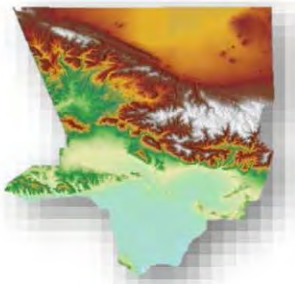
Los Angeles County
Fire Department
2021 Strategic Fire Plan



UNIT STRATEGIC FIRE PLAN AMENDMENTS

PI	Section Updated	Page Numbers Updated	Description of Update	Updated By
		(Previous 2019 Version/Current 2020 Version)	**Note:** **Deletions will not be found in new version. Page number updated is not the same page number as the section updated (where the section actually starts).**	
4/19/21	Cover Page	Cover/Cover	Current cover page	Fire Plan Unit
4/19/21	Signature Page	1	Signature Page, reformat, updated information	Fire Plan Unit
4/19/21	Executive Summary	2/2	2018 Strategic Fire Plan inserted and new Web link	Fire Plan Unit
4/19/21	Section 1: Unit Overview	4/4	Number of contact cities update	Fire Plan Unit
4/19/21	Section 1: Unit Overview	5/5	Updated numbers for Department	Fire Plan Unit
4/19/21	Section 1: Unit Overview	8/8	Updated message from the Chief	Fire Plan Unit
4/19/21	Section 1: Unit Overview	9/9	New organizational chart	Fire Plan Unit
4/19/21	Section 1: Unit Overview	11/11	Grammar Humidity's	Fire Plan Unit
4/19/21	Section 1: Unit Overview	12/12	Update fire history with 2020 fire information	Fire Plan Unit
4/19/21	Section 1: Fire History	13/13	Insert Fire History Map	Fire Plan Unit
4/19/21	Section 1: Daily Fire Danger	15/14	Insert City of Los Angeles	Fire Plan Unit
4/19/21	Section 1: Unit Preparedness and Firefighting Capabilities	16/15	Update current numbers	Fire Plan Unit
4/19/21	Section 2: Collaboration	17/16	Remove City of Vernon	Fire Plan Unit
4/19/21	Section 3: Tree Mortality	21/20	Current GSOB numbers	Fire Plan Unit
4/19/21	Section 4: Pre-Fire Management Strategies	26/24	Current Ignition numbers	Fire Plan Unit
4/19/21	Section 4: Pre-Fire Management Strategies	27/24	Insert current ignition graph	Fire Plan Unit
4/19/21	Section 4: Pre-Fire Management Strategies	28/25	Current acres burned graph	Fire Plan Unit
4/19/21	Section 4: Community Projects	30/27	Current 2020-2021 projects updated	Fire Plan Unit
4/20/21	Section 4: Natural Resources Section	30/28-33	Consolidation of Natural Resources Section, Vegetation Management Unit, Brush Clearance Unit, Fuel Modification Unit, into Section 5: Pre-Fire Management tactics. Pictures deleted. Insert legislation on AB3074 structure ignitability	Fire Plan Unit
4/20/21	Appendix A	37/34	Current Appendix A from CAL FIRE	Fire Plan Unit
	Appendix C: Statistical Summary	40,41/37,38	Insert new Statistical Summary	Fire Plan Unit
4/20/21	Appendix C: Brush Log	42/39,40	Insert current Brush Log	Fire Plan Unit
4/20/21	Supplements: Annual Report of Unit Accomplishments	48/44	Current number updated	Fire Plan Unit

Table of Contents

SIGNATURE PAGE 1
EXECUTIVE SUMMARY 2
SECTION I: UNIT OVERVIEW 4
UNIT DESCRIPTION 4
VEGETATION OF LOS ANGELES COUNTY 10
TOPOGRAPHY AND WEATHER OF LOS ANGELES COUNTY 11
FIRE HISTORY 12
THE WILDFIRE ENVIRONMENT 14
DAILY FIRE DANGER REPORT 14
UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES 15
SECTION II: COLLABORATION 15
COMMUNITY / AGENCIES / FIRE SAFE COUNCILS 15
SECTION III: VALUES 18
PRIORITY LANDSCAPES OF LOS ANGELES COUNTY 18
TREE MORTALITY IN LOS ANGELES COUNTY 20
VALUES 21
SECTION IV: PRE-FIRE MANAGEMENT STRATEGIES 24
FIRE PREVENTION 24
SECTION V: PRE-FIRE MANAGEMENT TACTICS 27
NATURAL RESOURCES SECTION 28
VEGETATION MANAGEMENT 28
BRUSH CLEARANCE SECTION 29
FIRE SUPPRESSION PHILOSOPHY 32
THE FIRE PROTECTION SYSTEM 32
DIVISION/BATTALION/PROGRAM PLANS 32
APPENDIX A: PRE-FIRE PROJECTS 34
APPENDIX B: DEPARTMENT GOALS AND OBJECTIVES 36
APPENDIX C: 2020 STATISTICAL SUMMARY 37
EXHIBITS: MAPS 41
SUPPLEMENT: 2020 44

SIGNATURE PAGE

Unit Strategic Fire Plan developed for the County of Los Angeles:

This Plan:

- Was collaboratively developed. Interested parties, federal, State, city, and county agencies within the unit have been consulted and are listed in the plan.
- Identifies and prioritizes pre-fire and post-fire management strategies and tactics meant to reduce the loss of values at risk within the Unit.
- Is intended for use as a planning and assessment tool only. It is the responsibility of those implementing the projects to ensure that all environmental compliance and permitting processes are met as necessary.

6/9/2021

Unit Chief **Date**
Daryl L. Osby, Fire Chief
Forester and Fire Warden

5/25/2021

Division Chief **Date**
Ron Durbin, Chief, Forestry
Forestry Division

5/11/2021

Pre-Fire Engineer **Date**
Trevor Moore, Deputy Forester
Forestry Division

EXECUTIVE SUMMARY

The 2018 Strategic Fire Plan (2018 Plan) for California is the current generation of the first Statewide fire plan developed in 2010. It was a collaborative effort between the State Board of Forestry and Fire Protection and the California Department of Forestry and Fire Protection (CAL FIRE). The 2018 Plan recognizes that wildfires will occur in California and works to answer questions of "How do we prepare and live with that risk?" The 2010 and 2018 Plans build upon the concept first developed in the 1996 California Fire Plan which led to collaborative efforts in fire prevention. A copy of the 2018 Strategic Fire Plan for California can be found at https://osfm.fire.ca.gov/media/5590/2018-strategic-fire-plan-approved-08_22_18.pdf

The vision of the 2018 Plan for California -- a natural environment that is more resilient and man-made assets, which are more resistant to the occurrence and effects of wildland fire through local, State, federal, and private partnerships.

The 2018 Plan outlines seven goals focused on enhancing the protection of lives, property, and natural resources from wildland fire, as well as improving environmental resilience to wildland fires. Each goal is meant to build upon the previous one; the seven goals are listed below:

1. Identify and evaluate wildland fire hazards and recognize life, property, and natural resource assets at risk, including watershed, habitat, social, and other values of functioning ecosystems. Facilitate sharing of all analyses and data collection across all ownerships for consistency in type and kind.

2. Articulate and promote the concept of land use planning as it relates to fire risk and individual landowner objectives and responsibilities.

3. Support and participate in the collaborative development and implementation of wildland fire protection plans and other local, County, and regional plans that address fire protection and landowner objectives.

4. Increase awareness, knowledge, and actions implemented by individuals and communities to reduce human loss and property damage from wildland fires. Actions can include creation of defensible space and other fuel reduction activities, educating homeowners about fire prevention, and encouraging fire safe building standards.

5. Develop a method to integrate fire and fuel management practices with landowner priorities and multiple jurisdictional efforts within local, State, and federal responsibility areas.

6. Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.

7. Address post-fire responsibilities for natural resource recovery, including watershed protection, reforestation, and ecosystem restoration.

The Los Angeles County Fire Department (Department) is one of six contract counties (Los Angeles, Kern, Ventura, Orange, Santa Barbara, and Marin), which has executed a contract with the State of California to provide wildland fire protection on State Responsibility Areas (SRA). The Department has the responsibility as a contract county to implement the 2010 Plan in Los Angeles County. As such, the Department functionally operates as a unit of the CAL FIRE and is responsible for all Strategic Fire Plan activities within the County. The County of Los Angeles Fire Department 2021 Strategic Fire Plan replaces the previous unit fire plan:

Los Angeles County Fire Department 2020 Strategic Fire Plan.

Brush Clearance Deadline, Shaded fuel breaks

SECTION I: UNIT OVERVIEW

UNIT DESCRIPTION

Los Angeles County, one of California's original 27 counties, was established on February 18, 1850. The County originally occupied a comparatively small area along the coast between Santa Barbara and San Diego counties, but within a year, its boundaries were enlarged from 4,340 square miles to 34,520 square miles, sprawling east to the Colorado River.

In 1853, a bill was introduced dividing the eastern portion of Los Angeles County to create San Bernardino County. During subsequent years, Los Angeles County slowly ebbed to its present size and the last major detachment occurred in 1889, with the creation of Orange County. Los Angeles County encompasses approximately 4,083 square miles of land, in which 1,741 square miles are flat, 1,875 square miles are mountains, 246 square miles consist of hills, 59 square miles of mountain valleys, and 28 square miles of marshland. It also includes 131 square miles on San Clemente and Santa Catalina islands.

Los Angeles County has the largest population (10,039,107; 2020 Census) of any county in the nation and is exceeded by only eight states. Approximately 25 percent of California's residents live in Los Angeles County.

The Board of Supervisors (Board), created by the State Legislature in 1852, is the governing body within Los Angeles County consisting of five supervisors elected to four-year terms by voters within their respective supervisorial districts. The Board has executive, legislative, and quasi-judicial roles in addition to appointing all department heads other than the Assessor, District Attorney, and Sheriff, which are elective positions.

As a subdivision of the State, Los Angeles County is charged with providing numerous services affecting the lives of its residents. Traditional mandatory services include fire protection, law enforcement, property assessment, tax collection, public health protection, public social services, relief to people experiencing homelessness, flood control, and services through the Department of Parks and Recreation. Within the Department, the Forestry Division manages the Brush Clearance Inspection Program, Fuel Modification Program, Vegetation Management Program (VMP), Environmental Review, Oak Tree Ordinance implementation, and Fire Plan implementation.

There are 88 cities contracting with Los Angeles County for municipal services to varying degrees. Sixty-five percent of Los Angeles County, approximately 2,653.5 square miles, is unincorporated, where the County provides all municipal services. For the one million people living in those areas, the Board serves as their "City Council." Los Angeles County is the largest employer in the five-county region with approximately 109,881 budgeted employees.

The Fire Department started in the late 1800s with the formation of two separate departments. The first department, the County Forester, was charged with protecting natural resources and responsible for planting and maintaining Department landscapes. The second department, the County Fish and Game Warden, was then assigned the responsibility as County Fire Warden. On May 8, 1911, the Board created the County of Los Angeles Board of Forestry, which later became the Los Angeles County Forestry Department.

In 1919, over 135,000 acres of wildland fires blackened Los Angeles County prompting the merging of these two departments, which resulted in greater emphasis on fire suppression, creating the County Forester and Fire Warden. Between September 1923 and 1925, 31 separate fire districts were formed, the first two being in Signal Hill and Santa Monica Canyon.

In 1956, Fire Chief Emeritus Keith E. Klinger created the visionary Lakewood Plan, allowing incorporated cities within Los Angeles County to contract with the Department for fire protection services. Today, 60 cities are served by the Department, which staffs a total of 217 engine companies, 33 truck companies, 112 paramedic units, and numerous other specialized apparatus.

The Department is credited with the creation of the nation's first 911 emergency phone calling system and the nation's second firefighter paramedic program, having its 50th anniversary in 2019. Throughout its history, the Department has emerged as a leader in the fire service on local, regional, and national levels growing in terms of total fire stations, to become the nation's second largest fire protection agency.

The Department operates nine divisions, 22 battalions, 175 fire stations and 9 fire suppression camps and answers nearly 400,000 emergency calls annually. Additionally, the Department has Forestry, Planning, Information Management, Fire Prevention, Air and Wildland, Lifeguard, and Health Hazardous Materials Divisions, which provide valuable services to over four million County residents.

The Department's Fiscal Year 2019-2020 Final Adopted budget is approximately $1.286 billion. The budget is primarily funded with property tax revenue, making up approximately 66.5% of the Department's revenue. Other funding sources include fee-for-service cities and the Prop E special tax.

MISSION STATEMENT

The mission of the Los Angeles County Fire Department is to protect lives, the environment, and property by providing prompt, skillful, and cost-effective fire protection and life safety services.

