process for the effects of monitoring to be incorporated back into the treatment programs.

- Both scientists and fire practitioners stated that current pattern of monitoring had failed to create feedback loops to management. Practitioners suggested that monitoring be focused, imbedded in management activity, and should produce timely results. Scientists suggested that design of treatments should be modified to produce better quality information – specifically, treatments be designed so that they can be compared, in a rigorous manner, to untreated and previously treated areas to test efficiency, costs/benefits, constraints, and consequences of management actions.

1.4.2.3 Management Efforts along the Wildland Urban Interface

- Evidence from recent fires suggests that structures with adequate vegetation clearance are ignited by embers transported into communities by winds or by radiant and convective heat traveling house-to-house. Whereas wildfires may create and transmit embers, participants felt that current evidence suggests that structural losses are primarily caused by failure to manage fuels and subsequent radiant/convective heat sources around suburban housing, and failure to harden houses against flying embers. This is a key area in which loss of structures can be reduced. Structural design was not a topic of the workgroup however landscaping on the urban fringe may be an area where recommendations can be made.

- There is a need to compare cost of vegetation management relative to the cost of fire-hardening existing structures along the wildland urban interface. The common currency for making these comparisons should be the prevention of structural losses, and the probability that a given action will reduce the risk of structural losses. There also should be a comparison between the costs of the various tools for vegetation treatments.

- There was a consensus that very little practical or research-based knowledge exists on the mechanics of ember creation and transmission in wildfires, and that this information is critical in the management of structural losses. The County of San Diego has developed policies to lower the susceptibility of structures to embers, but these do not correct the susceptibility of existing structures (N=95,000) in the wildland-urban interface. Specific information that is needed includes:

    - A general description of the embers transmitted across the wildland urban interface (mass, rate, timing/patterns).
    - An estimate of ember creation and transmission across vegetation types and conditions (topography, weather conditions) in San Diego wildfires.
    - A means of predicting the effective transport distance of embers that cause structural or vegetation fires (using a model of creation, transport, and susceptibility)
    - Are there treatments that could reduce the creation, transport, and susceptibility components of embers?

- Current standards for defensible space around housing (CALFIRE, US Forest Service) are supported by existing information on (1) fire behavior and (2) the susceptibility of structures to ignition by radiant and convective heat. The workgroup discussed larger fuel breaks and vegetation clear areas around properties and raised the following points: (1) the need to insure that fuel breaks were based on sound estimates of radiant and convective heat for each situation where they are employed, (2) that clearing in excess of what was needed for radiant and convective heat would lead to erosion, possible costly disruption of ecosystem processes (including invasive plants and increased fire cycles), and unnecessary destruction of wildlife habitats and amenity (property) values. However, fire practitioners suggested that these distance standards are designed for structural loss and do not consider firefighter safety. Standards are reasonable but specific instances may require some flexibility to deal with conflicting demands along the wildland urban interface.

1.4.2.4 Strategies for Vegetation Management

- The workgroup agreed that wildland fuels treatments in San Diego County need a strategic approach to determine where and what types of treatments could be utilized to reduce fire risk. There are at least two examples of Strategic fuels management (San Jacinto Mountains and Santa Monica Mountains); but neither has been in place long enough to evaluate their success or their environmental consequences, and both relied heavily on expert opinions and static maps of vegetation, slope, and community decisions. Practitioners indicated that they rely on individual experience and group consensus for vegetation treatment activities. Workshop members did not recommend any models for planning that have been undertaken including planning exercises though the strategic fuels treatment plan in the Santa Monica Mountains provides a local example of a strategic model; proposing a variety of techniques to reduce fire hazard and maintain habitat health. It indicates a preferred alternative that applies the following:

    - “Prescribed burning is used to provide resource enhancement”
    - “Hazard fuel reduction projects using prescribed fire or mechanical fuel reduction are considered in strategic locations that reduce the chance of wildfires, which may damage life and property or impact natural and cultural resources.”

- “Short-term and site specific resource impacts of strategic prescribed fires are weighed against long-term and regional hazard fuel reduction benefits.”
- “Strategic zones are identified using up-to-date analysis of vegetation types, fuel characteristics, fire spread models, and potential hazards to life, property, and natural and cultural resources.”
- “Mechanical or biomechanical fuel reduction is concentrated at the wildland urban interface to protect homes.”

SECTION II: VEGETATION MANAGMENT RESOURCES

A number of tools and regulations exist that are relevant when considering vegetation management. In addition, prescribed fire or controlled burns are only one tool to be used in vegetation treatments and may not be a primary consideration in many areas.

2.1 Vegetation Modification Tools

Vegetation modification is a broad term that refers to a number of techniques for removing or reducing the level of standing vegetative biomass. The most common types of modification involve hand cutting the vegetation to leave the roots in the soil to help stabilize the slopes, Mastication with a machine that grinds up the vegetation and spreads it out onto the slope, browsing with animals such as goats, and the use of herbicides. Scraping of the soil surface is another type of vegetation modification, but it is not recommended because it leaves swaths of land with high erosion potential and is frequently an avenue for the spread of invasive weeds.

It is recognized that some methods such as prescription burning may emulate natural processes and when applied judiciously, can be used to reduce fuels and still maintain sustainable ecosystems. Other tools if not applied in a careful manner may need to be viewed as sacrificing local resources for larger scale regional benefit.

2.1.1 Hand Cutting

Hand cutting the vegetation can provide a strategic means to remove large biomass from standing in a fire prone configuration. The vegetation that is cut will need to be removed in order to reduce its fire potential unless it is run through a chipper on site and redistributed over the slope. In some cases, the cut vegetation may be gathered into a pile and burned during non-hazardous fire weather conditions, or it may need to be hauled away for disposal. The benefits are that it can be carried out close to existing homes with little concern for the neighbors and it can be strategically carried out anywhere. It is a strategic tool that will need to be performed in some locations in any fire and vegetation management plan. The drawbacks are that it is labor intensive and therefore has a higher cost than some of the other tools. Depending on the level of application, it could also have a strong impact on the vegetation and if applied very intensely is likely to permanently alter the vegetation structure or at least cause a change that will last for a number of years. This may be a benefit in some locations, but as a broad level tool, it is not desirable to permanently change the vegetation, particularly in locations that have been identified for the sensitive vegetation and endangered species habitat.

2.1.2 Mastication

Mastication utilizes a mechanized tool where a tractor with tread carries an articulating arm that supports a rotating devise that flails or chops the vegetation and spreads it in place. There are a number of benefits of this tool. First, it reduces the cost of hand cutting and can be used on gentle slopes much more quickly than hand crews to break up the vegetation and put it on the ground. Another benefit is that the machine only reduces the size of the vegetation or thins it. If it is applied carefully, it should not have a major effect on the vegetation. However, if it is applied too heavily or repeatedly in the same area, it may have an affect of permanently altering the vegetation. If applied only as a thinning tool, it may mean that the areas may need to be retreated again in the future, but it also means that the slopes will not be subjected to erosion and the vegetation. It is critically important that the negative effects could occur if it was applied directly to a sensitive habitat of some kind. However, it may be one of the better tools to apply

around sensitive areas including healthy stands of old age chaparral in strategic locations in order to provide some means of protection to those areas from fire. Mastication can be carried out on slopes up to 35%. It has been used successfully on the slopes of Palomar Mountain in areas with heavy chaparral.

The drawbacks to mastication as mentioned include the fact that it will require retreatment a number of years later if the intention in a particular location is to maintain a fuel break. However, the cost may also be so much lower than hand modification that retreatment occasionally will still be more economical than hand modification.

2.1.3 Herbivores

The use of herbivores to thin shrub vegetation is becoming more widespread. The predominant animals used in key locations are goats. However, cattle on a more or less permanent rotational pattern can also perform a service of general vegetation thinning. The benefits of using goats and grazing animals are that they are generally considered to be able to thin the vegetation with lower overall impact. The amount of thinning can be controlled by how long the animals are kept on a particular site. The cost should in concept be relatively lower than some of the more intensive manipulations. The potential drawbacks are several. First, the animals need to be cleaned of biological propagules between areas on which they feed. They could become agents for spread of weeds or movement of native species into areas that they currently do not grow if the animals are not cleansed by providing them with clean feed until their digestive tracts are clear and by insuring that their fur does not contain seeds or stickers. However, this can easily be remedied. Second, they may not feed on the portion of the vegetation that is intended. Goats can be forced to trim down the vegetation desired to be removed, however, they have in practice not been very effective. In heavy vegetation, hand or mechanical cutting often needs to precede the use of goats in order to be effective. The use of goats as vegetation consumers did not receive widespread support by the scientists. However, they were again requested by the fire practitioners to be left as a tool that would be available if necessary.

2.1.4 Prescribed Burning

Fire is a natural ecosystem process in Southern California, although these systems may be highly sensitive to the frequency of occurrence of fire. The vegetation is adapted to it and there are even a number of species of plants including the California poppy (the California State Flower), Purple Phacelia (*Phacelia parryi*), Fire poppy (*Papaver californica*), Golden eardrops (*Dicentra chrysantha*), Whispering bells (*Emmenanthe penduliflora*), Hillside monkey flower (*Mimulus brevipes*) and Ground pinks (*Linanthus dianthflorus*) and others that grow and flower in seasons following wildfires. The benefits of controlled burning are that it is a natural process, whereas mastication and hand modification are tools that may affect ecosystem sustainability, particularly if applied in repeated fashion. The benefits of controlled burning are that it is a more natural process than mastication and hand modification. Depending on the frequency with which it is applied, it can be used so that it will not alter the general structure of the vegetation. In the forested areas, it is the most economical in terms of cost if it is performed in areas without nearby residences. In forest areas in particular, it can be strategically used to maintain the health of the vegetation and the associated inhabitants.

Prescribed fire is generally administered by CALFIRE on Non-Federal Lands. However, it has not been used as extensively as it could be. Between 1981 and 2006, only 19,265 acres have been burned under the prescribed burning program in San Diego County constituting less than a thousand acres per year. In the forested areas in particular, prescribed burning is critical to

help in limiting the effects of wildfire and to reestablish forest health. As an example of its affect on wildfire movement, the Cedar Fire stopped its eastward movement when it burned into an area that had been prescribed burned on East Mesa in Cuyamaca Rancho State Park a few months earlier during the previous summer.

Benefits if used properly, as mentioned, include the incorporation of a natural process and the lower potential effect on altering the vegetation communities. The drawbacks are the effects of smoke, the potential for a controlled burn to escape control, and the potential for repeated fires in a relatively short time interval to modify the vegetation and convert it to weedy species. There is often stated a concern that controlled burns escape and cause damage on their own. Fire agency representatives indicate that the escaped vegetation management fires are generally the result of incomplete mop up operations.

Repeat fires in a short time interval may cause a conversion of shrub vegetation to herbaceous habitats dominated by non-native annual plants. Furthermore, there is a potential for negative effects from conducting controlled burns outside of the season that they would normally occur. This could have impacts on the recovery and regrowth of species of plants as well as some animals. However, the potential for negative impacts must be balanced against the values of performing a controlled burn in light of the massive uncontrolled blazes have occurred in recent years. Controlled burns in strategic locations could provide a means to enable fire fighters greater opportunity to slow or redirect a flame front during a major fire event. "Even under severe weather conditions, younger chaparral fuels do reduce a fire's intensity, thereby increasing defensible space for firefighters. Strategic application of fuel treatments does have value, particularly in the wildland/ urban interface (WUI). As the WUI expands and increases in complexity, the value of strategically placed fuel treatments will only grow as firefighters are forced to defend lives and property (Keeley, 2005)."

Prescribed burns will generally be utilized in strategic locations when the surrounding land has few residences or a fire can be easily controlled because of topographic or other features. Again, the use of fire as a management tool will be considered specific to ecosystem management objectives. Strategic fuels treatments would be located to provide the most effective potential for reducing catastrophic fire. The potential for promoting vegetation health could be factored into decisions on locating strategic fuel treatments. For example, if chaparral vegetation reaches a condition of a major level of dead material, such as 30-40% of the above ground biomass and over forty years of age, that would be considered in selecting the best locations for a controlled burn. For example, if chaparral vegetation reaches a condition that 30-40 % of the above ground biomass is dead material, a controlled burn could be considered, however, it will be at the discretion of a certified fire manager in the preparation of a burn prescription. On the other hand, fuel management may be more reliant upon a combination of treatments over time. In all cases, management actions will be evaluated with monitoring to adapt fuel reduction practices to those approaches which attain desired results while minimizing undesirable impacts.

2.1.5 Herbicides

Herbicides have been used as a tool for vegetation treatments on various scales with some success. There are a number of different types of herbicides that can be used for specific vegetation treatments. Development of herbicides has progressed significantly; however, there are common perceptions that are negative toward their use. They have been used strategically by the University of California Cooperative Extension Service though most agencies are reluctant to use them. Though they may not be used in any major level, they can be used strategically to treat certain invasive weeds and may provide useful application to alter weedy

vegetation to a more natural form. Fire agency representatives would also like to maintain them in the set of tools that can be used if necessary.

2.1.6 Post Management Monitoring

Under natural conditions prior to European influences, following a fire, the vegetation would recover with no further modification or assistance. The native annuals and shrubs would either germinate from seed or resprout from root crowns to grow following the winter rains. However, in modern times, non-native plants introduced from other parts of the world have spread into the environment. Fire may create an environment conducive to their growth affecting the possibility that the native shrubs that form the basis for the coastal sage scrub and chaparral habitats will be able to regrow. In many cases, the non-natives may be present initially for a few seasons following a burn, but the shrubs may become reestablished over time. The competition pressure from non-native plants is greater when areas have burned with short time intervals between the fires. Therefore, areas that have burned recently may need to be monitored to insure that invasive weeds do not spread and replace the native plants. The burn plan requirements listed in section 2.2.1.2 below include 21 different elements necessary for preparing for, carrying out and monitoring a burn plan. Monitoring and post burn activities are also included. Monitoring is critical to insure that the burns do not replace natural habitats. It is also strongly recommended that monitoring concepts be incorporated into the design of fuels treatment projects. The follow-up should include a multi-prong approach analyzing treatment effectiveness and an on-going adaptive management program to monitor for type conversion characteristics, including the introduction and/or spread of non-native/nuisance/exotic species into the treated areas. If monitoring indicates that a problem exists for the establishment of new growth of the vegetation that has been subjected to a controlled burn, specific action may be necessary. Adaptive management would then include the control of those undesirable species using herbicide, hand-pulling or other weed removal process. These steps are considered to be very important because the intent of the strategic fuels treatment is to maintain and protect the existing natural habitats that are in place.

Another aspect of monitoring will evaluate the effectiveness of the fuels treatment areas. In the event that major fires burn around or into the areas that have been treated, an evaluation should be made regarding the effectiveness of the treatment area in slowing the fire or reducing the overall effect of the wildfire in destroying property and resources.

2.1.7 Treatment Costs

In general, the estimated cost to manage vegetation using all of these tools is $2,500 per acre for vegetation management plan development and plan implementation. This number includes environmental review. Monitoring costs are estimated at $50 per acre and would be additional. Some of the treatments may be less expensive, but these numbers are based on realistic scenarios. As a component of this, the cost of creating and implementing a controlled burn program would be roughly $100 per acre and the cost of using a masticator machine or hand clearing may range from $800- $1,400 per acre.

2.2 Unique Regulations Specific to Controlled Burns and Other Treatments

It is important to understand the existing regulations regarding conducting controlled burns and other vegetation treatments at the State level as well as grading and clearing regulations under the San Diego County Grading and Clearing Ordinance and the MSCP Biological Mitigation Ordinance. The first section 2.2.1 describes the California State regulations and the second

section, 2.2.2 describes the County of San Diego regulations that have been previously adopted.

2.2.1 State

2.2.1.1 California Environmental Quality Act

The CAL FIRE guidelines for conducting controlled burns indicate the following:

> "All prescribed burns are developed in compliance with state and federal rules and regulations including the California Environmental Quality Act (CEQA), and California and Federal Clean Air and Rare and Endangered Species Acts."

Conversations with the Wildlife Agencies indicate an understanding that controlled burns will be included in the preserve system management. Under the Multiple Species Conservation Program, the intent is that the use of prescribed fire is covered under the environmental review under the adopted plans and that it is viewed as a means to protect important habitat areas as well as create healthier vegetation. Within the specific County preserves, the intent is that it would not be necessary for additional environmental review for controlled burning activities. For lands that are under multiple ownerships and involving a variety of agencies, CAL FIRE would take the lead on preparing the plan and addressing the environmental issues. As new information on vegetation management is generated, the MSCP management plans will take that information into account.

The California Environmental Quality Act requires that discretionary projects are evaluated for their environmental impacts. CEQA also provides for exemptions for a variety of projects through statutory and categorical exemptions. CAL FIRE and the County of San Diego are subject to conformance with the requirements of the California Environmental Quality Act.

2.2.1.2 CAL FIRE

Under the California Department of Forestry and Fire Protection (CAL FIRE) Vegetation Management Program, property owners may enroll in a program with CAL FIRE and they will cover liability and plan for and conduct controlled burns on private lands. The property owner may provide 10% of the cost using in kind services, and the percentage may vary depending on the objectives and the public benefits from the activity.

The majority of regulations regarding the use of controlled burns involve air quality impacts and regulations from the California Air Resources Board and any local air districts. Before obtaining air district permission to burn, a burner must register the burn with the local air district, obtain a burn permit from the air district, submit a Smoke Management Plan to the air district and obtain air district approval of the Smoke Management Plan. Smoke Management Plans include information on the method for the burn, fuel type, nearby population, burning time, location and size, duration of the burn, projections of smoke travel, acceptable ignition conditions, and techniques to minimize smoke as well as public notification procedures and any potential alternatives to burning. A number of the government code sections have references to CAL FIRE and the relationship between that agency and other agencies as well as private property owners as follows:

- Cal. Gov. Code § 51175-51189 declares that prevention of fires is of statewide concern, creates a process for identifying very high fire severity zones which includes nearly all of

San Diego County except for the lowland desert areas, generates requirements of 100 feet for fuel modification and irrigation around structures, it requires new buildings to meet building code requirements for fire safety and it sets forth the ability of local jurisdictions to force compliance with vegetation modification regulations.

- Cal. Health & Safety Code § 13009 states the terms in which costs of fire suppression resulting from an escaped private fire can be collected by CAL FIRE.
- Cal. Health & Safety Code § 42311.2 describes conditions in which charges in excess of the actual cost of conducting a controlled burn are not allowed.
- Cal. Public Resources Code §§ 4475 - 4480 describes how CAL FIRE can enter into agreements with other agencies and private landowners to conduct controlled burns.
- Cal. Public Resources Code §§ 4491 & 4493 Declares that vegetation management utilizing controlled burns for enhancing the health of vegetation and creating a situation with vegetation that will provide for better fire management is a public purpose.

The use of Prescribed Fire must follow a set of guidelines titled “Interagency Prescribed Fire, Planning and Implementation Procedures Reference Guide” that were cooperatively designed in 2006 by the National Park Service, Bureau of Land Management, Bureau of Indian Affairs, Department of Agriculture, and U. S. Fish and Wildlife Service. The Guidelines include directions on how to prepare a prescribed burn plan, the steps for addressing environmental and air quality issues, as well as the organization of the field crew who conduct the burn. All burn proposals must conform to the National Environmental Policy Act, National Historic Preservation Act, and Endangered Species Act.

The goals of the Interagency Fire Program are as follows:

- Provide for firefighter and public safety as a first priority
- Ensure that risk management is incorporated into all prescribed fire planning and implementation.
- Use prescribed fire in a safe, carefully planned, and cost-efficient manner.
- Reduce wildfire risk to communities, municipal watersheds and other values and to benefit, protect, maintain, sustain, and enhance natural and cultural resources.
- Utilize prescribed fire to restore natural ecological processes and functions, and to achieve land management objectives.

Depending on the complexity of the burn area, specific criteria determine the eligibility of the fire boss. The Agency Administrator has final approval authority for all Prescribed Fire Plans. An “off unit” Technical Reviewer is responsible for all of the elements in the plan. There are additional hierarchies of participants described down to the fire effects monitor. The Prescribed Fire Plan itself has 21 elements to be included with specific requirements and risk assessments as important components for many of them. Some of the key elements of the plan are as follows:

- List of the agencies involved and the approving authority.

- Pre-Ignition Approval Check List and Prescribed Fire Go/No Go checklist.
- Complexity Analysis Summary.
- Description of Prescribed Fire Area
- Goals and Objectives
- Funding
- Prescription
- Scheduling
- Pre-burn Considerations
- Briefing
- Organization and Equipment
- Communication
- Public and Personnel Safety, Medical.
- Test Fire
- Ignition Plan
- Holding Plan
- Contingency Plan
- Wildfire Conversion
- Smoke Management and Air Quality
- Monitoring
- Post Burn Activities

CAL FIRE utilizes a 135 page Vegetation Management Handbook and Field Guide that was approved in 2001 for identifying the steps to take place for creating a Vegetation Management Plan. The handbook includes an extensive list of criteria that are used in establishing the prescription for a particular project site including vegetation, potential impacts to sensitive species, cultural resources and smoke sensitive locations. The burn prescription includes assessments of humidity, temperature, wind speed and direction, fuel moisture, soil moisture, duff moisture, and days since the last rain. It also includes a cost assessment. In addition, before any project is performed, an Environmental Checklist is prepared that addresses the potential effects on water courses, trees, the type of burn pattern that will result, evaluation of impacts to sensitive species, biological movement corridors, riparian areas, smoke generation, and archaeology.

2.2.1.3 Air Pollution Control District

Under Regulation VI, rule 101 provides the prohibitions for the use of fire and the regulations covering the generation of smoke from controlled burns. There are requirements for Smoke Management Plans as well as limitations on the days on which burns can take place due to atmospheric conditions. Furthermore, there are requirements that vegetation modification associated with controlled burns be conducted with the local fire agency. Title 17 of the State of California Code of Regulations outlines the smoke management requirements for agricultural and prescribed burning. This code designates CAL FIRE and the United States Forest Service as the agencies with the authority to issue agriculture and prescribed burning permits. This code also presents the criteria that must be met for smoke control and the potential for smoke impacts to smoke sensitive areas, as well as requirements that may cause cessation of prescribed fire, if the smoke exceeds requirements in the burning permit.

2.2.2 Local

Existing Grading and Clearing Ordinance

SEC. 87.501. CLEARING PERMIT REQUIRED.

Except as exempted by Section 87.502, no person shall do any clearing, nor shall an owner allow any clearing on his or her property or allow the property to remain in an unlawfully cleared condition, unless the person or owner has a valid clearing permit issued by the County Official authorizing such clearing. An owner is presumed to have allowed clearing which has been done on property occupied by him or her or is under his dominion and control. This presumption is a presumption affecting the burden of producing evidence. A separate clearing permit shall be required for each site. All clearing shall conform to the conditions of the authorizing permit.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.502. EXEMPTIONS.

Clearing for fire protection purposes within 100 feet of a dwelling unit. Any additional clearing for fire prevention, control or suppression purposes is exempt when authorized or required, in writing, by a fire prevention or suppression agency.

(i) On land located outside the "MSCP Subarea" (as defined in Section 87.803 of this Division), clearing of up to a maximum of five acres, on a parcel zoned for single family residential use and improved with a single family residence. The amount of land cleared under this exemption shall not exceed a total of five acres, regardless of the number of occasions on which clearing is performed.

Existing Biological mitigation Ordinance

SEC. 86.501. FINDINGS, PURPOSE AND INTENT.

The Board of Supervisors finds that the ecosystems of the County and the vegetation communities and sensitive species they support are fragile, irreplaceable resources that are vital to the general welfare of all residents; these vegetation communities contain habitat value which contributes to the region's environmental resources; special protections for these vegetation communities must be established to prevent future endangerment of the plant and animal species that are dependent upon them. This Chapter will protect the County's biological resources and prevent their degradation and loss by guiding development outside of biological resource core areas, and by establishing mitigation standards which will be applied to discretionary projects. Adoption and implementation of this Chapter will enable the County of San Diego to achieve the conservation goals set forth in the Subarea Plan for the Multiple Species Conservation Plan ("MSCP"), adopted by the Board of Supervisors on October 22, 1997, and will preserve the ability of affected property owners to make reasonable use of their land subject to the requirements of the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 and following, and other applicable laws, and the avoidance and mitigation requirements contained herein….

SEC. 86.502. APPLICATION OF REGULATIONS.

Except as provided in Section 86.503 below, this Chapter shall apply to all land within San Diego County shown on the MSCP Boundary Map (Attachment A of Document No. 0769999 on file with the Clerk of the Board). Upon application for a discretionary approval subject to CEQA,

the applicant shall be required to comply with the procedures set forth in this Chapter. No project requiring a discretionary permit shall be approved unless a finding is made that the project is consistent with the MSCP Plan, the County Subarea Plan and the provisions of this Chapter.

