SECTION I: UNIT OVERVIEW

A: UNIT DESCRIPTION

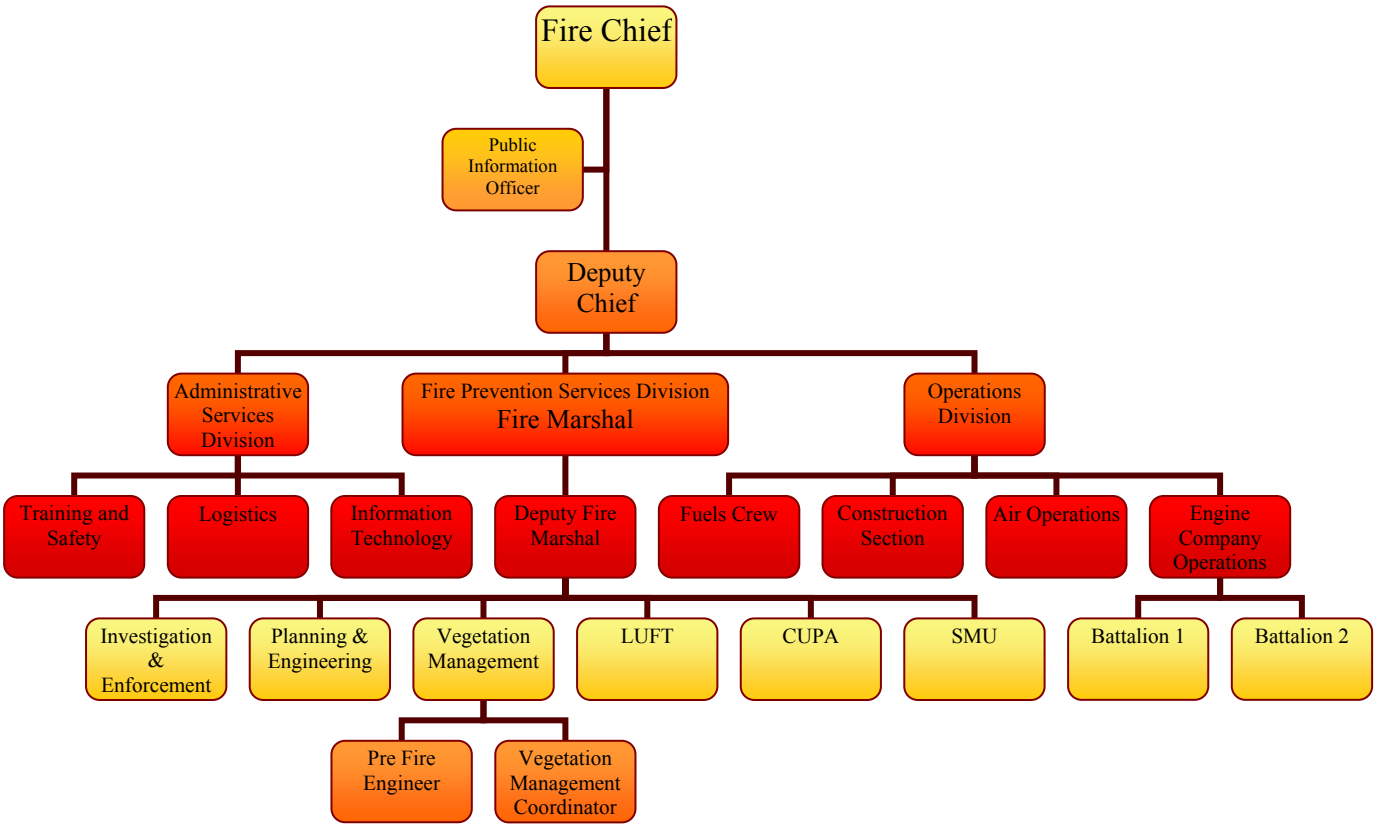

Table 1 ***Organizational Chart***

Contract County

Santa Barbara County Fire Department is one of six contract counties in the State of California. In most cases SRA (State Responsibility Area) is protected directly by CAL FIRE, however, in Kern, Los Angeles, Marin, Orange, Ventura, *Santa Barbara* counties, SRA fire protection is provided by the counties under contract with CAL FIRE. Known as "Contract Counties", they protect 3.4 million acres of SRA.