CORE VALUES

Integrity – Teamwork – Caring – Courage – Commitment – Community

FIRE DEPARTMENT VISION

The Los Angeles County Fire Department will be an exemplary organization acclaimed for our national reputation, our regional strength, and our hometown attentiveness as we provide fire protection and life safety services

LA Co Fire Core Values: working together

Los Angeles County Fire Department Strategic Plan
"Engineering Our Future"

In 2011, the Department unveiled its Strategic Plan, entitled "Engineering Our Future." From the beginning, the Strategic Plan has been a roadmap to communicate Department goals, and actions needed to achieve these goals. Now in its ninth year, the Department focused on critical areas identified within the 2011 Strategic Plan and achieved envisioned results. Updated in 2015, the Department's Strategic Plan was refined to five goals: fiscal sustainability, exemplary service, workforce development, operational effectiveness and emergency preparedness.

Narrowing focus and sharpening actions, the current 2017-2021 Strategic Plan is laser-focused on three primary goals: emergency operations, public service, and organizational effectiveness. Fire Chief Daryl L. Osby and his executive team are moving forward with the 2017-2021 Strategic Plan goals with renewed energy and confidence in achieving successful outcomes.

The Department's history demonstrates an ability to be leaders in the fire service. An unwavering commitment to serving the public, technological advancements, innovative thinking and ability to work toward common goals enables the Department to maintain exceptional service and sustain a legacy of excellence.

As in previous years, a critical goal is ensuring fiscal sustainability by providing the best possible value for taxpayers in meeting daily emergency operational needs in 59 cities and all unincorporated areas served. As COVID-19 alters the economy, the Department must evaluate revenue streams in a rapidly changing environment and ensure priorities and infrastructure needs are addressed.

Additional critical areas for the Fire Chief include exemplary service, an inclusive workforce, operational effectiveness and emergency preparedness. With increased focus, the Department is improving by integrating technology into everyday operations, enhancing transparency and accountability, providing exceptional service and proactively investing in training and educational opportunities.

Opportunities to train ordinary citizens in emergency preparedness through the Department's Community Emergency Response Teams (CERT) have been developed, as well as volunteer opportunities assisting the Department. Marketing the Department to generate revenue supporting public education and information programs also needs exploration and development through the organization's grant development program.

The Department continues to uphold a tradition of excellence, securing its legacy as one of the most highly trained, innovative, resilient and compassionate emergency services agencies in the world.

MESSAGE FROM FIRE CHIEF DARYL L. OSBY

The Los Angeles County Fire Department (Fire Department) provides fire protection and life safety services 24/7 to 4.1 million residents within our jurisdiction of 59 cities and all unincorporated areas of Los Angeles County (County), along with the City of La Habra located in Orange County. The Fire Department's service area includes suburban neighborhoods, city centers, commercial districts, sandy beaches, mountain ranges, and more.

There are 4,775 budgeted positions within the Department's emergency and business operations bureaus, including firefighters, dispatchers, lifeguards, nurses, and administrative support.

As the communities we serve continue to grow and diversify, our County remains committed to expanding and adjusting to the ever-changing demands and needs. Together, with the Board of Supervisors, Chief Executive Office, and other County Departments, we partner and collaborate on the many challenges confronting our communities (e.g., health pandemic, large-scale disasters/emergencies, homelessness, mental health, etc.).

As an all-hazard Fire Department, we are focused on providing the highest quality of professional emergency and medical service to residents, property owners, and visitors through accountability and transparency.

By continually evaluating our performance and accomplishments, we set goals and standards while implementing improvements in the areas of service delivery, operational effectiveness, emergency preparedness, workforce welfare, workplace inclusivity, equity, and fiscal solvency.

Los Angeles County Fire Organizational Chart

VEGETATION OF LOS ANGELES COUNTY

Los Angeles County has a vast range of vegetation types across coastal areas, the Santa Monica Mountains, San Gabriel Mountains, valleys, and the desert. The Antelope Valley is located on the western side of the Mojave Desert. Vegetation types consist of California Juniper, Joshua tree, California Scrub oak, Creosote, California Poppy, and many native and non-native grasses. Traveling east, the landscape is dominated by Pinyon Pine woodlands and a desert chaparral understory. Streambeds have cottonwoods, willows, and related vegetation requiring more water.

High country areas located in the eastern portion of Los Angeles County include elevations from 5,000-10,000 feet. Dominant vegetation types are conifers, hardwoods, and more traditional forest communities. This landscape consists Coulter Pine and mixed conifers on dry slopes, whereas Bigcone Douglas Fir and Jeffery pine populate slopes receiving more precipitation. There are also significant Oak Woodland communities along shaded canyon slopes and riparian communities within streambeds.

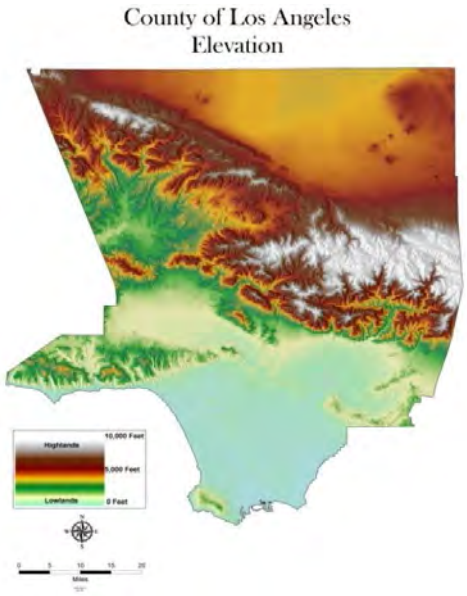
Much of the Santa Clarita Valley and the Santa Monica Mountains have the following vegetation types: coastal sage, riparian, oak woodlands, and chaparral. Coastal sage communities are typically found in lower elevations and drier sites of coastal south-facing slopes. The coastal sage community can be referred to as soft chaparral where foliage is soft, grey-green, and aromatic. Various plants include Purple Sage, California Sage, Coastal Buckwheat, Laurel Sumac, and Lemonade Berry. Riparian communities are woodlands with multi-layered vegetation, including Arroyo Willows, California Black Walnut, California Sycamore, Fremont Cottonwood, Mexican Elderberry, California Bay Laurel, and Mule Fat. Oak Woodlands are found on northern slopes blanketed with Coast Live Oak, Valley Oak in warmer areas, Hollyleaf Cherry, California Bay Laurel, Coffeeberry, and Poison oak.

Chaparral communities have typically shrubby vegetation seen on both coastal and inland hillsides and separated into two types: soft chaparral (usually called coastal sage scrub) and taller, hard chaparral. Chaparral is dominated by evergreen and drought deciduous shrubs one to fifteen feet tall. Most plants are recognized by tough, leathery leaves that reduce water loss in dry climates. Many chaparral plants contain volatile oils, which produce a strong odor and increase flammability. Common examples include various species of Ceanothus, Manzanita, Sage, Sumac, Toyon, and Chamise.

Determining wildfire risks in Los Angeles County involves assessing fire-adapted chaparral ecosystems, dynamic Mediterranean weather conditions, values at risk, and the fire protection system's ability to respond. The California Strategic Fire Plan employs an intensive assessment process graphically depicting fuels, weather, and assets at risk in a Geographic Information System (GIS) program. GIS layers are field-validated and used to identify areas within or adjacent to the Wildland-Urban Interface (WUI) most at risk.
The California's Forests and Rangelands: 2017 Assessment
https://www.arcgis.com/home/item.html?id=c33c4bf214084bed88f4d8cc391b30a4

produced a variety of GIS data layers identifying assets, threats, and priority landscapes (combinations of assets and threats into priorities).

TOPOGRAPHY AND WEATHER OF LOS ANGELES COUNTY



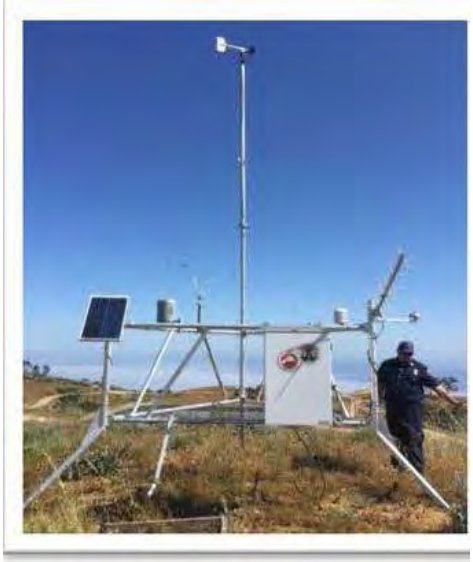
Los Angeles County encompasses 4,083 square miles. Forty-seven percent of this is mountainous, while the remainder consists of alluvial valleys, coastal plains, and high desert. Large mountain ranges within Los Angeles County include the Santa Monica, San Gabriel, Santa Susana, and Verdugo Mountains and run east to west, while main canyon drainages flow north and south. This natural topography creates airflow patterns linking the desert with the Pacific Ocean. Los Angeles County elevations start at sea level and rise to 10,069 feet at the Summit of Mount San Antonio, also known as Mount Baldy, in the San Gabriel Mountains.

The Los Angeles basin experiences a Mediterranean climate with warm dry summers and mild wet winters. Due to various micro-climates found in Los Angeles County, coastlines experience cooler temperature of 40°F to 80°F, while inland areas experience more extreme temperatures, from light snow in winter to 100+°F in summer. Precipitation occurs approximately 35 days a year averaging about 15 inches. Although Southern California received substantial rain in 2018-19, a significant dead-fuel component remains, creating potential for extreme fire behavior on wildland incidents.

During the autumn and winter months, high-pressure weather systems develop over the Great Basin and upper Mojave Deserts, heating up the air. These systems often produce strong offshore winds, known as the Santa Ana winds by the National Weather Service, and are described as having strong down slope winds blowing through Southern California mountain passes. Relative air humidity is further decreased as it travels from the high desert to the coast. These hot dry winds blow through valleys and canyons, pre-heating and dropping fuel moisture and relative humidities in all areas of Los Angeles County. This condition produces a high frequency of wildland fires where temperatures are high, while fuel moistures are extremely low, and winds blow at 30-70 miles per hour.

Due to vast differences in weather across Los Angeles County, the Department strategically placed Remote Automated Weather Stations (RAWS) to accurately and effectively collect weather data, providing daily fire weather forecasts to fire personnel, giving current weather conditions on the ground. This data is shared in tabular and graphic formats on various public websites. These sites also act as multi-agency data collection and distribution systems, allowing CAL FIRE, the Bureau of Land Management, the U.S. Forest Service, the National Park Service, and others to collect and share RAWS data.

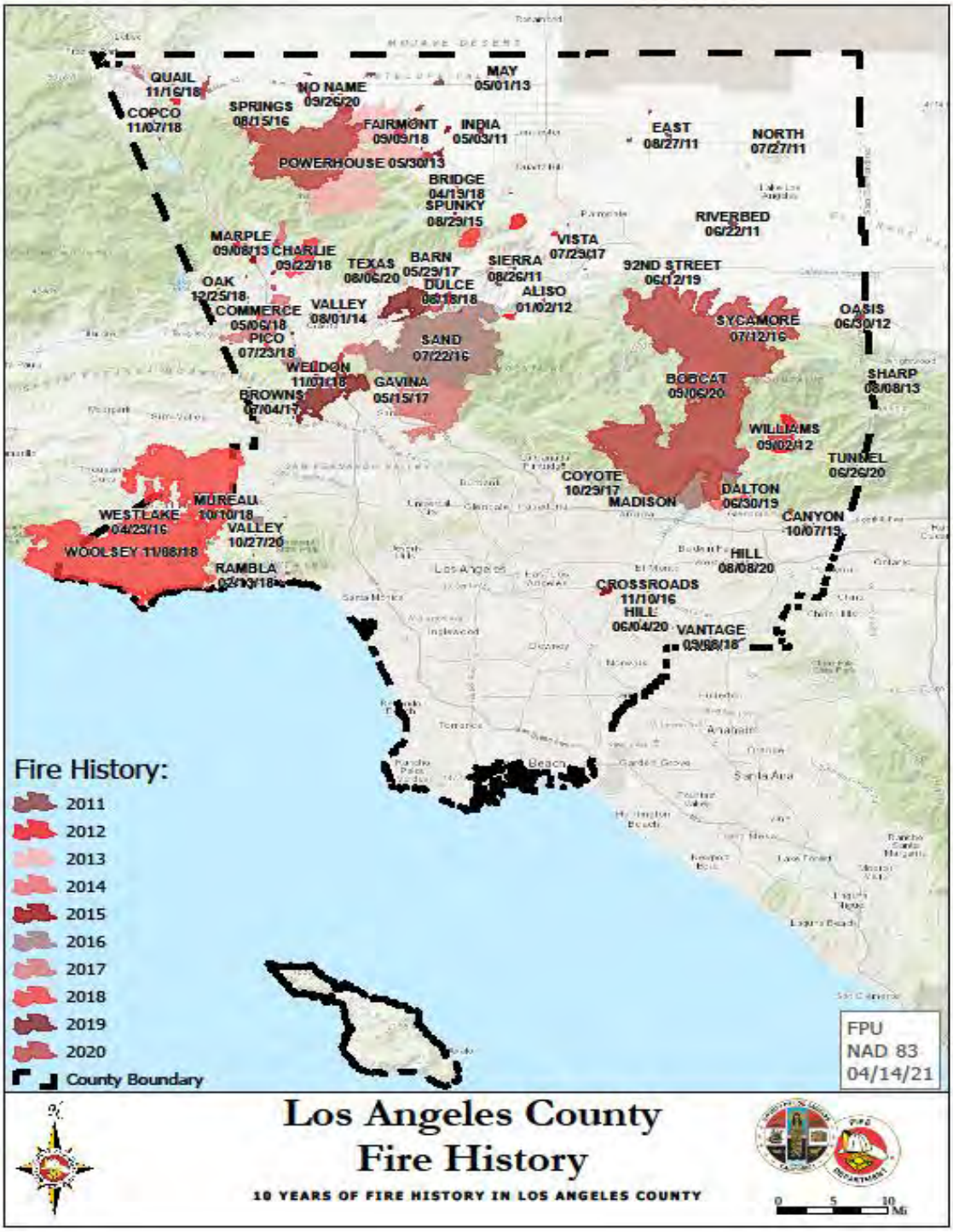
The RAWS is solar-powered and automatically detects weather conditions including air temperature, relative humidity, wind speed and direction, fuel moisture and temperature, barometric pressure, and precipitation. RAWS transmits the information via the Geostationary Operational Environmental Satellite system every hour. The host server receives, compiles, sorts, and files the data for downloading into local agency computers. This information can be displayed on maps, charts, and graphs showing weather conditions throughout the state. Historical data can also be accessed showing weather patterns for specified areas and times.



