Santa Barbara County Communities

Wildfire Protection Plan

Sycamore Canyon Fire - 1977

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Wildfire Protection Plan

EXECUTIVE SUMMARY

Prescribed burn, target planning block, completed burn, wildfire, and Copter 308 with helitorch attached.

Plan Status and Direction

Santa Barbara County Fire Department (SBC) personnel have prepared this annual update to the unit fire management plan to fulfill administrative responsibility as an agent to the California Department of Forestry and Fire Protection (CDF). In addition to fulfilling the administrative obligation to CDF, the preparers are attempting to format this document so as to comply with federal guidelines as well. As a result of the 2003 Healthy Forests Restoration Act, guidelines have been set forth for the development of Community Wildfire Protection Plans (CWPP). Consequently, this document has been formatted with the goal of achieving CWPP compliance. The name of the plan has also been changed to the Santa Barbara County Communities Wildfire Protection Plan. A third goal in the formatting of the plan is to incorporate the wildfire hazard element of the Multi-Jurisdiction Hazard Mitigation Plan required by the Disaster Mitigation Act of 2000. As the State forest agent, the Santa Barbara County Fire Department is soliciting cooperation, collaboration and concurrence with local

governments and fire agencies, along with the Federal agencies to develop a countywide CWPP.

Wildfire Situation

Due to record winter rainfall the current seasonal wildfire situation in Santa Barbara County is, like much of Central and Southern California, late and mild in nature. For the period beginning January 1, 2005 to the month of July, the Santa Barbara County Fire Department has responded to approximately 49 wildfires that burned approximately 49 acres. Although the wildfire season has been mild with no large, damaging or costly fires to date, live fuel moistures appear to be dropping to levels typical for this time of year. Typical live fuel moistures and an abundance of light flashy fuels could produce high rates of spread and high intensities later in the season.

Activity Status

There has been progress towards implementing several of the programs, projects and activities outlined in the 2004 wildfire management plan. In the at-risk community of Mission Canyon, a large-scale wildfire evacuation drill was successfully conducted, a grant was applied for and has been awarded for a roadside hazard reduction maintenance project, a Vegetation Management Program (VMP) project has been proposed for the upper end of Tunnel Road, the annual hazard reduction program (PRC 4192), and strategic fire access road maintenance programs have been completed. In the at-risk communities of Vandenberg Village and Mission Hills, SBC has been working with the California Department of Fish and Game to implement a defensible space fuel break in the interface of these communities, several meetings have taken place to increase awareness and provide wildfire education and to encourage stakeholders to become members of the Santa Barbara County Fire-Safe Council. In the at-risk community of Tepusquet Canyon, several wildfire awareness meetings have taken place with the resulting participation in the Santa Barbara County Fire-Safe Council, four potential VMP projects have been identified, roadside hazard reduction was completed by the newly re-commissioned SBC handcrew, and the

annual hazard reduction program was completed. Significant progress has occurred on the Painted Cave VMP project where handcrews have cut, stacked and burned approximately five acres of vegetation. A wildfire safety awareness meeting was conducted in the at-risk community of Refugio Canyon. VMP projects have been identified for the Jalama Road and Santa Ynez areas.

THE PLANNING PROCESS

Collaborating with stake holders, FireSafe Council meeting and planning a prescribe burn.

Background

Working with the State Board of Forestry, the California Department of Forestry and Fire Protection developed the California Fire Plan in answer to Legislative direction codified in the California Public Resources Code (PRC).

Purpose

The WPP is structured to articulate the County wildfire situation to the Director of CDF, the various stakeholders, and the administrative and elected officials charged with developing fiscal policy. The WPP is also intended to convey management direction from the County Fire Chief, educate the stakeholders on the wildfire environment and explain the processes used to identify strategic targets for pre-fire solutions. Finally, the intent of the WPP is to organize the myriad of wildfire prevention and suppression projects and programs into a single unified plan.

Goals and Objectives

California Fire Plan Goal

Reduce total costs and losses from wildfire in California by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success.

California Fire Plan Objectives

- To create wildfire protection zones that reduce the risks to citizens and firefighters.
- To assess all wildlands, not just the state responsibility areas. Analysis will include all wildland service providers - federal, state, local government, and private. The analysis will identify high risk, high value areas and develop information on and determine who is responsible, who is responding, and who is paying for wildland fire emergencies.
- To identify and analyze key policy issues and develop recommendations for changes in public policy. Analysis will include alternatives to reduce total costs and losses by increasing fire protection system effectiveness.
- To have strong fiscal policy focus and monitor the wildland fire protection system in fiscal terms. This will include all public and private expenditures and economic losses.
- To translate the analysis into public policies.

Community Wildfire Protection Plan Goal

The Consolidated Planning Process

The WMP also has direct relationships with other plans, programs and agreements, such as the County Comprehensive Plans, Fire Department Strategic Plan, U.S. Forest Service - Land Management Plan, U.S. Forest Service Operating Agreement, Bureau of Land Management Operating Agreement, Santa Barbara City Fire Department Wildland Fire Plan, Montecito Fire District Wildland Fire Plan, U.S. Bureau of Reclamation - Cachuma Lake Management Plan, UCSB Sedgewick Reserve Fire/Vegetation Management Plan, California Department of Fish And Game – Burton Mesa Ecological Reserve Management Plan and the Fire Protection Agreement - Operating Plan between the California Department of Forestry and Fire Protection and the Santa Barbara County Fire Department.

Administrative Oversight and Approval

For the CFP element, the Santa Barbara County is one of six “contract counties" (Santa Barbara, Ventura, Los Angeles, Orange, Kern, and Marin), which has

executed a contract with the State of California to provide wildland fire protection on state responsibility area (SRA). As such the Santa Barbara County Fire Department functionally operates as a Unit of the California Department of Forestry and Fire Protection (CDF) and is responsible for all California Fire Plan activities within the County. One of the primary California Fire Plan activities is completion of what CDF refers to as the "Unit Fire Management Plan" and which this document, the Santa Barbara County Communities Wildfire Protection Plan, is intended to fulfill.

In addition to the administrative responsibility that the Santa Barbara County Fire Department has in relation to the California Fire Plan, as the representative State agency responsible for forest management, the Santa Barbara County Fire Department must agree to the final contents of any CWPP in the County.

For the CWPP element, the local government and local fire departments agree on the final content.

Stakeholder Collaboration and Concurrence

A stakeholder can be defined as any person, agency or organization with a particular interest – a stake – in fire safety and protection of assets from wildfires. The stakeholders already identified include federal, state, local, private agencies, or interest groups, with assets at risk from wildfire.

The Santa Barbara County Fire Department is attempting to involve as many stakeholders as possible in the development of the SBC CWPP. The process of identifying stakeholders and their interests is an ongoing process and will be evaluated continuously through the evolution of future unit wildfire management plans. The Santa Barbara County Fire Department will participate with as many stakeholders as is possible and continually update planning efforts involving stakeholder input.