CAL FIRE provides funding to the six counties for fire protection services including wages of suppression crews, lookouts, maintenance of fire fighting facilities, fire prevention assistants, pre-fire management positions, dispatch, special repairs, and administrative services. CAL FIRE's budget also provides for infrastructure improvements, and expanded fire fighting needs when fires grow beyond initial attack.

Contract Counties are responsible for providing initial response to fires on SRA. When a wildland fire escapes this initial attack, CAL FIRE responds with fire fighting resources to assist the county.

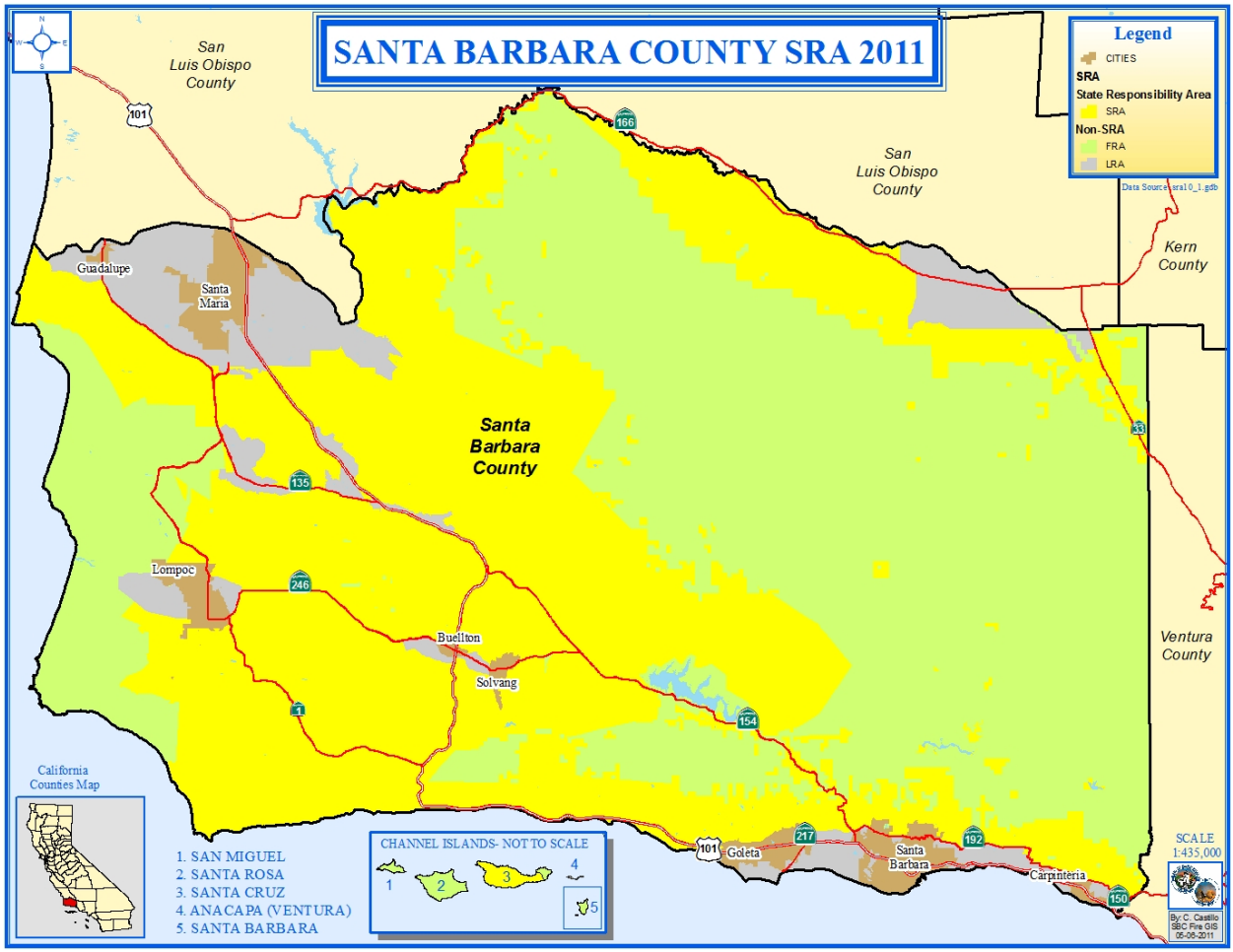

Figure 1

Physical Description

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 includes four of the five Channel Islands that make up the Channel Islands National Park: San Miguel, Santa Cruz, Santa Rosa, and Santa Barbara Islands. The County occupies approximately 2,748 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 to the east, San Luis Obispo to the north, and Kern to the northeast border the County.