(Added by Ord. No. 9632 (N.S.), effective 4-23-04)

SEC. 86.503. EXEMPTIONS.

(7) Brushing and Clearing on existing parcels 10 acres and under in size containing a dwelling unit as of October 22, 1997.

(11) Parcels ten acres and under in size zoned for single family residential uses shall be allowed to conduct clearing without complying with the provisions of this Chapter in the following circumstances. To qualify for this exemption, a finding must be made that the clearing will not interfere with the assembly of the Multiple Species Conservation Plan Preserve according to the terms of the MSCP Plan and the Subarea Plan. The total number of acres cleared per parcel may not exceed the amounts set forth below.

a) Parcels located within the Pre-Approved Mitigation Area shown on Attachment F of Document No. 0769999 on file with the Clerk of the Board, that are ten acres and under in size and zoned for single family residential uses may clear a total of two acres without complying with the terms of this Chapter. Clearing required pursuant to applicable fire safety regulations shall not be counted in computing the number of acres cleared.

b) Parcels located outside the Pre-Approved Mitigation Area that are ten acres and under in size and zoned for single family residential uses may clear a total of five acres without complying with the terms of this Chapter. Clearing required pursuant to applicable fire safety regulations shall not be counted in computing the number of acres cleared.

SECTION III: VEGETATION MANAGEMENT PRIORITIES

3.1 Approach to Defining the Priorities

The Forest Area Safety Taskforce (FAST) was formed in the fall of 2002, and formalized in the spring of 2003, to address life and property safety concerns related to declining forest health and the increasing number of dead, dying and diseased trees and brush in San Diego County. Formed as a collaborative effort, FAST is made up of various government agencies, tribal groups, as well as local, state and federal elected officials, community organizations and private citizens. The priority of this joint venture is to remove the dead, dying and diseased trees in and around evacuation corridors and communities at risk in the forested areas of San Diego County.

FAST is an advisory body that helps to direct where money is spent in the best manner to protect the communities of San Diego County. FAST is divided into five committees: Evacuation and Community Protection, Outreach and Public Education, Forest Health and Restoration, Vegetation Management and Fuels Reduction, and Legislative Outreach. FAST will continue to work toward mitigating the threat to the life and property of the citizens of San Diego County while fostering forest health.

The FAST group has evaluated the vegetation in San Diego County in light of the drought of the past decade, the fires of the past 5 years, age of existing vegetation, history of projects such as the Dead and Dying Tree Removal Program and other environmental factors and has generated a priority list of projects. These projects have been scored and ranked relative to the other projects that remain in San Diego County. The Criteria are as follows from the Natural Resource Conservation Service (NRCS):

- Population: What is the people population of the project area? This includes seasonal, year round residents, and daily visitors. A relatively high population scores 3 points, low scores 1 point. check
- Escape Route: Are there escape routes in the areas? If so, how many? If there is only one way in and one way out, then an area would score a 3. If there are multiple routes in and out of an area then it would score a 1.
- Safe Zones: Does the project area contain safe zones, places for people to take shelter in the immediate event of a fire (I.E. open fields, golf courses?) Safe Zones are areas offering immediate safety from a passing fire, not extended shelter for long-term evacuees. If an area has no safe zones, it will score a 3. With many safe zones, it will score a 1.
- Fuel/Vegetation Degree of Hazard: what is the fuel load in the area? This considers fuel age class and type of fuel. An area with extremely hazardous fuels present will score a 3. Less fuel scores a 1.
- Infrastructure: Does the project area contain a lot of infrastructure? If it does contain a lot of infrastructure needing protection from wildfire, then the area would score a 3. If it does not contain a lot of infrastructure needing protection from wildfire, then it will score a 1.
- Risks of Ignition: How high is the risk of ignition in the area? An area with high population, especially many homes, will score a 3. Busy roads, campgrounds, or highly

frequented rural areas, will also score high. Remote areas with no access will score lower.

- Ecological Sensitivity: Is there a need of fuel treatment in the form of manipulation of the fire cycle in order to maintain ecological values? If an area has a known presence of an endangered species or supporting critical habitat, then it will score high. Known significant archaeological sites that need fuel treatments for protection from wildfire will also increase this value.

Exhibit 3-1: San Diego FAST – Expanded Community Area Fuels Reduction[1]

Project Area	Population	Escape routes	Safe zones	Fuels degree of hazard	Infrast.	Risks of ignition	Ecological Sensitivity[2]	Total
Palomar Mt.	2	3	2	3	3	3	3	19
I-8 Laguna Fire	3	2	2	3	3	3	3	19
Southeast County	2	3	2	3	2	3	3	18
Greater Julian	3	2	2	2	3	3	3	18
San Luis Rey (West)	3	2	1	2	3	3	3	17
Rancho	3	2	2	2	3	3	2	17
Santa Margarita	3	1	1	3	2	3	3	16
Warners	1	3	2	3	1	3	3	16
Cuyamaca-Laguna	2	3	2	2	1	3	3	16

[1] Values are based on the following scale: 1=low, 2=medium, and 3=high.

[2] Need of habitats and species requiring fuel treatment for manipulation of the fire cycle in order to maintain ecological values.

Exhibit 3-2: San Diego FAST – Areas of Concern [1]

Project Area	Project Boundary Size (acres)
Palomar Mountain	71,152
I-8 Laguna Fire	169,280
SE County PART 1	94,588
SE County PART 2	119,523
San Luis Rey West	124,930
Santa Margarita	29,182
Northeast County - Warner Springs	76,333
Cuyamaca - Laguna	53,457
Greater Julian	70,829
Rancho	32,913
TOTALS	**842,187**

[1] Only reflects project boundary, NOT area requiring treatment

3.2 Summary of the Priority Areas

The following is intended only to provide a broad outline of the project areas. For each of the project areas, the specific sites will be mapped and processed for treatment under a separate vegetation management plan that will incorporate the recommendations made in Section 2. Each of these plans will be evaluated in a regional context for their likelihood for providing a benefit. Furthermore, each of them will be evaluated for their environmental compliance. In those treatment studies, the specific tool, controlled burns, hand modification, mastication, or grazing animals, will be identified.

3.2.1 Priority Area #1: Palomar Mountain

Palomar Mountain received the highest priority for a vegetation management project area. It contains a combination of issues that include safety concerns for the residents and properties, a high level of flammability due to age of vegetation and need for maintenance of the forest. Vegetation management techniques including controlled burns and manual thinning of trees are needed to protect sensitive habitat areas, ancient trees and even some outstanding old but healthy chaparral. The risk is the occurrence of a massive forest destroying fire like the Cedar Fire in Cuyamaca. The Dead, Dying and Diseased Tree program removed dead trees within 200 feet of structures and roads from 2004 to 2006 on Palomar Mountain. This action allowed for fire crews to stop the Poomacha Fire from entering into the communities of Birch Hill and Bailey Meadows on Palomar Mountain and prevented the fire from destroying the forest in Palomar Mountain State Park and Palomar Mountain County Park. However, the majority of the forest on the mountain, both on private and public land, still sustains standing dead trees and tree density that is far too high. The threat of an all consuming fire traveling from the northeast with a strong Santa Ana wind event through very old growth Chaparral into the weakened forest and the populated communities is critically high. Furthermore, once the forest vegetation on Palomar Mountain is brought back to a more stable configuration, it will be necessary to sustain controlled burns and regularly manage the vegetation in perpetuity. Strategic fuel breaks in the chaparral may be indicated following careful evaluation. Specific segments of this project area and their scores are listed below:

- Birch Hill 20
- Birch Hill (N. Slope) 19
- Bailey Meadows (revisit thinning) 18
- Conifer Rd 17
- Mendenhall Valley 15
- Lower Bailey 15
- French Valley 15
- East Grade (revisit and new) 14
- South Grade 12

3.2.2 Priority Area #2: I-8 Laguna Fire

Prior to the fires of 2003 and 2007, the largest fire recorded in San Diego County was the Laguna Fire of September 1970. It consumed close to 175,400 acres, nearly 400 homes and was one of the largest in the State at that time. It began from a wind downed power line in the Kitchen Creek area of Mount Laguna and burned to the southwest through parts of Alpine, Crest and Dehesa carried by 60 mph winds. It burned over a distance of 30 miles in 24 hours. The

path of the Laguna fire has not had significant fires or fuel treatment since then leaving a bed of nearly 40 year old vegetation that has like the rest of the County endured a 10 year drought period. Furthermore, in the nearly 40 years since the Laguna Fire, many more homes have been constructed within its path. It is a well known fact in California that the paths of fires may be repeated. The advancing age for this vegetation combined with the drought is creating a situation that is becoming gravely dangerous. This area would be served through strategic fuels treatment to break up the large swath of old age class vegetation with possible augmentation through the use of other tools such as masticators.

Portions of this project area were treated in the Dead, Dying and Diseased Tree removal program. However, with the continued drought, there have been a large number of additional trees that have died, particularly oak trees in the area around and north of Descanso. The Golden spotted oak borer may also contribute to oak tree mortality.

One portion of this project area that was not directly burned in the Laguna Fire is Guatay Mountain. It contains some of the oldest Chaparral in the region and the oldest stand of Tecate Cypress in San Diego County at approximately 100 years. Strategic fuel modification may be indicated following careful review and may involve controlled burns, chaparral cutting, and masticators in order to manage the surroundings to protect this area. Specific sites and their scores within this project area are listed below:

- Descanso (revisit) 21
- Guatay (Tecate Cypress) 21
- Pine Valley (Oak Mortality and Fuel Breaks) 20
- Corte Madera 14
- Crouch Meadows 11

3.2.3 Priority Area #3: Southeastern County

The southeastern part of the County from Jacumba to Potrero along Highway 94 and south of Interstate 8 and the area north of Interstate 8 in the area of the Tecate Divide contain old and severely drought stressed Chaparral. While the County and Southern California as a whole have suffered a long period of drought, this portion of San Diego County has been particularly hard hit. The Chaparral vegetation has a significant level of standing dead material. This portion of the County has also exhibited greater numbers of residences. Fires carried by an east wind event would be very destructive to the communities of Tierra del Sol, Bankhead Springs, Boulevard, Campo, Morena Village, Potrero and Buckman Springs. This area would be served through strategic fuels treatment where indicated. Specific sites and their scores within this project area are listed below:

- Lawson Valley 19
- E. Hauser 19
- Lyons Valley 19
- Lake Morena 18
- Live Oaks Springs 17
- Tribal Area 17
- Boulevard/Manzanita 16
- Campo (brush) 14
- Buckman Springs 11

3.2.4 Priority Area #4: Greater Julian

Portions of this project area burned in several different fires, the Pines fire of 2002, the Cedar Fire of 2003, and the Volcan Fire of 2005. The Sunrise fuel break was installed in the eastern portion of Julian and it has served to limit the spread of destructive fires into the community. Other areas such as portions of Pine Hills have not burned in many years and have not had vegetation treatment. In many of these areas, dead tree skeletons still stand serving as a safety hazard. In others, conducting tree thinning would be necessary for forest health. Prescribed fire may not be necessary except in areas that were not involved in the fires of the last five years. Furthermore, other areas are Chaparral of older age. This project area is also quite heavily populated with residences located in potential fire hazard areas. Strategic fuels treatments in this area may include all of the tools as well as additional dead tree removal both for standing skeletons of fire kill and drought kill. The specific study areas involved and their rankings are as follows:

- Pine Hills/ Heise 20
- Engineers Road/North Peak/Cuyamaca Metro 16
- Santa Isabel/Mesa Grande/Henshaw 14
- Julian Metro 13
- Volcan Mountain Region 13

3.2.5 Priority Area #5: San Luis Rey West

The area from Rainbow, Pala, Pauma Valley, Bonsal, Lilac, Valley Center to Twin Oaks and Jesmond Dene has a large coverage of old growth chaparral of mixed health with some areas appearing to support significant standing dead material. This area has also been subject to a large amount of residential development over the past two decades. The Merriam Mountains and San Marcos Mountains have little history of fire ever occurring there leaving old growth and somewhat drought stressed vegetation that contains significant standing dead material. Homeowner landscaping and management of vegetation around structures may also contribute to residential fire hazards. A wildfire through this area could be quite destructive. Following careful evaluation, controlled burns could be used, but because of the urbanized nature of much of this area, it may be necessary to utilize masticators instead. Specific sites and their scores within this project area are listed in the following table:

- Pala 17
- Gopher Canyon 16
- Lilac Area 16
- Deer Springs/Mountain Meadows 16
- Rice Canyon/Rainbow 15

3.2.6 Priority Area #6: Rancho (Santa Fe)

Portions of this project area burned in the Witch Fire of 2007 and previously in fires in the 1990's. This area is a challenge due to its relatively high number of residences, but also because of the intermixing of landscaped properties in the midst of areas with Chaparral and Coastal sage scrub vegetation. Along the San Dieguito River and in many of the undeveloped areas, concentrations of rare, endangered and otherwise sensitive species exist. The combination of flammable landscape material in the midst of large residential properties and hills and slopes of natural habitat make this an area that needs strategic treatment to protect the properties as well as the sensitive resources. For the areas that recently burned, treatment may

not be necessary for a while, but it will always be important to maintain modified and irrigated spaces around buildings and communities.

- San Dieguito River Watershed 20
- Del Dios/ Lake Hodges 20
- Mount Israel 20
- Escondido Creek/Elfin Forest 19
- West Rancho Bernardo 14

3.2.7 Priority Area #7: Santa Margarita

The area east of Camp Pendleton extending east to Rainbow and south to Camp Pendleton and Fallbrook includes numerous groves and old age chaparral. The DeLuz area has been gradually expanding in population. The potential is great for a fire to ignite north of the County line in the western portion of Temecula and spread with a Santa Ana event into DeLuz and the back side of Camp Pendleton and Fallbrook. Again, careful evaluation for strategic fuels treatment in this area would likely involve controlled burns and mastication. The individual site areas would include De Luz and Rainbow.

3.2.8 Priority Area #8: Northeast County – Warner Springs

The area ranging from the forested Hot Springs Mountain through Warner Springs and Chihuahua Valley to Oak Grove has had various fires over its history including those in the last decade that burned parts of Hot Springs Mountain in the Los Coyotes Indian Reservation and Bucksnort Mountain. However, the majority has not burned in many decades. Very old growth Red shank chaparral reportedly exists near Warner Springs that may still be healthy and viable and worthy of consideration for protection from fire. The majority of the chaparral is of varying health and vigor with some drought affected vegetation supporting standing dead material. If ignited, this region could be the source for a major fire that could burn into the back side of Palomar Mountain but take the entire forest. Following careful evaluation, portions of this project area may be treated through controlled burns to prevent a wide fire front from gaining momentum as it moved through the area to the west or even to the east into Anza Borrego State Park. Specific areas that support healthy chaparral of old age should also be identified in order that treatment may occur in the surroundings to help prevent its loss during a fire. Individual site areas are as follows:

- Chihuahua
- Los Coyotes
- Lower Culp
- Previtt Canyon
- Warners

3.2.9 Priority Area #9: Cuyamaca - Laguna

The Cedar Fire impacted a major portion of this project area causing what is potentially a conversion of a coniferous oak forest to an oak, chaparral community. The State Park is exploring means for re-establishing the primary coniferous trees including Jeffrey Pines and Sugar Pines. Vast areas of standing dead tree skeletons remain. Re-establishment of forests will require specific treatments for removal of the invading chaparral shrubs and modifying the understory of the replanted and seedling conifers as they grow. This will require treatment for many years in the future. Portions of the area of Cuyamaca cypress on the west slope of Cuyamaca Peak was burned in the Cedar Fire and risks replacement by chaparral if fires re-occur there in the next 30 years. This area will need treatment by either controlled burns or

mastication to prevent fires from burning the stand before the trees are mature enough to generate adequate cones and seeds for reproduction.

Portions of the Mount Laguna area burned in the Pines fire as well. However, the central and western part of Mount Laguna has not been burned for many years. Treatment of the forest to sustain forest health may require application of controlled ground fires and some of the large chaparral expanses may need to be treated through strategic controlled fire or other means to reduce the mass of fuels.

Overall, this project area will need treatments of various types for the foreseeable future. They will be necessary in order to allow for the forest and woodland vegetation to become re-established and then to grow in a healthy and vigorous manner so that unanticipated fires do not heavily alter the vegetation in the future.

SECTION IV: VEGETATION MANAGEMENT PROJECTS

Land in the backcountry is owned by several large public agencies and private ownership. Roughly 50 percent of the FAST priority areas are privately owned and 50 percent are publicly owned by Federal, State or County agencies. Appendix G includes a list of acreages of the public agencies within the FAST priority areas and Appendices F1, F2, and F3, illustrate the ownerships of public land agencies and Appendix F4 shows the private ownerships. Each of these public agencies has conducted management on their lands in order to reduce fire threat to adjacent properties. Many of these agencies participate in the FAST group and have decided the priorities and locations of treatment areas based on input from the FAST group. Over the past 5 years, the majority of these agencies have carried out activities to reduce fire threat. In addition, many of them have specific management plans for the next five years. The following discussion describes the activities of each of the Federal, State and Local Agencies. Detailed listings of their activities are included in the Appendices. One other factor to consider is that in most cases, operations by one of the agencies involves coordination and participation with the others. CAL FIRE, for example, participates in a number of activities carried out by the other agencies because their activities can apply to both public and private lands.

4.1 Federal and Tribal Lands

Roughly 350,000 acres of the lands identified in the FAST study areas is under the ownership of the Federal Government or Tribes. This number includes Forest Service, Bureau of Land Management and Tribal ownerships. The vegetation treatment activities conducted for Federal Lands as well as those conducted by CAL FIRE are usually coordinated. Cleveland National Forest staff manages the vegetation treatments on land under their ownership, but they also cooperate with the County and CAL FIRE for some inspections and treatments on land that they do not own that is located within the Cleveland National Forest Boundary. The Natural Resource Conservation Service (NRCS) carries out treatment activities on Tribal lands.

4.1.1 Cleveland National Forest

The Cleveland National Forest includes land within San Diego, Orange and Riverside Counties in three districts: the Trabuco, Palomar and Descanso districts. The largest portion, approximately 320,000 acres occurs within San Diego County in the Palomar and Descanso districts and a portion of the Trabuco District on land north of Camp Pendleton and west of DeLuz.

Within the past 5 years, a number of treatments have been applied to Forest Service land totaling 23,986 acres within the San Diego County portion of the Cleveland National Forest. All of these activities reduce the potential for fire to be carried through an area (Appendix I). These include thinning of small stems to increase the health of the mature trees, mastication, prescribed burning, felling trees, bucking them into smaller segments, chipping, and lop and scatter of natural fuels. Within the Palomar District, they ranged in size from 8 acres to 2,300 acres. They range in type from the maintenance of a rural fuel breaks to thinning of trees to remove the Dead, Dying and Diseased trees and mastication and mowing. Many of them were relatively small projects less than 100 acres in size and a relatively large number of those were less than 20 acres in size.

In the Laguna Mountain and I-8 portion of the Cleveland National Forest, a similar situation exists with a number of small projects less than roughly 10 acres in size. Many of the smaller

projects were chipping treatments though mastication and pile burning, prescribed burning and thinning were also applied. However, more than 1,300 acres were burned in a wildfire within an area that was proposed to be treated, and the Forest Service also conducted invasive removal projects and revegetation and replanting in burned areas.

Projects proposed for the next five years would total 16,835 acres. The majority of these projects are to be carried out in a number of key locations. They include projects ranging from 50 to more than 500 acres in the Mount Laguna and Corte Madera area, as well as Lake Morena, Pine Valley, Guatay, and Viejas Creek areas in the southern part of the forest in the Descanso District. Additional projects in that District closer to the urban interface include San Vicente and Carveacre, and Capitan Grande located respectively in the areas east of Jamul and Lakeside communities. They also include several projects near Warner Springs, Indian Flats and the Sunshine Summit area of the Cleveland National Forest Palomar District. In addition, on Palomar Mountain and adjacent Agua Tibia Mountain, there are projects proposed for sites ranging from 55 acres to 1,300 acres. See Appendix J for a detailed listing of the projects.

4.1.2 Bureau of Land Management

The Bureau of Land Management is involved in a variety of projects, with the majority being the generation of fuel breaks. They work closely with CAL FIRE in their treatment programs. Totaling 1,261 acres, they include the International Fuel Break, Shockey Truck Trail, McCain Valley, Sunrise Fuel Break, Beauty Mountain Fuel Break and Puerta La Cruz Truck Trail (Appendix K).

4.1.3 Bureau of Indian Affairs

Forested lands under the ownership of the Pauma Tribe on the west side of Palomar Mountain were treated under the Dead, Dying and Diseased Tree program by the Natural Resource Conservation Service. These treatments were conducted along the major roads into and out of the ownership. Additional work was done on tribal lands on the Los Coyotes Indian Reservation and Santa Ysabel tribal ownership near Julian. CAL FIRE also prepared a watershed assessment for the Los Coyotes Indian Reservation.

4.1.4 Natural Resource Conservation Service

The Federal Natural Resource Conservation Service (NRCS) have conducted vegetation management projects on 3,006 acres of lands that are owned in trust by various tribal organizations as well as other specific sites. Their activities included Dead, Dying and Diseased tree removal for land that is owned by the Pauma Tribe on Palomar Mountain (Appendix L). In addition, they conducted similar operations on land owned by the Lost Valley Boy Scout camp east of Chihuahua Valley, the Christian Conference Center located on Palomar Mountain near the Palomar Mountain State Park, the Bailey Meadows subdivision on the western portion of Palomar Mountain and the Fry Creek Camp Ground area on Palomar Mountain near the Observatory. These operations were performed in cooperation with the County of San Diego.

4.2 State Agencies

4.2.1 CAL FIRE

CAL FIRE has carried out a number of projects ranging from removal of dead, dying and diseased trees, on Palomar Mountain to slash reduction and prescription development for areas around Julian and Cuyamaca. In addition, a number of properties have participated in the Forestry Assistance Program. CAL FIRE administers several state and federal forestry

assistance programs with the goal of reducing wildland fuel loads and improving the health and productivity of private forest lands. California's Forest Improvement Program (CFIP) and other federal programs that CAL FIRE administers, offer cost-share opportunities to assist individual landowners with land management planning, conservation practices to enhance wildlife habitat, and practices to enhance the productivity of the land. CAL FIRE also delivers the Forest Stewardship Program which combines funds from state and federal sources to assist communities with multiple-ownership watershed and community issues related to pre-fire fuels treatment, forest health, erosion control, and fisheries issues.

Within the past 5 years, CAL FIRE has completed treatment of 6,026 acres of land (Appendix M). On the Palomar Mountain area, they participated in the removal of Dead, dying and diseased trees along roads and around residences as well as treatments of the Palomar Mountain State Park. For the Greater Julian Area, they have completed treatments on Volcan Mountain, the Julian Community Services District lands, Whispering Pines, the Cuyamaca Recreation District lands and Banner Grade. Within the Cuyamaca Laguna Area, they completed projects along State Route 79 through Cuyamaca Rancho State Park. In addition to the actual treatments they have completed a watershed assessment for 11,500 acres of Los Coyotes Indian Reservation. In the Laguna Fire area, they completed treatments in Corte Madera Ranch and a Pine Valley fuel break. In addition, they also worked with property owners on lands that ranged from 20 to 80 acres in size in a variety of locations.

Currently CAL FIRE is actively engaged in the treatment of 10,070 acres of land both on public and private lands. Many of these projects are additional phases of those that have been completed. On Palomar Mountain, they are working on the fuel breaks near the Observatory and the East Grade Road as well as a vegetation management plan for the area near the Observatory. They are also working on a series of projects in Cuyamaca Rancho State Park and the surrounding areas. Additional projects are occurring on land within Corte Madera Ranch in the I-8 Laguna region. Within the Greater Julian Area they are working on Volcan Mountain, the Julian Community Service District lands and Lake Cuyamaca Recreation District lands. CAL FIRE has also participated in planting plans in the Lost Valley Boy Scout property.

In addition, there are projects proposed to be carried out by CAL FIRE for 15,933 acres of land within the next five years. These proposed projects including a fuel break east of Ramona, fuel reduction around Mount Woodson, a Vegetation Management Plan for the Volcan Mountain/San Felipe Valley area, and the Palomar Mountain Vegetation Management Plan. Please see Appendix N for a listing of the projects.

CAL FIRE has also documented the projects that were completed prior to the fires of 2007 that enabled the ability to save lives and property. That documentation is included in Appendix O.

4.2.2 California State Parks

California State Parks manages roughly 630,000 acres of San Diego County. While they may perform their own controlled burn operations, they usually coordinate with CAL FIRE to carry out such activities. Based on the information obtained to date, the activities within the State Parks have been included in the CAL FIRE list of projects.

4.2.3 California Department of Fish and Game

The California Department of Fish and Game owns very little property within the nine FAST priority areas.