Santa Barbara County FireSafe Council

The Santa Barbara County Fire Safe Council was formed in January of 1997

after a presentation from the California Department of Forestry and Fire Protection. Representatives from all local fire agencies and a collective group of some forty-five plus members of the community were present. The FSC is organized as a non-profit organization and has 501c (3) tax-exempt status with the Franchise Tax Board and the Internal Revenue Service, tax identification number 77-0459954. The FSC has a Board of Directors (Chairperson, Treasurer, Secretary, and seven directors) and has adopted by-laws with the mission statement for the FSC being: "To unify public and private organizations to educate, motivate and coordinate Santa Barbara County communities to minimize the losses associated with wildfire".

The Fire Safe Council (FSC) is instrumental in bringing a conglomeration of stakeholders to "the table." The council sheds light on many concerns within communities and expose information relating to the effectiveness of fire safe efforts in the County. Through the council's diversity, agencies have been able to develop pre-fire projects that otherwise may never have developed.

Plan Implementation

As the plan evolves and matures the concept is that all of the stakeholders will use the plan to implement programs, projects and activities to achieve the goals documented in the plan.

Plan Monitoring, Evaluation and Updating

All of the stakeholders will collectively and collaboratively monitor and evaluate the plan on a regular basis. The plan will updated in the same fashion on an annual basis.

Santa Barbara County Communities
Wildfire Protection Plan

COMMUNITY DESCRIPTION

Oak Trails, Engine 324, Water Tender 32, Refugio Canyon, and Copter 308 with helitorch attached.

Governance

Santa Barbara County was established by an act of the State Legislature on February 18, 1850. The County is a general law county and political subdivision of the State of California. The constitution and laws of the State establish the County's rights, powers, privileges, authority, functions, and duties. The powers granted California counties by State statute include the power to: sue and be sued, purchase, receive by gift or bequest and hold land within its limits, or elsewhere when permitted by law; make contracts and purchase and hold personal property necessary to the exercise of its powers; manage, sell, lease, or otherwise dispose of its property as the interest of its inhabitants require; levy and collect taxes authorized by law; and exercise such other and further powers as may be especially conferred by law, or as may be necessarily implied from those expressed.

The County is divided into five supervisory districts based on population, as required by State statute. Supervisors are elected from each district by the voters of the district to serve staggered four-year terms. The Chair is elected by and from, members of the Board. The Board exercises the powers of the County. By County ordinance, the Board is required to hold meetings on the first four Tuesdays of every calendar month and at such other times as, in the opinion of the Board, the public interest may require.

The Board exercises the legislative powers of the County and other County officials oversee the County's daily operations. County administration includes officials appointed by the Board of Supervisors and officials elected by countywide vote, including the Auditor-Controller, the Treasurer-Tax Collector, the County Clerk-Recorder-Assessor, the District Attorney, and the Sheriff. Many boards, commissions, and committees assist the Board of Supervisors and County officials.

Counties perform a dual role in providing comprehensive government services to their residents. First - as a local government entity responsive to the residents in the unincorporated areas of the county, second - as a regional government and agent of the State. As a local government entity, the County of Santa Barbara provides services such as sheriff's patrol and fire protection, road construction and maintenance, planning, zoning, and building permits, solid waste collection, and an affordable housing program. Through special districts and County Service Areas the County also provides sewer, street lighting, and redevelopment services to unincorporated areas of the County. Other entities within the County provide services to the County's unincorporated area population even though the County may not exercise oversight responsibility or fiscal control over such entities. These entities include school districts, water, sanitary and other special districts. Services provided county-wide include district attorney and public defender, flood control, parks and libraries, and the assessment, collection, and distribution of property taxes to all local governments including cities and schools. As an agent of the State, the counties, including the County of Santa Barbara, are required to administer many of the State's health, welfare and criminal justice programs of greater statewide concern.

Government Services

Countywide Services provided to all residents: Court Services, District Attorney and Public Defender, Public Health, Mental Health, Social Services, Parks and Beaches, Veteran Services, Probation, Flood Control, Library Services, Agriculture Commissioner.

Services to the Unincorporated Area: Sheriff's Patrol, Planning & Zoning, Building Permits, Roads, Street Lights, Fire Protection, Trash Collection and Recycling.

Contract Services to Incorporated Cities: Sheriff's Patrol to Cities of Carpinteria, Buellton, and Solvang, Building Permit Processing to Cities of Buellton, and Solvang, Animal Control (Field and Shelter Services) to all Cities, except Carpinteria (Shelter Services only) Library Services for the Cities of Santa Barbara, Santa Maria, and Lompoc.

Population

On January 1, 2001, the California Department of Finance estimated the County population to be 408,900, with eight incorporated cities: Santa Barbara, Santa Maria, Lompoc, Carpinteria, Guadalupe, Solvang, Buellton and Goleta. The largest cities in the County and their respective populations are: Santa Barbara, the County Seat, at 94,200; Santa Maria at 80,000; Lompoc at 42,150; and Goleta at 29,595. The unincorporated area on January 1, 2001, with a population of 162,500, is comprised of several communities: Orcutt, Los Alamos, Isla Vista, Los Olivos, Ballard, Santa Ynez, Sisquoc, Garey, Tepusquet Canyon, Hope Ranch, Hollister Ranch, Vandenberg Village, Mission Hills, Cuyama, Summerland, Montecito, Casmalia, Refugio Canyon and Gaviota.

Demographics

According to the 2000 Census, the population in Santa Barbara County was almost equal in ratio of male to female. The median age was 33.4 and 75.1% of the population was 18 years and over.

Employment

The largest employment categories in the County include services, healthcare, education, manufacturing, retail trade, public administration, and agriculture. The mild climate, picturesque coastline, scenic mountains, and numerous parks and beaches make the County a popular tourist and recreational area.

Socioeconomic Trends

Santa Barbara County's economy is expected to continue to grow at a very slow rate. The rate of real economic growth in both 2001 and 2002 was considerably below that of the late 1990's. The September 11th terrorist attacks and current uncertainty regarding the California budget, the economy, and geopolitical affairs discourage investment and growth.

Geography

Santa Barbara County is located on the Central Coast of California, approximately 100 miles northwest of Los Angeles and 300 miles south of San Francisco. The County occupies 2,774 square miles, one-third of which is located in the Los Padres National Forest. Bordered on the West and South by the Pacific Ocean, the County has 110 miles of coastline. The Counties of Ventura, San Luis Obispo and Kern border the County.

Ranges of hills generally bisect the County west to east, dividing it into its northern, central and southern portions. The South Coast area is a narrow coastal terrace between the Pacific Ocean and the Santa Ynez Range, extending from Rincon Point on the east to Point Conception on the west. The Santa Ynez Range rises from 1,500 to 4,000 feet and is characterized by sharp transverse ridges separated by steep-walled canyons.

The Central area of the County is characterized by lower rolling hills and broad, flat valleys. The east-west trending Santa Ynez River forms the Lompoc and Santa Ynez Valleys. These valleys, together with the Santa Rita Valley and Santa Rita Hills comprise the southern portion of the central coast lowlands. The Santa Ynez River lies between the Santa Ynez Range on the south and the

Purisima Hills on the north. The northern portion of the central coast lowlands is defined by the Purisima Hills on the south and the Casmalia and Solomon hills on the north. These hills range from 1,340 to 1,840 feet and define the San Antonio Valley and the Los Alamos lowland. The Santa Maria Valley lies just north of the Casmalia and Solomon hills and extends northward into San Luis Obispo County, eastward toward the town of Sisquoc, and westward to the Pacific Ocean.