As of 2009, the US Census Bureau estimated County population was 407,057[3]. This includes the unincorporated communities of Burton Mesa, Casmalia, Cuyama, Eastern Goleta Valley, Gaviota, Isla Vista, Los Alamos, Los Olivos, Montecito, Orcutt, Santa Ynez, and Vandenberg Village as well as the incorporated cities of Buellton, Carpinteria, Goleta, Guadalupe, Lompoc, Santa Barbara, Santa Maria, and Solvang. The cities of Santa Barbara and Santa Maria have the largest populations.

[3] http://quickfacts.census.gov/qfd/states/06/06083.html

The County is situated among a series of transverse mountain ranges, the only ranges within the continental United States to trend in an east-westerly direction. These mountain ranges bisect the County east to west, 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. The County includes two wilderness areas located in the National Forest: San Rafael Wilderness and the Dick Smith Wilderness. Big Pine Mountain (6,828 feet), the highest point in the County, is in the San Rafael Range.

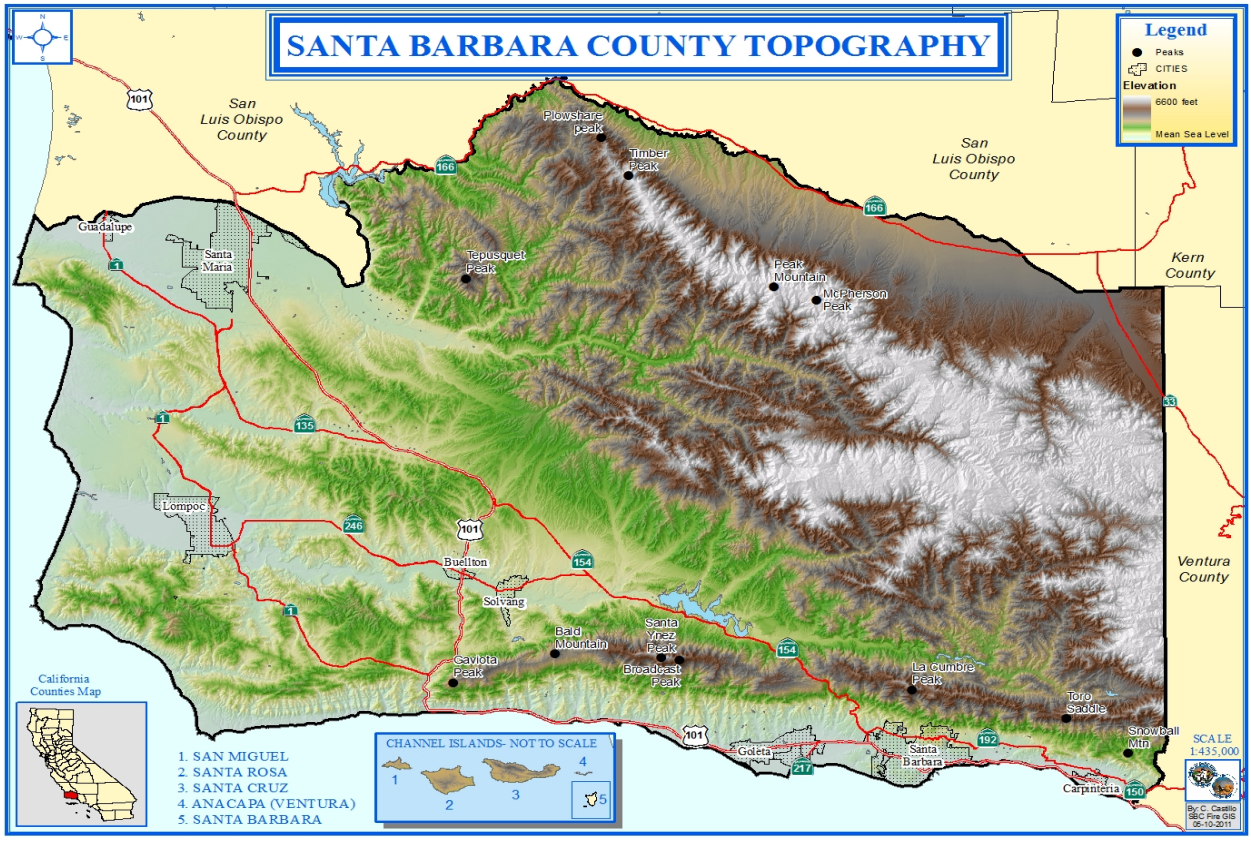

Figure 2

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 154 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. Other Federal Agencies that have land holdings within Santa Barbara County include the Bureau of Land Management, Bureau of Reclamation, Bureau of Indian Affairs, and the National Park Service. State lands within the County include 4.76 square miles (3,047 acres) of State beaches, 8.1 square miles (5,200 acres) of the Burton Mesa Ecological Reserve, and 1.5 square miles (966 acres) at La Purisima Mission in the Lompoc area.