4.3 County of San Diego

4.3.1 Multiple Species Conservation Program

The MSCP Framework Management Plan as well as the MSCP Biological Opinion that discussed fire/vegetation management in the preserve system was adopted as part of the MSCP on October 22, 1997 (1). The MSCP Framework Management Plan discusses the need for fuel management zones at the edge of urban development and the need -- in some cases -- for controlled burning to generate habitat age mosaics in the interior areas. For lands on the edge of the urban development, it states that controlled burns may not be necessary because it assumes human caused fires, accidental or intentional, will likely occur often enough that they would not be needed. For the interior areas where habitat mosaics may be appropriate, it indicates that habitat requirements for sensitive species will need to be taken into account.

Lands that are set aside under the Multiple Species Conservation Program require a management program. Management plans and Area Specific Management Directives, the specific actions to be taken to manage resources on the ground, will include requirements for the use of controlled burns where appropriate. The broad level Management and Monitoring Plan associated with the adoption of the project described the use of controlled burns in the MSCP plan.

Aside from providing a more efficient process for land development to proceed in the lower value habitat lands, the primary purpose of the Multiple Species Conservation Program plan is the protection and conservation of species of plants and animals that may be considered rare, endangered, or threatened, as well as representative examples of habitat lands to insure that the overall biological diversity of the County is maintained. A number of the sensitive species in the MSCP plan preserved lands may have direct benefits from controlled burning, though others may be adversely affected. Any potential treatment of the vegetation within an area that is MSCP preserve would as a primary objective address the effects and benefits that may result to the protected habitats and species from a vegetation management action. Furthermore, through adaptive management, as new information is acquired, the new information it will be applied to the management plans.

The Monitoring Plan and the South County MSCP Framework Management Plan, as well as the Biological Opinion for the MSCP, discuss fire management and the vegetation in the preserve system. The existing Framework Management Plan as a basic premise discusses the need for fuel management zones at the edge of urban development and when necessary, to use controlled burning to generate habitat age mosaics to assist in the reduction of catastrophic fires. For lands on the edge of the urban development, it states that controlled burns may not be necessary because it assumes human caused fires, accidental or intentional, will likely occur often enough that they would not be needed. For the interior areas where habitat mosaics may be appropriate, it indicates that habitat requirements for sensitive species such as Tecate cypress that needs fire but not too frequently, will need to be taken into account.

The following is an excerpt from the existing South County MSCP Framework Management Plan regarding Fire Management:

Background

Fire management in the County of San Diego primarily focuses on fuel or brush management in conjunction with local Fire Districts. The typical mesa-canyon topography

and fire-adapted native vegetation of the coastal region has led to the common condition of development occurring on mesa tops surrounded by canyon slopes of highly-flammable chaparral and other native open space. The formation of an open space system to protect biological resources and preserve long-term viability introduces additional issues regarding fire management that need to be addressed in conjunction with public safety factors.

Major issues related to fire management in the MSCP Preserve include the following:

1. Fire hazard reduction methods, including brush management, for public safety purposes may impact sensitive species.
2. Fire hazard reduction may involve methods that increase other management concerns (e.g. exotic species invasion, erosion).
3. Fire management needs for particular fire-adapted species such as the Del Mar manzanita and Shaw's agave need to be identified.
4. Within the MSCP, it is highly unlikely that problems would ever occur from the creation of senescent vegetation through excessive fire suppression. Vegetation and habitats are much more likely to be adversely affected by fires occurring too often. Therefore, fire suppression should be the primary tool for fire management. However, specific fire management plans may be created to create vegetation mosaics that reduce the ability of catastrophic fire when necessary. In those plans, sensitive species and sensitive habitats must be given highest priority so that fire management does not impact them.

Fuel Modification Zones

Residential, industrial, institutional and commercial uses will be generally separated from the preserve by a fuel modification zone, which varies in width depending on each project's circumstances. For properties controlled by public land trusts, they are responsible for maintaining a fuel modification zone where required. The intent of the fuel modification zone is to protect uses adjacent to the preserve from wildfires. It may further protect the resources within the preserve by absorbing some of the "edge effects" that might otherwise occur within the preserve. With implementation of the fuel modification zone, no other restrictions for fuel management on residential, industrial, institutional, commercial or other uses are required.

The following guidelines are intended to establish how the fuel modification zone will be managed.

A. Plant materials existing within the fuel modification zone may be thinned, mowed, pruned and/or removed as necessary.

B. Supplemental planting may be elected by the owner. Plant materials used shall be acceptable to the appropriate fire agency and non-invasive. This guideline also applies to any road cuts and/or graded disturbed areas within the fuel modification zone.

C. Ownership of the fuel modification zone may vary. In most cases, it may be by the adjacent lot owner of homeowners' association. Where appropriate, the zone may be incorporated into project open space and landscaping plans.

D. Responsibility for brush management will vary according to the specific requirements of the approved project. In most cases, it shall reside with the landowner or homeowners association, and may be enforced by the appropriate fire department or homeowners' association. For residential areas, the Codes, Covenants and

Restrictions (CC&Rs) shall clearly define the responsibilities of the owner with respect to fuel modification including when and how such activities shall be carried out.

E. Fencing, lighting and signage are permitted in the fuel modification zone, at the discretion of the landowner.

   i. Lighting shall be confined to areas necessary to ensure public safety, and shall be limited to low pressure sodium fixtures, shielded and directed away from the preserve.

   ii. Fencing is desirable but not mandatory and provides a barrier to invasive species, and uncontrolled human access. Should a landowner decide to install fencing anywhere within the brush management zone, the type, style and height must conform to existing regulations."

MSCP approved Monitoring Plan states the following:

"Fire management activities are permitted within the preserve when conducted according to a fire management plan approved by the wildlife agencies, County and appropriate fire district as part of area-specific management directives. Preparation of a stand-alone fire management plan is optional, at the desire of the MSCP preserve manager, jurisdiction, landowner or fire district."

South County MSCP Biological Opinion from the U.S. Fish and Wildlife Service and California Department of Fish and Game states:

"Many of the species within chaparral and Tecate cypress forest are fire adapted. The disruption of natural fire cycles could potentially threaten the remaining habitat, but framework management plans to be developed for individual County Subareas will include measures to minimize impacts related to fire control and fire frequency that could affect covered species. Area specific management directives must also be prepared and implemented as logical and discrete areas of land are committed to permanent preservation by the County. Edge effects will be minimized within the preserve through required implementation of area-specific management directives which must address measures to control human impacts at the urban interface including fuel modification zones, non-native species, and trampling. The adaptive management process will provide for the incorporation of new information, as determined through research, monitoring, and ongoing management, into preserve and species management actions."

4.3.2 County Owned Lands

The Department of Parks and Recreation is responsible for management of MSCP preserve lands it owns or manages for other entities. As lands are brought into the preserve system Resource Management Plans are prepared which include Habitat and Species Area Specific Management Directives, public access plans and vegetation management plans. These directives identify the locations and appropriate options available for vegetation management in order to reduce the possibility of fire without adversely impacting the habitat in the preserves or threatening lives and private property. These Directives will be reviewed by the Wildlife Agencies. For more detail, please examine the County Parks department web site http://www.co.san-diego.ca.us/parks/projects.html. A summary of each is listed below:

- Wilderness Gardens – Vegetation Management for Wilderness Gardens is determined by CAL FIRE and implemented by County Parks and Recreation. Flammable vegetation

is periodically reduced along the main access road and throughout the preserve trail system. Vegetation reduction focuses on dead, exotic, or hazardous vegetation. Soil disturbance is avoided.

- Mount Olympus – Vegetation management on Mount Olympus has been limited to existing dirt access road off of Pala-Temecula Rd and Rainbow Heights Rd. Flammable vegetation is periodically reduced to maintain vehicle access for stewardship and resources management purposes. As park land is added to Mount Olympus additional vegetation management may be required in fringe and interface areas

- Potrero County Park – Vegetation management in the form of fire breaks and oak tree maintenance is conducted annually at the property boundaries of Potrero County Park and adjoining County owned land. These fire breaks are maintained by County Park staff and CAL FIRE Honor crews. The Harris Fire, October 2007, completely burned all vegetation in the properties surrounding Potrero County Park. However, Potrero County Park had very minimal damage due to County Park staff and CAL FIRE crews continued efforts in maintaining existing firebreaks and reducing the fuel ladder on mature oak trees.

- Santa Ysabel Property -- The Resource Management Plan for managing the site, including cattle grazing, and using controlled burns, also includes specific recommendations for fuel loading and spatial arrangement of fuels to minimize the potential for large crown fires.

- William Heise County Park – The Vegetation Management Plan designed for the William Heise County Park is a very complete plan that describes not only current treatments, but includes a program to provide for habitat recovery from the catastrophic Cedar fire in 2003 that killed many of the conifers in the park.

- Lakeside Linkage Open Space Preserve – The Area Specific Management Directive plan for this property indicates the need to create a vegetation management plan through coordination with CALFIRE. The goals of the specific vegetation management on the site are to apply a prescription plan that addresses the County responsibilities toward land uses and reduction of fire hazard while at the same time insuring the preservation of the sensitive resources that occur on the sites.

- Boulder Oaks-San Vicente Highlands -- This entire site was burned in the 2003 Cedar fire. Therefore, the vegetation is currently in the process of initial recovery and it would not be necessary to conduct controlled burns in the immediate future. However, the Area Specific Management Derivatives indicate a need to create a vegetation management plan in coordination with CAL FIRE.

- San Vicente Highlands – Vegetation on this site is managed in accordance with short, medium and long term priorities as identified in a Fire Management Plan. Since the site burned in the 2003 Cedar fire, prescribed burns are not currently needed and would be considered a long term action.

Area Specific Management Directives are being prepared for the remaining County owned lands including : Del Dios Highlands, Lusardi Creek, Sycamore Canyon/Gooden Ranch,

Oakoasis, Stelzer County Park, El Monte County Park, El Capitan Open Space Preserve, Hellhole Canyon and Ramona Grasslands Preserve.

4.3.3 Fuels Reduction Program

On June 16, 2004 (4) the Board established the Fire Safety and Fuels Reduction Program (FSFR) to resourcefully and effectively implement a comprehensive program to complete fuels reduction activities in the unincorporated county. The FSFR, in partnership with the San Diego Forest Area Safety Task Force (FAST) partner agencies successfully secured and spent nearly $47 million, including $5 million of county funds, to aggressively remove nearly 500,000 dead, dying and diseased trees in the most impacted areas of Palomar Mountain, Lost Valley near Warner Springs, and greater Julian areas. This treatment affected more than 19,000 acres.

Pursuant to a letter from CALFIRE this program directly contributed to the success of protecting structures and limiting property losses in the Palomar Mountain communities during the 2007 wildfires.

On April 23, 2008 (9), the Board authorized FSFR to accept $4 million from the US Forest Service to be used to continue the fuels reduction program in high risk areas. Furthermore, FSFR, again in partnership with FAST, has applied for $45 million in grants to continue the fuels reduction program. If received, this grant money would allow for removal of additional dead, dying and diseased trees but also provide for treatments of chaparral areas near roads and communities and other strategic locations. Because treatment of chaparral lands is less expensive than removing trees, it is anticipated that if received, future grant money could provide for treatment of more land, ranging from 30,000 to 40,000 acres total for all of these treatments over the next five years.

4.3.4 Defensible Space Inspection Program

The DPLU Fire Services Division, in partnership with local fire districts, CAL FIRE, and US Forest Services, developed a defensible space inspection program for the unincorporated area of the county. In summary, inspectors from CAL FIRE and the local fire districts are responsible for the initial inspection of properties to ensure an adequate defensible space has been created around structures. If violations of the program requirements are noted, inspectors provide a list of required corrective measures and provide a reasonable timeframe to complete the task. If the violations still exist upon re-inspection, the local fire inspector will forward a complaint to the County for further enforcement action.

Upon receiving a complaint from the local fire agency and/or CAL FIRE, the DPLU Code Enforcement Division will again notice the property owner of the violations present on their property and what actions are required. Should the property owner again fail to bring the property into compliance, the County will conduct a Summary Abatement and clear the needed defensible space at the owner's expense.

In 2008, over 14,100 inspections have been conducted by CAL FIRE, of which less than one percent resulted in forced abatement.

4.4 Resource Conservation District of Greater San Diego County, and Fire Safe Council of San Diego County and Community Fire Safe Councils

The RCD is a special district (local government) formed under Division 9 of the California Public Resources Code. In partnership with the Fire Safe Council of San Diego County, a 501(c)3 non-profit, the RCD administers grant-funded fire safe council programs for private land owners and residents in wildland-urban interface and rural areas of the county, including fuel reduction projects and programs for fire safe council support. These funded programs provide the County with greatly needed community outreach and education which results in widespread reduction of vegetative fuel loads.

Since 1997, the RCD has brought grant funding into San Diego County of over $6.5 million for valuable programs for defensible space, pre-fire planning, Community Wildfire Protection Plans, and vegetative fuel removal on private properties. Other community FSCs brought an additional $2,661,189 million to the County in fuel reduction project funding in 2007-2008.

Fuel Reduction programs:
The RCD provides free chipping services provided by locally contracted tree services to residents who have trimmed and stacked brush on private properties. Under current grant programs funded by US Forest Service and Bureau of Land Management, the chipping service is conducted in the following targeted areas: Banner, Barona Mesa, Black Canyon, Boulder Creek Road, Boulevard, Campo/Lake Morena, Deerhorn Valley, Descanso, Dehesa, Dulzura, Greater Julian, Jacumba, Jamul, Lawson/Lyons Valleys, Mesa Grande, Ramona, Ranchita, Santa Ysabel, San Diego Country Estates, Sherilton Valley (north Descanso), Valley Center. Since 1997, RCD chipping programs have treated 291,627 tons of vegetation, 14,584 acres treated, and protected 2,503 properties (these statistics do not include fuel reduction work conducted by local fire safe councils which is reported independently). An additional $3,000,000 will address dead oak tree removal and additional fuel reduction projects over the next 3 years; this program will be conducted in priority areas within Greater Descanso and Greater Julian.

Fire Safe Council Support Services:
Fire safe council support services are provided by the RCD to community Fire Safe Councils. Since 1997, eighty-three community Fire Safe Councils have been formed throughout the County with support assistance from the RCD, 63 of these councils are still active. Programs implemented by the local fire safe councils include roadside brush abatement, evacuation planning, fuel breaks, chipping, educational outreach and training for council members.

Community Wildfire Protection Plans:
CWPPs are authorized and defined in Title I of the Healthy Forests Restoration Act (HFRA) passed by Congress and signed into law by President Bush in 2003. The HFRA is the legislative component of President Bush's Health Forests Initiative. The HFRA also emphasizes the need for federal agencies to work collaboratively with communities in developing hazardous fuel reduction projects, and places priority on treatment areas identified by communities themselves in a CWPP.

CWPPs are the result of a collaborative effort between the RCD, the County of San Diego, Cal Fire, federal agencies, local fire jurisdictions and local Fire Safe Councils. Approved plans address projects to be implemented in wildland-urban interface areas of San Diego County. Plans must be the result of collaborative efforts and contain components addressing structural

ignitability of homes and fuel reduction priorities. Fifteen plans have been approved to date throughout San Diego County with five additional plans pending approval.

San Diego is in an area of ongoing drought and threat from wildfires. Programs of voluntary compliance conducted by Fire Safe Councils not only protect private properties but reduce severity of fires and enhance suppression efforts by fire agency responders.

SECTION V: VEGETATION MANAGEMENT NEXT STEPS

The identified project areas cover much of the highly flammable portions of San Diego County. However, there are additional actions that can be taken to assist in the creation and implementation of vegetation management plans.

5.1 Priority Specific Vegetation Management Plans

Implementing a vegetation management plan particularly for improving forest health and not just removing dead, dying and diseased trees, will require significant levels of funds for plan development, plan implementation and plan monitoring. These funds need to include allocation for design of treatments incorporating monitoring and specific goals and benefits of the treatment and before and after monitoring of the effects of the treatment. Funding needs to insure that information that is learned with each treatment is applied to future treatments.

5.1.1 Plan Development

Develop targeted vegetation treatments for each FAST priority area. For areas of critical initial need, create a "no regrets" scenario in which a decision is based on the best information available at the time and implement it while a longer term program is created using models and specific input from fire practitioners. Include identification of areas that are sensitive to fire including specific plant and animal resources and potentially historic stands of old age vegetation. For each project area and site within those project areas that have been prioritized for treatment, a vegetation plan with specific treatments and locations for treatments will be created. These plans may involve a Prescribed Burn Plan or they may include maps of areas to be treated with other management tools. These plans will follow CAL FIRE protocols with appropriate review. The FAST group will review these plans and provide an opportunity for public input.

It is estimated that the Plan creation and Plan implementation for these project areas would cost $2,500 per acre based on the overall average for costs of treatment. Working with the NRCS, the County has applied for grants for the treatment of the FAST areas with an overall cost of implementing the program of estimated costs for the treatment areas are as follows:

Palomar Mountain	$49,210,000
I-8 Laguna Fire	$105,220,000
Southeast County	$76,460,000
Greater Julian	$45,687,500
San Luis Rey West	$113,302,500
Rancho	$30,270,000
Santa Margarita	$17,480,000
Northeast County – Warner Springs	$28,682,500
Cuyamaca – Laguna	$21,455,000

5.1.2 Plan Implementation

The cost of plan implementation is included in the numbers listed above. This involves actually carrying out the projects with on the ground actions, depending on the implementation measures that are taken in a particular location. While the County working with the NRCS has

applied for this amount of money, it is anticipated that the grants that will actually be received may be a significantly less.

5.1.3 Plan Monitoring

Monitoring costs are not included in the above numbers. Monitoring costs will represent approximately an additional 4% of the overall costs of the program activities. This constitutes approximately $19.5 million dollars for all of the 9 priority areas combined. Monitoring will be included in the plans that are created for the priority areas.

5.2 Local Legislative Policy

It may be useful for the Board of Supervisors to adopt a policy confirming that the use of the Vegetation Management Tools discussed in Section II of this report should be considered in current and future site specific vegetation management plans. These tools and management plans are valuable to the citizens of San Diego County in order to provide for managing vegetation to assist in the protection of residences and communities and improve vegetation health.

5.3 State Legislative Change

State regulations and CAL FIRE guidelines limit the use of controlled burning programs when complaints are received about smoke from neighboring residents. It will be important to apply for legislation to create an atmosphere that is less negative toward the use of strategic prescribed fire when warranted. In addition, create an exemption in the California Environmental Quality Act Guidelines for controlled burns subject to specified guidelines involving attention to the need to avoid impacts to sensitive areas, inclusion of monitoring requirements and appropriate fire seasonality. Also, there need to be legislative requirements for funding of monitoring of treatments and application of remediation measures if treatments have unanticipated impacts.

Further, the acceptance of the use of controlled burns and prescribed fire by the public will require extensive public relations and media programs. The public may be concerned about the risk of a fire escaping and the potential for smoke, but they will also need education about the value of conducting prescribed fire to facilitate environmental health and public safety in addition to the efforts that individual property owners must make to fire harden their homes. The theme may be that fire is a natural process and that the vegetation that we have is adapted to fires and furthermore, if it is not applied under strategic controlled conditions, there is a higher chance that it will occur with disastrous results such as those from the 1970, 2003 and 2007 fires.

5.4 Seasonal Park Closures

During the 1960s and 1970s, portions of the Cleveland National Forest were closed to access during fire season. It may be appropriate to re-establish closure of certain areas of San Diego County to public use during high fire hazards. While power lines have been the ignition source for a number of fires in recent years, the Cedar Fire was known to have been caused by an inexperienced visitor to the backcountry.

5.5 Ornamental Landscape Regulations

It is apparent that specific plantings in the urban fringe area may generate large embers that carry fires deep into the residential community. It will be important to evaluate means to reduce the effects of such plantings including potential inspections and planting limitations with conditions. Also, the County should continue to seek funds for retrofitting structures to harden them against fire.

5.6 Research on Fire Behavior and Ember Production

Specific localized fire behavior and the production of embers that carry fire should be the subject of further research to better understand the relationship between age of vegetation, type of vegetation and movement and spread of fire under various conditions.