FIRE HISTORY

Los Angeles County has a long history with fire dating back to the Native Americans using fire to create diversity and maintain landscapes. Today, Los Angeles County experiences many large, damaging, and costly wildfires, affecting the population. In recent years, Los Angeles County battled large, wind-driven fires destroying hundreds of homes and hundreds of thousands of acres of scenic landscape. The 2020 Lake Fire consumed 31,089 acres with 6 structures damaged and 33 other structures destroyed. The 2020 Bobcat Fire had 115,796 acres burned with 171 structures destroyed and 47 other structures damaged. The 2018 Woolsey Fire consumed nearly 97,000 acres and destroyed over 1,600 structures. The 2014 Colby Fire in Glendora burned more than 2,000 acres and five homes. In 2009, the Station Fire consumed 160,000 acres, and in 2008, the Sayre Fire engulfed more than 500 structures. Due to continual growth and development within Los Angeles County, the Department continues working to protect and prevent catastrophic fires from destroying vulnerable communities; addressing wildfire potential continues to be a top priority.

Fire History Maps



THE WILDFIRE ENVIRONMENT

A thorough evaluation of the wildfire environment is essential in understanding fire severity potential in Los Angeles County. Determining which programs and projects are most efficient in preventing catastrophic wildfires is a major focus of the Fire Plan Unit. Firefighters become skilled in recognizing wildfire environment components that determine fire behavior when fuels ignite, the nature and condition of fuels, weather, and topography.

Fuel

Wildland fuel is vegetation covering the landscape. Fuel provides the thermal energy source, which fire needs to spread. Ornamental vegetation around homes and structures is also considered fuel. Large WUI areas within Los Angeles County are where native fuels and residential communities come together and provide a dangerous wildfire environment: these are areas of great concern.

Weather

Weather, comprised of temperature, wind, relative humidity, cloud cover, precipitation, and atmospheric stability, is the most dynamic component of the fire environment and can change rapidly.

Topography

Topography includes elements of slope, aspect, elevation, or the lay of the land. These factors play an important role while fighting wildland fires. Slope affects the rate of fire spread, while aspect may affect fire intensity. Elevation changes affect the amount of oxygen in the air and vegetation types.

DAILY FIRE DANGER REPORT

The Daily Fire Danger Report is a tool for firefighting personnel determining staffing levels, response, and ability to control wildland fires. The Daily Fire Weather Forecast and staffing levels are provided and transmitted on mobile data computers and e-mailed to all sites and units by the Command and Control Division.

The Daily Fire Danger Report produces the Daily Fire Weather Forecast by processing wildland fire weather data from manual weather stations and RAWS. It also acquires data from other agencies located in Los Angeles County. These agencies include the City of Beverly Hills, the City of Los Angeles, National Park Service, and Angeles National Forest. RAWS observations and historical data can be accessed daily at http://www.fire.lacounty.gov/forestry-division/fire-weather-report/.

Observations are reported electronically to the Weather Information Management System (WIMS) in Boise, Idaho each day, between 1300 and 1330 hours, and are processed by the National Fire Danger Rating System. Department personnel from the Henninger Flats Forestry Unit query WIMS each afternoon at 1400 hours to adjust weather data and enter manual weather station data.
https://fire.lacounty.gov/fire-weather-danger/

UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES

The Department currently has over 4,775 budgeted positions. A total of 175 fire stations (including FS55 and FS155 on Catalina Island), 217 fire engines (including 500 series), 3 light forces, 30 quints, 74 paramedic squads, 9 fire suppression camps, 10 bulldozers, 8 helicopters, 2 USAR squads, 1 USAR Task Force, 58 lifeguard vehicles and 8 rescue boats, 23 Prevention offices, 12 Forestry units, and numerous other response vehicles and facilities as listed in Appendix “C.” The Department serves unincorporated areas of Los Angeles County as well as 60 incorporated cities.

The Department has a contractual agreement with CAL FIRE to provide wildland fire protection on state responsibility areas (SRA). The Gray Book staffing agreement identifies resource allocations CAL FIRE considers necessary for protection of SRA and provides funding accordingly. In Los Angeles County, the Gray Book provides funding for 23 stations and fire prevention activities.

SECTION II: COLLABORATION

COMMUNITY / AGENCIES / FIRE SAFE COUNCILS

Cooperative Fire Services

In emergency services, mutual aid is an agreement among emergency responders to lend assistance across jurisdictional boundaries. This may occur due to an emergency response exceeding capabilities of local resources, such as a disaster or a multiple alarm fire. Mutual aid may be ad hoc, requested only when such an emergency occurs, or may be a formal standing agreement for cooperative emergency management on a continuing basis, such as ensuring resources are dispatched from the nearest fire station, regardless of the incident’s jurisdictional boundary. Agreements sending the closest resources are regularly referred to as "automatic aid agreements." Current agreements include:

- Los Angeles County Operational Area Mutual Aid Plan
- California Fire Master Mutual Aid Agreement
- California Master Cooperative Wildland Fire Management and Stafford Act Response Agreement
- California Fire Assistance Agreement
- Public Resources Code 4129

Additional Fire Agencies in Los Angeles County:

USDA Forest Service, Angeles National Forest
USDOI National Park Service, Santa Monica Mountains Recreational Area

City of Alhambra	City of La Habra Heights	City of Redondo Beach
City of Arcadia	City of La Verne	City of San Gabriel
City of Avalon	City of Long Beach	City of San Marino
City of Beverly Hills	City of Los Angeles	City of Santa Fe Springs
City of Burbank	City of Manhattan Beach	City of Santa Monica
City of Compton	City of Monrovia	City of Sierra Madre
City of Culver City	City of Montebello	City of South Pasadena
City of Downey	City of Monterey Park	City of Torrance
City of Glendale	City of Pasadena	City of West Covina

A stakeholder is defined as any person, agency or organization with an interest in fire safety, and protection of assets from wildland fires. Stakeholders include federal, State, local, private agencies, fire safe councils, or interested groups. The Department's goal is to involve as many stakeholders as possible in planning and development of the Fire Plan.

Plan Development Team:

Agencies coordinating with the Los Angeles County Fire Department

POLITICAL ENTITY	JURISDICTION
LOS ANGELES COUNTY BOARD OF SUPERVISORS	LOCAL GOVERNMENT
LOS ANGELES COUNTY SHERIFF'S DEPARTMENT	LOCAL GOVERNMENT/LAW ENFORCEMENT
ORANGE COUNTY FIRE AUTHORITY	LRA AND SRA FIRE PROTECTION
KERN COUNTY FIRE DEPARTMENT	LRA AND SRA FIRE PROTECTION
VENTURA COUNTY FIRE PROTECTION DISTRICT	LRA AND SRA FIRE PROTECTION
NATIONAL PARK SERVICE	FEDERAL GOVERNMENT
CALIFORNIA STATE PARKS	STATE
SANTA MONICA MOUNTAINS CONSERVANCY	PUBLIC LAND OWNERSHIP, RECREATIONAL USE
MOUNTAINS RECREATION AND CONSERVATION AUTHORITY	STATE
LOCAL WATER COMPANIES	PUBLIC & PRIVATE, WATER STORAGE & TREATMENT
PUBLIC UTILITY COMPANIES	PRIVATE
CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION	STATE
AIR QUALITY MANAGEMENT DISTRICT	STATE/COUNTY
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE	STATE
USDA-SOILS CONSERVATION	FEDERAL GOVERNMENT
U.S FISH AND WILDLIFE SERVICE	FEDERAL GOVERNMENT
BUREAU OF RECLAMATION	FEDERAL GOVERNMENT
USDA-FOREST SERVICE	FEDERAL GOVERNMENT
USDI-NATIONAL PARK SERVICE	FEDERAL GOVERNMENT
TOPANGA COALITION FOR EMERGENCY PREPAREDNESS	HOMEOWNER'S ASSOCIATION
FIFTY-NINE (59) CONTRACT AND FEE FOR SERVICE CITIES	LOCAL GOVERNMENT
THIRTY (30) INDEPENDENT CITY FIRE DEPARTMENTS	LOCAL GOVERNMENT

Community Participation

Fire Safe Council (FSC) - https://cafiresafecouncil.org/

FSCs are grassroots community-driven organizations whose objective is making California's communities less vulnerable to catastrophic wildfire. FSCs accomplish this through education programs and fire hazard reduction projects such as shaded fuel breaks or home hardening, protecting residents and providing fire fighters a safe place to fight the oncoming wildfire. FSCs started in the early 1990s; there are now over 200 statewide. Through the Fire Plan Unit, the Department supports these community-based organizations and efforts. In the early 2000s, the Department developed support mechanisms for the 26 active FSCs in Los Angeles County.

Firewise Communities Program – www.firewise.org

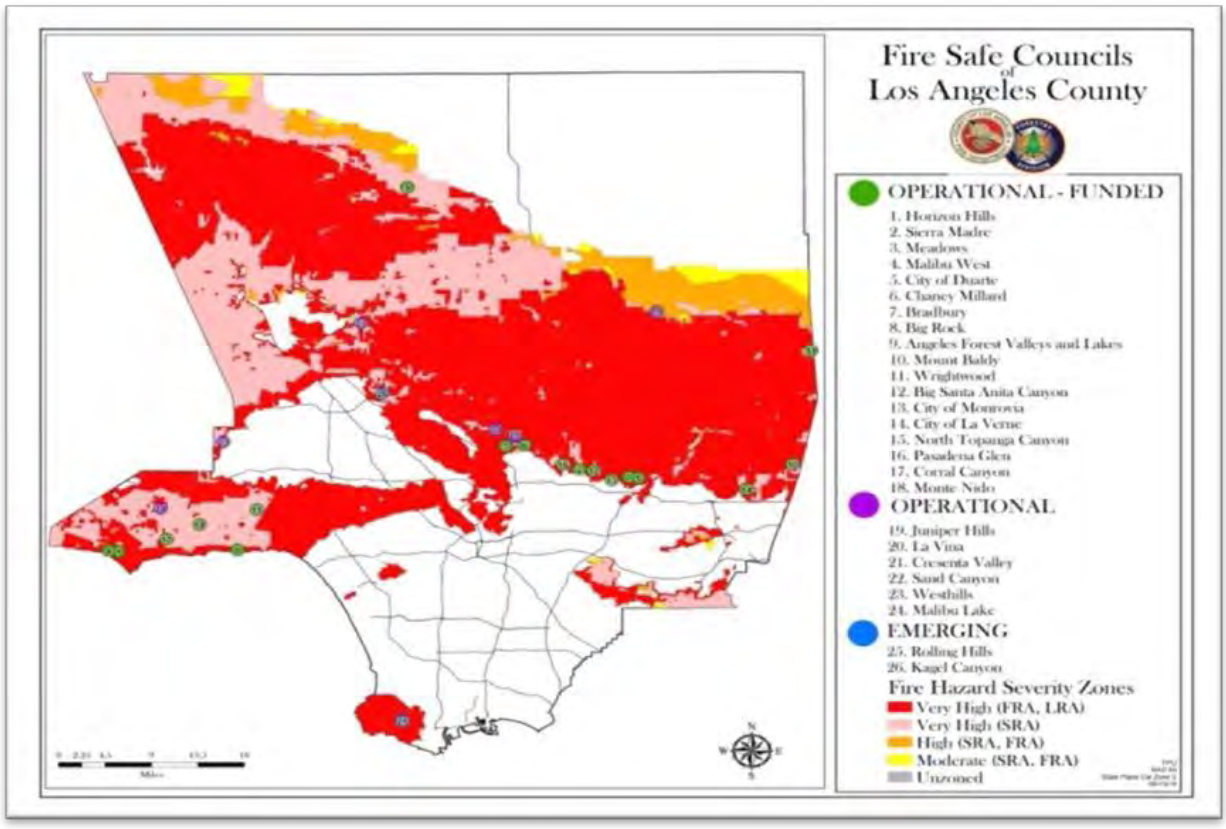
Brush, grass, or forest fires do not have to be disasters.
The National Fire Protection Association. Firewise Communities program encourages local solutions for wildfire safety by involving
homeowners, community leaders, planners, developers, firefighters, and others in the effort to protect people and property from wildfire risks.