Vegetation/Fuels

Santa Barbara County has 791,934 acres of state responsibility area, the bulk of which is covered with fire-prone vegetation. Additionally, there are 820,438 acres of federal responsibility area (FRA) and 146,229 acres of local responsibility area (LRA) within the County (values determined through GIS analysis of the sra10_1 geodatabase). 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. 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 vegetation communities are characterized by woody brush and 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 manzanita species, two ceanothus species, an unusual form of coast 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 system used to categorize 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 Fuel Models for Santa Barbara can be seen in Figure 3.

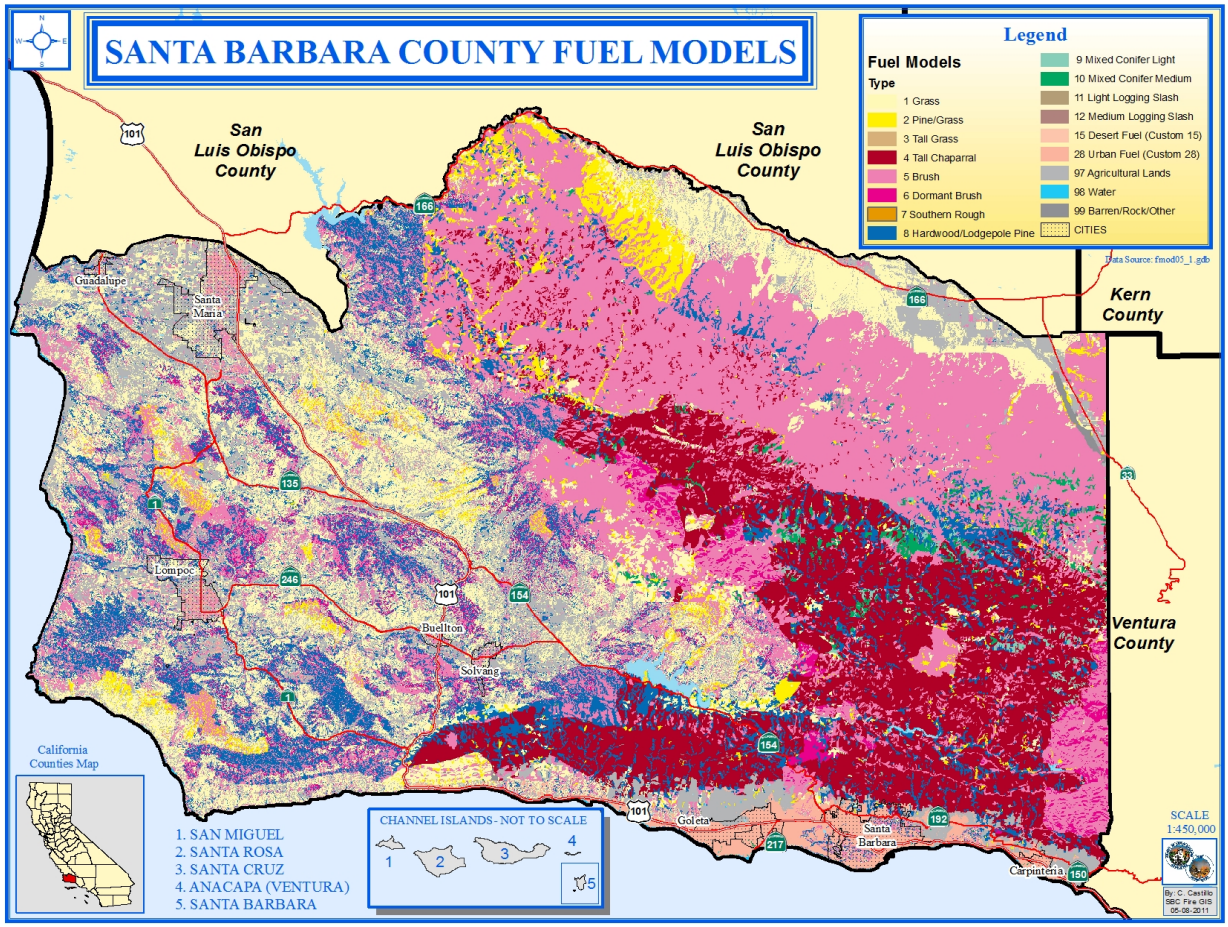

Figure 3

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 as seen in recent years with the Tea Fire in 2008 and the Jesusita Fire in 2009. 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.