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APPENDICES

Appendix A: 10-Year Fire History – San Diego County
Appendix B: FAST Project Areas – Unincorporated San Diego County
Appendix C: Potential Fire Threats – San Diego County
Appendix D: 2000 Fuel Age Class – San Diego County
Appendix E: 2008 Fuel Age Class – San Diego County
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Appendix H: FAST Project Areas with Vegetation Communities
Appendix I: Forest Service Activities in Past 5 Years
Appendix J: Forest Service Activities for Next 5 Years
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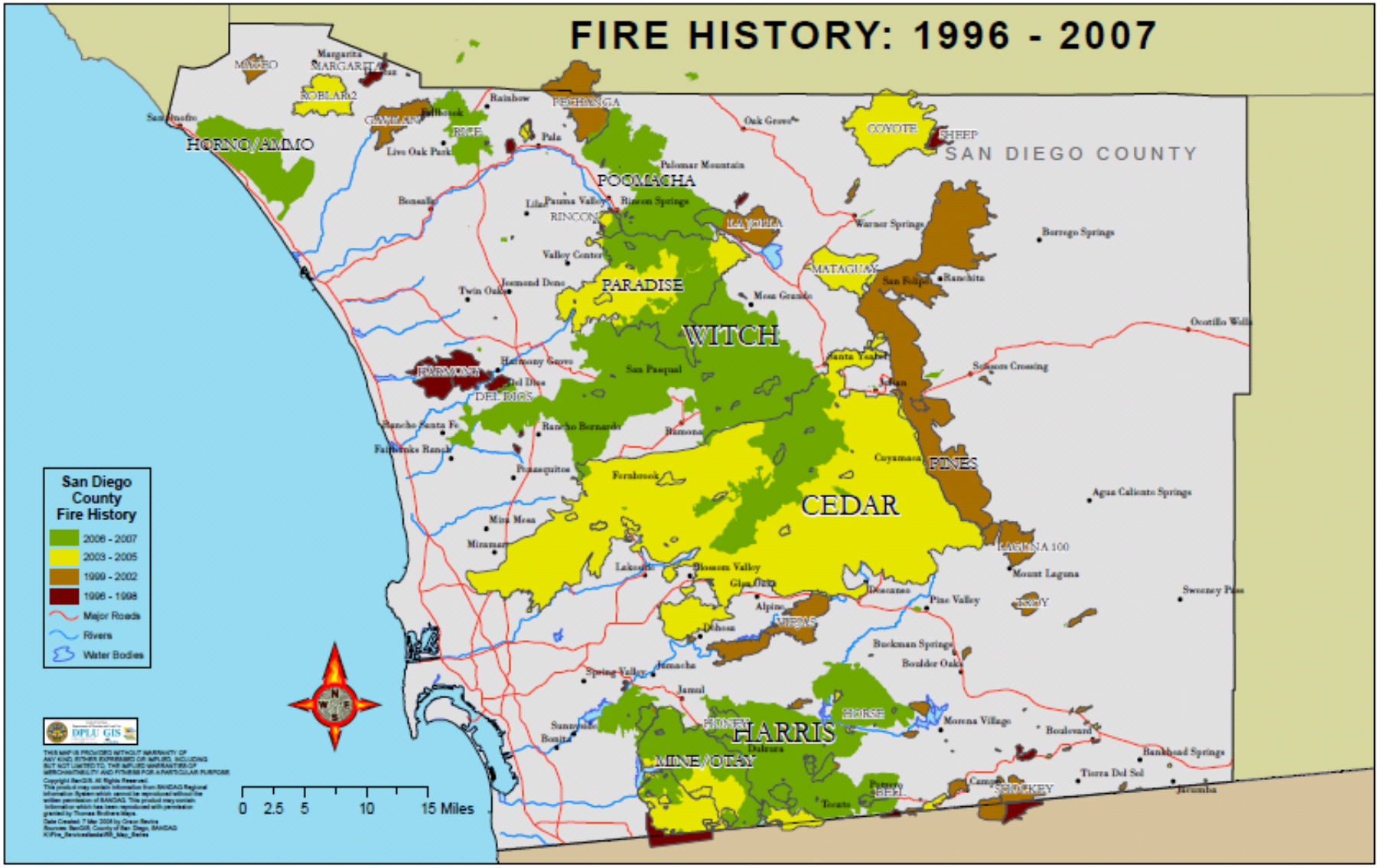
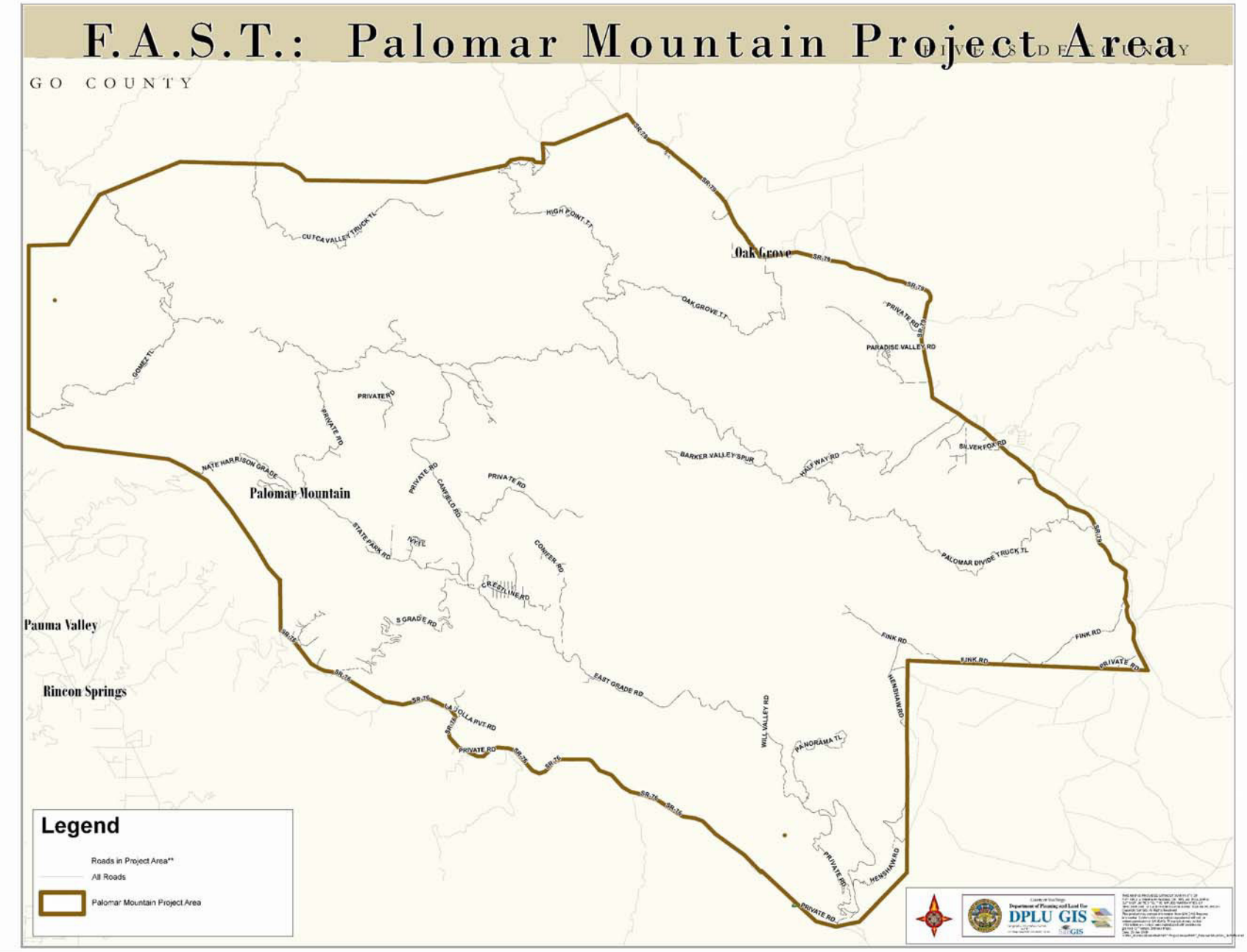
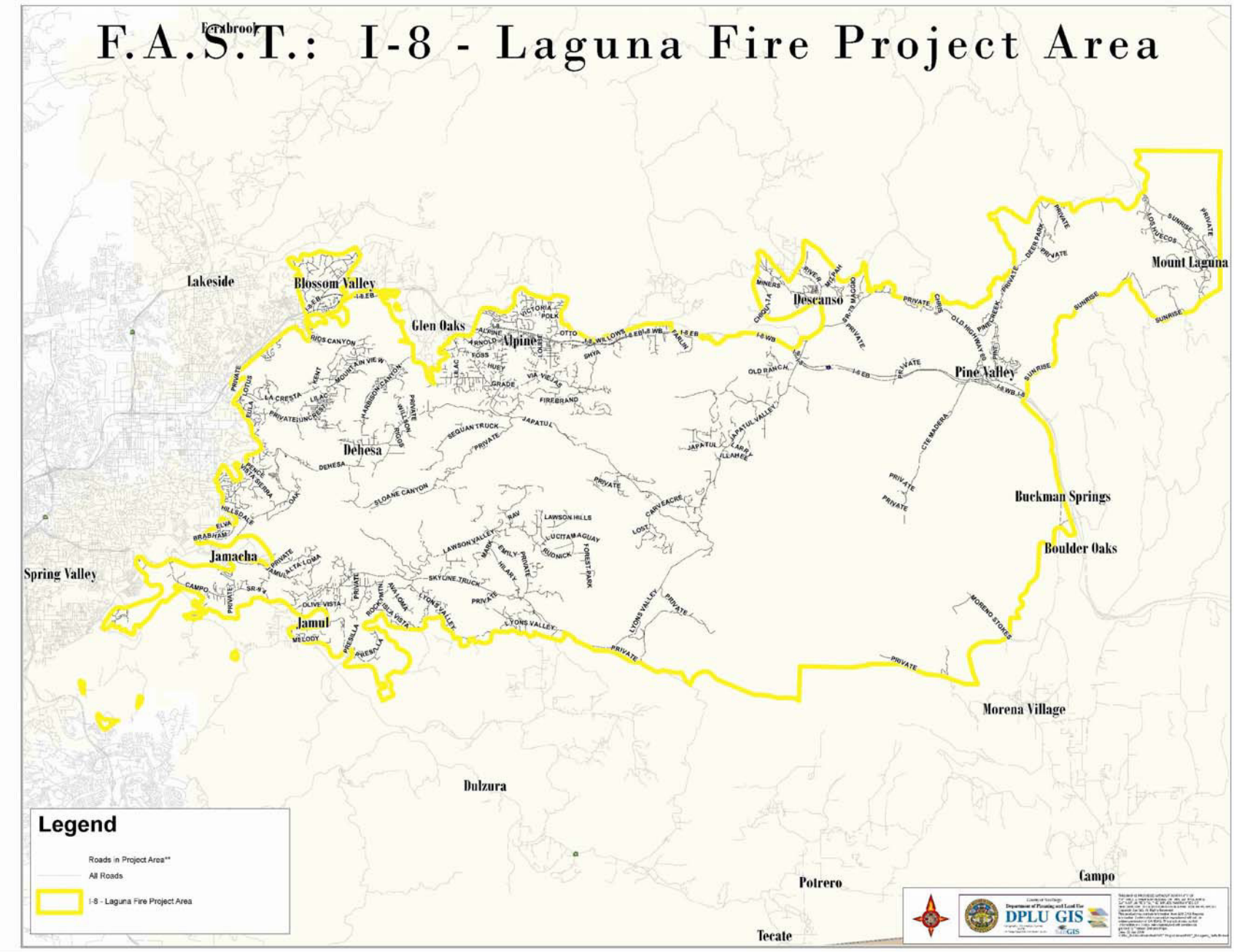
Appendix L: CAL FIRE Activities for Last 5 Years
Appendix M: CAL FIRE Activities for Next 5 Years
Appendix N: Bureau of Land Management Activities for Last 5 Years
Appendix O: List of Scientists and Practitioners who participated in the discussion of fire issues.



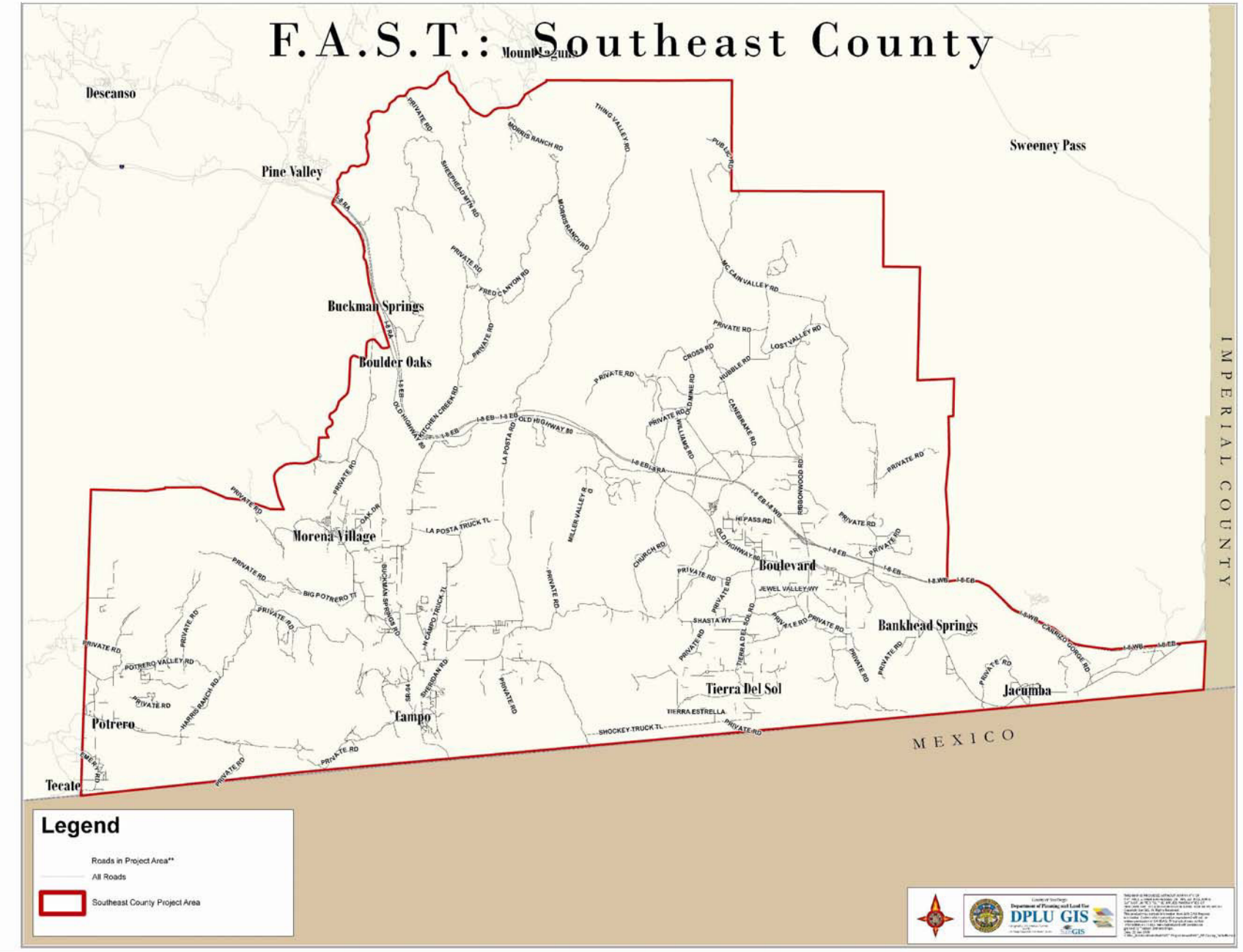
Appendix A. Fire History: 1996-2007



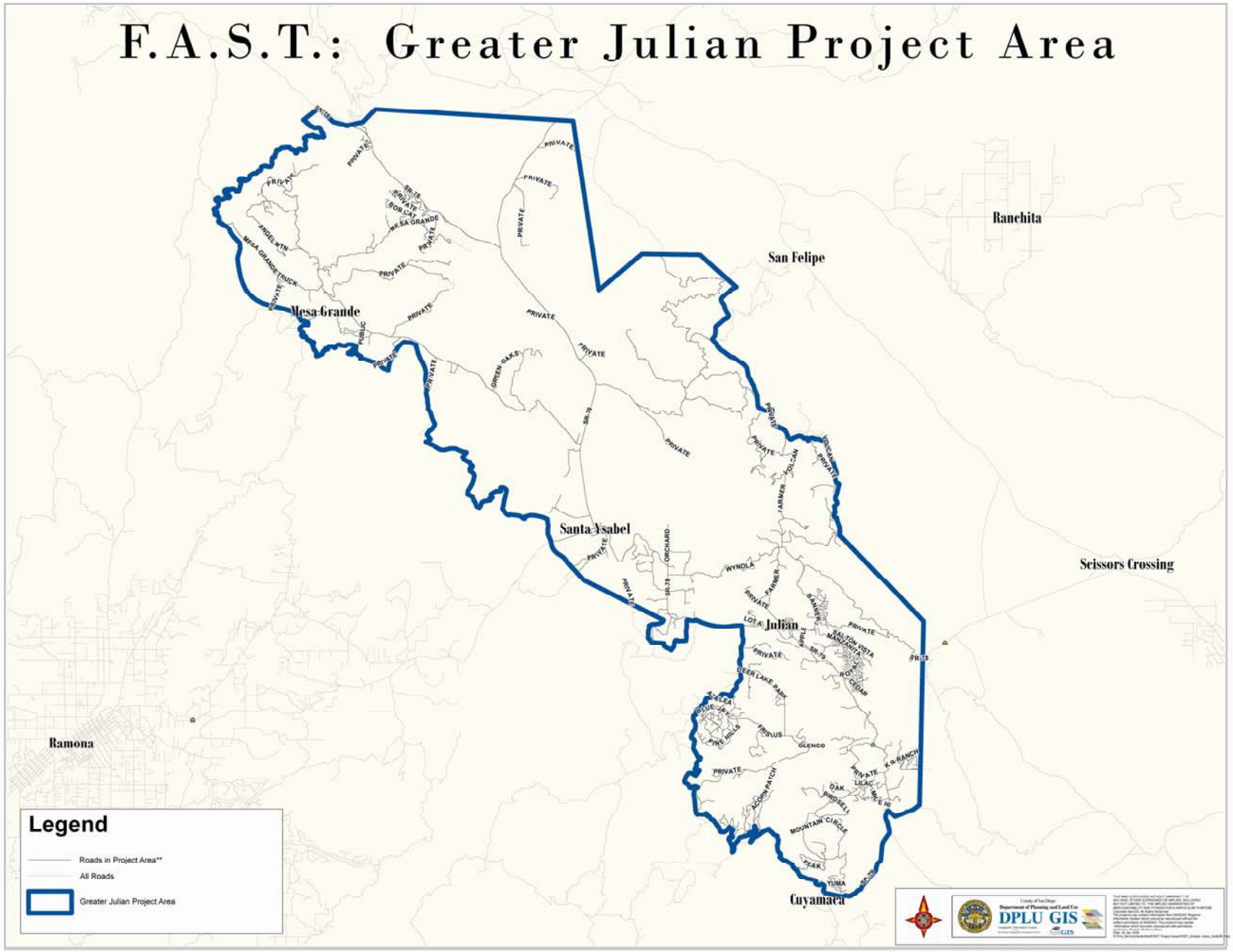
Appendix B1. FAST Palomar Mountain Project Area



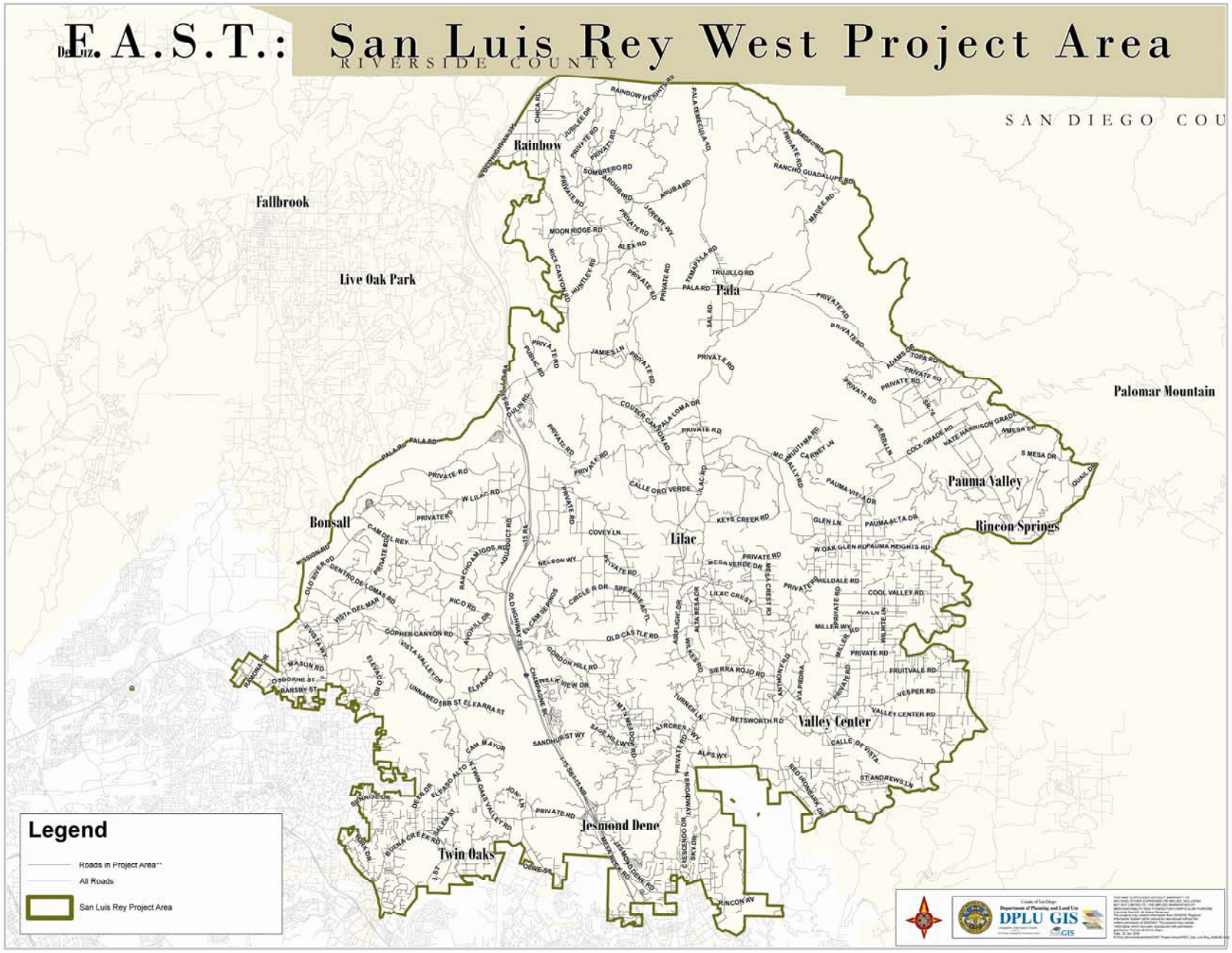
Appendix B2. FAST I-8 – Laguna Project Area



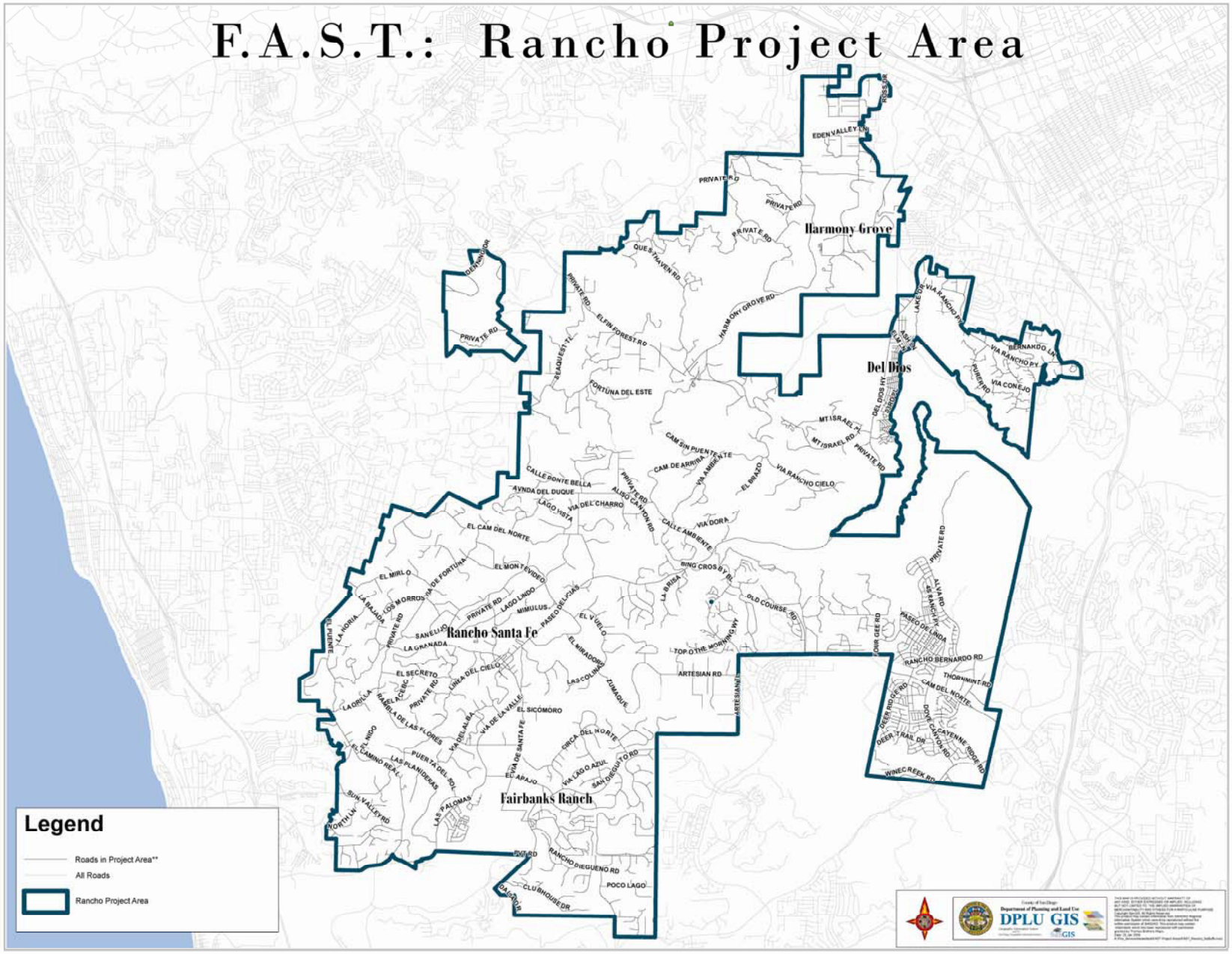
Appendix B3. FAST Southeast County Project Area



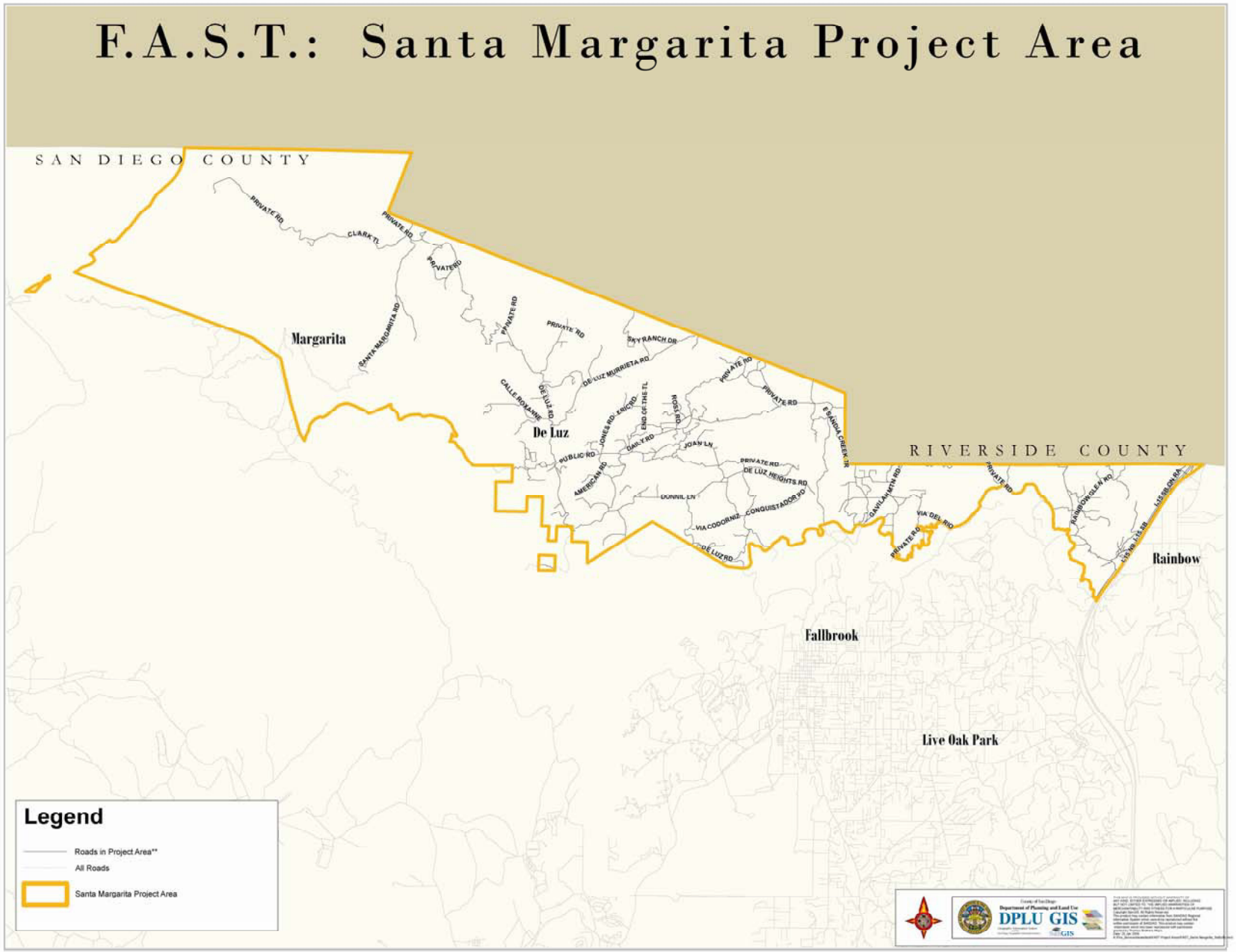
Appendix B4. Greater Julian Project Area