The northeastern area of the County is a diverse region lying almost entirely within the Los Padres National Forest. The Sierra Madre Range binds the Cuyama Valley in the extreme northeast corner on the south with elevations up to 5,485 feet. South of the Sierra Madre Range lies the Sisquoc River Valley and south of this lies the San Rafael Mountains. Big Pine Mountain (6,828 feet), the highest point in the County, is in the San Rafael Range.

The County of Santa Barbara has land use regulatory jurisdiction in all unincorporated lands not within the jurisdiction of the Federal or State governments. Major Federal land holdings within the County include 153.75 square miles (98,400 acres) of Vandenberg Air Force base and approximately 1,211 square miles of (775,040 acres) of Los Padres National Forest. State lands within the County include a total of 4.76 square miles (3,047 acres) of State beaches and 1.5 square miles (966 acres) at La Purisima Mission in the Lompoc area.

Climate

Santa Barbara County has a semi-arid Mediterranean climate, characterized by warm dry summers and mild winters. Sunny skies are common throughout most of the area, although seasonal low clouds and fog occur with some frequency over the Pacific Ocean and in the immediate coastline. Mild temperatures occur throughout the year, particularly near the coastline. Considerably more temperature variation occurs in the inland valleys and mountainous areas. Maximum readings in summer average about 80°F near the coast to 105°F in the interior. In winter, minimum temperatures can range from the 40's along the

coast to the 30's inland. Precipitation is confined primarily to the winter months. Annual averages range from about 6 inches in some inland areas to over 30 inches in higher mountain areas. Occasionally, tropical air masses bring rainfall in summer months. In general, the mountains of the southeastern part of the County receive 20 to 25 inches of rainfall in the course of the year, with less than 20 inches being characteristic of the immediate southern coastline. Most of the western half of the County receives from 11 to 15 inches of precipitation, up to 20 inches or more falling at some high elevation points in the Santa Ynez Mountains and in parts of the San Rafael Mountains.

Seasonal totals vary considerably from year to year. Low elevations in the western part of the County, for example, receive as little as 5 inches in the driest one year out of 20, while in the wettest year in 20 the total is around 25 inches. In heavy rainfall areas of the mountains of the eastern part, annual totals range from a low of 15 inches to a high of 55 inches within a 20-year period. Western stations receive from 10 to 18 inches of moisture in one half of the years, while in the mountains to the east; these figures are 25 to 40 inches.

Wind speeds are usually light to moderate and tend to be highest in association with winter storms. A diurnal wind pattern (land and sea breeze) characterizes most of the area, with westerly (on-shore) winds common in daytime and light easterly (offshore) winds predominant at night. The many deep canyons running out of the coastal mountains towards the coast therefore tend to catch and concentrate these winds, enhancing the fire threat in warm, dry weather.

Santa Barbara County lies in a transitional area between several characteristic air masses. To the west, marine air over the Pacific Ocean exerts a major influence. This area is dominated by a large high-pressure cell, which is present throughout the year but is strongest and most persistent during spring, summer and autumn. This high-pressure cell tends to block storm systems approaching the area from the west, causing them to move well to the north. In addition, clockwise wind flow patterns around the high pressure cell cause relatively cool marine air to flow eastward toward the California coast, producing the

characteristic “sea breeze” conditions. A persistent inversion layer (warm air above cold air) accompanies the high-pressure cell.

A second major air mass region lies over the desert areas of the southwestern United States. The generally warm conditions over the desert cause the near-surface air to rise due to the intense heating near the ground. This produces low atmospheric pressure, which tends to draw in surrounding air, including eastern-moving marine air (the sea breeze) near the Pacific High. Occasionally, however, strong high pressure over the desert causes a reversal of this flow pattern. During such periods, strong gusty east winds (commonly known as Santa Ana Winds) carry inland air toward the coastline and out over the Pacific, leading to clean, clear atmospheric conditions in many areas.

Ecosystems

Santa Barbara is home to many varied and unique ecosystems.

Santa Barbara County Communities

Wildfire Protection Plan

WILDFIRE PROTECTION ADMINISTRATION

Copter 308

The Fire Protection System

The Santa Barbara County Fire Department actually has a dual fire protection role. The Santa Barbara County Fire Department provides structural fire protection and rescue services to the Santa Barbara County Fire Protection District, which encompasses approximately 1,236 square miles (791,040 acres). With the exceptions of the Santa Barbara City area around the airport, City of Buellton and City of Goleta, these lands are outside the limits of the County's eight incorporated cities, although numerous unincorporated communities are within the fire department's jurisdictional boundaries.

The Santa Barbara County Fire Department is also one of six contract counties, which has executed a contract with the State of California to provide wildland fire protection on state responsibility area (SRA). The SRA within the jurisdiction of the Santa Barbara County Fire Department is 686,688 acres.

The Santa Barbara County Fire Department operates 15 Type I capable engines,

9 Type III engines, 3 Type II/III - reserve firefighter staffed engines, 2 bulldozers, 2 Type II helicopters, 3 water tenders, 1 hazardous materials squad, 1 truck company, and 1 breathing support unit from 16 locations.

The publication known as the Gray Book is Exhibit A of the "Contract County Agreement" between the Santa Barbara County Fire Department and the California Department of Forestry and Fire Protection (CDF). The Gray Book identifies resource allocations, which the CDF considers necessary for the protection of SRA and provides funding accordingly.

In addition to the Santa Barbara County Fire Department there are ten other fire agencies providing fire protection within the County of Santa Barbara: Of the eleven fire protection agencies, only the United States Forest Service, Santa Barbara County Fire Department and the Vandenberg Air Force Base Fire Department have wildland fire protection, as part of their primary mission. The primary mission of the remainder of the fire protection agencies in the County is structural fire protection and rescue type services.

Santa Barbara Fire Department
The Santa Barbara Fire Department operates 7 Type I capable engines, 1 Type III engine, 1 hazardous materials squad, 2 airport crash/fire/rescue companies and 1 truck company, from 8 locations. The Santa Barbara Fire Department has 124 fulltime employees organized into three functional areas – 107 employees in Operations, 11 employees in Prevention and 6 employees in Support Services.

Santa Maria Fire Department

The Santa Maria Fire Department operates 3 Type I capable engines, 1 Type III engine, and 1 truck company, from 3 locations. The Santa Maria Fire Department has 37 fulltime employees organized into three functional areas – 31 employees in Operations, 3 employees in Prevention and 3 employees in Support Services.

Lompoc Fire Department

The Lompoc Fire Department operates 2 Type I capable engines and 1 truck company, from 2 locations. The Lompoc Fire Department has 25 fulltime employees organized into three functional areas – 23 employees in Operations, 1 employee in Prevention and 1 employee in Support Services.

Solvang Fire Department

The Solvang Fire Department operates 2 Type I capable engines, 1 Type II/III engine, 1 Type III engine and 1 squad from 1 location. The Solvang Fire Department has 2 fulltime employees.