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, during a 20-year period can receive as little as 5 inches in the driest year and 25 inches in the wettest year. In the mountainous areas of the eastern part of the County, 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.

Sundowner Winds

Santa Ana winds which occasionally affect the counties of Ventura, Los Angeles, and Orange to the south leave Santa Barbara County virtually untouched. The only disturbance to this idyllic picture comes when downslope winds pour across passes in the Santa Ynez Range, descending onto the Santa Barbara front country.

These winds are “sundowners,” Santa Barbara’s special version of the Santa Ana regime. Sundowners frequently occur in the late afternoon or evening hours – hence the name. Light sundowners create irregular rises in temperature with gentle offshore breezes. Stronger sundowners, occurring two or three times a year, can create sharp temperature rises, local gale force winds, and significant weather-related problems. Rarely, probably about a half dozen times in a century, an “explosive” sundowner occurs. These extremely strong and hot winds present a dangerous weather situation. In these events, super heated air from the Santa Ynez Valley bursts across the Santa Ynez Mountains and onto the coastal plain, reaching gale force or higher speeds within the City of Santa Barbara. Dust storms occur, fires can race down the mountain slopes, and great stress is felt by the human population, by animals, and by plants.

During the Painted Cave Fire sundowner event, the official Federal Aviation Administration (FAA) observing station at Santa Barbara airport reported a maximum temperature of 109°F (42.7°C), remarkable for a location on the coastal plain within 2 km of the ocean itself [where the sea surface temperature was approximately 65°F (18.3°C)]. As noted by Ryan and Burch (1992) and Ryan (1994), however, even this wind event pales in comparison to the 17 June 1859 Sundowner. A rather dramatic and colorful description of this event is provided by the following passage taken from the *Coast Pilot of California* (Davidson 1869).

- “The only incident of the *“poison wind”* on this coast, mentioned either in its history or traditions, was that occurring at Santa Barbara, on Friday, the 17th of June 1859. The temperature during the morning was between 75° and 80°, and gradually and regularly increased until about one o’clock p.m., when a blast of hot air from the northwest swept suddenly over the town and struck the inhabitants with terror. It was quickly followed by others. At two o’clock the thermometer exposed to the air rose to 133°F, and continued at or near that point for nearly three hours, whilst the burning wind raised dense clouds of impalpable dust. No human being could withstand the heat. All betook themselves to their dwellings and carefully closed every door and window. The thick adobe walls would have required days to have become warmed, and were consequently an admirable protection. Calves, rabbits, birds, etc., were killed; trees were blighted; fruit was blasted and fell to the ground, burned only on one side; and gardens were ruined. At five o’clock the thermometer fell to 122°, and at seven it stood at 77°. A fisherman, in the channel in an open boat, came back with his arms badly blistered.”