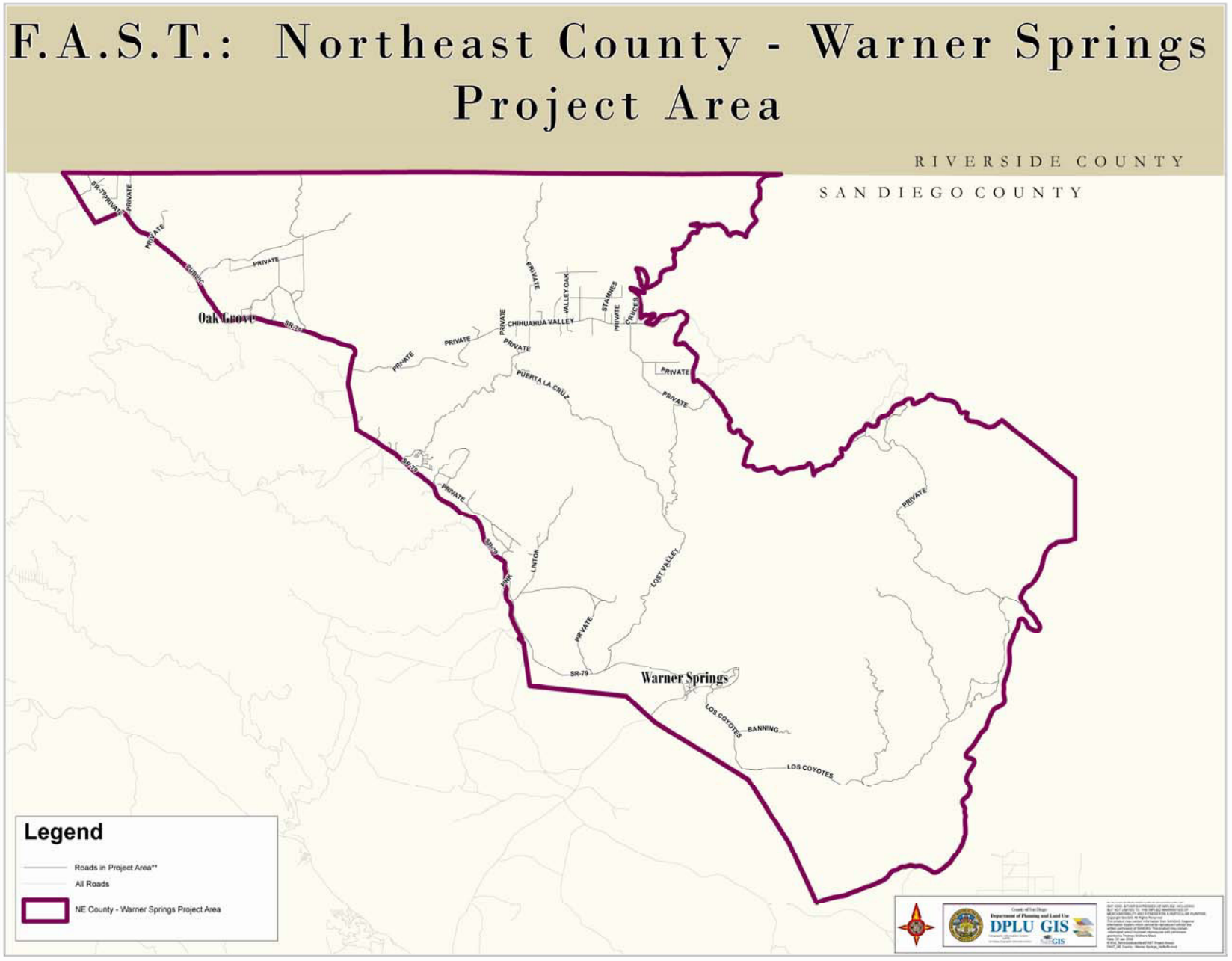
Appendix B5. FAST San Luis Rey Project Area



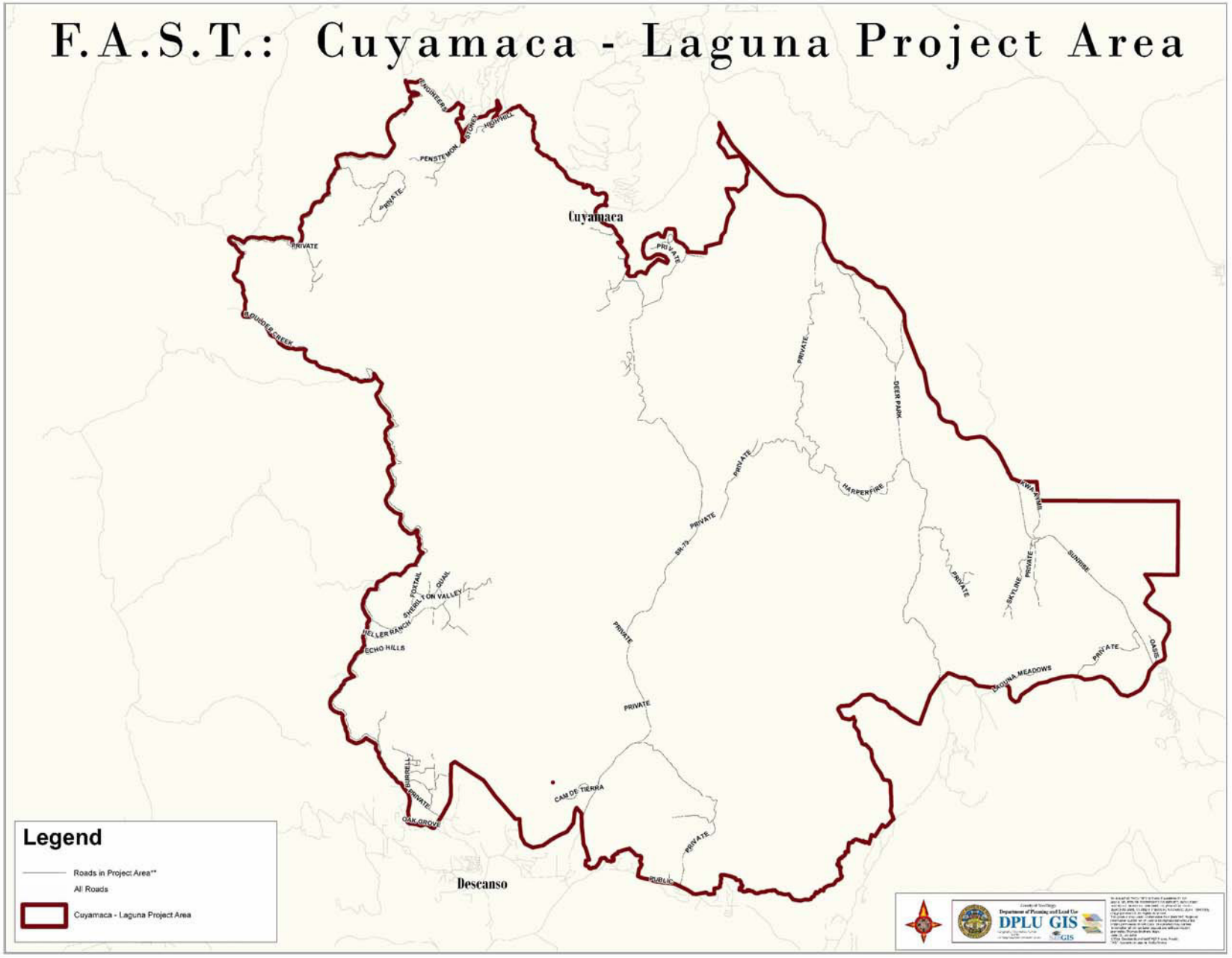
Appendix B6. FAST Rancho Project Area



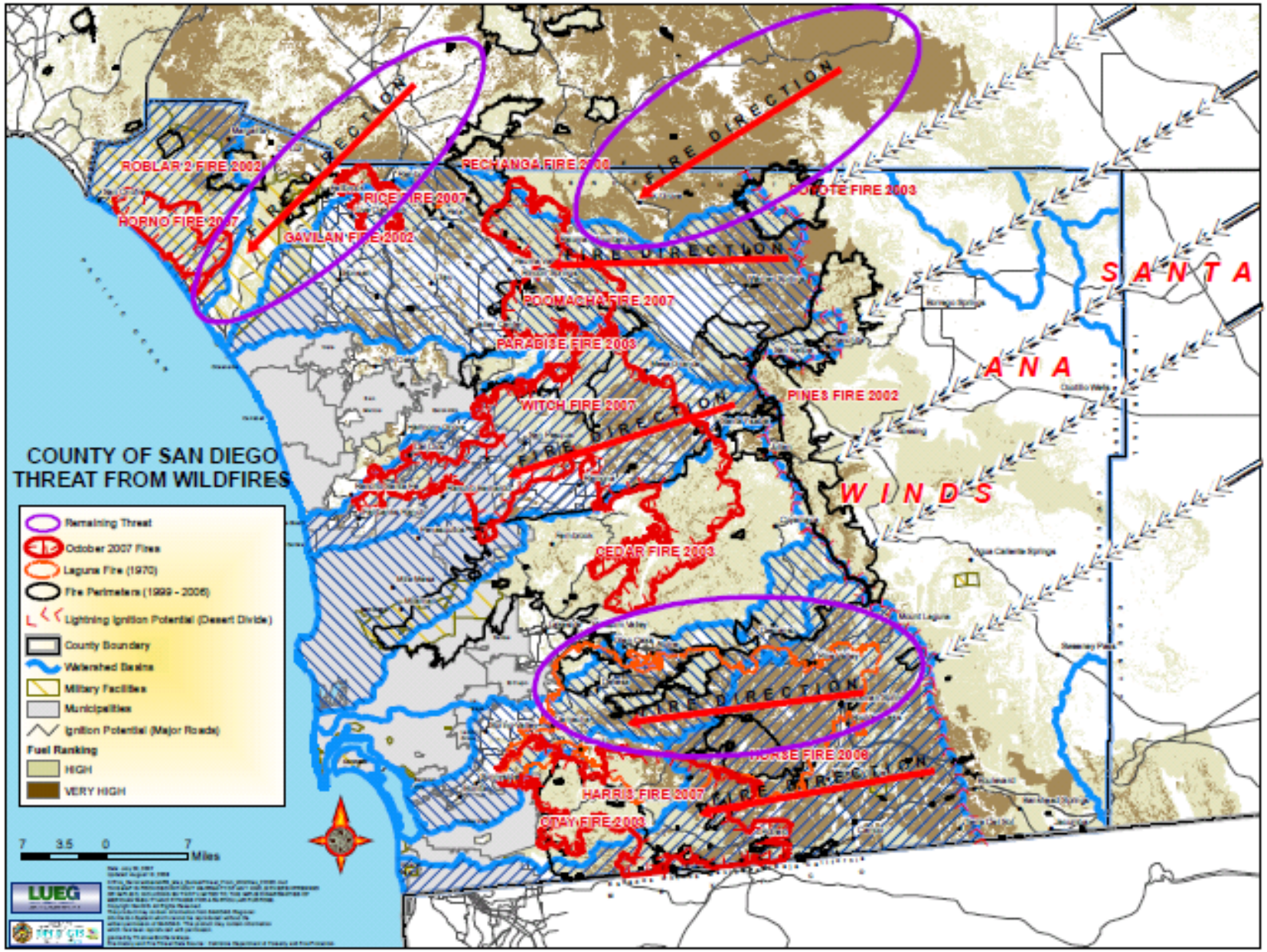
Appendix B7. FAST Santa Margarita Project Area



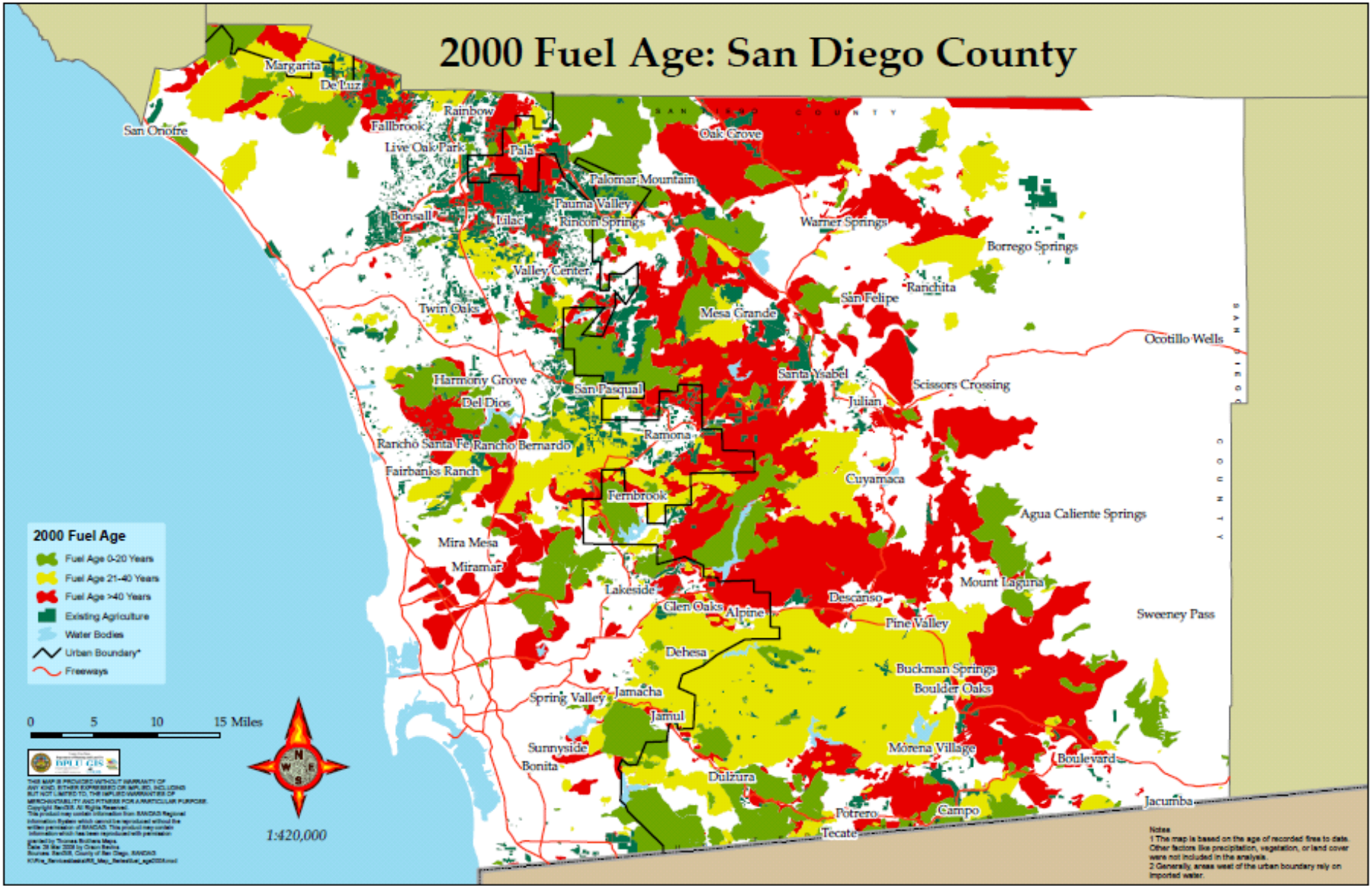
Appendix B8. FAST Northeast County – Warner Springs Project Area



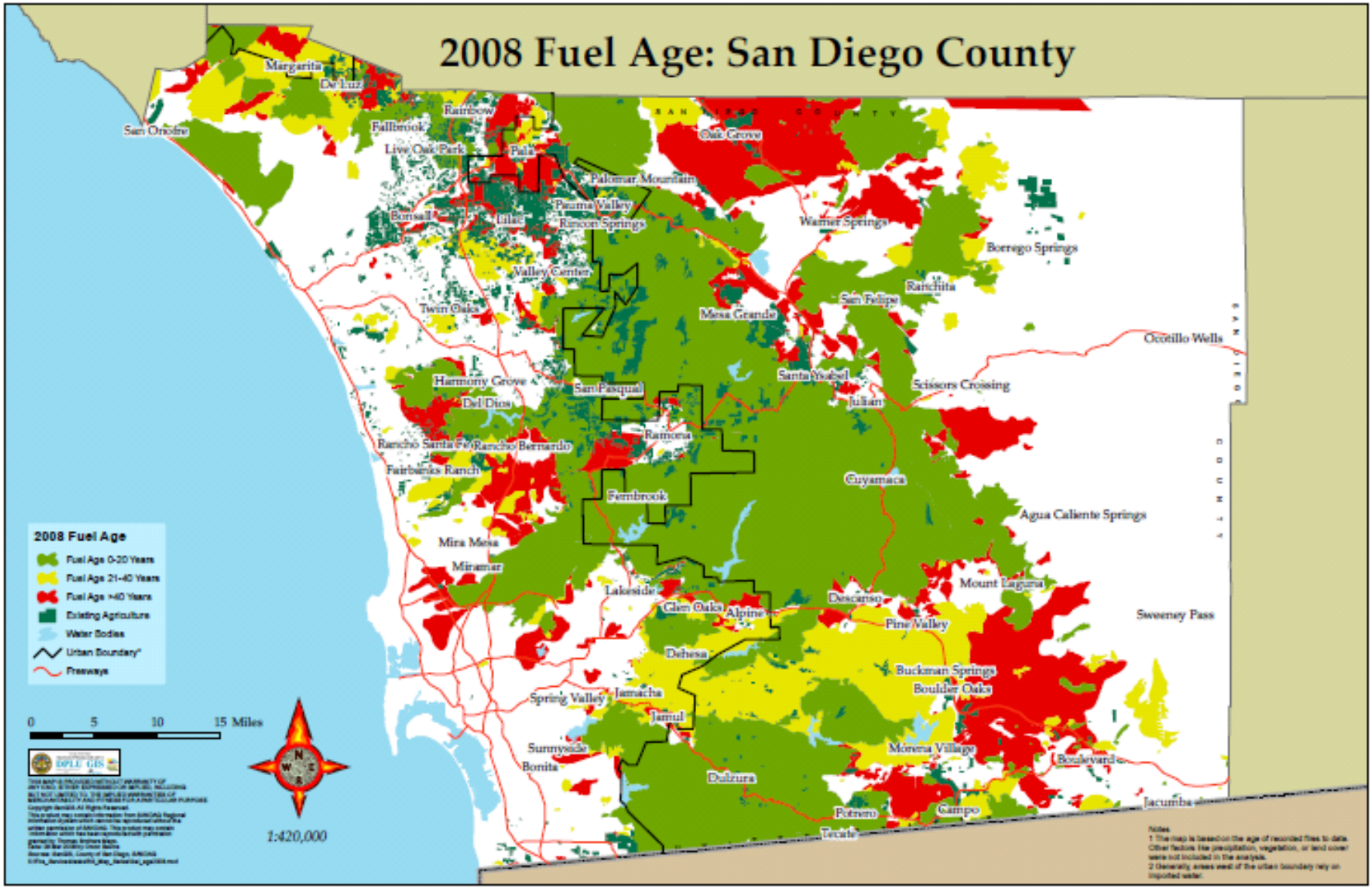
Appendix B9. FAST Cuyamaca – Laguna Project



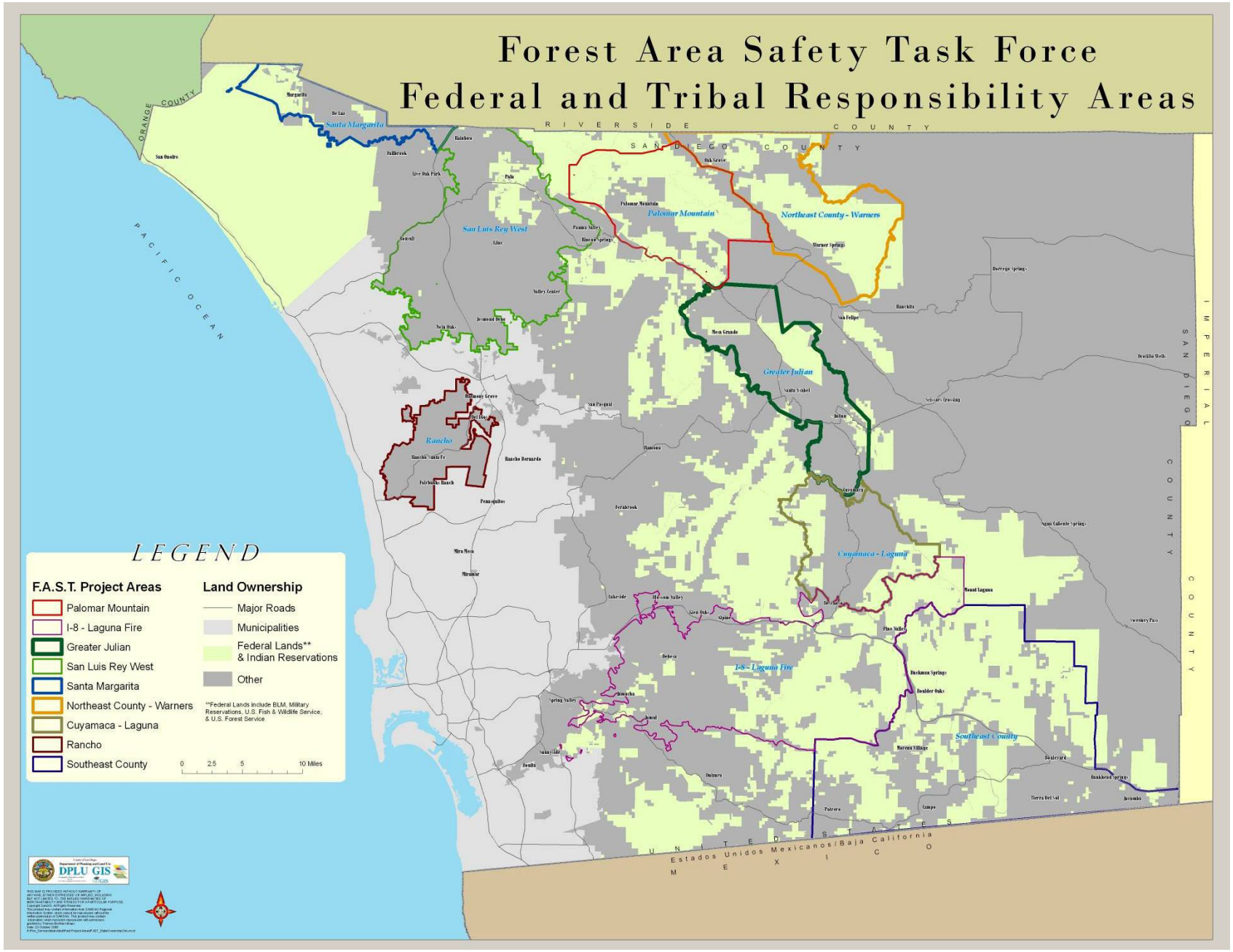
Appendix C. Potential Fire Threats – San Diego County