Guadalupe Fire Department

The Guadalupe Fire Department operates 2 Type I capable engines and 1 squad from 2 locations. The Guadalupe Fire Department has 1 fulltime employee.

DOD - Vandenberg Air Force Base Fire Department

The Vandenberg Air Force Base Fire Department operates 5 Type I capable engines, 1 hazardous materials squad, 5 airport crash/fire/rescue companies, 3 water tenders, 1 hand crew and 1 truck company, from 6 locations. The Vandenberg Air Force Base Fire Department has 124 fulltime employees organized into three functional areas – 107 employees in Operations, 11 employees in Prevention and 6 employees in Support Services.

Carpinteria-Summerland Fire Protection District

The Carpinteria-Summerland Fire Protection District operates 2 Type I capable engines from 2 locations. The Carpinteria-Summerland Fire Protection District has 25 fulltime employees organized into three functional areas – 23 employees in Operations, 1 employee in Prevention and 1 employee in Support Services.

Montecito Fire Protection District

The Montecito Fire Protection District operates 2 Type I capable engines, 1 Type III engine and 1 squad from 2 locations. The Montecito Fire Protection District has 38 fulltime employees organized into three functional areas – 26 employees in Operations, 6 employees in Prevention and 6 employees in Support Services.

Orcutt Fire Protection District

The Orcutt Fire Protection District operates 2 Type I capable engines, 1 Type III engine and 1 squad from 1 location. The Orcutt Protection District has 2 full-time employees.

USDA Forest Service – Los Padres National Forest

The USDA Forest Service – Los Padres National Forest operates 10 Type III engines, 2 Type II Bulldozers, 1 Type I handcrew, 1 Type II helicopter and 1 water tender.

The fire suppression resources in the Santa Barbara County fire protection system that are appropriate to wildfire suppression include: engine companies, particularly Type III engine companies, bulldozers, helicopters, handcrews, air tankers, and water tenders. Although the typical municipal engine company is capable of and is often used for wildfire suppression, the Type III engine company is designed specifically to fight wildfire. The Type III engine carries more tools and equipment for wildfire suppression, has a short wheelbase, high ground clearance and often has four-wheel drive for off-road operation.

Although engine companies are the typical gage for initial attack capability and response time, most wildfires in the initial attack stages require that engine companies be supported with other resources. Many wildfires begin and develop with such intensity and rapid rate-of-spread that bulldozers, aircraft and/or handcrews must supplement the initial engine company response. A fairly recent addition to the Santa Barbara County Fire Department wildfire suppression arsenal, are two Type II helicopters. Of all the recent advancements in Santa Barbara County Fire Department capabilities, the addition of the helicopter is the most significant in terms of addressing the true "fire problem" in the County. The Type II helicopter is particularly versatile in the wildland-urban/interface fire. Not only is it capable of dropping 300 gallons of water in rapid succession, it can also act as an aerial observation platform for tactical and evacuation purposes and can perform rescue operations.

The Santa Barbara County Fire Department's two bulldozers have been a mainstay in the wildfire suppression program for many years and remain so despite some perception that they are environmentally insensitive. Fire agency bulldozer operators are experienced in rapidly constructing fire line while minimizing any negative environmental impacts. The Santa Barbara County Fire Department Type III engine fleet is being upgraded and in some cases company staffing levels have been increased, which has improved the overall wildfire initial attack capability. In July of 2005 the Santa Barbara County Board of Supervisors authorized the re-establishment of a 24 person handcrew for a trial period of six months. This resource is proving to be invaluable for both suppression and pre-suppression purposes.

Both the USDA Forest Service – Los Padres National Forest and the DOD Vandenberg Air Force Base Fire Department staff 20-person inter-regional "Hotshot" handcrews. Hotshot crews are highly trained and organized wildland firefighting crews that are extremely versatile. The CDF maintains conservation camps in Ventura and San Luis Obispo Counties that house inmate handcrews.

Cooperative Fire Services

A cornerstone of the fire protection system in Santa Barbara County is the Master Mutual Aid Plan. Just as is the case at the State level, no single fire agency can muster the resources necessary to combat multiple fires or large fires on an ongoing basis. The California Fire Master Mutual Aid Agreement requires each county to have a mutual aid plan. Because several cities and unincorporated areas of the County provide their own fire protection services, the Santa Barbara County Mutual Aid Plan becomes an essential mechanism for coordinating fire protection resources.

Mutual Aid takes on several different forms. For initial attack purposes, "local mutual aid" facilitates the day-to-day responses where the closest resources are dispatched regardless of jurisdictional boundaries. Although local mutual aid fills a gap in the county fire suppression system, the approach is still not ideal. Because several of the agencies maintain their own dispatch centers, any mutual aid request must be relayed between dispatch centers, creating the potential for error and increasing response times. Duplication of services frequently occurs as a result of either different operational or administrative policies.

Fiscal constraints also hinder system effectiveness. With agencies under pressure to reduce costs, providing mutual aid can become a source of concern that the aid is not reciprocal.

If an incident requires reinforcement resources that cannot be met through local mutual aid agreements, the California Fire Service and Rescue Emergency Mutual Aid Plan is followed. All fire service entities in California are signatory to the California Fire Service and Rescue Emergency Mutual Aid System, Master Mutual Aid Agreement.

Fire Suppression Policies and Philosophy

As mentioned in other areas of this document, "initial attack" is the primary focus of wildfire suppression activities for the Santa Barbara County Fire Department. As a "Contract County," Santa Barbara County Fire Department is contractually obligated to provide an initial attack force designed to achieve the goal of

containing 90% of all wildfires occurring on SRA to 10 acres or less. With so much emphasis placed on quickly extinguishing all wildfires, it might seem that all fire in the wildland is a bad thing. Quite to the contrary, fire is absolutely a necessary element in most the County's ecosystems. Since too many assets are at risk to allow the natural occurrence of wildfire, prescribed or controlled burns must take the place of naturally occurring wildfire.

The human element is always the number one priority for all fire suppression efforts. Many rules and guidelines have been developed to stress firefighter and public safety during wildfires. These rules and guidelines can be helpful for the layperson to understand why firefighters may say or do certain things related to wildfire. Some of these rules and guidelines are: "The Ten Standard Firefighting Orders," "The Eighteen Watchout Situations," "Common Denominators of Fire Behavior on Tragedy and Near-miss Forest Fires," "LCES – Lookouts, Communications, Escape Routes, Safety Zones," "Look Up, Look Down, Look Around." On occasion firefighters have been quoted as saying things such as, "we're not going in there, that place is going to burn," or "we can't do anything, mother nature will just have to take its course" and while these statements might be true at a given time, it shouldn't be misconstrued to mean that firefighters are helpless once a fire escapes initial attack.

With all wildfires, certain strategic and tactical actions must take place. From the time of alarm to the abandonment or closure of a wildfire, one single unified entity must be in command of the incident. To accomplish this, all fire agencies in the County and in the State, for that matter, use the Incident Command System (ICS). Tactically all wildfires must be anchored, which means that a secure starting point is established from which all other strategic and tactical decision-making can build upon.