Community Emergency Response Teams (CERT) - https://fire.lacounty.gov/community-emergency-response-team/

The CERT program educates people about disaster preparedness for hazards impacting their community and trains them in basic disaster response skills, such as fire-safety, light search and rescue, team organization, and disaster medical operations. Using training learned in classrooms and exercises, CERT members can assist residents in their neighborhood or workplace when professional responders are not immediately available. CERT members are also encouraged to support emergency response agencies by taking active roles in emergency preparedness projects in their community. In June 2003, the Department began offering the Federal Emergency Management Agency-approved 20-hour CERT training curriculum to cities and communities we serve. The program operates from the Public Affairs Section under the direction of a fire captain, serving as the Department CERT coordinator.

Fire Adapted Communities - https://www.adafireadapted.org/

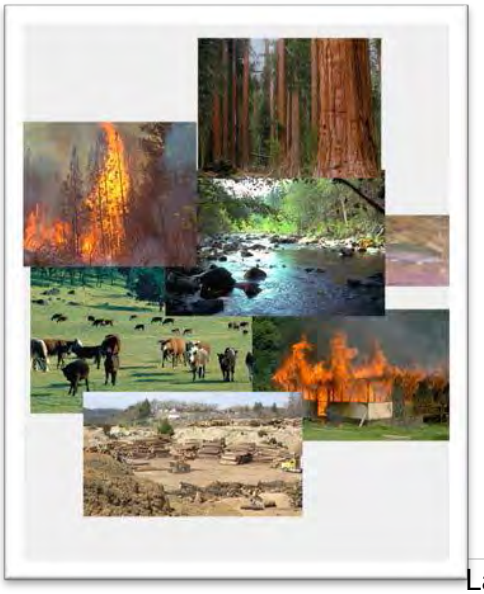
A Fire Adapted Community accepts fire as part of the natural landscape. The community understands its fire risk and takes action *before* a wildfire to minimize harm to residents, homes, businesses, parks, utilities, and other community assets. These collective actions empower all residents to be safer in their environment.



26 Fire Safe Councils in Los Angeles County

SECTION III: VALUES

PRIORITY LANDSCAPES OF LOS ANGELES COUNTY



Priority Landscapes as defined by *California's Forests and Rangelands: 2010 Assessment* prepared by the California Department of Forestry and Fire Protection Fire and Resource Assessment Program (FRAP) are landscapes featuring assets, such as water supply, urban population, and ecosystems threatened by any form of damage (i.e. fire, pollution, pest damage, etc.). It also presents an analysis of trends, conditions, and the development of priority landscapes throughout California. Based on the FRAP assessment, communities in the WUI, rangelands, and protected habitats in the Los Angeles County, are considered high priority landscapes.

The Federal Mandate

The 2010 Assessment shifted focus to a format developed by the USDA Forest Service for State forestry assessments, in response to the 2008 Farm Bill. Each chapter included analyses of threats and assets to generate "Priority Landscapes," for more efficiently targeting potential areas for investment and treatment.

The 2017 Assessment was developed in cooperation with our federal partners, including the Forest Service. However, the focus has changed to an indicator-based approach for tracking the state's progress towards sustainability.

The State Mandate

By State law (PRC 4789), CAL FIRE must periodically assess California's forest and rangeland resources. The previous effort was California's Forests and Rangelands: 2010 Assessment. Assessment results are used by the State Board of Forestry and Fire Protection Board to develop and update a forest policy statement for California. In 2010, the strategy report produced by FRAP as part of the Assessment process served as the policy statement.

The 2017 Assessment takes into consideration various existing planning efforts; these range from local plans such as Community Wildfire Protection plans to Statewide plans, like the State Wildlife Action Plan, the State Water Plan, and the Forest Carbon Plan. The Assessment also integrates work related to renewable energy and to climate change from the California Energy Commission, the Air Resources Board, California Department of Fish and Wildlife, and various academic institutions. Many other reports and data sources were used in the preparation of this Assessment, including extensive use of forest inventory data from the Forest Service's Forest Inventory and Analysis program.

TREE MORTALITY IN LOS ANGELES COUNTY

Approximately one million acres of forest within and adjacent to the San Bernardino, Cleveland, and Angeles National Forests have experienced severe tree mortality due to the drought-induced, pine bark beetle epidemic, the Polyphagous Shot Hole Borer (PSHB), and the Goldspotted Oak Borer (GSOB). These forests are directly adjacent to major metropolitan areas in Los Angeles County; however, tree mortality is widespread within the WUI and urban areas. Risks from fire and falling trees pose a major threat to public safety, private property, and ecosystem health.

Currently, the Department, the Los Angeles County Department of Agricultural Commissioner/Weights and Measures (ACWM), the Los Angeles County Department of Public Works, the USFS and the local FSCs are actively involved in GSOB and PSHB containment and eradication projects.

On January 27, 2016, the California Board of Forestry and Fire Protection declared the community of Green Valley a GSOB Zone of Infestation. Emergency hazard mitigation efforts are being implemented in Green Valley for GSOB infestation as well as long term planning for forest recovery and rehabilitation caused by this Oak Borer. A $200K Fire Prevention grant was completed in February 2019, removing 143 infested trees. Also, in February 2019, the Department received a $3M Forest Health Grant to remove approximately 1,500 more infested oaks: this grant was set to run through March of 2022, but due to COVID-19 restrictions, work was slowed this year and CAL FIRE has granted a year extension. By removing infested trees and controlling GSOB spread, approximately 12,000 healthy trees will be preserved, a primary grant goal to reducing greenhouse gas. Furthermore, over 6,000 oak seedlings are being grown for reforestation and age-class diversity. As of March 2021, LACoFD contract vendors have removed 911 trees, with the expectation to remove more infested trees than originally planned, greatly enhancing fire safety and defensible space.

The Forestry Division's projects include spatial and quantitative data collection on vegetative mortality issues throughout Los Angeles County. The focus of this intensive forest inventory is being directed to hot spots (areas of most concern), which are showing the highest appearance of tree mortality and declining vegetation conditions. An assessment of viable treatment options and effective treatment activities is ongoing on private and public lands. Efforts monitoring spread of insect-related mortality as well as ongoing hazard mitigations in the region are increasing workloads for Prevention Services and Regional Operations Bureaus. Some of this work builds on existing CAL FIRE programs; however, challenges arise when projects overlap into private property.

Forest health, resilient landscapes, fire adapted, and Firewise communities are the main focus of land management planning and activities. Current Department work is supported by both the National Fire Plan and California Fire Plan by developing short- and long-term vegetation management and fire protection strategies.

Goldspotted Oak Borer Beetle

Camp Crews Chipping Infested wood

VALUES

Generalized assets at risk need to be identified within Los Angeles County to show areas containing high value assets. Areas with the highest combined asset values and fire risk are then targeted for fire plan projects, particularly where such projects reduce damage if a fire starts in the project area during high fire hazard weather.

In Los Angeles County, the following are priority values and assets at risk:

- Public and firefighter safety
- Water and watershed
- Vital infrastructure (power lines, gas lines, highways, roads, etc.)
- Structures
- Wildlife and habitat (including rare and endangered species)
- Air quality
- Soil erosion
- Recreation
- Agriculture, range
- Cultural and historic resources

Potential projects are identified and then an objective analysis determines the degree projects will reduce potential suppression costs and damage to valued assets within the project area. The asset framework and validation process are refined as stakeholders are identified and participate in the Fire Plan process. Multiple agencies have played a vital role in identifying assets within Los Angeles County. Identifying locations of assets at risk is critical to fire protection planning. Given the limits on fire protection resources, they should be allocated, in part, based on assets being protected. Considering resource limitations, a thorough understanding of assets at risk is necessary to determine pre-fire management projects providing the greatest benefit. The Department's primary concern is reducing fire risk and potential loss of assets described herein, providing safety and protection of life, property, and the environment, while reducing suppression costs. Public and firefighter safety is paramount. As development continues and expands into the WUI, it becomes exceedingly more difficult to provide protection against the threat of wildland fires.

ASSETS AT RISK	PUBLIC SSUE CATEGORY	LOCATION AND RANKING METHODOLOGY
FIRE/FLOOD/WATERSHEDS	PUBLIC SAFETY, PUBLIC WELFARE	WATERSHED WITH A HISTORY OF PROBLEMS OR PROPER CONDITIONS FOR FUTURE PROBLEMS. RANKS ARE BASED ON AFFECTED DOWNSTREAM POPULATIONS
SOIL	ENVIRONMENT	WATERSHED RANKED BASED ON EROSION POTENTIAL
WATER SUPPLY	PUBLIC HEALTH	1) WATERSHED AREA UP TO 20 MILES FROM WATER SUPPLY FACILITY 2) GRID CELLS CONTAINING DOMESTIC WATER DIVERSIONS, RANKED BASED ON NUMBER OF CONNECTIONS; 3) CELLS CONTAINING DITCHES THAT CONTRIBUTE TO THE WATER SUPPLY SYSTEMS
SCENIC VALUE	PUBLIC WELFARE	FOUR MILE VIEWSHED AROUND SCENIC HIGHWAYS, RANKED BASED ON POTENTIAL IMPACT TO VEGETATION TYPES (TREE VS. NON-TREE TYPES)
AIR QUALITY	PUBLIC WELFARE, PUBLIC HEALTH, ENVIRONMENT	POTENTIAL DAMAGES TO HEALTH, MATERIALS, VEGETATION AND VISIBILITY; RANK BASED ON VEGETATION TYPE
HISTORIC BUILDING	PUBLIC WELFARE	FROM STATE OFFICE OF HISTORIC PRESERVATION, RANKED BASED ON FIRE SUSCEPTABILITY
RECREATION	PUBLIC WELFARE	UNIQUE RECREATION AREAS OR AREAS WITH POTENTIAL DAMAGE TO FACILITIES, RANK BASED ON FIRE SUSCEPTABILITY
STRUCTURES	PUBLIC WELFARE, PUBLIC SAFETY	RANK BASED ON HOUSING DENSITY AND FIRE SUSCEPTABILITY
NON-GAME WILDLIFE	PUBLIC WELFARE, ENVIRONMENT	CRITICAL HABITATS AND SPECIES LOCATION BASED ON INPUT FROM CALIFORNIA DEPT. OF FISH AND GAME AND OTHER STAKEHOLDERS
GAME WILDLIFE	PUBLIC WELFARE, ENVIRONMENT	CRITICAL HABITATS AND SPECIES LOCATION BASED ON INPUT FROM CALIFORNIA DEPT. OF FISH AND GAME AND OTHER STAKEHOLDERS
INFRASTRUCTURE	PUBLIC WELFARE, PUBLIC SAFETY	INFRASTRUCTURE FOR DELIVERY OF EMERGENCY AND OTHER CRITICAL SERVICES (I.E., REPEATER SITES, TRANSMISSION LINES)

California's Forests and Rangelands: 2010 Assessment identified a variety of "Priority Landscapes" applicable to all areas of California.

Based on the Priority Landscapes developed by the Assessment, 11 landscapes are considered immediate priorities for Los Angeles County. The following best identifies Los Angeles County's current issues, problem areas, and potential strategies:

1. Community Wildfire Planning
2. Population Growth and Development Impact
3. Preventing Wildfire Threats to Maintain Ecosystem Health
4. Restoring Wildfire Impacted Areas to Maintain Ecosystem Health
5. Preventing Wildfire Threats for Community Safety
6. Water Quality
7. Water Supply
8. Conserving Green Infrastructure
9. Managing Green Infrastructure
10. Threats to Forest Carbon from Wildfire, Insects, and Disease
11. Threats to Forest Carbon from Development

From the Priority Landscapes, the following Assets at Risk are identified as the highest concerns and should be addressed first:

- Structures, major roads, and transmission lines – as threatened from wildfire. The value of housing, measured by density, with susceptibility to loss (exposure). Fire access road vegetation clearance for ingress/egress. Power delivery and communication sites susceptible to extended loss of service due to fire or the simple interruption of these services is a public safety and welfare issue.

- Ecosystems – as threatened by localized development and landscape level development. Based on potential ecological damage from a severe fire event, areas can diverge significantly due to the historic fire return interval and development resulting in fuel conditions that could promote ecological damage (e.g. mortality within large tree diameters, soil impacts).