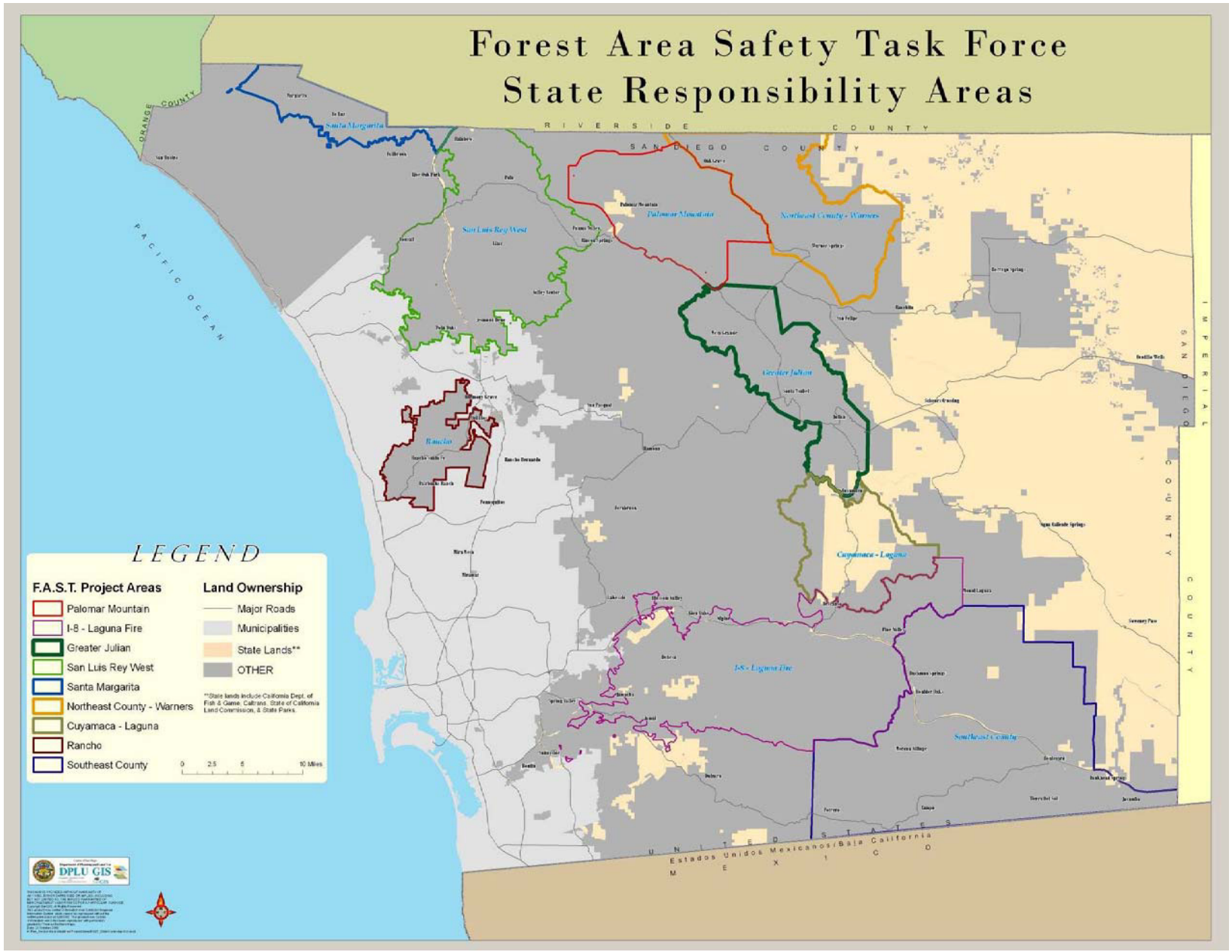
Appendix D. 2000 Fuel Age Class – San Diego County



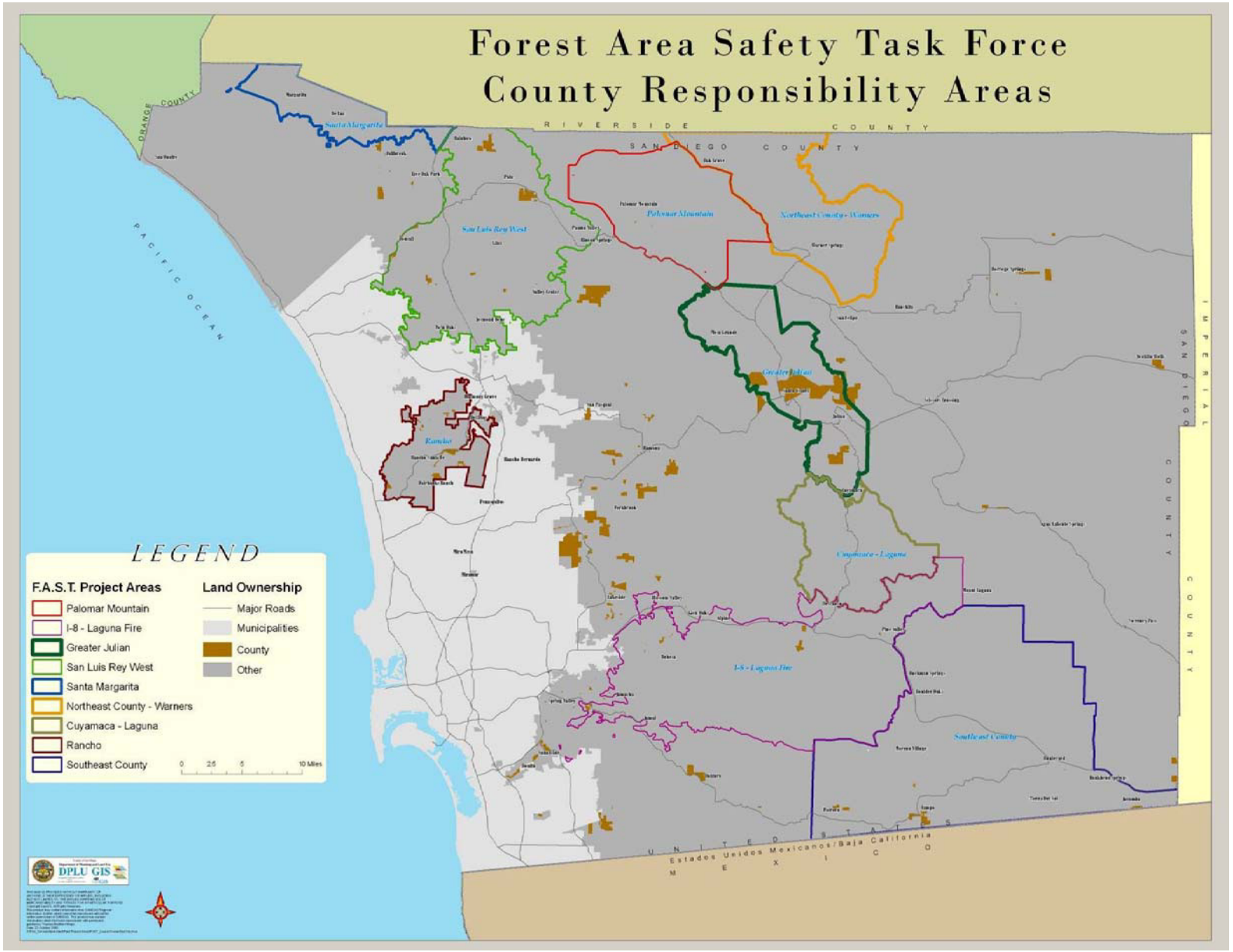
Appendix E. 2008 Fuel Age Class – San Diego County



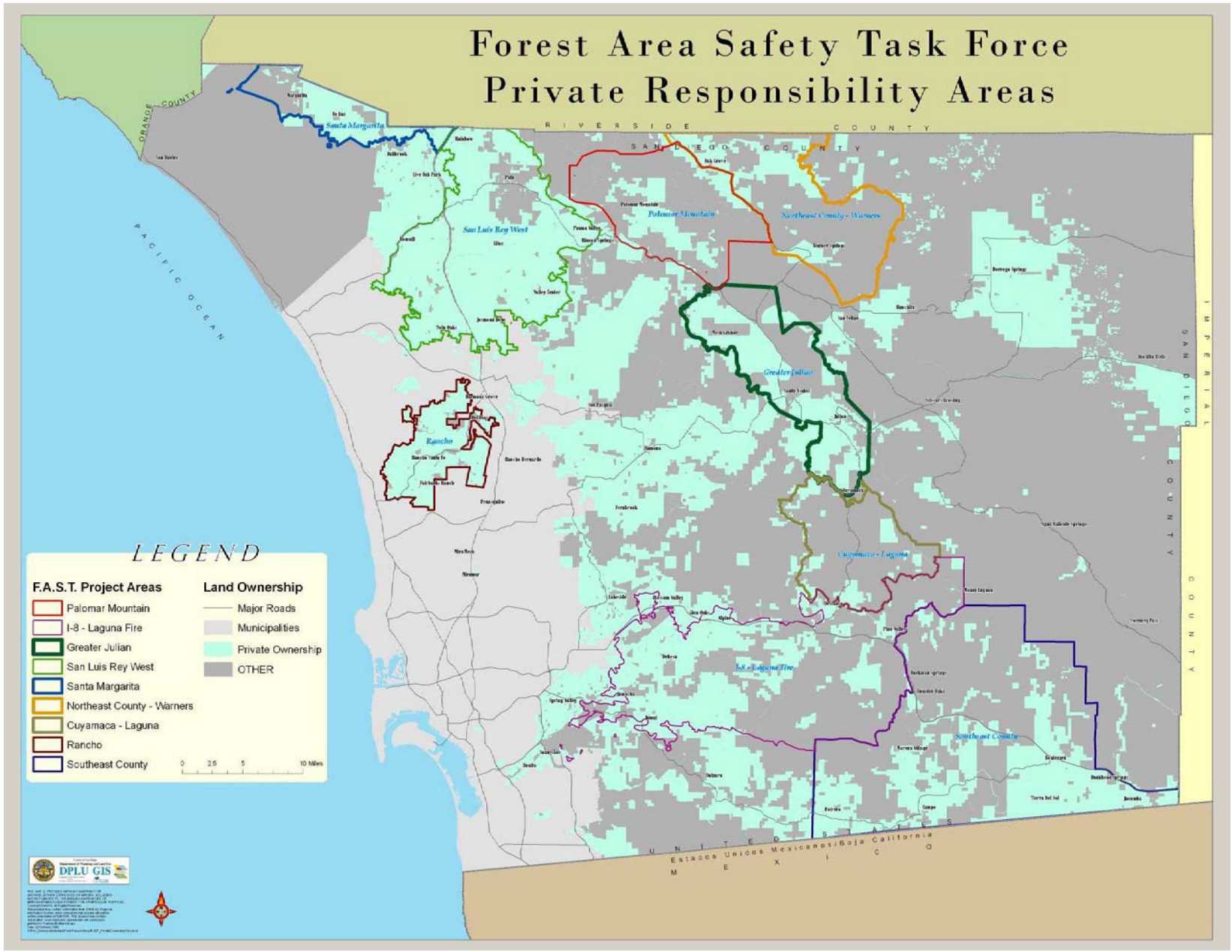
Appendix F1. Forest Area Safety Task Force Federal and Tribal Responsibility Area



Appendix F2. Forest Area Safety Task Force State Responsibility Areas



Appendix F3. Forest Area Safety Task Force County Responsibility Areas



Appendix F4. Forest Area Safety Task Force Private Responsibility Areas

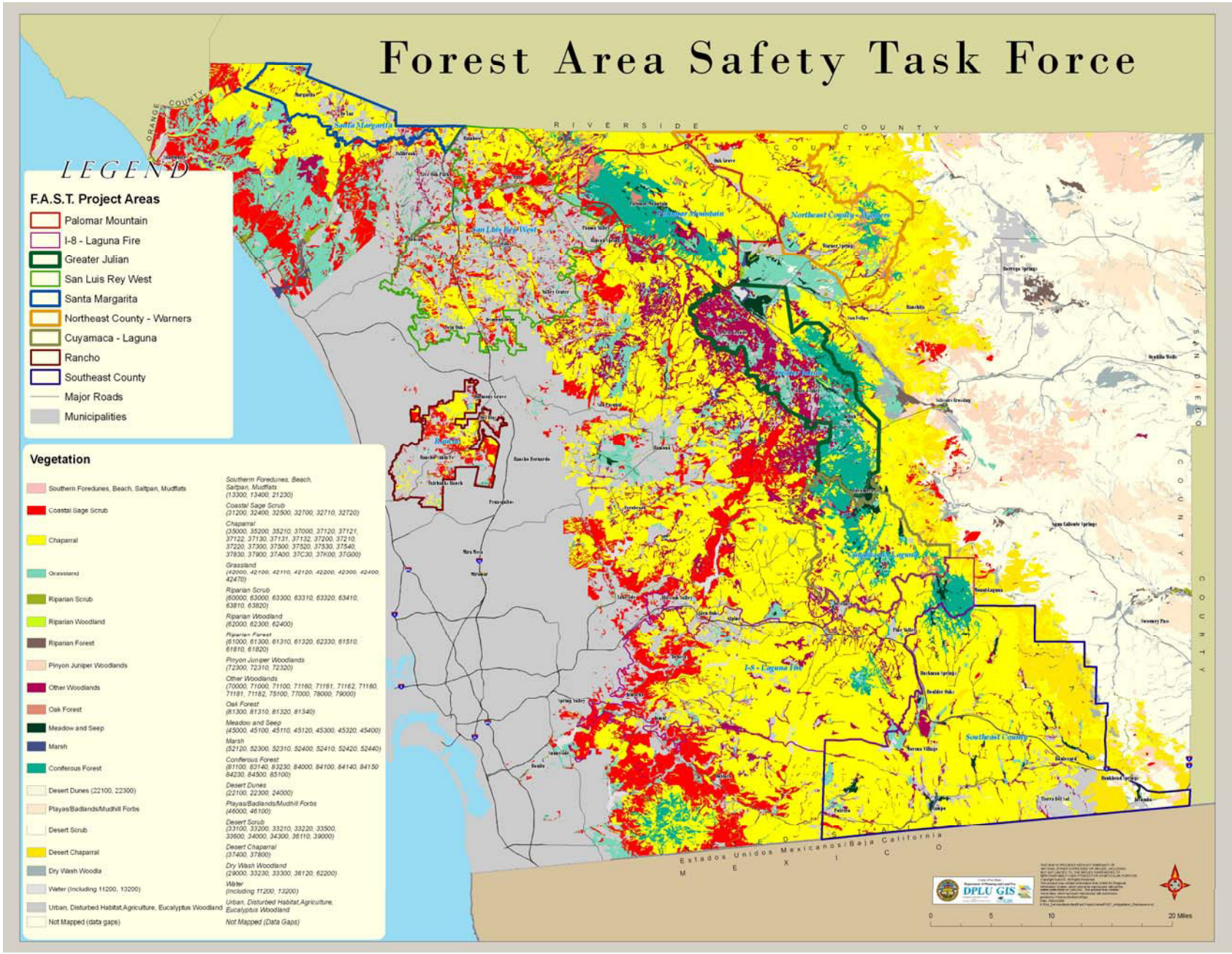
FAST Project Areas
Land Ownership (in acres)

FAST Areas	Federal*	State	County	Private	TOTALS
Palomar Mtn	45,101.1	2,220.5	12.7	19,818.7	67,153.0
I-8 - Laguna Fire	81,035.3	6,915.1	613.1	73,210.6	161,774.1
Greater Julian	15,347.7	1,695.7	7,244.8	39,141.6	63,429.8
San Luis Rey West	10,427.2	1,426.1	1,899.2	109,870.2	123,622.7
Santa Margarita	10,369.1	314.6	0	17,857.1	28,540.8
Northeast County - Warners	46,056.3	2,457.5	0	20,351.9	68,865.7
Cuyamaca - Laguna	17,814.3	26,503.1	0	9,137.0	53,454.4
Rancho	0	19.3	947.8	30,181.1	31,148.2
Southeast County	118,915.6	4,258.2	850.8	87,180.1	211,204.7
TOTALS	345,066.6	45,810.1	11,568.4	406,748.3	809,192

*FEDERAL includes all Federal and Tribal Responsibility areas

NOTE: Total acre amounts for each FAST area does NOT INCLUDE areas defined as Water Districts, School Districts, Other Special Districts, & City Owned land. Therefore, these totals will not equal the acreage values for each FAST project area

Appendix G. Acreage of Ownership for FAST Priority Areas



Appendix H. FAST Project Areas with Vegetation Communities

CLEVELAND NATIONAL FOREST PAST 5 YRS

ARRANGED BY FAST AREA

ACTIVITY	NBR	AREA	COMPLETED	YR	DISTRICT	ACTIVITY UNIT NAME	CNF Project Name	FAST
PALOMAR MOUNTAIN PROJECT AREA								
Natural Fuels Prescribed Burn	500	Acres	01-Jun-03	2003	Palomar	Cleveland NF 24853 Treatment U	Fuelbreak: Palomar NFPORS	Pal
Natural Fuels Prescribed Burn	2370	Acres	11-Jun-03	2003	Palomar	53 Rocky Mountain	Rocky Mountain 2 NFPORS	Pal
Chipping of Natural Fuels	286	Acres	26-Jun-03	2003	Palomar	53 Palomar Mtn Communtiy Assis	Greater SD RCD NFPORS	Pal
Rearrangement of Natural Fuels	83	Acres	25-Jul-03	2003	Palomar	53 Birch Hill	Birch Hill NFPORS	Pal
Chipping of Natural Fuels	8	Acres	01-Sep-03	2003	Palomar	53 Crestline	Crestline NFPORS	Pal
Burn of Natural Fuels Piles	8	Acres	01-Sep-03	2003	Palomar	53 Crestline	Crestline NFPORS	Pal
Compacting/Crushing of Natural Fuels	209	Acres	29-Apr-04	2004	Palomar	53-2004 Aguanga Fuelbreak	Aguanga Fuelbreak NFPORS	Pal
Rearrangement of Natural Fuels	35	Acres	09-Apr-04	2004	Palomar	53-2004 Birch Hill	Birch Hill NFPORS	Pal
Compacting/Crushing of Natural Fuels	112	Acres	09-Apr-04	2004	Palomar	53-2004 Butterfield Fuelbreak	Butterfield Fuelbreak NFPORS	Pal
Compacting/Crushing of Natural Fuels	179	Acres	29-Jul-04	2004	Palomar	NORTH SLOPE	North Slope NFPORS	Pal
Natural Fuels Prescribed Burn	450	Acres	18-Feb-04	2004	Palomar	53-2004 Rocky Mountain	Rocky Mountain 2 NFPORS	Pal
Natural Fuels Prescribed Burn	165	Acres	25-Mar-04	2004	Palomar	53-2004 Cottonwood Fuelbreak	Cottonwood Fuelbreak NFPORS	Pal
Natural Fuels Prescribed Burn	6	Acres	09-Apr-04	2004	Palomar	53-2004 Crestline	Crestline NFPORS	Pal
Rearrangement of Natural Fuels	163	Acres	29-Apr-04	2004	Palomar	53-2004 Observatory	Observatory Fuelbreak NFPORS	Pal
Mastication/Mowing	850	Acres	26-Sep-05	2005	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Project	Pal
Natural Fuels Prescribed Burn	51	Acres	25-Jan-05	2005	Palomar	53-2005 North Slope	North Slope NFPORS	Pal
Natural Fuels Prescribed Burn	99	Acres	20-Dec-04	2005	Palomar	53-2005 Cottonwood Fuelbreak	Cottonwood Fuelbreak NFPORS	Pal
Natural Fuels Prescribed Burn	150	Acres	02-Dec-04	2005	Palomar	53-2005 Butterfield Fuelbreak	Butterfield Fuelbreak NFPORS	Pal
Natural Fuels Prescribed Burn	364	Acres	26-Jan-05	2005	Palomar	53-2005 Aguanga Fuelbreak Rx	Aguanga Fuelbreak NFPORS	Pal
Compacting/Crushing of Natural Fuels	133	Acres	11-Dec-04	2005	Palomar	53-2005 East Grade	East Grade NFPORS	Pal
Precommercial thinning - individual or selected trees	100	Acres	20-Mar-06	2006	Palomar	E-VAC	Evac	Pal
Precommercial thinning or cleaning need addition	210	Acres	07-Jun-06	2006	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek hazardous fuels	Pal
Mastication/Mowing	210	Acres	08-May-06	2006	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek hazardous fuels	Pal
Chipping of Natural Fuels	210	Acres	15-May-06	2006	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek hazardous fuels	Pal
Precommercial thinning - individual or selected trees	210	Acres	07-Jun-06	2006	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek hazardous fuels	Pal

CLEVELAND NATIONAL FOREST PAST 5 YRS

ARRANGED BY FAST AREA

ACTIVITY	NBR	AREA	COMPLETED	YR	DISTRICT	ACTIVITY UNIT NAME	CNF Project Name	FAST
Precommercial thinning or cleaning need addition	24	Acres	08-May-06	2006	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek unit 13	Pal
Precommercial thinning - individual or selected trees	24	Acres	08-May-06	2006	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek unit 13	Pal
Selection cut	14	Acres	08-May-06	2006	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 2A	Pal
Precommercial thinning - individual or selected trees	14	Acres	08-May-06	2006	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 2A	Pal
Precommercial thinning or cleaning need addition	14	Acres	08-May-06	2006	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 2A	Pal
Precommercial thinning or cleaning need addition	14	Acres	08-May-06	2006	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 2A	Pal
Precommercial thinning - individual or selected trees	14	Acres	08-May-06	2006	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 2A	Pal
Invasive Species Treatment	5	Acres	10-Dec-05	2006	Palomar	OAK GROVE TREE OF HEAVEN	Oak Grove Tree of Heaven	Pal
Natural Fuels Prescribed Burn	1503	Acres	08-Jun-06	2006	Palomar	AGUANGA RIDGE FB	Aguanga Ridge Fuelbreak Maintenance	Pal
Natural Fuels Prescribed Burn	20	Acres	15-May-06	2006	Palomar	06 Observatory Fuelbreak	Observatory Fuelbreak NFPORS	Pal
Mastication/Mowing	40	Acres	15-May-06	2006	Palomar	06 Birch Hill	Birch Hill NFPORS	Pal
Mastication/Mowing	195	Acres	08-Jun-06	2006	Palomar	06 High Point Mechanical	High Point Fuelbreak NFPORS	Pal
Natural Fuels Prescribed Burn	10	Acres	08-Jun-06	2006	Palomar	06 North Slope	North Slope NFPORS	Pal
Pruning need addition	24	Acres	02-Feb-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 12 handpile	Pal
Precommercial thinning or cleaning need addition	24	Acres	02-Feb-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 12 handpile	Pal
Pruning	24	Acres	02-Feb-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 12 handpile	Pal
Piling of Natural Fuels	24	Acres	07-Feb-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 12 handpile	Pal
Precommercial thinning - individual or selected trees	24	Acres	02-Feb-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 12 handpile	Pal
Thin of Natural Fuels	33	Acres	16-Mar-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 9	Pal
Lop and Scatter of Natural Fuels	120	Acres	12-Feb-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 2	Pal
Removal of Activity Fuels	120	Acres	08-Dec-06	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 2	Pal
Thin of Natural Fuels	24	Acres	16-Mar-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek unit 13	Pal
Thin of Natural Fuels	14	Acres	16-Mar-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 2A	Pal
Burn of Natural Fuels Piles	34	Acres	19-Mar-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Campground Unit 12A	Pal

CLEVELAND NATIONAL FOREST PAST 5 YRS

ARRANGED BY FAST AREA

ACTIVITY	NBR	AREA	COMPLETED	YR	DISTRICT	ACTIVITY UNIT NAME	CNF Project Name	FAST
Burn of Natural Fuels Piles	10.2	Acres	13-Mar-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 12B	Pal
Precommercial thinning - individual or selected trees	10.2	Acres	31-Mar-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 12B	Pal
Pruning need addition	10.2	Acres	13-Mar-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 12B	Pal
Pruning	10.2	Acres	13-Mar-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 12B	Pal
Precommercial thinning or cleaning need addition	10.2	Acres	31-Mar-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 12B	Pal
Precommercial thinning - individual or selected trees	10.2	Acres	31-Mar-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 12B	Pal
Precommercial thinning or cleaning need addition	10.2	Acres	31-Mar-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 12B	Pal
Piling of Natural Fuels	10.2	Acres	13-Mar-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek Unit 12B	Pal
Precommercial thinning or cleaning need addition	19	Acres	09-Apr-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek unit 3 hand_felling	Pal
Precommercial thinning - individual or selected trees	19	Acres	09-Apr-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Fry Creek unit 3 hand_felling	Pal
Precommercial thinning - individual or selected trees	145	Acres	11-Sep-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Resume work of unit 2,3	Pal
Chipping of Activity Fuels	145	Acres	23-Aug-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Resume work of unit 2,3	Pal
Precommercial thinning or cleaning need addition	145	Acres	11-Sep-07	2007	Palomar	FRY CREEK HAZARDOUS FUELS	Resume work of unit 2,3	Pal
Natural Fuels Prescribed Burn	400	Acres	02-Apr-07	2007	Palomar	AGUANGA RIDGE FB	Aguanga Ridge FB	Pal
Natural Fuels Prescribed Burn	26	Acres	03-Apr-07	2007	Palomar	AGUANGA RIDGE FB	Agunaga Ridge FB	Pal
Lop and Scatter of Natural Fuels	10	Acres	04-Apr-07	2007	Palomar	AGUANGA RIDGE FB	Agunaga Ridge FB	Pal
Mastication/Mowing	55	Acres	02-Mar-07	2007	Palomar	EAST GRADE	East Grade NFPORS	Pal
Precommercial thinning - individual or selected trees	55	Acres	09-Mar-07	2007	Palomar	EAST GRADE	East Grade NFPORS	Pal
Piling of Natural Fuels	50	Acres	27-Feb-08	2008	Palomar	FRY CREEK HAZARDOUS FUELS	fy08_frycreek_unit2_handpiling	Pal
Burn of Natural Fuels Piles	16	Acres	18-Apr-08	2008	Palomar	FRY CREEK HAZARDOUS FUELS	20080414_frycreek_pileburn	Pal
Rearrangement of Natural Fuels	28	Acres	25-Mar-08	2008	Palomar	AGUANGA RIDGE FB	Palomar Fuelbreak	Pal
Rearrangement of Natural Fuels	274	Acres	14-Jan-08	2008	Palomar	AGUANGA RIDGE FB	Butterfield FB	Pal
Natural Fuels Prescribed Burn	56	Acres	22-Apr-08	2008	Palomar	AGUANGA RIDGE FB	20080422_PRD_Fuel_break_burning	Pal
Natural Fuels Prescribed Burn	19	Acres	12-Feb-08	2008	Palomar	AGUANGA RIDGE FB	20080414_PRD_Fuel_break_mast	Pal