Once a wildfire grows beyond the initial attack stage where there are assets at risk, particularly in the wildland/urban interface/intermix, two additional dimensions are added to the already complex nature of wildland firefighting. In addition to anchoring and flanking the fire to narrow the flame front, firefighting resources must also be committed to protecting assets out in front of the fire and

resources must be left to protect assets from residual embers and fire after the fire passes through.

Although fire is a necessary component of the local ecosystem, in most cases, unchecked wildfire is no longer a viable fire/fuel management option in Santa Barbara County. Mostly because of population growth, assets at risk have interfaced and intermixed with the wildlands to such an extent that uncontrolled fires must be quickly extinguished. Therefore, an aggressive initial attack firefighting strategy is at the heart of the wildfire protection system in Santa Barbara County.

The initial attack concept relies on the system being designed to provide enough resources, of an appropriate type, in an expeditious enough manner to suppress a wildfire before it causes unacceptable damage. For initial attack, as well as extended attack purposes, applying the appropriate type of resources is paramount to a successful operation.

Programs, Projects and Activities

The Santa Barbara County Fire Department maintains a multitude of programs designed to reduce the costs and losses associated with wildfire. The Hazard Reduction Program provides defensible space through the annual application of PRC 4291. The Strategic Fire Access Road Program is maintained by the Construction Section who in turn keep many miles of unimproved roads accessible to firefighting forces. The Vegetation Management Program provides a mechanism for conducting large scale projects using prescribed fire and mechanical means that can reduce hazardous wildland fuels. In conjunction with the FireSafe Council, the department participates in many community education and outreach programs designed to increase awareness of the wildfire problem and how to deal with it. The High Fire Hazard Area Burn Permit Program gives property owners in high fire hazard areas a means of disposing of hazardous vegetation through burning. The Planning and Engineering Program establishes regulations and oversight for development in hazardous fire areas. The Investigation and Enforcement program determines cause and enforces

regulations for the purpose of reducing the number of wildfires. And finally the Initial Attack Wildfire Suppression Program is intended to keep wildfires to ten acres or less.

Funding and Fiscal Framework

As the WPP evolves, this section will document who receives the benefits and who pays for the fire protection services being provided in the county. This section will also describe grant administration through the National Fire Plan as well as other sources. The various governmental budget processes will be discussed here as well. The goal is to provide a complete fiscal framework for wildfire protection in the county.

Institutional Issues

Issue: With air quality being an issue for the constituents of Santa Barbara County, as well as being an asset at risk, substantial limitations apply to the use of fire for fuel reduction.

Issue: High fire hazard area development standards.

Issue: The City of Santa Barbara and the Montecito Fire District have begun the construction of a fuel break in the foothill interface area. There exists a gap between these two areas that is Santa Barbara County Fire Department. With open ends, the value of this fuel break is severely limited.

Issue: Weather data collection for historical tracking of severe fire weather, real-time tracking of weather conditions for pre-fire management projects such as prescribed burns, fire danger rating notifications, and red flag fire alert notifications is severely lacking due to the limited number of remote automated weather stations (RAWS) representing the varied climatic areas of the County.
Issue: The US Forest Service has a large fuel management project planned for the Brookshire area of the Santa Lucia District of the Los Padres National Forest. This project uses prescribed fire to treat 31,433 acres of old age class fuels which directly benefits the Tepusquet Canyon area of Santa Barbara County.

There is a large area of SRA land between the Forest Service project and Tepusquet Canyon, which should be treated in order to enhance the benefits of the Forest Service project to the Tepusquet Canyon area.

Issue: The high-risk interface/intermix areas of the County need a consistent and comprehensive fire danger rating and red flag warning system.

Issue: The Burton Mesa area of the County has several residential communities that interface with a large wildland area with very old age class fuels that is for the most part managed by the California Department of Fish and Game. This interface poses significant risk to both the structures in the community and to the wildland area, which consists of several endangered plant species.

Issue: The Oak Trails, Woodstock, and Rancho Ynecita areas of the Santa Ynez Valley are adjacent to the Sedgewick Reserve that is managed by the University of California, Santa Barbara (UCSB). The Reserve has a number of acres that has old age class fuel that has been identified in the Reserve Management Plan for prescribed burning.

Issue: Many high fire hazard area community members are interested in conducting fuel reduction projects on their own properties, but don't have the means to dispose of the cut vegetation.

Issue: The current hazard reduction programs administered by the County Fire Department and other fire agencies have considerable workload requirements that can limit the effectiveness of these programs.

Issue: The Range Improvement Association of Santa Barbara County and the Vegetation Management Program conduct prescribed (controlled) burns that face considerable constraints on when and how these burns will be conducted. Due to air quality issues, only a limited number of days are considered favorable from an air quality standpoint. For biological reasons, some entities feel that frequent burning cycles can convert the fuel type to grasses from heavier fuels. Due also to biological reasons, some entities desire that prescribed burning be conducted during specific times of the year in order to mimic somewhat natural burning

conditions and not disturb the nesting and or reproduction of birds and other animals.

Issue: Because of the expense associated with large-scale training exercises, training associated with commanding a large wildfire in the interface has only occurred on a limited basis.

Santa Barbara County Communities

Wildfire Protection Plan

WILDFIRE HAZARD

Chipping at the *Trout Club and prescribe burn near Los Alamos.*

Components of the Wildfire Environment

A cursory understanding of the wildfire environment is helpful in understanding the fire problem in Santa Barbara County and what projects and programs are most effective in preventing large loss incidents. The wildfire environment can be regarded as the conditions, influences, and modifying forces that control wildfire behavior. Firefighters become skilled at recognizing the status of three components that make up the wildfire environment. The nature and/or condition of fuels, weather and topography dictate the likelihood of a fire starting, the direction and rate of spread a fire takes and the intensity at which a fire burns.

Fuel

Wildland fuel is the vegetation layer that covers the topography. Fuel provides the thermal energy source upon which fire behavior relies.

Weather

Weather is the most variable component of the fire environment and can change rapidly in space and time. Weather represents such elements as temperature, wind, relative humidity, cloud cover, precipitation, and atmospheric stability.

Topography

Topography includes such elements as slope, aspect, elevation and configuration or lay of the land. In relation to time, topography can be considered static, for the forces that change it generally work very slowly. In horizontal space, however, topography can change quickly, particularly in mountainous country.

Wildfire Regime and Condition Class

It is a commonly accepted concept that fire is a necessary part of the natural life cycle of the chaparral ecosystems in Santa Barbara County. Without fire, the chaparral-covered terrain of Santa Barbara County reaches an unhealthy state where the ratio of dead material to live plant structure becomes unbalanced. As the chaparral ages, more and more decadent growth adds to the fuel load (expressed in tons per acre), which contributes to the high intensity, costly, large loss wildfires. Historically, fires occurred naturally as a result of lightning or were introduced by native inhabitants. The Chumash Indians, during the late 18th century, were said to have purposefully burned the native vegetation to promote the growth of certain plant resources. The occurrence of fire on a regular basis, whether natural or introduced, tended to promote ecosystem health and reduced the number of large acreage, high intensity fires.