Water Supply, Water Quality – as threatened by wildfire and the effects of wildfire on soil surfaces, threats to and from localized development, watersheds, and climate change. Watersheds can burn in the dry season and then discharge torrents of debris into downstream-populated plains during subsequent severe, wet-season storms.

SECTION IV: PRE-FIRE MANAGEMENT STRATEGIES

FIRE PREVENTION

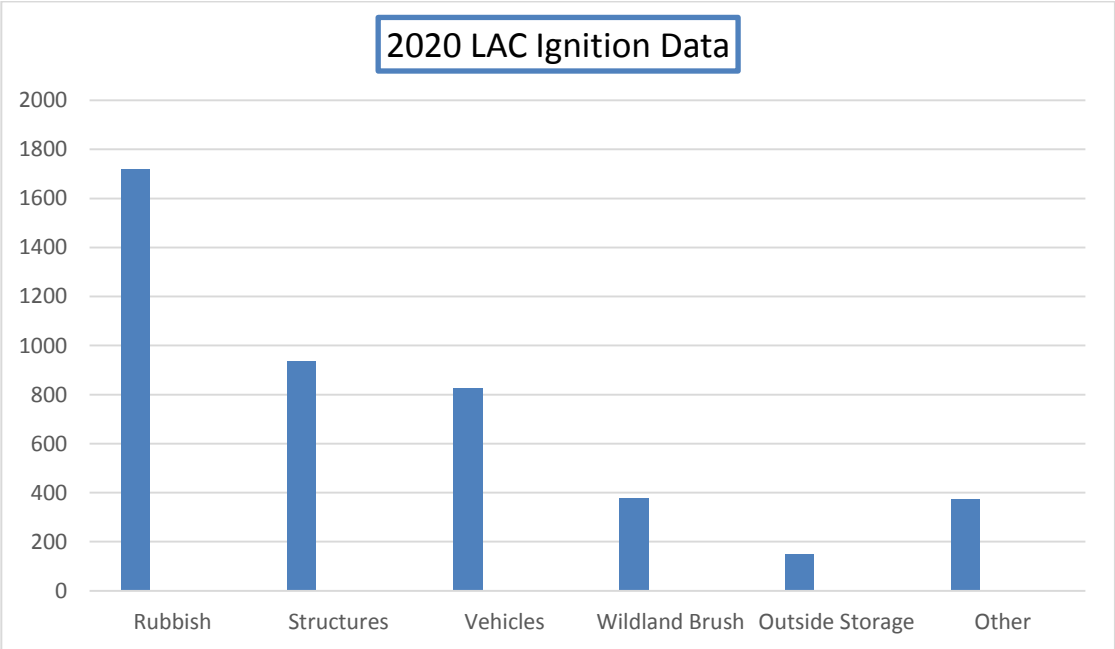
In 2020, Los Angeles County recorded 4,375 ignition starts. Over the 2016-2020 timeframe, 37,646 ignition starts took place. Due to the large number of ignition starts, the Fire Plan Unit evaluated and analyzed the cause of these starts to find methods in preventing fires from developing.

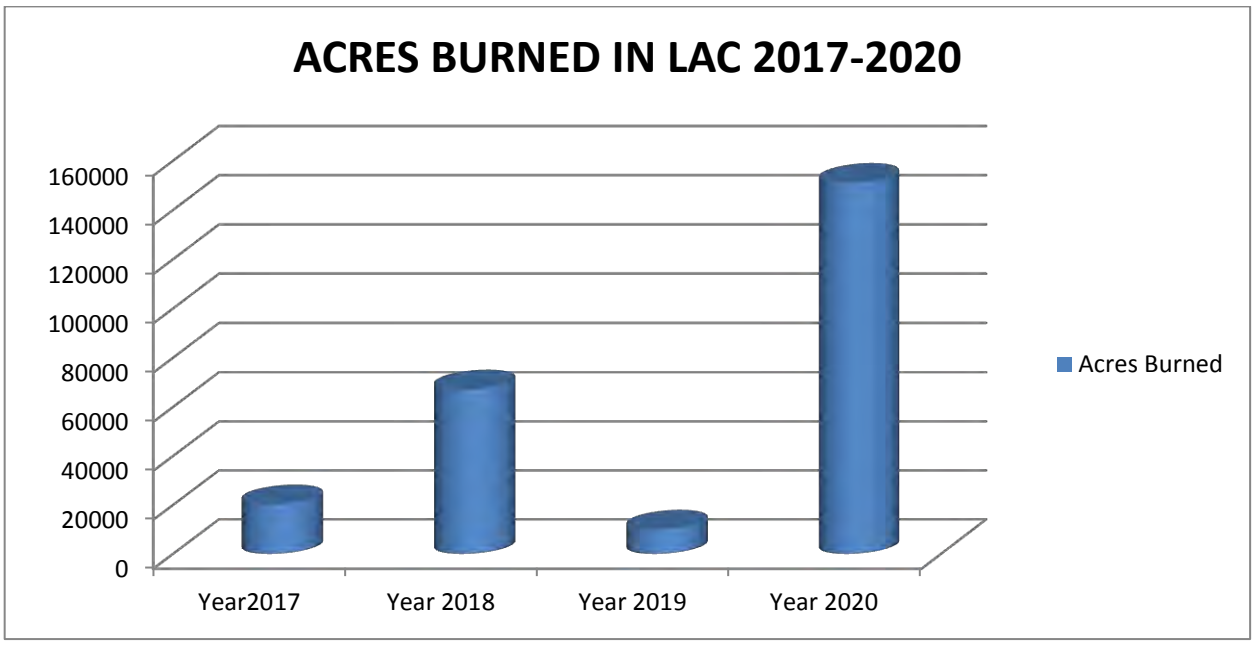
Ignition Starts

The largest numbers of ignition starts are caused by outside rubbish fires. The National Fire Incident Reporting System reference guide describes outside rubbish fires as trash, waste fires, garbage dump or sanitary landfill fires, construction or demolition landfill fires, dumpsters, or other outside trash receptacle fire and outside stationary compactor, or compacted trash fire. Known sites can implement fire prevention practices, such as misters and brush clearance.

The next largest category of ignitions threatening Los Angeles County is structure fires. Due to Los Angeles County's large population, the number of structure ignitions corresponds respectively to the concentration of starts occurring within the 59 Fire Protection District Cities and Unincorporated communities. Fire prevention and public education programs can increase awareness and minimize structure loss.

The third largest ignition source is vehicle-related. An effective mitigation method for vehicle ignition starts is timely completion of annual roadside brush clearance on all major and minor roads within the WUI. Brush clearance should be completed for 10 feet on both sides of fire access roads.





2017-2020 Acres Burned

Prevention

The focus of fire prevention is educating citizens to reduce the risk from hazardous conditions. These programs are focused on awareness of fire causes and reducing costs due to fire damage. The Department's Fire Plan Unit coordinates programs and activities intending to create efficient and timely Pre-Fire Management projects.

Passive Protection

Passive protection such as defensible space, hazard fuel reduction, proper brush clearance, fire-resistive landscaping, fire-resistive construction, and good housekeeping around structures plays a critical role in increasing survivability in a wildfire. The sum effect of passive protection is a force multiplier for active firefighting resources. A single firefighting resource may protect many more structures when passive protection is properly employed. In some cases, firefighting resources may not be necessary at all, thus freeing firefighters for additional assignments.

Pre-Fire Management

The pre-fire engineer and unit staff work with a myriad of stakeholders and cooperators including federal, State, and local government entities, FSCs, individual citizens, and other organizations to assist with the development and implementation of their fire plan. Pre-fire engineer programming varies from unit to unit and includes the following: Prevention, VMP, Resource Management, administration and, in some cases, working directly for the unit chief.

Fire Prevention Engineering

The Fire Prevention Division is under the leadership of the Department's Fire Marshal. This Division focuses on educating communities on benefits of proper safety practices and identifying and eliminating all types of hazardous conditions posing a threat to life, property, and the environment. Safety inspections are consistently conducted in commercial, industrial and residential developments. Numerous fires are investigated and tracked. Acquired information is used to update fire codes and fire prevention best management practices.

Arson/Fire Investigation Unit: Conducts investigations of major alarm fires and other fires to determine the cause or investigates suspected arson. The Unit interviews witnesses, collects evidence, writes reports, and conducts training programs for departmental personnel.

Codes and Ordinances Unit: Conducts research, answers requests for information, and maintains the Department's legal and historic library. The Unit proposes code changes to the California Fire Code and California Building Code groups and coordinates the fire code adoption process with all contract cities.

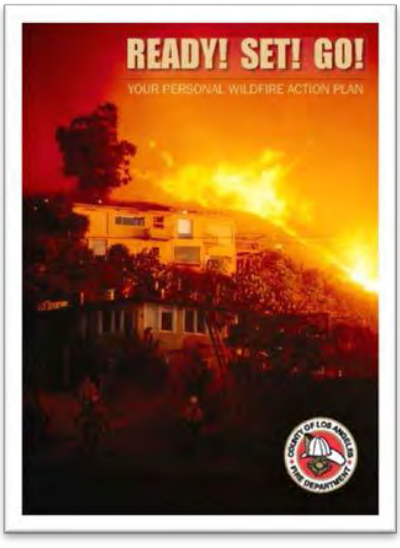
Land Development Unit: Reviews water and Fire Department access for city and County entitlement projects prior to a public hearing.

Building Plan Check Unit: Performs nonstructural fire safety plan review and approves architectural plans for various complex occupancies.

Information and Education

The Public Information Officer develops specific programs, educational materials, and public statements. Ultimately, public education is the responsibility of all members of the Department. Each section interacts with the public and is responsible for increasing the public's awareness of wildfire safety and preparedness. The Department uses several publications to provide safety information to citizens of Los Angeles County.
Among them are:

- ✓ Ready! Set! Go!: https://fire.lacounty.gov/rsg
- ✓ Community Emergency Response Team (CERT): https://fire.lacounty.gov/community-emergency-response-team
- ✓ County of Los Angeles Fuel Modification Guidelines: https://fire.lacounty.gov/forestry-fuel-modification/



- ✓ For a complete list of WUI fire prevention education materials; please visit: https://fire.lacounty.gov/fire-hazard-reduction-programs/

Additional WUI information and brochures are available through the Forestry Division's Interpretive Unit at (818) 890-5723.

Los Angeles County Fire Department
Website: www.fire.lacounty.gov/
Facebook: www.facebook.com/LACoFD
Twitter: @LACo_FD

Community Fire Hazard Reduction Project Support

The Department's Fire Plan Unit provides fire hazard reduction project design, development, planning, and implementation for communities in Los Angeles County.

2020-2021 Projects

- North Topanga Canyon Fire Safe Council Grant Awarded and active
- $3M Green Valley GSOB Forest Health Grant awarded February 2019 – active
- City of Malibu creation of Community Wildfire Projection Plan Grant (CWPP) – active/completed
- City of Bradbury creation of CWPP – active
- City of Rolling Hill CWPP/Fuels reduction – active
- City of Claremont; Claremont Hills Wilderness Park & CWPP – active
- Catalina Hazardous Fuel Reduction Project - active
- Defensible Space Landscaping in the Santa Monica Mountain Recreation Area Grant awarded and active
- Tonner Canyon Fuels reduction project

SECTION V: PRE-FIRE MANAGEMENT TACTICS

Engineering and Structure Ignitability

All newly constructed homes in the Fire Hazard Severity Zone (FHSZ) are subject to strict construction guidelines. There must be screening over all attic vents, preventing or limiting embers from entering the home. All eaves must be "boxed in" which provides no exposed wood to catch on fire. Windows are required to be one-hour fire danger-rated, which means they can withstand one hour of heat from a wildfire before breaking. These are just a few specific preventive methods reducing structure damage and loss.

NATURAL RESOURCES SECTION

Fire Plan Unit

The Forestry Division's Fire Plan Unit is in charge of implementing the California Strategic Fire Plan and the Los Angeles County Strategic Fire Plan in Los Angeles County. The State Board of Forestry and CAL FIRE drafted a comprehensive document for wildland fire protection in California. The planning process defines a level of service measurement, considers assets at risk, incorporates the cooperative inter-dependent relationships of wildland fire protection providers, provides for public stakeholder involvement, and creates a fiscal framework for policy analysis

This unit works with communities and organizations across Los Angeles County to limit the risk of fire in WUI areas. The Fire Plan Unit is focused on educational programs, development and enforcement of fire and building codes in the FHSZ as well as Pre-Fire Planning, Vegetation Management, Brush Clearance, Environmental Review, and Fuel Modification Programs. These programs concentrate on awareness and mitigation of fire causes, fire spread potential, and the total costs and effects of fire damage associated with protection of life, property and the environment. The Fire Plan Unit coordinates programs and activities with the intent of creating efficient and timely pre-fire management projects.