CLEVELAND NATIONAL FOREST PAST 5 YRS

ARRANGED BY FAST AREA

ACTIVITY	NBR	AREA	COMPLETED	YR	DISTRICT	ACTIVITY UNIT NAME	CNF Project Name	FAST
Chipping of Natural Fuels	19	Acres	14-Apr-08	2008	Palomar	AGUANGA RIDGE FB	20080414_PRD_Fuel_break_mast	Pal
	11080							
I 8 LAGUNA FIRE PROJECT AREA								
Piling of Natural Fuels	20	Acres	28-May-03	2003	Descanso	54 Fuelbreak Pine Valley Hand	Fuelbreak Pine Valley NFPORS	I8 Laguna
Chipping of Natural Fuels	163	Acres	25-Jun-03	2003	Descanso	54 Sherilton Valley	Sherilton Valley Prop. Owners NFPORS	I8 Laguna
Chipping of Natural Fuels	129	Acres	25-Jun-03	2003	Descanso	54 Carveacre	Carveacre Fire Safe Council NFPORS	I8 Laguna
Natural Fuels Prescribed Burn	240	Acres	09-Jun-03	2003	Descanso	54 Kitchen Creek Fuelbreak	Kitchen Creek Fuelbreak NFPORS	I8 Laguna
Natural Fuels Prescribed Burn	351	Acres	28-May-03	2003	Descanso	54 Fuelbreak Pine Valley Broad	Fuelbreak Pine Valley NFPORS	I8 Laguna
Removal of Natural Fuels	180	Acres	27-Jul-04	2004	Descanso	D54 STAND 01	stand	I8 Laguna
Chipping of Natural Fuels	22	Acres	27-Jul-04	2004	Descanso	FOSTER LODGE	stand	I8 Laguna
Natural Fuels Prescribed Burn	80	Acres	29-Jul-04	2004	Descanso	54-2004 Fuelbreak Pine Valley	Pine Valley NFPORS	I8 Laguna
Natural Fuels Prescribed Burn	150	Acres	31-May-04	2004	Descanso	54-2004 Shrine	Shrine NFPORS	I8 Laguna
Rearrangement of Natural Fuels	220	Acres	17-Sep-04	2004	Descanso	54-2004 Carveacre	Carveacre NFPORS	I8 Laguna
Rearrangement of Natural Fuels	100	Acres	17-Sep-04	2004	Descanso	54-2004 Lake Morena	Lake Morena NFPORS	I8 Laguna
Natural Fuels Prescribed Burn	150	Acres	29-Jul-04	2004	Descanso	JAPATUL FB	Japatul Fuelbreak	I8 Laguna
Natural Fuels Prescribed Burn	604	Acres	01-Jul-04	2004	Descanso	Kitchen Creek	Kitchen Creek Fuelbreak NFPORS	I8 Laguna
Piling of Natural Fuels	604	Acres	27-Aug-04	2004	Descanso	Kitchen Creek	Kitchen Creek Fuelbreak NFPORS	I8 Laguna
Precommercial thinning - individual or selected trees	120	Acres	17-May-05	2005	Descanso	LAGUNA REC RESIDENCE HAZARDOUS	Laguna Rec Res TSI 120	I8 Laguna
Precommercial thinning or cleaning need addition	120	Acres	17-May-05	2005	Descanso	LAGUNA REC RESIDENCE HAZARDOUS	Laguna Rec Res TSI 120	I8 Laguna
Natural Fuels Prescribed Burn	177	Acres	01-Jun-05	2005	Descanso	54-2005 Pine Valley CP Burn	Pine Valley Community Protection NFPORS	I8 Laguna
Natural Fuels Prescribed Burn	604	Acres	19-Mar-05	2005	Descanso	Kitchen Creek	Kitchen Creek Fuelbreak NFPORS	I8 Laguna
Selection cut	23	Acres	08-May-06	2006	Descanso	WOODED HILLS	Wooded Hill	I8 Laguna
Natural Fuels Prescribed Burn	78	Acres	08-Jun-06	2006	Descanso	06 Pine Valley Fuelbreak Rx Bu	Pine Valley Fuelbreak NFPORS	I8 Laguna

CLEVELAND NATIONAL FOREST PAST 5 YRS

ARRANGED BY FAST AREA

ACTIVITY	NBR	AREA	COMPLETED	YR	DISTRICT	ACTIVITY UNIT NAME	CNF Project Name	FAST
Mastication/Mowing	140	Acres	09-Jun-06	2006	Descanso	06 Craveacre	Carveacre NFPORS	I8 Laguna
Mastication/Mowing	5	Acres	09-Jun-06	2006	Descanso	06 Lake Morena Flbr	Lake Morena Fuelbreak NFPORS	I8 Laguna
Chipping of Natural Fuels	30	Acres	09-Jun-06	2006	Descanso	06 Pine Creek Cabins	Pine Creek Cabin NFPORS	I8 Laguna
Thin of Natural Fuels	40	Acres	14-Jun-06	2006	Descanso	06 Wooded Hill	Wooded Hill NFPORS	I8 Laguna
Chipping of Natural Fuels	120	Acres	31-Jul-06	2006	Descanso	06-54 Laguna Rec Res	Laguna Fuels NFPORS	I8 Laguna
Mastication/Mowing	604	Acres	08-Jun-06	2006	Descanso	Kitchen Creek	Kitchen Creek Fuelbreak NFPORS	I8 Laguna
Natural Fuels Prescribed Burn	604	Acres	08-Jun-06	2006	Descanso	Kitchen Creek	Kitchen Creek Fuelbreak NFPORS	I8 Laguna
Chipping of Natural Fuels	76	Acres	22-Jun-07	2007	Descanso	PENNY PINES PLANTATION	Kitchen Creek Plantation	I8 Laguna
Thin of Natural Fuels	76	Acres	22-May-07	2007	Descanso	PENNY PINES PLANTATION	Kitchen Creek Plantation	I8 Laguna
Thin of Natural Fuels	300	Acres	19-Mar-07	2007	Descanso	DESCANSO MASTER FUELBREAK	observatory	I8 Laguna
Chipping of Natural Fuels	300	Acres	27-Apr-07	2007	Descanso	DESCANSO MASTER FUELBREAK	observatory	I8 Laguna
Mastication/Mowing	500	Acres	15-Aug-07	2007	Descanso	CARVEACRE	Carveacre (FS Treatment)	I8 Laguna
Chipping of Natural Fuels	112	Acres	27-Feb-07	2007	Descanso	LAGUNA REC RESIDENCE HAZARDOUS	Laguna rec residence	I8 Laguna
Natural Fuels Prescribed Burn	92	Acres	06-Apr-07	2007	Descanso	LAGUNA REC RESIDENCE HAZARDOUS	Laguna Rec Haz, Trial Burn	I8 Laguna
Mastication/Mowing	18	Acres	04-Jan-07	2007	Descanso	LAGUNA REC RESIDENCE HAZARDOUS	Laguna Rec Haz, Ravine Burn	I8 Laguna
Natural Fuels Prescribed Burn	18	Acres	04-Apr-07	2007	Descanso	LAGUNA REC RESIDENCE HAZARDOUS	Laguna Rec Haz, Ravine Burn	I8 Laguna
Chipping of Natural Fuels	47	Acres	21-Jun-07	2007	Descanso	LAGUNA REC RESIDENCE HAZARDOUS	Burnt Ranch CG	I8 Laguna
Thin of Natural Fuels	47	Acres	04-Jun-07	2007	Descanso	LAGUNA REC RESIDENCE HAZARDOUS	Burnt Ranch CG	I8 Laguna
Precommercial thinning - individual or selected trees	90	Acres	15-Mar-07	2007	Descanso	LAGUNA REC RESIDENCE HAZARDOUS	ole	I8 Laguna
Chipping of Activity Fuels	90	Acres	14-Jun-07	2007	Descanso	LAGUNA REC RESIDENCE HAZARDOUS	ole	I8 Laguna
Mastication/Mowing	90	Acres	06-Mar-07	2007	Descanso	LAGUNA REC RESIDENCE HAZARDOUS	ole	I8 Laguna
Precommercial thinning or cleaning need	90	Acres	15-Mar-07	2007	Descanso	LAGUNA REC RESIDENCE	ole	I8 Laguna

CLEVELAND NATIONAL FOREST PAST 5 YRS

ARRANGED BY FAST AREA

ACTIVITY	NBR	AREA	COMPLETED	YR	DISTRICT	ACTIVITY UNIT NAME	CNF Project Name	FAST
addition						HAZARDOUS		
Additions/Subtractions due to other changes	5	Acres	20-Mar-07	2007	Descanso	DESCANSO 2007 PLANTING	Descanso 2007 Planting	I8 Laguna
Full planting without concurrent site preparation	5	Acres	20-Mar-07	2007	Descanso	DESCANSO 2007 PLANTING	Descanso 2007 Planting	I8 Laguna
Invasive Species Treatment	5	Acres	11-Jul-07	2007	Descanso	YELLOW STARTHISTLE REMOVAL	Robert's Ranch Yellow Starthistle	I8 Laguna
Thin of Natural Fuels	48	Acres	09-Aug-07	2007	Descanso	LAGUNA HORSE	El Prado CG	I8 Laguna
Chipping of Natural Fuels	48	Acres	17-Aug-07	2007	Descanso	LAGUNA HORSE	El Prado CG	I8 Laguna
Burn of Natural Fuels Piles	300	Acres	13-May-08	2008	Descanso	DESCANSO MASTER FUELBREAK	observatory	I8 Laguna
Natural Fuels Prescribed Burn	358	Acres	16-Apr-08	2008	Descanso	CARVEACRE	carveacre_mech	I8 Laguna
Compacting/Crushing of Natural Fuels	358	Acres	12-Nov-07	2008	Descanso	CARVEACRE	carveacre_mech	I8 Laguna
Compacting/Crushing of Natural Fuels	17	Acres	13-Nov-07	2008	Descanso	CARVEACRE	carveacre_mech	I8 Laguna
Burn of Natural Fuels Piles	5	Acres	10-Dec-07	2008	Descanso	LAGUNA REC RESIDENCE HAZARDOUS	CampOle_station	I8 Laguna
Natural Fuels Prescribed Burn	300	Acres	22-May-08	2008	Descanso	LAGUNA REC RESIDENCE HAZARDOUS	08-LagunaRec	I8 Laguna
Wildfire - Natural Fuels	1620	Acres	31-Oct-07	2008	Descanso	CORTE MADERA	Corte Madera	I8 Laguna
Burn of Natural Fuels Piles	100	Acres	21-May-08	2008	Descanso	ALL DRD ADMIN SITES	all DRD admin sites	I8 Laguna
Full planting without concurrent site preparation	11	Acres	17-Jul-08	2008	Descanso	BURNT RANCERHIA PLANTING	Burnt Racherhia Planting	I8 Laguna
Additions/Subtractions due to other changes	11	Acres	17-Jul-08	2008	Descanso	BURNT RANCERHIA PLANTING	Burnt Racherhia Planting	I8 Laguna
Thin of Natural Fuels	30	Acres	13-May-08	2008	Descanso	06 Pine Creek Cabins	Pine Creek Cabin NFPORS	I8 Laguna
Natural Fuels Prescribed Burn	28	Acres	04-Apr-08	2008	Descanso	PENNY PINES PLANTATION	08_kitchen_creek_rx	I8 Laguna
Thin of Natural Fuels	28	Acres	01-Apr-08	2008	Descanso	PENNY PINES PLANTATION	08_kitchen_creek_rx	I8 Laguna
	10901							
CUYAMACA LAGUNA PROJECT AREA								
Natural Fuels Prescribed Burn	448	Acres	23-Jun-03	2003	Descanso	54 Tragedy Springs	x03-54 Tragedy Springs (3040714)	Cuy Lagu
Natural Fuels Prescribed Burn	300	Acres	27-Aug-04	2004	Descanso	LAGUNA HORSE	Laguna Horse NFPORS	Cuy Lagu
Precommercial thinning - individual or selected trees	73	Acres	29-Jul-05	2005	Descanso		stand	Cuy Lagu

CLEVELAND NATIONAL FOREST PAST 5 YRS

ARRANGED BY FAST AREA

ACTIVITY	NBR	AREA	COMPLETED	YR	DISTRICT	ACTIVITY UNIT NAME	CNF Project Name	FAST
Precommercial thinning - individual or selected trees	63	Acres	29-Jul-05	2005	Descanso	D54 STAND 95	stand	Cuy Lagu
Precommercial thinning or cleaning need addition	73	Acres	29-Jul-05	2005	Descanso		stand	Cuy Lagu
Precommercial thinning or cleaning need addition	74	Acres	29-Jul-05	2005	Descanso		stand	Cuy Lagu
Precommercial thinning - individual or selected trees	74	Acres	29-Jul-05	2005	Descanso		stand	Cuy Lagu
Precommercial thinning or cleaning need addition	63	Acres	29-Jul-05	2005	Descanso	D54 STAND 95	stand	Cuy Lagu
Precommercial thinning - individual or selected trees	40	Acres	29-Jul-05	2005	Descanso	D54 STAND 100	stand	Cuy Lagu
Precommercial thinning - individual or selected trees	88	Acres	29-Jul-05	2005	Descanso		stand	Cuy Lagu
Precommercial thinning or cleaning need addition	88	Acres	29-Jul-05	2005	Descanso		stand	Cuy Lagu
Precommercial thinning - individual or selected trees	63	Acres	29-Jul-05	2005	Descanso	D54 STAND 103	stand	Cuy Lagu
Mastication/Mowing	50	Acres	12-Jun-06	2006	Descanso	54	Hubbard Grove NFPORS	Cuy Lagu
Mastication/Mowing	18	Acres	09-Jun-06	2006	Descanso	54 Ironside	Ironside fuelbreak NFPORS	Cuy Lagu
Chipping of Natural Fuels	237	Acres	07-Sep-06	2006	Descanso	06 Fillary Flats	Filaree Flats NFPORS	Cuy Lagu
Thin of Natural Fuels	237	Acres	29-Sep-06	2006	Descanso	06 Fillary Flats	Filaree Flats NFPORS	Cuy Lagu
Removal of Activity Fuels	16	Acres	11-Oct-07	2008	Descanso	PENNY PINES PLANTATION	Filaree Flat	Cuy Lagu
	2005	Acres						

Total San Diego County 23986 Acres

CLEVELAND NATIONAL FOREST
PROJECTED FUELS TREATMENT STRATEGY 2008-2012 - Arranged by FAST Area

PALOMAR MOUNTAIN						
Project Name	***Districts***	***Proposed***	***Acres***	***Treatment Methods***	***Fuel Type***	***FAST***
North Slope	PRD	2008	1300	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Aguanga FB	PRD	2008	300	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Fry Creek	PRD	2008	75	Thinning/mastication/pile burning/prescribed burning	Timber	Palomar
High Point FB	PRD	2008	150	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
East Grade	PRD	2008	55	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Butterfield FB	PRD	2008	150	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
North Slope	PRD	2009	300	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Butterfield FB	PRD	2009	100	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Fry Creek	PRD	2009	150	Thinning/mastication/pile burning/prescribed burning	Timber	Palomar
Aguanga FB	PRD	2009	100	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Morgan Hill/Fry Creek II	PRD	2009	200	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Kohler	PRD	2010	200	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Aguanga FB	PRD	2010	268	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Morgan Hill/Fry Creek II	PRD	2010	500	Thinning/mastication/pile burning/prescribed burning	Timber	Palomar
Palomar Sta. CDZ	PRD	2010	125	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Long Cyn. FB	PRD	2010	150	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Kohler	PRD	2011	450	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Aguanga FB	PRD	2011	100	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Morgan Hill/Fry Creek II	PRD	2011	200	Thinning/mastication/pile burning/prescribed burning	Timber	Palomar
Long Cyn. FB	PRD	2011	100	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Dripping Springs CDZ	PRD	2011	90	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Agua Tibia CDZ	PRD	2011	?	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Kohler	PRD	2012	1306	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Aguanga FB	PRD	2012	100	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Morgan Hill/Fry Creek II	PRD	2012	200	Thinning/mastication/pile burning/prescribed burning	Timber	Palomar
Devils Hole CDZ	PRD	2012	100	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar
Cutca Valley CDZ	PRD	2012	540	Mastication/lop&scatter/prescribed burning	Chaparral	Palomar

CLEVELAND NATIONAL FOREST
PROJECTED FUELS TREATMENT STRATEGY 2008-2012 - Arranged by FAST Area

I 8 LAGUNA FIRE						
Project Name	***Districts***	***Proposed***	***Acres***	***Treatment Methods***	***Fuel Type***	***FAST***
Corte Madera	DRD	2008	525	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Carveacre	DRD	2008	200	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Wooded Hill	DRD	2008	200	Thinning/mastication/pile burning/prescribed burning	Timber	I 8 Laguna
Horsethief	DRD	2008	300	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Pine Valley	DRD	2008	125	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Viejas Creek	DRD	2008	27	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Sweetwater	DRD	2008	72	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Horsethief	DRD	2009	250	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Wooded Hill	DRD	2009	200	Thinning/mastication/pile burning/prescribed burning	Timber	I 8 Laguna
Carveacre	DRD	2009	200	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Pine Valley	DRD	2009	125	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Corte Madera	DRD	2009	200	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Laguna Rec.	DRD	2009	125	Thinning/mastication/pile burning/prescribed burning	Timber	I 8 Laguna
Guatay	DRD	2009	50	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Rodeo	DRD	2009	150	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Lake Morena	DRD	2009	100	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Horsethief	DRD	2010	200	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Wooded Hill	DRD	2010	200	Thinning/mastication/pile burning/prescribed burning	Timber	I 8 Laguna
Carveacre	DRD	2010	200	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Corte Madera	DRD	2010	200	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Laguna Rec.	DRD	2010	125	Thinning/mastication/pile burning/prescribed burning	Timber	I 8 Laguna
Guatay	DRD	2010	50	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Rodeo	DRD	2010	150	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Lake Morena	DRD	2010	100	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Capitan Grande	DRD	2010	50	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Fred Canyon	DRD	2010	175	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna

Horsethief	DRD	2011	200	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Wooded Hill	DRD	2011	200	Thinning/mastication/pile burning/prescribed burning	Timber	I 8 Laguna
Carveacre	DRD	2011	200	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Corte Madera	DRD	2011	200	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Laguna Rec.	DRD	2011	125	Thinning/mastication/pile burning/prescribed burning	Timber	I 8 Laguna
Rodeo	DRD	2011	150	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Lake Morena	DRD	2011	100	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Capitan Grande	DRD	2011	50	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Fred Canyon	DRD	2011	175	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna

Horsethief	DRD	2012	200	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Wooded Hill	DRD	2012	200	Thinning/mastication/pile burning/prescribed burning	Timber	I 8 Laguna
Carveacre	DRD	2012	200	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Corte Madera	DRD	2012	200	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Laguna Rec.	DRD	2012	125	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Rodeo	DRD	2012	150	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Lake Morena	DRD	2012	100	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Capitan Grande	DRD	2012	50	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna
Fred Canyon	DRD	2012	175	Mastication/lop&scatter/prescribed burning	Chaparral	I 8 Laguna

NE WARNER SPRINGS						
Project Name	***Districts***	***Proposed***	***Acres***	***Treatment Methods***	***Fuel Type***	***FAST***
Warner Springs CDZ	PRD	2009	110	Mastication/lop&scatter/prescribed burning	Chaparral	NE Warner
Sunshine Summit CDZ	PRD	2009	70	Mastication/lop&scatter/prescribed burning	Chaparral	NE Warner
Indian Flats CDZ	PRD	2010	105	Mastication/lop&scatter/prescribed burning	Chaparral	NE Warner
Indian Flats CDZ	PRD	2011	100	Mastication/lop&scatter/prescribed burning	Chaparral	NE Warner

Puerta La Cruz CDZ	PRD	2012	140	Mastication/lop&scatter/prescribed burning	Chaparral	NE Warner

CLEVELAND NATIONAL FOREST
PROJECTED FUELS TREATMENT STRATEGY 2008-2012 - Arranged by FAST Area

CUYAMACA LAGUNA						
Project Name	***Districts***	***Proposed***	***Acres***	***Treatment Methods***	***Fuel Type***	***FAST***
San Vincente CDZ	DRD	2009	180	Mastication/lop&scatter/prescribed burning	Chaparral	Cuy Laguna

GREATER JULIAN						
Project Name	***Districts***	***Proposed***	***Acres***	***Treatment Methods***	***Fuel Type***	***FAST***
Lower San Ysabel	DRD	2011	1722	Mastication/lop&scatter/prescribed burning	Chaparral	Grtr Julian

Total Projected	16835

BLM 2008-2012 Fuels Treatment Strategy

Project Name	*Districts*	*Proposed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
International Fuel Break	Otay Mtn. east	2008	145	Mastication/thinning	Chaparral	SE Co2
International Fuel Break	Otay Mtn. West	2008	181	Mastication/thinning	Chaparral	SE Co2
Shockey Truck Trail	Campo	2008	30	Mastication/thinning	Chaparral	SE Co2
McCain Valley Road	Boulevard	2008	100	Mastication/thinning	Chaparral	SE Co1
Sunrise Fuel Break	Jullian	2008	75	Thinning/mastication	Mix	Julian
Beauty Mountain Break	Chihuahua Valley	2008	220	Mastication/thinning	Chaparral	NE Warner
W Beauty Mtn Break	Chihuahua Valley	2008	145	Mastication/thinning	Chaparral	NE Warner
E Beauty Mtn Break	Chihuahua Valley	2008	145	Mastication/thinning	Chaparral	NE Warner
Puerta La Cruz Tr. Trl.	Chihuahua Valley	2008	220	Mastication/thinning	Chaparral	NE Warner
TOTAL			1,261			

NRCS projects

Public and Private Lands

PALOMAR MOUNTAIN

Project Name	*Districts*	*Completed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Palomar- Christian Conference Center	Palomar	2004	52	Trimming and chipping	Timber	Palomar
Palomar - Bailey Meadows	Palomar	2006	449	DDD tree removal	Timber	Palomar
Palomar- 6th Grade Camp	Palomar	2004	10	Trimming and chipping	Timber	Palomar
Palomar - Girl Scout Camp	Palomar	2005	50	Trimming and chipping	Timber	Palomar
Palomar - Hazardous Tree Removal	Palomar	2005	1	DDD tree removal	Timber	Palomar
Palomar - Helicopter Pad	Palomar	2006	2	DDD tree removal	Timber	Palomar
Mother's Kitchen	Palomar	2006	110	Forest Health Thinning	Timber	Palomar

NE WARNER SPRINGS

Project Name	*Districts*	*Completed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Lost Valley- Boy Scout Camp	Chihuahua Valley	2005	500	Trimming and chipping	Timber	NE Warner
Lost Valley Additional	Chihuahua Valley	2005	1	Trimming and chipping	Timber	NE Warner
Mataguay Boy Scout Camp	Henshaw	2006	300	Trimming and chipping	Oaks	NE Warner

GREATER JULIAN

Project Name	*Districts*	*Completed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Julian - Adobe Helicopter Project	Julian	2005	2	DDD tree removal	Timber	Greater Julian

Tribal Lands

PALOMAR MOUNTAIN

Project Name	*Districts*	*Completed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Pauma Palomar	Palomar	2005	310	DDD tree removal	Timber	Palomar

NE WARNER SPRINGS

Project Name	*Districts*	*Completed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Los Coyotes Lost Valley	Warner Springs	2005	30	DDD tree removal	Timber	NE Warner Spr.