Fire History

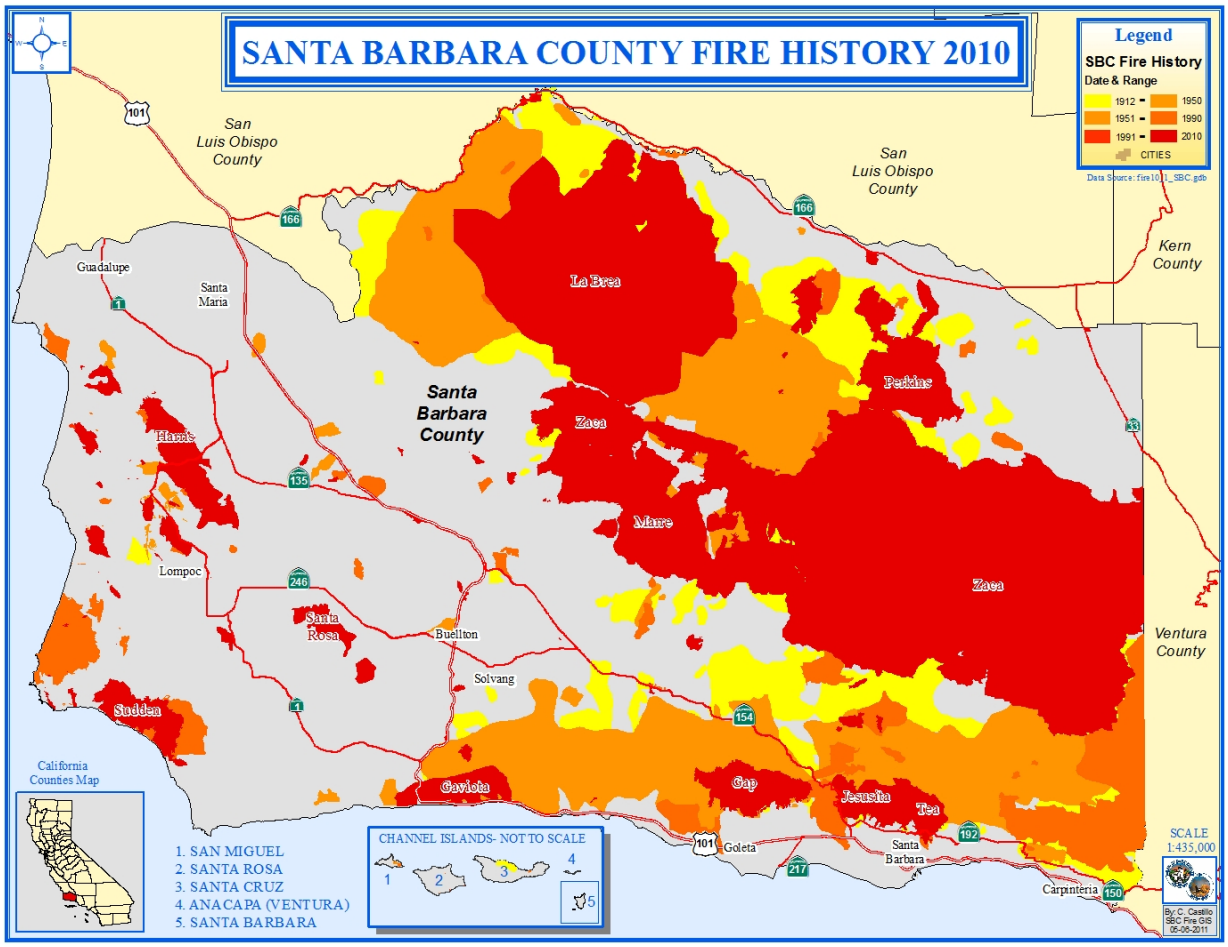

Figure 4

Over the last ten years, Santa Barbara County has experienced seven major fires. Three of these fires (Gap, Tea, and Jesusita) directly threatened the heavily populated Santa Barbara Front Country. Two of these fires: the Tea Fire and the Jesusita Fire destroyed close to three hundred structures and burned a total of 16 ½ square miles. The La Brea Fire and the Zaca Fire combined burned a total of 518 square miles predominately in backcountry areas of the County; though the western edge of the La Brea Fire came within a mile of the community of Tepusquet Canyon. Even though these two fires did not directly threaten urban areas, the smoke and ash produced created air quality issues for over one hundred miles.

Major Wildfires in Santa Barbara County 1955-2010					
Fire	Date	Cause	Acres Burned	Structures Damaged or Destroyed	Deaths
La Brea	August-2009	Miscellaneous	91,622	1	0
Jesusita	May-2009	Equipment Use	8,733	80	0
Tea	November-2009	Campfire	1,940	210	0
Gap	July-2008	Miscellaneous	9,443	4	0
Zaca	July-2007	Equipment Use	240,207	1	0
Perkins	July-2006	Lightning	14,988	0	0
Gaviota	July-2004	Lightning	7,440	1	0
Paint	June-1990	Arson	4,270	673	1
Wheeler	July-1985	Miscellaneous	119,361	26 (on border with Ventura County)	0
Sycamore	July-1977	Kite into powerlines	806	234	0
Romero	October-1971	Arson	14,538	n/a	4
Coyote	September-1964	Undetermined	65,338	94	1
Refugio	September-1955	Structure Fire	79,428	20	0

Table 2 ***Major Fires Last 55 Years***

Unit Priority Landscapes

The recent *California's Forests and Rangelands: 2010 Assessment*[4] prepared by the California Department of Forestry and Fire Protection Fire and Resource Assessment Program (FRAP) presents an analysis of trends, conditions, and the development of priority landscapes in California. The assessment showed that in addition to communities in the wildland urban interface being a high priority from the threat of wildfire, rangelands and protected habitats in the County are high priority areas as well.