VEGETATION MANAGEMENT

The Department's Forestry Division, since its inception in 1911, has been involved in conservation and protection of natural resources through its forestry programs. The Division is comprised of three sections: Operations, Natural Resources, and Brush Clearance. Forestry Division employees serve citizens by using acquired knowledge to preserve and enhance the environment for the benefit of all residents of Los Angeles County. The Division is responsible for reviewing environmental documents related to development and protection of oak tree resources, development of vegetation management projects, coordination of wildland fire planning, enforcement of the Department's brush clearance program, review of fuel modification plans, support to FSCs, and implementation of the California Strategic Fire Plan.

As the population of Los Angeles County increases, further expansion of residential areas into the WUI is inevitable. Panoramic views, wildlife, fresh air, and solitude are just a few reasons people choose to live in wildland areas of the County. The rewards may be numerous, but the increased risk of wildland fires, and subsequent flooding and erosion pose a serious threat to life and property.

Vegetation Management Program

The VMP is a cost-sharing program focusing on the use of prescribed fire, mechanical and biological controls addressing wildland fire fuel hazards and other resource management issues on SRA and Local Responsibility Area (LRA) lands. The use of prescribed fire mimics natural processes restores fire to its historic role in wildland ecosystems and provides significant fire hazard reduction benefits enhancing public and firefighter safety.
The VMP allows private landowners to contract with CAL FIRE, using an integrated vegetation management plan to accomplish a combination of fire protection and resource management goals. The Forestry Division's Vegetation Management Unit and the Air and Wildland Division's Prescribed Fire Office implement VMP projects, which align with the Department's priority areas (e.g., those identified through the fire plan) and are considered to be most beneficial.

The Vegetation Management Unit works closely with the Fire Plan Unit and the Air and Wildland Division's Prescribed Fire Office to implement projects outlined in this plan. The Vegetation Management Unit provides the State and County with required paperwork for prescribed burning, mechanical, biological and chemical treatment methods used in project areas. The unit also provides legal documentation for CEQA compliance and Negative Declarations.

Environmental Review Unit

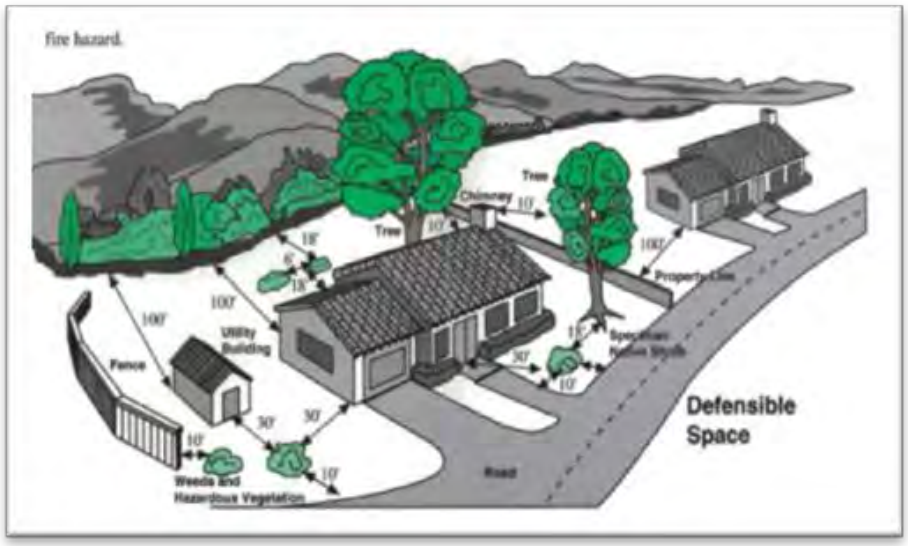
The Forestry Division's Environmental Review Unit works in collaboration with the Los Angeles County Department of Regional Planning (DRP) in implementing existing environmental ordinances. Unit personnel review all County Oak Tree Permit applications submitted to the DRP and develop recommendations for implementation. Additionally, unit personnel produce environmental documentation and recommendations, such as, non-significant impact documents, negative declarations, and mitigation measures consistent with California Environmental Quality Act (CEQA) mandates for construction projects and developments. The Environmental Review Unit ensures statutory responsibilities of the Department's Forestry Division are addressed in the project planning phase.

BRUSH CLEARANCE SECTION

Brush Clearance Program

The Brush Clearance Program is a joint effort between the Fire Department and the ACWM Weed Abatement Division. This unified enforcement legally declares improved and unimproved properties a public nuisance, and where necessary, requires the clearance of hazardous vegetation. These measures create "Defensible Space" for effective fire protection of life, the environment, and property. The Department's Brush Clearance Unit enforces the Fire Code regarding brush clearance on improved parcels, coordinates inspections and compliance efforts with fire station personnel, and provides annual brush clearance training to station personnel. The Department's defensible space program is developing a database to be consistent with CAL FIRE reporting.

Existing homes in the FHSZ are inspected annually by local fire personnel. These inspections are performed in spring and the goal is to evaluate properties for adequate defensible space. Los Angeles County requires more than the State's 100 feet of clearance and may extend fire hazard reduction up to 200 feet depending on aspect, slope, and other environmental conditions. Some inspection guidelines require no vines on structures or large trees within the first 30 feet of the home. Inspectors are looking for adequate removal of vegetation, breaking fuel continuity and density. Depending on slope direction from the structure, fire intensity can be mitigated by decreasing density and clearing vegetation. If a property is found to be non-compliant, Los Angeles County has a process to warn property owners and may impose infractions for inadequate fire hazard reduction. A homeowner with a non-compliant property requiring fire hazard reduction clearance by ACWM contracted personnel will be charged an administrative fine and assessed and abatement enforcement fee. AB 3074 signed into law September 29, 2020, established a new 5' ember resistant zone. We need to add the new 5' ember resistant zone requirement to be enforced starting on January 1, 2023. Public outreach and education will occur between 2021 and 2023, prior to full enforcement.



Fuel Modification Unit

The Forestry Division's Fuel Modification Unit's objective is to create the Defensible Space necessary for effective fire protection in newly constructed and/or remodeled homes within the Department's FHSZ. The Fuel Modification Unit provides guidelines and reviews landscape and irrigation plans submitted by property owners for approval before construction or remodeling of a structure. Fuel modification reduces radiant and convective heat and provides valuable defensible space for firefighters to make an effective stand against an approaching fire front. A fuel modification plan identifies specific zones within a property, subject to fuel modification.

Once homes are constructed, an inspection is performed confirming implementation of the approved landscape plan. At three-year intervals, the property is re-inspected to ensure the plan is implemented and maintained. If properties are non-compliant, homeowners can be fined and required to correct deficiencies.

A fuel modification zone is a restricted or limited planting area around a structure where vegetation, ornamental and/or native, has been modified and/or partially or totally replaced with drought-tolerant, low-fuel-volume plants. Zones may extend to 200 feet from structures. Fuel Modification Guidelines can be found at https://www.fire.lacounty.gov/forestry-division/forestry-fuel-modification/

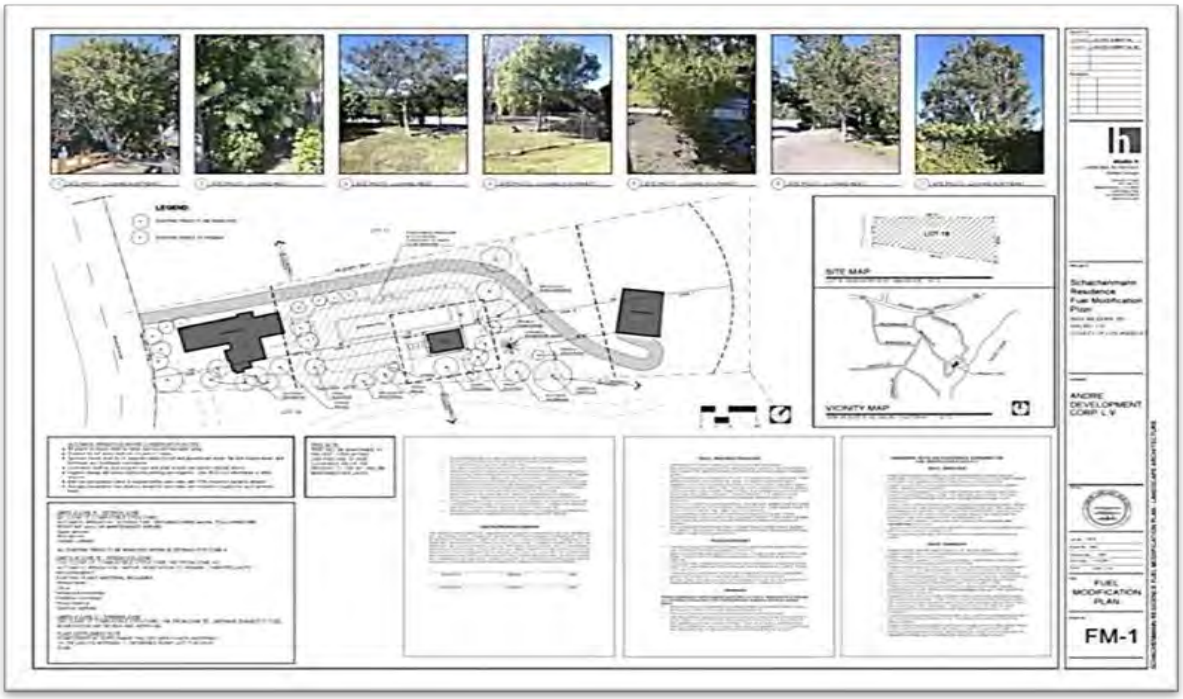


Figure Fuel Modification Example Plan and Landscapes

FIRE SUPPRESSION PHILOSOPHY

Life safety is the number one priority for fire suppression efforts. During a WUI, fire, protection of firefighters and civilians is followed by values at risk and natural resources. Many rules and guidelines have been developed protecting firefighters and the public during a WUI fire. These guidelines can help the public understand why firefighters perform specific tactics during wildfires.

Some of these guidelines are *The Ten Standard Firefighting Orders, the Eighteen Watch-Out Situations, the Risk Management Process, Primary Alternate Continence Emergency, and the WUI Guidelines.* Additionally, in extreme wildfire conditions, such as a Santa Ana Wind event, it can be extremely unsafe and unrealistic for firefighters to make an effective defensive stand on ALL values at risk in the operational area.

With all wildfires, specific strategic and tactical actions must take place. From initial dispatch to containment of a wildfire, a single, unified command is required. To accomplish this, all fire agencies in Los Angeles County and the State, use the National Incident Management System.

When a wildfire grows beyond initial attack in areas with assets at risk, particularly in the WUI, two additional dimensions are added to an already dynamic fire environment. These are perimeter control and structure defense that are identified by the Incident Commanders and developed in the Incident Action Plan. In addition, firefighting resources will be assigned in the Operational area for Tactical Patrol to monitor values at risk after the fire front has passed.

THE FIRE PROTECTION SYSTEM

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 Los Angeles County, primarily due to population growth and assets at risk having interfaced and intermixed with wildlands to an extent that uncontrolled fires must be quickly extinguished. Therefore, at the heart of the wildfire protection system in Los Angeles County is an aggressive initial response firefighting strategy.

DIVISION/BATTALION/PROGRAM PLANS

The Fire Plan Unit assessment process utilizes weather, assets at risk, fuels and input from various regions, bureaus, divisions, and battalions to determine priority areas and prioritize projects. The Fire Plan Assessment, with its science-based approach, is evaluated in conjunction with other intangibles to arrive at a "reasonable" assessment of the needs and likelihood of accomplishing a project.

The current assessment indicates there is a significant need throughout foothill communities, especially in WUI areas adjacent to local mountain ranges, such as, the Santa Monica Mountains, the Angeles National Forest, Verdugo, and San Rafael Mountains.

Each Fire Department battalion was consulted to determine pre-fire management projects considered important in reducing potential and impacts of wildfire. Projects are assigned a relative ranking by the Vegetation Management Task Force. Theoretically, a project with the highest hazard would have the first priority.

Nonetheless, there are a number of circumstances where projects less than the highest priority would be given preference. Some of these circumstances include the following: the Department's current commitment to an existing pre-fire project, community participation necessary to complete a project, the preparatory work and ease of instituting the project, the project type, a required match for grant-funded projects and the established commitment between the Department, Fire Safe Councils, and communities. The Fire Plan Unit's function is to identify, propose, and support Countywide fire hazard reduction projects.