As the County continues to grow in population, values at risk are encroaching on and intermixing with the wild lands. Consequently, wildfires threaten the values at risk and are seen as bad and should be extinguished promptly. Suppression efforts are quite successful, but result in the eventual, unnatural build-up of fuel for fire, making wildfires more intense and more destructive. Although the fire protection system has become more efficient, those fires that do escape initial

attack efforts can quickly overwhelm the available suppression resources. Wildfires, under certain severe fire weather conditions such as a “Sundowner” wind event, can prevent initial attack resources from suppressing the fire, while still small and can spread so quickly and threaten so many values at risk that suppression resources cannot arrive quickly enough to prevent a majority of the damage.

Wildfire History

Santa Barbara County has experienced many large, damaging and costly wildfires. A historical look at the damaging and costly wildfires in the County indicates that all other threats to life, property and the economy pale in comparison. In one wildfire incident, the “Paint Fire,” more structures were lost at a higher cost than individual structure fires occurred in a ten-year period from 1991 –2000.

Considering that the County has experienced many catastrophic fires of this nature, it is evident that addressing the wildfire problem needs to be a top priority for the Santa Barbara County Fire Department.

The Current Wildfire Problem

Determining the wildfire problem in Santa Barbara County involves assessing the interrelated results of many chaparral covered, fire dependent ecosystems, the resulting weather of a Mediterranean climate, the values at risk, and the fire protection system’s ability to deal with the occurrence of wildfire. A major element of the California Fire Plan is an extensive assessment processes, that graphically depicts fuels, weather, level of service and assets at risk data, in a computer based Geographic Information System (GIS). The GIS thematic layers are then continually field-validated and used to identify the wildland urban-interface/ intermix fire problem. The CDF Fire and Resource Assessment Program (FRAP) has built a methodology of assigning fire hazard ranks to the diverse landscapes of California using United States Geological Survey (USGS) 7.5 minute quadrangle maps, which are partitioned nine by nine into 81 cells.

Each cell is approximately 450 acres and is referred to as Q81st cells.

Structural Ignitibility

An element of the fire problem equation that has been addressed to a large extent revolves around construction materials, location of structure in relation to topography and defensible space in relation to potentially flammable vegetation.

Santa Barbara County Communities

Wildfire Protection Plan

WILDFIRE RISK ASSESSMENT

Highway 101, Harris Grade, Cachuma Lake, Burton Mesa and Santa Ynez Peak.

Hazardous Fuels

Santa Barbara County has 686,688 acres of state responsibility area, the bulk of which is covered with fire prone vegetation. Additionally, there are 877,728 acres of federal responsibility area (FRA) and 191,744 acres of local responsibility area (LRA) within the County. These large areas of vegetation are commonly referred to as “fuel beds” and are often large in size due to steep topography and lack of roads or natural barriers. These large fuel beds are on some of the nation’s steepest and roughest topography. The average slope in the wildland areas is 40%.

Chaparral provides the most widespread wildland fuel threat in Santa Barbara County. It can be found on the slopes of the Santa Ynez Mountains, throughout the Sierra Madre and San Rafael mountains, and locally in northern

Santa Barbara County in the Casmalia, Soloman, Purisima and Santa Rosa Hills, and in the Lompoc and Tranquillion Peak areas of Vandenberg Air Force Base. These chaparral communities are characterized by woody shrubs of chamise, ceanothus and manzanita, which dominate dry rocky slopes and provide erosion control and watershed protection. A unique chaparral community, the Burton Mesa Chaparral, occurs on the sandy terraces north of Lompoc in the Santa Ynez River watershed. This chaparral community includes plants of special concern such as two manzanitas, two ceanothus, an unusual form of coastal live oak and other species of botanic value. Numerous grasslands and fields are found in the County and present the potential for fast moving wildland fires that can transition into heavier fuel beds and tree canopies.

The first step in the hazard assessment process is development of a land/vegetation coverage map for the County from the most recent and detailed vegetation composition and structure information. Vegetation data from a variety of sources are patched together to provide a complete, albeit heterogeneous, surface fuel coverage map for the County. The various vegetation types (fuels) found in Santa Barbara County have specific characteristics that allow them to be categorized according to how they burn.

Translating the variety of vegetation data into stylized fuel characteristics models used to predict fire behavior develops the surface fuel map. This process, known as “cross walking”, translates information on plant species, crown cover and tree size into 13 standard fuel models. The crosswalk process uses other factors, such as watershed boundaries, slope, aspect and elevation, to further refine vegetation/fuel model relationships. The system used to categorize these fuels is documented in the National Wildfire Coordinating Group (NWCG) document NFES 1574 “Aids to Determining Fuel Models for Estimating Fire Behavior” by Hal E. Anderson. These fuel models are commonly referred to as the Fire Behavior Prediction System (FBPS) fuel models. The assessment process further creates four additional custom models to represent non-wildland fuels: (28) Urban Fuels, (97) Agricultural Lands, (98) Water and (99) Barren/Rock/Other. This method produces a fine-grained portrayal of surface

fuel conditions.

The second step is to assign a surface fuel ranking, which introduces topography into the fuels ranking equation. The method first calculates the fire behavior to be expected for unique combinations of topography and fuels under a given weather condition. BEHAVE (Fire Behavior Prediction and Fuel Modeling System - Andrews 1986) provided estimates of fire behavior under standard severe fire weather conditions for FBPS fuel models located on six slope classes: on flat ground and at the midpoints of the five National Fire Danger Rating System (NFDRS) slope classes (USDA Forest Service, 1983). Surface ranks were assigned according to the rate of spread and heat per unit area associated with each unique fuel model-slope combination. Table 1 shows the surface rank, from Moderate to Very High, for unique combinations of surface fuel model and six different slope classes (0-10%, 11-25%, 26-40%, 41-55%, 56-75%, > 76) as derived from USGS 7-1/2 minute Digital Elevation Models (DEM).

Finally, fire perimeter data are used to update fuel model characteristics based on “time since last burned,” to account for both initial changes in fuels resulting from consumption by the fire and for vegetation re-growth. The fuels assessment process includes both current and historic fuel conditions. The historic fuels are those that existed in the climax or mature state before the occurrence of fire or other fuel modification process. After a fuel modification event, such as a fire, the re-growth process goes through a succession of fuel types on its way back to its climax fuel type. This succession is called the “Fuel Dynamic Pathway” (FDP). The FDP is intended to account for growth rates, rainfall, elevation, aspect and other factors that influence an area’s rate of growth.

Total fire hazard includes not only hazard posed by surface fire, but also hazard posed by involvement of canopy fuels. The hazard ranking method includes this additional hazard component by adjusting the surface hazard rank according to the value of the ladder and crown fuel indices. Specifically, the surface hazard rank increases a maximum of one class in all situations where the sum of the ladder and crown fuel indices is greater than or equal to two. Otherwise the final fuel rank is identical to the initial surface rank. For instance, lodge pole pine

types modeled as fuel model 8 have a moderate surface rank on all slopes. However, the presence of ladder fuels in areas of dense canopy cover would result in a final fuel rank one class higher than the surface rank (high instead of moderate) in such areas. Estimates of ladder and crown fuels support assessment of crown fire potential. The ladder and crown fuel indices estimate the relative abundance of these fuels. These indices measure in a rough manner the probability that individual tree torching and/or crown fire would occur if the stand experienced a wildfire during extreme weather conditions. The indices take values ranging from 0 to 2, with 0 indicating "absent", 1 representing "present but spatially limited", and 2 indicating "widespread".