Unit Priorities

General Unit priorities:

- ✓ Maintain suppression and emergency response resources.
- ✓ Update and implement Fire Department Development Standards.
- ✓ Enforce adopted California Fire Codes.
- ✓ Enforce Defensible Space laws and ordinances.
- ✓ Educate and inform the public.
- ✓ Implement and maintain the Red Flag Warning Plan.
- ✓ Maintain roadside vegetation clearance along key roads throughout County.
- ✓ Work collaboratively with the public and other agencies on mutually beneficial prescribed (control) burns and vegetation management projects.
- ✓ Investigate all wildland fires.

[4] http://frap.cdf.ca.gov/assessment2010.html

B: UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES

Santa Barbara County Fire

The Santa Barbara County Fire Department responds to emergencies from sixteen fire stations throughout the County, air operations located at the Santa Ynez Airport, construction section located in Los Alamos, and fuels crew located at Lake Cachuma. The Department operates 16 Type I Engines, 13 Type III Engines, 1 Truck Company, 1 Fuels Crew, 3 Type II Bulldozers, 2 Type II Helicopters with water dropping and rescue capabilities, 3 Water Tenders, 2 Ambulances, 1 Hazardous Materials Unit, 1 Urban Search and Rescue (USAR) Unit, 1 Water Rescue Unit (includes 3 Personal Watercraft "PWCs" and 1 Inflatable Rescue Boat "IRB") and 1 Breathing Support Unit.

Santa Barbara County Fire has a contractual agreement with CAL FIRE to provide wildland fire protection on state responsibility areas (SRA). The Gray Book is an Exhibit of the "Contract County Agreement" which identifies resource allocations, which CAL FIRE considers necessary for the protection of SRA and provides funding accordingly. In Santa Barbara County the Gray Book provides for nine stations, two bulldozers, two vegetation management positions, and fire prevention staffing.