Brush clearance: before

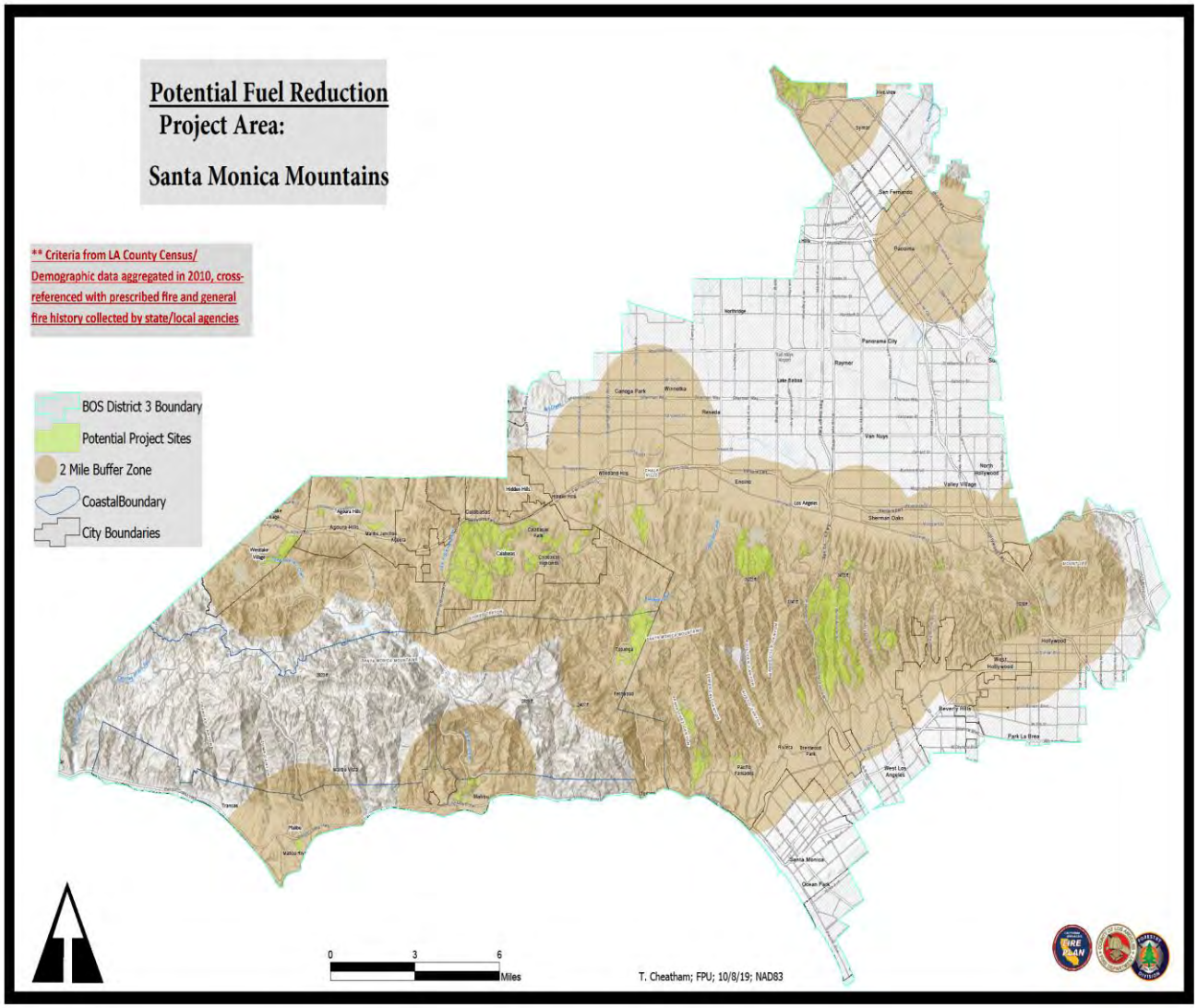
Brush clearance: after

APPENDIX A: PRE-FIRE PROJECTS

Project Name	Planning	Status	Type	Acres
Big Rock Fuel Reduction Project Goat Vendor	SRA	P	FPL	17.8
Bradbury Duarte Hazardous Fuels Reduction Project	LRA	P	FPL	
Catalina Fuel Break	SRA	P	FPL	
Catalina Hazardous Fuel Reduction Project	SRA	A	FPL	
Catalina Motorway System	SRA	A	FPL	36.33
Charmlee Park VMP	LRA	P	VMP	58.15
Claremont Hills Wilderness Park & Community Wildfire Protection	LRA	A	FPL	
Clear Creek RX USFS	FRA	A	FPL	
Creation of Malibu Community Wildfire Protection Plan	LRA	A	FPL	
East End System	SRA	A	FPL	206.99
Glendale System	SRA	A	FPL	72.85
Green Valley SRA FPF Tree Mortality	SRA/LRA	P	FPL	6,619.46
Guidance for sustainable defensible space for SMMNRA	SRA	A	FPL	
High Country System	SRA	A	FPL	335.65
LAC Hazardous Fuel Reduction BN5 and Recovery Within Woolsey	SRA/LRA	P	FPL	
La Crescenta HFRD	LRA	A	FPL	6.97
La Crescenta Hazard Fuel Reduction VMP	LRA	A	FPL	136.02
Malibu Lake FSC Projects	LRA	A	FPL	
Malibu System	SRA	A	FPL	81.51
Mt Wilson RX	FRA	P	FPL	113.09
Mt. Baldy RX ANF	FRA	A	FPL	29.09
North Topanga FSC Projects	LRA	A	FPL	
Public Education Malibu Unit Hardened Structure	SRA	A	FPL	
Resource Conservation District of the Santa Monica Mountains	SRA	A	FPL	
Saddle Ridge HZRD Tree	SRA/LRA	A	FPL	6.00
Santa Clarita System	SRA	A	FPL	163.8
Spinks Canyon HZRD Tree	LRA	P	FPL	
Tonner Motorway System	SRA	P	FPL	
	Total			7,947.48

Possible Fuel Reduction Projects Identified in Los Angeles County:

Collaboration with private landowners and public agencies required. For example, a critical area is near Las Virgenes Road and the 101 Freeway. This is where many wind-driven fires have jumped the freeway and progressed to the Pacific Ocean. This location is an opportunity to mitigate threats through pre-fire management tactics.



APPENDIX B: DEPARTMENT GOALS AND OBJECTIVES

The mission statement of the Department is to protect lives, the environment, and property by providing prompt, skillful, and cost-effective fire protection and life safety services. This mission compliments the goal of the 2010 California Strategic Fire Plan. Therefore, the Department will continue to support and align with the intent of the 2010 California Strategic Fire Plan by addressing identified objectives. The goals of the Department's Strategic Fire plan are as follows:

- Analyze the potential of wildfire threats to communities at the battalion level within and adjacent to the WUI.
- Prioritize within each battalion where hazardous fuel reduction projects can make the largest impact to protection of life, property, and natural resources.
- Identify, categorize, and prioritize through a detailed assessment the values and assets at risk at the battalion level.
- Establish and prioritize which battalions have the highest wildfire threat potential in regard to values and assets.
- Develop battalion specific maps identifying prioritized values and assets and at-risk communities.
- Develop battalion specific strategies and tactics within our own strategic fire plan.
- Determine large scale fire prevention strategies which parallel the County's land use planning strategies.
- Continue to reach out and assist with communities at risk to establish local FSCs and establish appropriate defensible space.
- Continue to work with communities at risk to develop Community Wildfire Protection Plans.

APPENDIX C: 2020 STATISTICAL SUMMARY

County of Los Angeles
Fire Department
Fire Chief Daryl L. Osby

2020 STATISTICAL SUMMARY

FIRE DEPARTMENT — Three Year Data 2018-2020	2020	2019	2018
Acreage Burned	61,850	9,923	63,648
FIRE INCIDENTS			
Structures	2,430	1,937	2,304
Vehicles	1,789	1,616	1,716
Rubbish	3,379	2,679	2,659
Brush / Grass	803	780	759
Outside Storage	345	42	336
Misc. Property	1,067	60	800
TOTAL	**9,813**	**7,114**	**8,574**
EMERGENCY MEDICAL RESPONSES			
TOTAL	**307,025**	**333,973**	**330,059**
OTHER INCIDENTS			
False Alarms	20,237	26,954	23,887
Mutual Aid Provided	2,066	2,164	1,919
Haz-Mat	629	662	681
Misc. Incidents	39,747	28,119	27,752
TOTAL	**62,679**	**57,899**	**54,239**
TOTAL INCIDENTS	**379,517**	**398,986**	**392,872**

Fire Loss in Dollars 2018-2020	2020	2019	2018
Property or Structure	$ 148,147,736	$ 88,657,162	$ 290,003,114
Vehicle Contents	$ 19,566,959	$ 20,394,296	$ 22,270,615
Misc. Property	$ 5,527,018	$ 9,777,531	$ 1,412,559
Total Dollar Loss	**$ 173,241,713**	**$ 118,828,989**	**$ 313,686,288**

LIFEGUARD - Three Year Data 2018-2020	2020	2019	2018
Ocean Rescues	9,666	10,057	11,242
Medical Calls	15,134	14,849	15,646
Boat Rescues (Distress)	523	393	423
Missing Persons	685	758	1,046
O2 Therapy	92	110	155
Drownings	3	2	4
Beach Attendance	**62,963,309**	**50,697,049**	**56,045,125**

4,067,549 Residents
1,262,576 Housing Units
60 District Cities and all Unincorporated Communities
2,311 Square Miles

DIVISION I
Battalions 7, 14 & 18 – 10 Cities

CARSON
GARDENA
HAWTHORNE
HERMOSA BEACH
LAWNDALE
LOMITA
PALOS VERDES ESTATES
RANCHO PALOS VERDES
ROLLING HILLS
ROLLING HILLS ESTATES

DIVISION II
Battalions 2 & 16 – 9 Cities

AZUSA
BALDWIN PARK
BRADBURY
CLAREMONT
COVINA
DUARTE
GLENDORA
IRWINDALE
SAN DIMAS

DIVISION III
Battalions 4, 6 & 22 – 2 Cities

LA CAÑADA FLINTRIDGE
SANTA CLARITA

DIVISION IV
Battalions 8, 9 & 21 – 12 Cities

ARTESIA
BELLFLOWER
CERRITOS
HAWAIIAN GARDENS
LA HABRA
LAKEWOOD
LA MIRADA
NORWALK
PARAMOUNT
PICO RIVERA
SIGNAL HILL
WHITTIER

DIVISION V
Battalions 11 & 17 – 2 Cities

LANCASTER
PALMDALE

DIVISION VI
Battalions 13 & 20 – 7 Cities

CUDAHY
HUNTINGTON PARK
INGLEWOOD
LYNWOOD
MAYWOOD
SOUTH GATE
VERNON

DIVISION VII
Battalions 1 & 5 – 6 Cities

AGOURA HILLS
CALABASAS
HIDDEN HILLS
MALIBU
WEST HOLLYWOOD
WESTLAKE VILLAGE

DIVISION VIII
Battalions 12, 15 & 19 – 5 Cities

DIAMOND BAR
INDUSTRY
LA PUENTE
POMONA
WALNUT

DIVISION IX
Battalions 3 & 10 – 7 Cities

BELL
BELL GARDENS
COMMERCE
EL MONTE
ROSEMEAD
SOUTH EL MONTE
TEMPLE CITY

County of Los Angeles
Fire Department
Fire Chief Daryl L. Osby

2020 STATISTICAL SUMMARY

PERSONNEL

Chief Officers	119	Administrative Support	923
Captains	702	Lifeguards	166
Firefighter Specialists	821	Seasonal Recurrent	120
Firefighter Paramedics	718	Dispatchers	97
Firefighters	719	Foresters	45
Call Firefighters	74	Haz Mat Specialists	107
Fire Suppression Aides (Paid)	150	**TOTAL PERSONNEL**	**4,775**
Pilots	14		

EMERGENCY OPERATIONS

Battalions	22	Hazardous Materials Squads	3
Fire Stations	177	USAR Squads	2
Engine Companies	**228**	Emergency Support Teams	1
Type I	175	Swift Water Rescue Units	6
Type III (OES)	11	Fire Boats	2
Type VI	42	Foam Units	3
Truck Companies	**34**	Mobile Air/Light Units	3
Light Forces	3	Water Tenders	15
Quints	30		
Paramedic Units	**112**		
Air Squads	3		
Assessment Engines	28		
Assessment Quint/Light Force	1		
Engines	5		
Squads	74		

RESERVE EQUIPMENT

Engines	61
Trucks/Quints	12
Squads	36
Battalion SUVs	21

LIFEGUARD DIVISION

Lifeguard Stations	24
Lifeguard Towers	159
Beach Patrol Vehicles	58
Rescue Boats	8
Paramedic Rescue Boats	2
Baywatch Paramedic Squads	2

HEALTH HAZ MAT DIV.

Emergency Responses	1,424
Response Teams	3

AIR & WILDLAND DIV.