CDF has determined that there are no “low” hazard fuels in California. Consequently, fuels are ranked medium, high or very high. Fuel models 4 (mature brush) and 10 (timber) are always ranked very high regardless of slope.

Historic Severe Fire Weather

Fire behavior is dramatically influenced by weather conditions. Large costly fires are frequently associated with severe fire weather conditions. High temperatures, low humidity, and strong surface winds typify severe fire weather.

The weather assessment considers the different climates of the County, from the foggy coastline to the hot, dry interior valleys and to the cooler windy mountains. Each of these local climates experiences a different frequency of weather events that lead to severe fire behavior (severe fire weather).

The weather assessment uses a Fire Weather Index (FWI) developed by USDA Forest Service researchers at the Riverside Fire Lab. This index combines air temperature, relative humidity, and wind speed into a single value index. This index can be calculated from hourly weather readings such as those collected in the Remote Automatic Weather Station (RAWS) data collection system. The FWI does not include fuel moistures or fuel models. The FWI includes topography only to the extent that RAWS station weather readings are influenced by local topography.

Each quad 81st (Q81) in the County has a weather station assignment in order to establish a link between Q81s and weather data. This link enables the calculation of the number of days of severe fire weather for each Q81, and eventually a link will be established between CFIRS/NFIRS ignitions and Q81s, that will be used to determine the burn indices (from weather data) for each CFIRS/NFIRS ignition, which will be used as part of the Level of Service (LOS) calculation. Weather stations are assigned to Q81s based on local knowledge, completeness of weather data, proximity, and similarities in the weather environment such as elevation, landforms (e.g. within the same basin or ridge), and coastal influence.

Ideally the best weather station assignment is the closest weather station that is within the same fire weather forecast zone and has a complete stream of weather data. Because many zones have no weather stations, and many weather stations have incomplete data, both the amount of data available for each station, and the similarity in weather environment of the weather station and Q81s will be considered. To the extent possible, weather stations are picked that have enough observations to adequately represent ignitions during the peak fire season and are in a physical setting that experiences similar weather conditions as the Q81s being validated.

Ignition Workload

Once a fire starts, success is defined as the ability of the fire protection system to limit damage and costs to within an acceptable level. Determining what an acceptable cost or damage amount would be, is ultimately defining the level of service desired by the stakeholders involved.

Although County Fire Department management, working with stakeholders, must define and provide a particular level of service, the County Fire Department (as the California Department of Forestry and Fire Protection's agent in Santa Barbara County) must, at a minimum, deliver a fire protection system that provides an equal level of protection to lands of similar type in State Responsibility Area (SRA). The legislature has charged the State Board of

Forestry and CDF with providing this equal level of protection to lands of similar type (PRC 4130) in SRA.

To evaluate this, the department is initially using both a performance-based fire protection planning system and a prescription based fire protection planning system. The performance-based approach is used on a limited basis since the dataset collected from the California Fire Incident Reporting System (CFIRS) needs to have fire intensity data attached. Another limiting factor is that the CDF uses an agency specific data collection system called Emergency Activity Reporting System (EARS) that is not consistent with CFIRS. Consequently the CFIRS data will need to be reviewed to categorize low, medium and high fire intensity and will need to be exported to EARS. Once this is accomplished the CDF Level of Service (LOS) calculator can be used.

The performance based approach uses planning belts that group lands of similar type, along with a Level of Service Rating (LOS). The process measures the relative impact of fire on the various assets at risk and produces a level of service rating that is used to compare one area of the State with another, recognizing that the assets at risk may be quite different.

The level of service ranking is expressed as the percentage of incidents where initial attack efforts succeed. Successful initial attack is defined in terms of the amount of resources needed to suppress the fire and fire intensity. It is that effort which contains the fire within an acceptable level of resource commitment, acceptable suppression cost and minimal damage to assets at risk.

A matrix is used to define and display successful initial attacks in this framework. The matrix represents fire sizes and intensities. The body of the matrix contains the fire activity workload for each planning belt. The shaded portion of the matrix indicates fires that would be expected to exceed budgeted suppression costs. The non-shaded portion indicates successful initial attack suppression, fires that are normally contained within allowable suppression cost. The successful initial attacks represented in the non-shaded portion would also represent wildfires that are managed without either adversely affecting the initial attack system's ability to respond to other incidents or expending significant unallocated resources.

Assuming that the prescription based planning fire protection system is properly applied – an appropriate and timely response, with properly equipped and trained firefighters based on fire danger - the matrix can provide wildfire managers with a simple tool to determine where the suppression system would be expected to fail. For example: a medium size, high intensity wildfire might overwhelm a “high” level initial attack response even if an equal level of protection were provided Statewide. This might be the threshold where wildfire managers decide to focus intense pre-fire mitigation projects in order to bring initial attack efforts back into the successful range. On the other hand, a large fire of low intensity where initial attack fails may indicate an un-equal level of protection or some other weakness in the prescription based system.

The prescription based approach focuses primarily on the reasons for an initial attack success or failure. Unfortunately, the prescription based approach makes it difficult to integrate the interrelationships of various fire protection programs, such as the value of fuel reduction programs in reducing the level of fire suppression effort required. The prescription-based approach is useful for establishing initial attack fire suppression standards on those fires that don’t exceed expected suppression costs, as identified in the performance based approach, assuming an appropriate initial attack effort is applied.

Several factors influence the determination of what constitutes an appropriate initial attack effort. Detecting a wildfire in its incipient stage is vital if initial attack resources are to be successful. Response time for the initial attack resources to arrive at and begin taking suppression action on an incident is paramount to success. A response tailored to the incident potential increases the degree of success by applying appropriate reinforcement and resource type. For example, engine companies are usually the closest resource dispatched to a wildfire and are typically the measuring stick for response times. However, an engine company that encounters an incipient wildfire with intensity beyond its capability might only be successful with resources such as water-dropping helicopters air tankers, handcrews and bulldozers included in the initial attack response. The Fire Characteristics Charts are useful guidelines for understanding initial attack resource capability. Staffing levels, training and physical fitness are also

important elements of wildland firefighting success.

Assets at Risk

Knowledge of the types and magnitudes of assets at risk to wildfire, as well as their locations, is critical to fire protection planning. Given the limits on fire protection resources, they should be allocated, in part, based on the magnitude of the assets being protected. Knowledge of assets at risk is necessary to choose those pre-fire management projects that will provide the greatest benefit for a given amount of investment. At this stage of development of the WMP, Santa Barbara County Fire Department's primary concern is reducing the fire risk and potential loss of the various assets described here in an effort to provide for the safety and protection of life and property while reducing suppression costs.