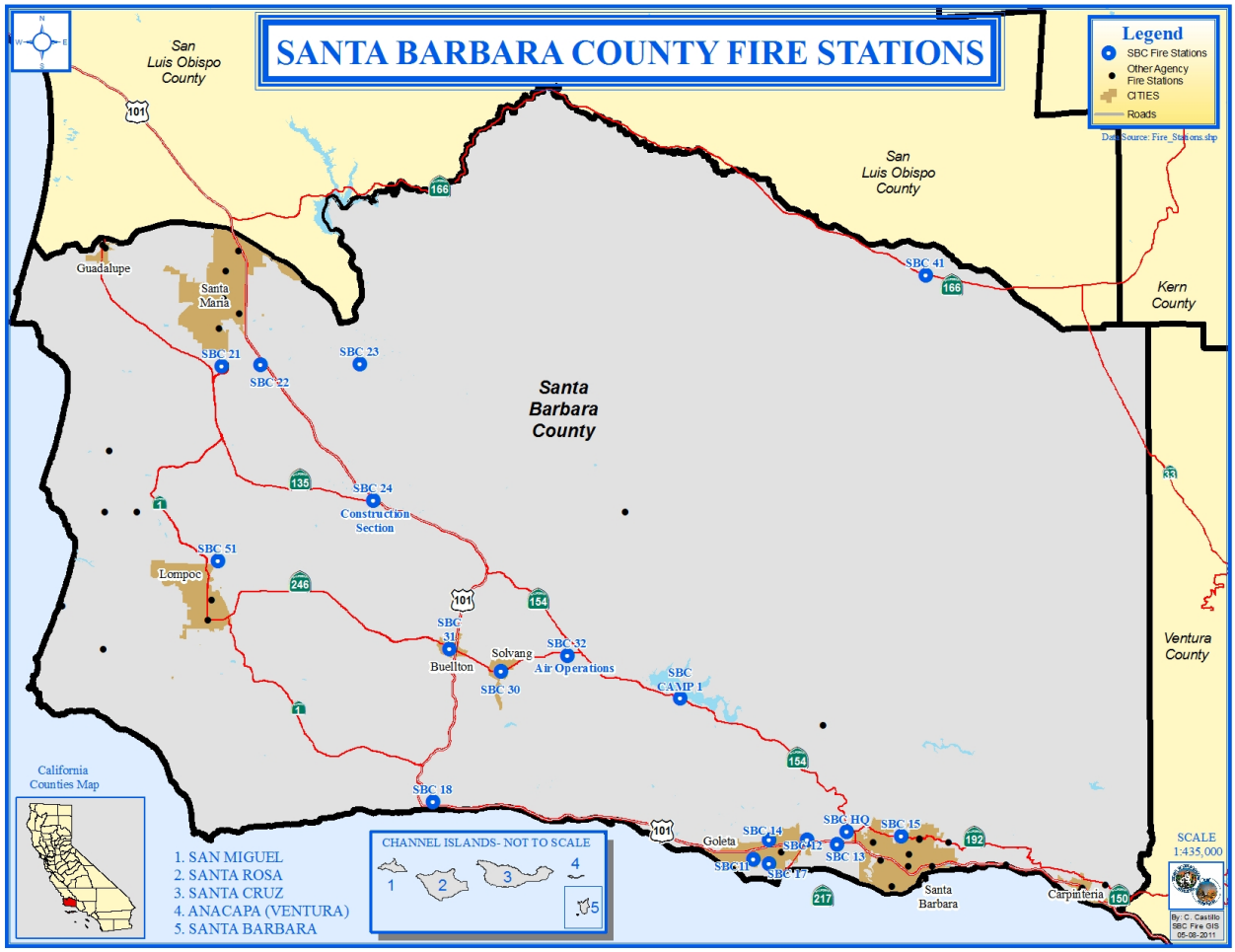

Figure 5

Additional Fire Agencies in Santa Barbara County

- Santa Barbara City Fire Department
- Santa Maria Fire Department
- Lompoc Fire Department
- Guadalupe Fire Department
- Carpinteria-Summerland Fire Protection District
- Montecito Fire Protection District
- USDA Forest Service-Los Padres National Forest
- Department of Defense- Vandenberg Air Force Base Fire Department

Cooperative Fire Services

A cornerstone of the fire protection system in Santa Barbara County is the *Santa Barbara Operational Area Mutual Aid Plan* which is updated on a regular basis. In Santa Barbara County, no single local fire agency can muster the resources necessary to mitigate large scale emergencies on an on-going basis, such as large wildfires, hazardous materials responses, and urban search and rescue responses. 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 Operational Area Mutual Aid Plan* becomes an essential mechanism for coordinating fire protection resources.

Mutual Aid takes on several different forms. For initial attack purposes, mutual aid and automatic aid facilitates the day-to-day responses where the closest resources are dispatched regardless of jurisdictional boundaries. Because several of the agencies maintain their own dispatch centers, any aid request must be relayed between dispatch centers. Within Santa Barbara County agreements have been made between all agencies with regard to dispatch protocols and dispatch procedures (automatic aid and mutual aid). In addition, Santa Barbara County also has agreements with Kern County, San Luis Obispo County, and Ventura County.

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, Mutual Aid Plan[5].

[5] http://www.oes.ca.gov/WebPage/oeswebsite.nsf/ClientOESFileLibrary/Fire%20Documents/$file/Mutual%20Aid%20Plan%202010.pdf

SECTION II: COLLABORATION

A: COMMUNITY / AGENCIES / FIRE SAFE COUNCILS

Representatives involved in the development of the Unit Strategic Fire Plan are included in the following table. Their organization and title are indicated below:

**Due to the limited time to prepare this document, it was difficulty to solicit input from outside organizations. In future updates the planning team will grow as interested parties provide input. The goal is to involve as many organizations as possible and meet the intent of the California Strategic Fire Plan.*

Included in italics are organizations Santa Barbara County collaborates with on a regular basis.

Plan Development Team:

Organization	Representative (title)
Santa Barbara County Fire Safe Council	
Los Padres National Forest	
Santa Barbara City Fire	
City of Goleta	
Mission Canyon Association	
Vandenberg Fire	
Department of Fish and Game	
Fire Associates for the Community of Tepusquet	
Carpinteria-Summerland Fire Protection District	
City of Buellton	
Hollister Ranch Owners Association	
Montecito Fire Protection District	
Santa Barbara Range Improvement Association	
City of Solvang	