GREATER JULIAN

Project Name	*Districts*	*Completed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Julian - Santa Ysabel Indian Reservation	Julian	2006	841	Trimming and chipping	Oaks	Julian
Santa Ysabel Julian	Julian	2005	298	DDD tree removal	Oaks	Julian

CUYAMACA LAGUNA

Project Name	*Districts*	*Completed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Mount Laguna Indian Reservation	Laguna	In Prog	50	Trimming and chipping	Timber	Cuy Laguna

Total 3006.00

CAL FIRE Fuels Treatment Areas
Completed

Palomar Mountain

Project Name	*Districts*	*Proposed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Bailey Meadows -C.P./T.C.	Palomar	Completed	200	DDD road treatment	Conifer Oak	Palomar
Birch Hill Structures	Palomar	Completed	483	DDD structures	Conifer Oak	Palomar
Crestline Road	Palomar	Completed	37	DDD road treatment	Conifer Oak	Palomar
Palomar / Canfield - T.C.	Palomar	Completed	98	DDD road treatment	Conifer Oak	Palomar
Palomar State Park - Phase I	Palomar	Completed	48	Slash reduction	Conifer Oak	Palomar
Palomar State Park - Phase II	Palomar	Completed	31	Slash reduction	Conifer Oak	Palomar
Palomar State Park - Phase III	Palomar	Completed	53	Slash reduction	Conifer Oak	Palomar
Palomar State Park Rd. - C.P.	Palomar	Completed	92	DDD road treatment	Conifer Oak	Palomar
Palomar State Park Rd. - T.C.	Palomar	Completed	73	DDD structures	Conifer Oak	Palomar
			1115			

Greater Julian

Project Name	*Districts*	*Proposed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Banner Grade - T.C.	Julian	Completed	271	DDD road treatment	Conifer Oak	Greater Julian
CFIP - Camp Stevens	Julian	Suspended	256	Forest Management	Conifer Oak	Greater Julian
Lake Cuyamaca Recreation & Park District	Cuyamaca	Completed	24	Watershed improvement	Meadow	Greater Julian
Lake Cuyamaca Recreation & Park District-Planting Phase I	Cuyamaca	Completed	15	Tree Planting	Conifer Oak	Greater Julian
Lake Cuyamaca Recreation & Park District-Fuel Reduction Phase I	Cuyamaca	Completed	24	Felling, chipping dead trees	Conifer Oak	Greater Julian
Whispering Pines - T.C.	Julian	Completed	127	DDD road treatment	Conifer Oak	Greater Julian
Whispering Pines - C.P.	Julian	Completed	306	DDD structures	Conifer Oak	Greater Julian
Julian Community Services District	Julian	Completed	44	DDD structures	Conifer Oak	Greater Julian
Julian Community Services District -Planting Phase I	Julian	Completed	15	Tree Planting	Conifer Oak	Greater Julian
Julian Community Services District-Fuel Reduction Phase 1	Julian	Completed	25	Felling, chipping dead trees	Conifer Oak	Greater Julian
Volcan Mtn. - Demonstration area	Julian	Suspended	1155	Post fire improvement	Conifer Oak	Greater Julian
Volcan Mtn. - Prescription	Julian	Completed	1154	Stocking Prescription	Conifer Oak	Greater Julian
William Heise County Park - Assessment	Julian	Completed	200	Prescription Development	Conifer Oak	Greater Julian
William Heise County Park	Julian	Completed	200	DDD removal	Conifer Oak	Greater Julian
			3816			

Cuyamaca Laguna

Project Name	*Districts*	*Proposed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Cuyamaca State Park - HWY. 79 - Prescription	Cuyamaca	Completed	747	Marking mapping trees	Conifer Oak	Cuy Laguna

North East Warner Springs

Project Name	*Districts*	*Proposed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Los Coyotes Assessment	Warner Spr	Completed	11520	Watershed Assessment	Oak CHP Conifer	NE Warner Spr
Lost Valley Restoration Phase I	Warner Spr	Completed	10	Tree planting	Oak CHP Conifer	NE Warner Spr

I 8 Laguna Fire

Project Name	*Districts*	*Proposed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Corte Madera Ranch - T.C.	Pine Valley	Completed	219	Felling, bucking, chipping	Oak Chaparral	I8 Laguna
Pine Valley Fuel Break	Pine Valley	Completed	23	Fuel Mod	Chaparral	I8 Laguna
			242			

San Diego General

Project Name	*Districts*	*Proposed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
CFIP - Broyles	SD Gen	Completed	20	Forest Management	Conifer Oak	SD General
CFIP - Behirendet	SD Gen	Completed	24	Forest Management	Conifer Oak	SD General
CFIP - Camp Marston	SD Gen	Suspended	250	Forest Management	Conifer Oak	SD General
CFIP - Carter	SD Gen	Suspended	19	Forest Management	Mix	SD General
CFIP - Davis	SD Gen	Completed	80	Forest Management	Mix	SD General
CFIP - Fitz	SD Gen	Completed	40	Forest Management	Mix	SD General
CFIP - Frazee	SD Gen	Completed	36	Forest Management	Mix	SD General
CFIP - Krtek	SD Gen	Completed	43	Forest Management	Mix	SD General
CFIP - Simpson	SD Gen	Completed	20	Forest Management	Mix	SD General
CFIP - Thilken	SD Gen	Completed	59	Forest Management	Mix	SD General
CFIP - Utt	SD Gen	Completed	40	Forest Management	Mix	SD General
			631			

Total not including assessment area 6551
Total including assessment area 18081

DDD is Dead, Dying and Diseased

CAL FIRE Fuels Treatment Areas

Proposed/Active

Palomar Mountain

Project Name	*Districts*	*Proposed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Palomar State Park - Phase II	Palomar	Active	31	Slash reduction	Conifer Oak	Palomar
Palomar Observatory - VMP	Palomar	Proposed	1640	Veg Manage Plan	Mix Chp Ow Con	Palomar
Palomar Observatory - Fuel break	Palomar	Active	1000	Mastication/thinning	Mix Chp Conifer	Palomar
Palomar East & South Grade Fuel Break	Palomar	Active	205	Mastication/thinning	Mix Chp Conifer	Palomar
Palomar State Park - Forest Care	Palomar	Active	TBD	Felling chipping burning	Conifer Oak	Palomar
			2876			

Cuyamaca Laguna

Project Name	*Districts*	*Proposed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Cuyamaca State Park	Cuyamaca	Active	100	Felling, pruning dead	Conifer Oak	Cuyamaca Laguna
Cuyamaca State Park - Lookout Road Planting Reforestation Phase 1	Cuyamaca	Active	20	Prep and Planting	Conifer Oak	Cuyamaca Laguna
Cuyamaca State Park- Middle Peak Fire Road Planting Reforestation Phase 1	Cuyamaca	Active	20	Prep and Planting	Conifer Oak	Cuyamaca Laguna
Cuyamaca State Park	Cuyamaca	Active	100	Felling, pruning dead	Conifer Oak	Cuyamaca Laguna
Lookout Road/Cuyamaca Area Fuel Reduction	Cuyamaca	Active	65	Felling, chipping dead	Conifer Oak	Cuyamaca Laguna
Engineers Road/Cuyamaca Area Transportation Corridor	Cuyamaca	Active	TBD	Felling, chipping dead	Conifer Oak	Cuyamaca Laguna
Cuyamaca State Park - Lookout Road Fuel Reduction Reforestation Phase 1	Cuyamaca	Active	20	Felling, chipping dead	Conifer Oak	Cuyamaca Laguna
Cuyamaca State Park - Middle Peak Fire Road Fuel Reduction Reforestation Phase 1 ACTIVE	Cuyamaca	Active	20	Felling, chipping dead	Conifer Oak	Cuyamaca Laguna
Cuyamaca State Park- Middle Peak Truck Trail Fire Road Fuel Reduction	Cuyamaca	Active	TBD	Felling, chipping dead	Conifer Oak	Cuyamaca Laguna
			345			

San Diego General

Project Name	*Districts*	*Proposed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Ramona Fuel Break-East of Ramona	Ramona	Proposed	293	Mastication/thinning	CHP grassland	SD General
Mt. Woodson Repeater Site Road/Ramona Fuel Reduction	Ramona	Proposed	TBD	Thinning pile burning	Chaparral	SD General
			293			

I 8 Laguna

Project Name	*Districts*	*Proposed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Corte Madera Ranch - VMP	Pine Valley	Active	4657	Prescribed burn, chipping	CHP Oak	I8 Laguna
Corte Madera Ranch - Fuel Break	Pine Valley	Active	219	Felling chipping dead oaks	CHP Oak	I8 Laguna
Carmen Lucas Property	Mount Laguna	Active	20	Forest care remove slash	Conifer Oak	I8 Laguna
			4896			

Greater Julian

Project Name	***Districts***	***Proposed***	***Acres***	***Treatment Methods***	***Fuel Type***	***FAST***
Julian Community Services District -Planting Phase 2	Julian	Active	15	Prep and Planting	Conifer Oak	Greater Julian
Lake Cuyamaca Recreation & Park District- Planting Phase II	Cuyamaca	Active	15	Prep and Planting	Conifer Oak	Greater Julian
Sunrise/Julian Fuel Break	Julian	Active	497	Chipping burning	CHP Oak	Greater Julian
Volcan/San Felipe Valley VMP	Julian	Proposed	14000	Fire recovery/manage	CHP Conifer Oak	Greater Julian
Volcan/San Felipe Valley Fuel Reduction	Julian	Active	3000	Thinning, pile burning	CHP Conifer Oak	Greater Julian
Julian Community Services District- Fuel Reduction Phase 2	Julian	Active	25	Felling, chipping dead	Conifer Oak	Greater Julian
Lake Cuyamaca Recreation & Park District- Fuel Reduction Phase II	Cuyamaca	Active	24	Thinning, pile burning	Mix	Greater Julian
			17576			

North East Warner Springs

Project Name	***Districts***	***Proposed***	***Acres***	***Treatment Methods***	***Fuel Type***	***FAST***
Lost Valley Restoration Phase II	Oak Grove	Active	17	Prep and Planting	Conifer Oak	NE Warners
Total Proposed			15933			
Total Active			10070			
Total Active and Proposed			26003			

FAST Project Narrative:

(This is a representative list of the project areas that assisted firefighters during the 2007 siege in San Diego County.)

All of the **bold faced** projects in the list below were directly impacted by Fires during the 2007 Wildfire Season.

FHEP	**BAILEY MEADOWS**	**1**	**Complete**	**9/1/2006**	**7/1/2004**	**9/1/2006**	**PRIVATE**	**0**	**200**	**23**

This Dead Dying and Diseased tree removal project along with others completed by the NRCS and SDG&E reduced the (tree) falling hazard and helped to provide a safer working environment for fire crews and equipment during the Poomacha Fire 2007. Additionally this work improved evacuation safety during this fire siege.

FHEP	**BANNER GRADE**	**2**	**Complete**	**9/1/2006**	**7/1/2004**	**9/1/2006**	**PRIVATE**	**0**	**271**	**297**
FHEP	**BANNER GRADE**	**2**	**Complete**	**9/1/2006**	**7/1/2004**	**9/1/2006**	**FEDERAL**	**0**	**271**	**47**

These Dead Dying and Diseased tree removal projects improved the safe egress for fire crews and equipment during the Angel Fire 2007 and a clear evacuation route for Julian during the Witch Fire 2007.

FHEP	**BIRCH HILL**	**3**	**Complete**	**9/1/2006**	**7/1/2004**	**9/1/2006**	**PRIVATE**	**0**	**520**	**223**

This Dead Dying and Diseased tree removal project along with others completed by the County of San Diego and SDG&E reduced the (tree) falling hazard and helped to provide a safer working environment for fire crews and equipment during the Poomacha Fire 2007. Additionally this work improved evacuation safety during this fire siege.

FHEP	**CANFIELD RD**	**4**	**Complete**	**9/1/2006**	**7/1/2004**	**9/1/2006**	**PRIVATE**	**0**	**98**	**102**

This Dead Dying and Diseased tree removal project along with others completed by the County of San Diego and SDG&E reduced the (tree) falling hazard and helped to provide a safer working environment for fire crews and equipment during the Poomacha Fire 2007. Additionally this work improved evacuation safety during this fire event. Canfield Road accesses the Palomar Observatory the community's safe refuge in the event of wildfire.

FHEP	*CFIP-CAMP STEVENS*	*6*	*Never Happened*	*9/1/2006*		*9/1/2006*	*PRIVATE*	*0*	*256*	*255*

Though this particular project was not done, in recent years Camp Steven's has completed tens of thousands of dollars worth of fuel reduction projects. Many of the projects where CFIP cost share supported. The work that was accomplished made it possible for fire crews to save the main infrastructure of the camp as the Angel Fire ripper through the entire developed portion of the compound.

FHEP	**EAST & SOUTH GRADE**	**15**	**Planned**	**9/1/2006**	**6/26/2006**		**PRIVATE**	**0**	**0**	**142**
FHEP	**EAST & SOUTH GRADE**	**15**	**Planned**	**9/1/2006**	**6/26/2006**		**FEDERAL**	**0**	**0**	**53**
FHEP	**EAST & SOUTH GRADE**	**15**	**Planned**	**9/1/2006**	**6/26/2006**		**TRIBAL**	**0**	**0**	**10**

These projects were not yet implemented. They would have increased the safety for firefighters and evacuees during the Poomacha Fire 2007. The project was consumed by the fire.

MVU	RAMONA FUEL BREAK	16	Planned	10/1/2007			PRIVATE			

This project was/is a cooperative project with the USFS. It is in the planning phase and has been overrun by the Witch Fire 2007.

FHEP	JULIAN COMMUNITY SERVICES DISTRICT-FUEL REDUCTION	17	In Progress	9/1/2006	7/1/2004		PRIVATE	171	25	44

The site of this project is next to the area of origin of the Angel Fire 2007 in the historic town of Julian. At the time of dispatch to the Angel Fire there were several thousand people attending the annual bluegrass festival on the grounds within the project. The fuels and tree removal work that was accomplished made safe evacuation of the event possible.

MVU	PALOMAR OBSERVATORY VMP	19	In Progress	9/1/2006	2/1/2006		PRIVATE	0	1640	2016

The immediate surroundings of the Observatory are within the first phase of this Vegetation Management Plan (VMP). The work that has been completed made it safer for firefighters and Observatory personnel to defend the facilities. Future burns shall reduce the fire threat from the east. The Observatory is the safe refuge for the community of Palomar Mountain. Though the Poomacha Fire didn't impact this project directly, the work that had been accomplished made it possible to use the facility for staging.

FHEP	PALOMAR STATE PARK PHASE 1-FUEL REDUCTION	20	Complete	9/1/2006	7/1/2004	9/1/2006	PRIVATE	0	48	32
FHEP	PALOMAR STATE PARK PHASE 1-FUEL REDUCTION	20	Complete	9/1/2006	7/1/2004	9/1/2006	STATE	0	48	50
FHEP	PALOMAR STATE PARK PHASE 2-FUEL REDUCTION	21	In Progress	9/1/2006	7/1/2004		STATE	1359	31	170
FHEP	PALOMAR STATE PARK PHASE 3-FUEL REDUCTION	22	Complete	9/1/2006	7/1/2004	9/1/2006	STATE	0	53	149
FHEP	PALOMAR STATE PARK RD	23	Complete	9/1/2006	7/1/2004	9/1/2006	PRIVATE	0	165	97

These projects were very important in giving Firefighters a safe place to defend the State Park facilities and the historic Boucher Lookout (also a primary repeater site for Fire and Emergency communications). These projects were very important during the Poomacha Fire 2007. Further study of the value of these projects should be a priority.

FHEP	RANCHO CORTE MADERA FUEL BREAK	24	Complete	9/1/2006	7/1/2004	9/1/2006	PRIVATE	147	219	383
FHEP	RANCHO CORTE MADERA VMP	25	In Progress	9/1/2006	1/30/2006		PRIVATE	0	0	4283

This 2 plus mile shaded fuel break was used to safely access the flanks of the Pine Fire 2007. The fuel break didn't stop the head fire however, no trees blocked the road and safe anchor points were made on both flanks from the fuel break.
Later (3 or 4 hours) the right flank ran into the first of several burn blocks within the project are keeping the fire north of the main ranch valley which is the location of the dozen or so ranch homes. A second burn block that had been prepped to burn this fall was used to fire from protecting additional rangeland from being consumed by the fire.

FHEP	SUNRISE FUEL BREAK CENTRAL	26	In Progress	9/1/2006	7/1/2004		PRIVATE	50	78	51
FHEP	SUNRISE FUEL BREAK CENTRAL	26	In Progress	9/1/2006	7/1/2004		FEDERAL	50	78	13
FHEP	SUNRISE FUEL BREAK NORTH	27	In Progress	9/1/2006	3/30/2006		PRIVATE	0	0	41
FHEP	WHISPERING PINES	30	Complete	9/1/2006	7/1/2004	9/1/2006	PRIVATE	0	127	201

This fuel break was important as it reduced the intensity of fire along the right flank of the Angel Fire. It allowed firefighters to access the homes along the flank and kept the fire from consuming any homes adjacent to the fuel break. Other Dead Dying and Diseased tree removal projects completed by the County of San Diego and SDG&E reduced the (tree) falling hazard and helped to provide a safer working environment for fire crews and equipment during this and future fires. Additionally this work improved evacuation safety during this fire event.

FHEP	PALOMAR STATE PARK PHASE 2 - FELLING	36	In Progress	9/1/2006	7/1/2004		STATE	1427	0	170
FHEP	PALOMAR STATE PARK PHASE 2 - THINNING	37	In Progress	9/1/2006	7/1/2004		STATE	0	0	170
FHEP	PALOMAR STATE PARK PHASE 2 - BURNING	38	In Progress	9/1/2006	7/1/2004		STATE	0	0	170

These projects were very important in giving Firefighters a safe place to defend the State Park facilities and the historic Boucher Lookout (also a primary repeater site for Fire and Emergency communications). These projects were very important during the Poomacha Fire 2007. Further study of the value of these projects should be a priority.

MVU	HANSON - VMP	44	In Progress	9/1/2006			PRIVATE	0	0	923

This VMP was ready to go. The entire project was consumed by the Harris Fire 2007.

FHEP	RANCH CORTE MADERA FUEL BREAK-NEW MORTALITY	47	In Progress	1/3/2007	1/5/2007		PRIVATE	43	219	383
FHEP	RANCH CORTE MADERA FUEL BREAK-FOLLOW UP TREATMENT	48	In Progress	10/2/2006	10/4/2006		PRIVATE		219	383

This work shall reinforce the existing shaded fuel break on Rancho Corte Madera.

FHEP	PALOMAR OBSERVATORY (FHEP) - FELLING	61	In Progress	9/1/2006	8/1/2007		PRIVATE	0	1640	2016
FHEP	PALOMAR OBSERVATORY (FHEP) - THINNING	62	In Progress	9/1/2006	8/1/2007		PRIVATE	0	1640	2016
FHEP	PALOMAR OBSERVATORY (FHEP) - BURNING	63	In Progress	9/1/2006	8/1/2007		PRIVATE	0	1640	2016
FHEP	PALOMAR OBSERVATORY (FHEP) - DOZER LINE WORK	64	In Progress	9/1/2006	8/1/2007		PRIVATE	0	1640	2016

The immediate surroundings of the Observatory are the first phase of these projects. The work that has been completed made it safer for firefighters and Observatory personnel to defend the facilities. Future burns conducted under the Palomar Observatory VMP shall reduce the fire threat from the east. The Observatory is the safe refuge from wildfire for the community of Palomar Mountain. Though the Poomacha Fire 2007 didn't impact this project directly, the work that had been accomplished made it possible to use the facility for staging and it could have been used for safe refuge.

FHEP	ENGINEER ROAD - TREE FALLING	66	Planned	10/1/2007	STATE
FHEP	ENGINEER ROAD - PILE BURNING	67	Planned	10/1/2007	STATE
FHEP	ENGINEER ROAD - CHIPPING	68	Planned	10/1/2007	STATE

These projects shall secure the "backdoor" evacuation route for the community of Pine Hills near Julian. The Witch Fire 2007 threatened to push back through this community as it did in 2003 during the Cedar Fire. Securing Engineer Road for egress during wildfire is a priority for this area. It should be noted that San Diego County has cleared Dead Dying and Diseased trees along 75% of the length. The remaining shall be cleared in a cooperative effort by CAL FIRE, Cuyamaca State Park, and the NRCS.

Project Name	*Districts*	*Completed*	*Acres*	*Treatment Methods*	*Fuel Type*	*FAST*
Whispering Pines	Julian	2006	267	DDD tree removal	Timber	Grt Julian
Kentwood	Julian	2006	660	DDD tree removal	Mix	Grt Julian
Southern Julian	Julian	2006	1325	DDD tree removal	Timber	Grt Julian
Pine Hills	Julian	2006	2238	DDD tree removal	Timber	Grt Julian
Supplemental Pine Hills	Julian	2006	1350	DDD tree removal	Timber	Grt Julian
Central Julian	Julian	2006	2957	DDD tree removal	Timber	Grt Julian
Supplemental Kentwood	Julian	2006	1432	DDD tree removal	Timber	Grt Julian
Harrison Park Supplemental	Julian	2006	282	DDD tree removal	Timber	Grt Julian
Cuyamaca Woods	Julian	2006	1171	DDD tree removal	Timber	Grt Julian
Julian Various Roads	Julian	2006	102	DDD tree removal	Timber	Grt Julian
Cuyamaca Julian area	Julian	2006	770	DDD tree removal	Timber	Grt Julian
Supplemental Southern Julian Tanglewood	Julian	2006	2491	DDD tree removal	Timber	Grt Julian
Greater Julian	Julian	2007	753	DDD tree removal	Timber	Grt Julian
Volcan FAA Tower Road	Julian	2007	84	DDD tree removal	Timber	Grt Julian
Heise Park	Julian	2006	27	DDD tree removal	Timber	Grt Julian
			15909			
CUYAMACA LAGUNA						
Project Name	***Districts***	***Completed***	***Acres***	***Treatment Methods***	***Fuel Type***	***FAST***
Sunrise Highway Mount Laguna	Laguna	2006	239	DDD tree removal	Timber	Cuy Laguna
Cuyamaca State Park	Cuyamaca	2006	400	DDD tree removal	Timber	Cuy Laguna
			639			
Overall Total			19428.5			

Invited Participants in Scientific Workshop Discussing Vegetation Management

Michael Beck San Diego County Planning Commission

Adam Day San Diego County Planning Commission

Dr. Tom Scott--Facilitator-- Natural Resources/Wildlife Specialist Department of Earth Sciences University of California Riverside as an adjunct professor from the University of California, Berkeley.

Pete Scully CAL FIRE Battalion Chief

Thom Porter CAL FIRE Staff Chief for the southern region of the State

Carlton Joseph Deputy Fire Management Officer Cleveland National Forest

Augie Ghio Chief of San Miguel Fire Protection District and chair of the San Diego County Association of Fire Protection Districts

Rich Hawkins Retired Cleveland National Forest Fire Chief and fire and fuels management specialist

Dr. Jon Keeley United States Geological Survey and adjunct professor University of California Los Angeles.

Bret Goforth UC Riverside Graduate student studying Coulter Pines for dissertation

Dr. Richard Minnich Professor of Geography, UC Riverside

Dr. Anne Fege San Diego Natural History Museum. Dr. Fege is past supervisor for the Cleveland National Forest

Rick Halsey representing the Chaparral Institute

Clay Howe Fire Mitigation/Education Specialist Palm Springs-South Coast Fire Mitigation Bureau of Land Management

Jeff Murphy Deputy Director County of San Diego

Ralph Steinhoff County of San Diego

Ken Miller County of San Diego

Tom Oberbauer County of San Diego

Bob Eisele County of San Diego

Dr. Philip Riggan Scientist Forest Fire Laboratory, USDA Forest Service from the Riverside Forest Fire Lab.

Gary Reece Fire Management Specialist for California State Parks

Carl Bell Regional Advisor-Invasive plants with the University of California Cooperative Extension Program.

Dr. Edith Allen Cooperative Extension Natural Resource Specialist and Professor of Plant Ecology, University of California Riverside

Dr. Peter Sadler Professor of Geology, University of California Riverside

Kurt Roblek US Fish and Wildlife Service.

Dave Lawhead California Department of Fish and Game

Ann Bowers UC Riverside Graduate Student who is participating in conducting the surveys

Gregory Miller UC Riverside Graduate Student who is participating in conducting the surveys

Jan Gonzales wildfire project coordinator at the Farm and Home Advisors Office of the UC Cooperative Extension Program in the San Diego

Dr. Max Moritz Assistant Cooperative Extension Specialist, Adjunct Assistant Professor University of California Berkeley

Dr. Alexandra Syphard Conservation Biology Institute.

Will Metz is Forest Supervisor for the Cleveland National Forest

Thomas Brand is Forest Fuels Officer for the Cleveland National Forest

Acree Shreve Acting Deputy Forest Fire Chief for the Cleveland National Forest

Dr. Wayne Spenser Conservation Biology Institute