The plan will establish a methodology for defining assets protected and their degree of risk from wildfire. The primary purpose of wildfire protection in Santa Barbara County is to protect the wide range of assets. The department has assessed eight different assets at risk. Each asset is listed with the assessment methodology used. The assets addressed in the plan are public and firefighter safety, structures, range, recreation, water and watershed, air quality, soil erosion, cultural and historic resources, unique scenic areas, wildlife and habitat (including rare and endangered species), and air quality. Stakeholders-national, state, local, and private agencies, interest groups, etc. – will be identified for each asset at risk. The asset framework and validation process will be refined as stakeholders are identified and participate in the Fire Plan process. The assessment will define the areas where assets are at risk from wildfire, enabling fire service managers and stakeholders to set priorities for pre-fire management project work.

Asset at Risk	Public Issue Category	Location and Ranking Methodology
Hydroelectric power	Public welfare	1) Watershed area up to 20 miles upstream from run of the river power plants, ranked based on plant capacity; 2) cells adjacent to reservoir based plants (Low rank); and 3) cells containing canals and flumes (High rank)
Fire-flood watersheds	Public safety Public welfare	Watersheds with a history of problems or proper conditions for future problems (South Coastal Plain, field/stakeholder input), ranked based on affected downstream population
Soil erosion	Environment	Ranking of post-fire erosion potential based on weighted combination of fuel characteristics, soil k-factor, slope, and peak rainfall.
Water storage	Public welfare	Watershed area up to 20 miles upstream from water storage facility, ranked based on water value and dead storage capacity of facility
Water supply	Public health	1) Watershed area up to 20 miles upstream from water supply facility (High rank); 2) grid cells containing domestic water diversions, ranked based on number of connections; and 3) cells containing ditches that contribute to the water supply system (High rank)
Scenic	Public welfare	Four mile viewshed around Scenic Highways and 1/4 mile viewshed around Wild and Scenic Rivers, ranked based on potential impacts to vegetation types (tree versus non-tree types)
Timber	Public welfare	Timberlands ranked based on value/susceptibility to damage

Asset at Risk	Public Issue Category	Location and Ranking Methodology
Range	Public welfare	Rangelands ranked based on potential replacement feed cost by region/owner/vegetation type
Air quality	Public health Environment Public welfare	Potential damages to health, materials, vegetation, and visibility; ranking based on vegetation type and air basin
Historic buildings	Public welfare	Historic buildings ranked based on fire susceptibility
Recreation	Public welfare	Unique recreation areas or areas with potential damage to facilities, ranked based on fire susceptibility
Structures	Public safety Public welfare	Ranking based on housing density and exposure (potential for structure loss in a large fire event)
Non-game wildlife	Environment Public welfare	Public and NGO land holdings specifically for protection of non-game wildlife habitat, ranked based on fire susceptibility.
Game wildlife	Public welfare Environment	Omitted due to lack of methodology/available data
Infrastructure	Public safety Public welfare	Infrastructure for delivery of emergency and other critical services (e.g. repeater sites, transmission lines, transportation corridors)
Ecosystem Health	Environment	Ranking based on condition class, potential for ecological damage from a severe fire event due to deviation from historical fire return interval

As part of the overall fire plan process, assets will be addressed at two levels. First, generalized assets at risk need to be identified within the County to indicate what areas contain highly valuable assets. The areas with the highest combined asset values and fire risk are then targeted for pre-fire management projects, particularly where such projects will reduce damage should a fire start in the project area during high fire hazard weather.

Santa Barbara County Communities

Wildfire Protection Plan

AT-RISK COMMUNITIES AND TARGET PLANNING BLOCKS

Mission Hills, Tepusquet Canyon, Jonata Springs, Mission Canyon and Painted Cave.

Cachuma Lake

Cachuma Lake is located approximately 16 miles northwest of the City of Santa Barbara.

Cebada Canyon

Cebada Canyon is located approximately five miles northeast of the City of Lompoc.

El Capitan

The El Capitan area is located approximately ten miles west of the City of Goleta.

El Sueno

The El Sueno area of Santa Barbara is located near the intersection of Highway 154 and Cathedral Oaks Road.

Figueroa

The Figueroa area is located ten miles northeast of the City of Solvang.

Gobernador Canyon

The Gobernardor Canyon area is located two miles north of the City of Carpinteria.

Goleta

The City of Goleta is located west of the City of Santa Barbara on the south coast of the county.

Hollister Ranch

Hollister Ranch is located west of Gaviota.

Hope Ranch

Hope Ranch is located between the City of Santa Barbara and the City of Goleta on the south coast of the county.

Jonata

Jonata is located two miles north of the City of Buellton.

Miguelito Canyon

Miguelito Canyon is located one mile south of the City of Lompoc.

Mission Canyon

Mission Canyon is located north of the City of Santa Barbara.

Mission Hills
Mission Hills is located five mile north of the City of Lompoc.

Montecito
Montecito is adjacent to and east of the City of Santa Barbara.

Orcutt
Orcutt is adjacent to and south of the City of Santa Maria.

Refugio Canyon

Refugio Canyon is seventeen miles west of the City of Santa Barbara on the south coast of the county.

San Roque

The San Roque area is adjacent to and northwest of the City of Santa Barbara.

Santa Monica Canyon

Santa Monica Canyon is located four miles northeast of the City of Carpinteria.

Tepusquet Canyon

Tepusquet Canyon is located fourteen miles northeast of the City of Santa Maria.

Toro Canyon

Toro Canyon is located six miles northwest of the City of Carpinteria.

Vandenberg Village
Vandenberg Village is located located five mile northwest of the City of Lompoc.

Santa Barbara County Communities

Wildfire Protection Plan

GLOSSARY

Prescribed burn, target planning block, completed burn, wildfire, and Copter 308 with helitorch attached.

Assets	A generic term referring to all facets that can be affected by an impinging fire. Effects can be either positive or negative in terms of the amount of disturbance.
Assets at Risk	Assets identified as being at risk from wildland fire. Assets include, but are not limited to, citizen and firefighter safety, watershed and water, timber, wildlife and habitat (including rare and endangered species), unique areas (scenic, cultural and historic), recreation, range, structures and air quality.

Hazardous Fuels	Combustible materials, usually in the form of loose surface litter on the soil surface consisting of fallen leaves or needles, twigs, bark, cones, and small branches that have not yet decayed enough to lose their identity; also grasses, forbs, low and medium shrubs, tree seedlings, heavier branchwood, downed logs, and stumps interspersed with or partially replacing the litter.
Initial Attack Success	A term given to the process for measuring the protection system for wildland fire and the ability to provide an equal level of protection to lands of similar type. The measured outcome is referred to as "Success Ratio" (see below).
Pre-Fire Management	A defined and assessed list of alternatives to protect assets from unacceptable risk of wildland fire damage. The alternatives can become a program of work to provide protection to Assets at Risk.
Prescribed Fire	Any fire ignited by management actions under certain, predetermined conditions to meet specific objectives related to hazardous fuels or habitat improvement. A written, approved prescribed fire plan must exist prior to ignition.
Stakeholders	Any person, agency or organization with a particular interest, in fire safety and protection of assets from wildland fire.

Success Ratio	A rating, expressed as a percentage, representing the number of incidents where initial attack was successful. The success is that effort which contains the wildland fire to 100 acres or less, the level of resource commitment, acceptable suppression costs and minimal damage to the Assets at Risk.
Wildfire	Any nonstructural fire, other than prescribed fire, that occurs in the Wildlands.
Wildland Urban Interface	The line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.