Fire Responses	587
EMS Transports	556
Facilities	4
Aircraft Mechanics	18
Hoist Rescues	130
Water/Foam Dropped(gallons)	1,223,170
Helicopters	**10**
Bell 412	5
Firehawk	5
Fire Suppression Camps	**9**
Paid	4
Correctional	5
Probation Youth	0
Fire Suppression Crews	**18**
Paid	4
Correctional	14
Probation Youth	0
Dozers	10
Dozer Transport Trucks	10
Fuel-Tender	1
Heli-Tenders	9
Heavy Equipment	**19**
Excavator	1
Heavy Dump Truck	1
Track Loader	3
Rubber Tire Loader	3
Other	11

FORESTRY DIVISION

Forest Tree Nurseries	5
Plants Distributed	17,322

LOS ANGELES COUNTY FIRE DEPARTMENT

BRUSH FIRE LOG 2020

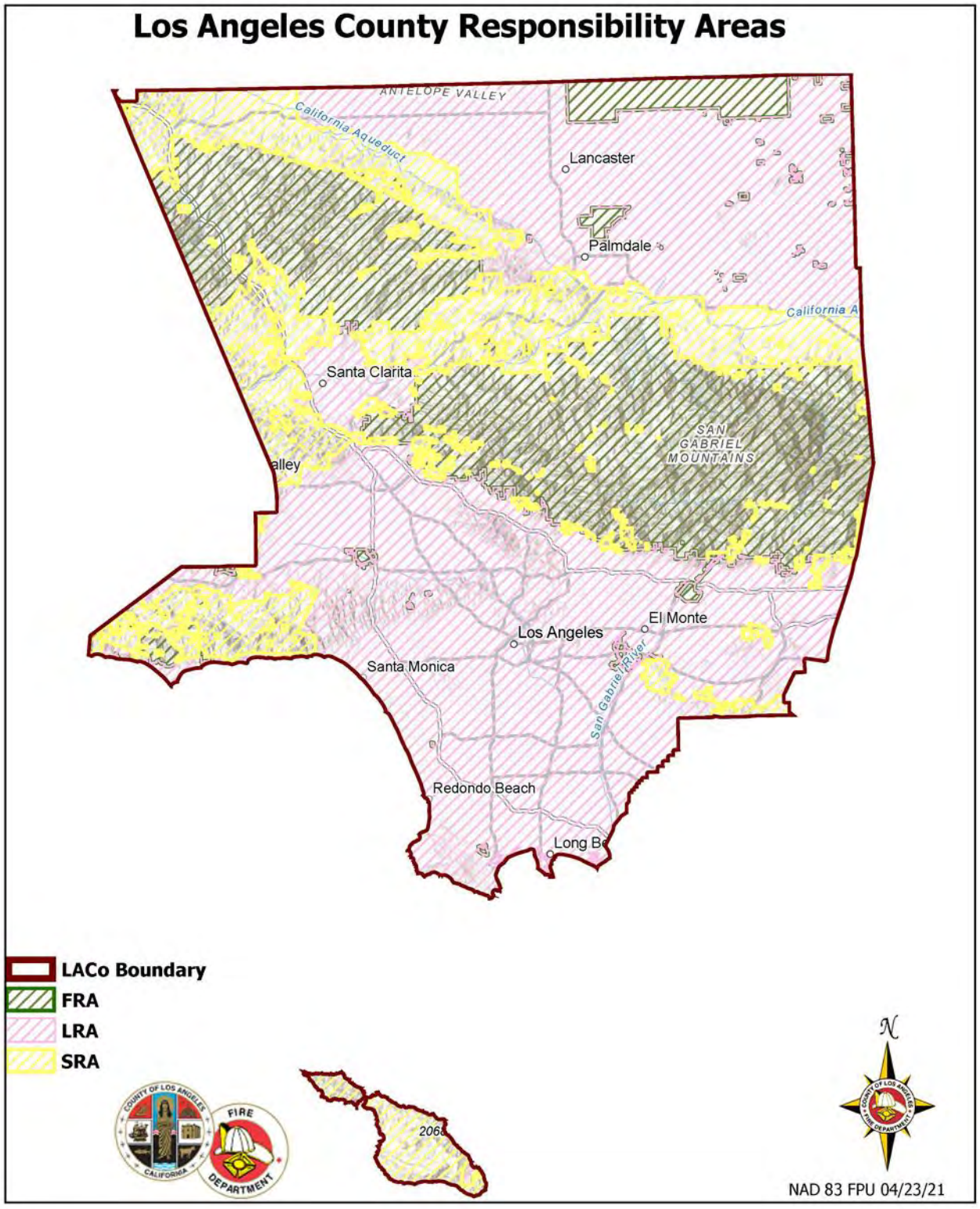
NO.	NAME	INC. #	JURIS.	DATE	S.R.A.*	S.R.A. BUF.**	C.F.P.D. ***
1	SOLEDAD FIRE	069278	FS 132	03/02/20	0.1	0.6	0.7
2	AIRPORT FIRE	149563	FS 81	05/21/20	3.0	0.0	3.0
3	SYCAMORE FIRE	160903	FS 68	06/01/20	0.0	0.2	0.2
4	HILL FIRE	163511	FS 17	06/04/20	3.5	0.0	3.5
5	EQUESTRIAN FIRE	167541	FS 76	06/08/20	83.6	0.0	83.6
6	COLIMA FIRE	169545	NONE	06/09/20	0.0	6.2	0.0
7	HASLEY FIRE	171441	FS 143	06/11/20	6.7	0.0	6.7
8	VISTA FIRE	172557	VARIOUS	06/12/20	19.7	0.0	19.7
9	VISTA FIRE	175571	NONE	06/15/20	0.0	0.2	0.0
10	WEST FIRE	181840	FS 78	06/21/20	0.0	46.8	46.8
11	TUNNEL FIRE	186808	FS 62	06/26/20	0.0	0.1	0.1
12	CALGROVE FIRE	191517	FS 124	06/30/20	1.7	2.5	4.2
13	210TH FIRE	198391	FS 78	07/05/20	0.0	7.1	7.1
14	3 POINTS FIRE	198047	VARIOUS	07/05/20	11.8	0.0	11.8
15	SOLEDAD FIRE	197926	VARIOUS	07/05/20	1,525.3	0.0	1,525.3
16	MESA FIRE	207264	FS 70	07/13/20	0.0	1.3	1.3
17	ROCK FIRE	210461	FS 70	07/16/20	0.0	0.4	0.4
18	TOPANGA FIRE	216968	FS 69	07/22/20	0.6	2.0	2.6
19	RIDGE FIRE	222638	FS 77	07/27/20	320.8	0.0	320.8
20	DAM FIRE	225728	FS 97	07/30/20	83.9	142.5	226.4
21	CANYON FIRE	226879	FS 81	07/31/20	0.8	0.2	1.0
22	CASTAIC FIRE	228163	FS 149	08/01/20	84.0	94.3	178.3
23	ELSMERE FIRE	230295	VARIOUS	08/03/20	69.3	89.9	159.2
24	TEXAS FIRE	233483	FS 108	08/06/20	1.5	170.5	209.9
25	HILL FIRE	236044	FS 141	08/08/20	0.1	0.0	0.1
26	PEAK FIRE	238836	FS 75	08/11/20	26.6	0.0	26.6
27	LAKE FIRE	240170	VARIOUS	08/12/20	3,945.4	2,956.7	30,994.6
28	RANCH2 FIRE	241258	FS 97	08/13/20	42.9	1,026.7	4,118.9
29	GROVE FIRE	242462	FS 91	08/14/20	1.8	0.0	1.8
30	KNOLLS FIRE	245374	FS 67	08/16/20	0.8	0.0	0.8
31	ROCK FIRE	244876	FS 67	08/16/20	93.8	0.0	93.8
32	RAYBURN FIRE	252458	FS 24	08/22/20	0.0	1.0	12.4
33	JOHNSON FIRE	259152	FS 78	08/28/20	291.9	0.0	291.9
34	BOBCAT FIRE	003687	VARIOUS	09/06/20	13,525.4	10,642.2	112,452.2
35	TOPANGA FIRE	271897	FS 69	09/08/20	6.7	0.0	6.7
36	PALM FIRE	275442	FS 91	09/11/20	8.4	0.0	8.4
37	SUNSET FIRE	275344	FS 62	09/11/20	1.0	0.0	1.0

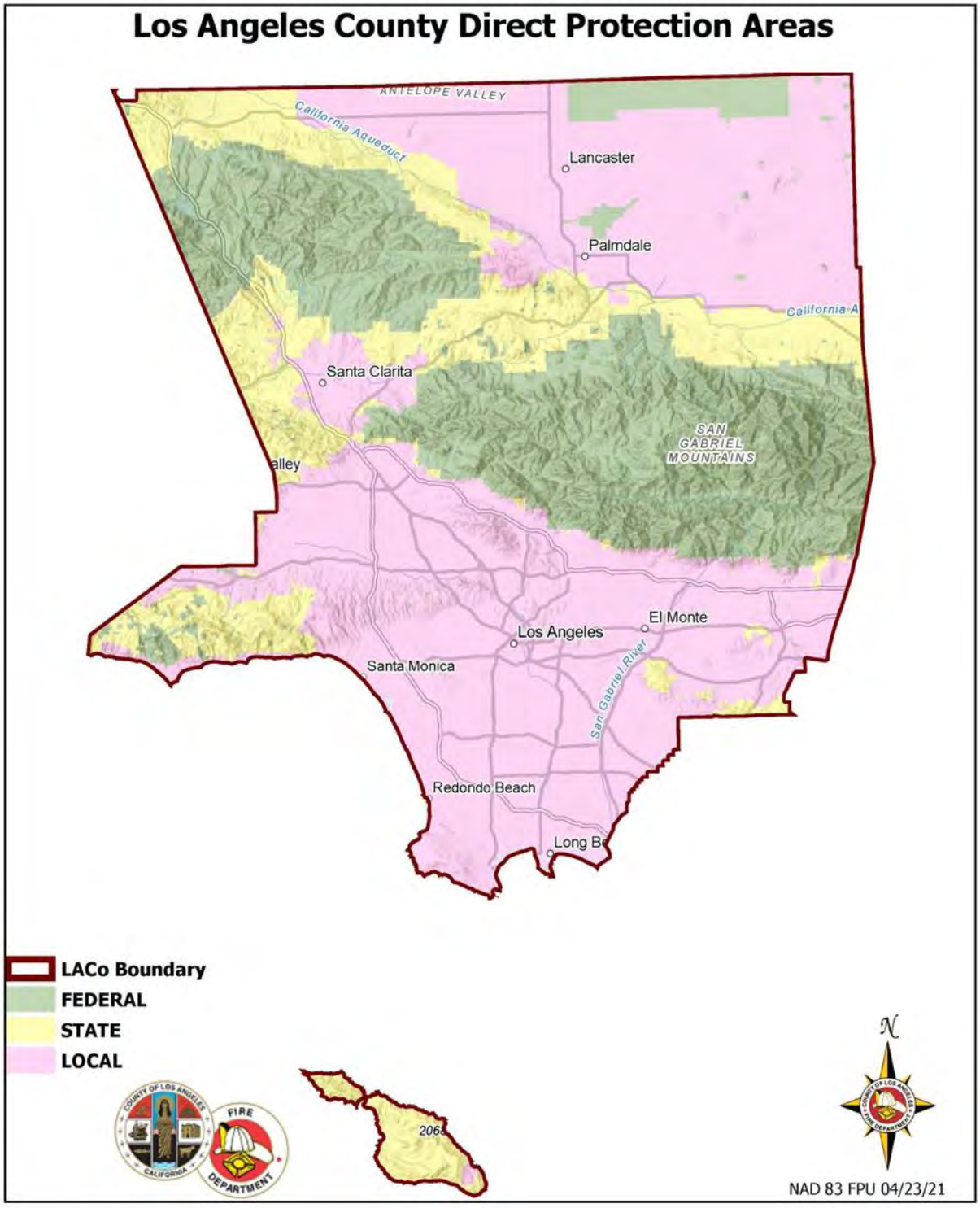
38	NO NAME FIRE	290998	FS 78	09/26/20	3.0	0.0	3.0
39	ACTON FIRE	293564	FS 80	09/28/20	13.8	0.0	13.8
40	QUAIL FIRE	306071	FS 77	10/09/20	12.9	0.0	12.9
41	WAVE FIRE	307499	FS 88	10/10/20	0.0	9.6	9.6
42	TOPANGA FIRE	315347	FS 70	10/17/20	0.0	0.3	0.3
43	VALLEY FIRE	325288	FS 69	10/27/20	0.1	0.1	0.1
44	SAN DIMAS FIRE	335402	FS 86	11/06/20	24.2	103.9	128.2
45	TUNA FIRE	339870	FS 70	11/10/20	0.2	0.0	0.2
46	TUNA FIRE	343103	FS 70	11/13/20	0.0	1.2	1.2
47	PEAK FIRE	355101	FS 69	11/24/20	0.1	0.0	0.1
48	CURVE FIRE	362479	FS 69	11/30/20	0.1	0.0	0.1
49	PUERCO FIFRE	369777	FS 88	12/07/20	0.0	0.2	0.2
50	CANYON FIRE	377420	FS 119	12/13/20	7.3	0.0	7.1
51	BANNING FIRE	385995	FS 155	12/20/20	1.5	0.0	1.5
52	MUIRE FIRE	390046	FS 68	12/23/20	0.0	0.2	0.2
				TOTAL	**20,224.3**	**15,306.9**	**151,000.3**

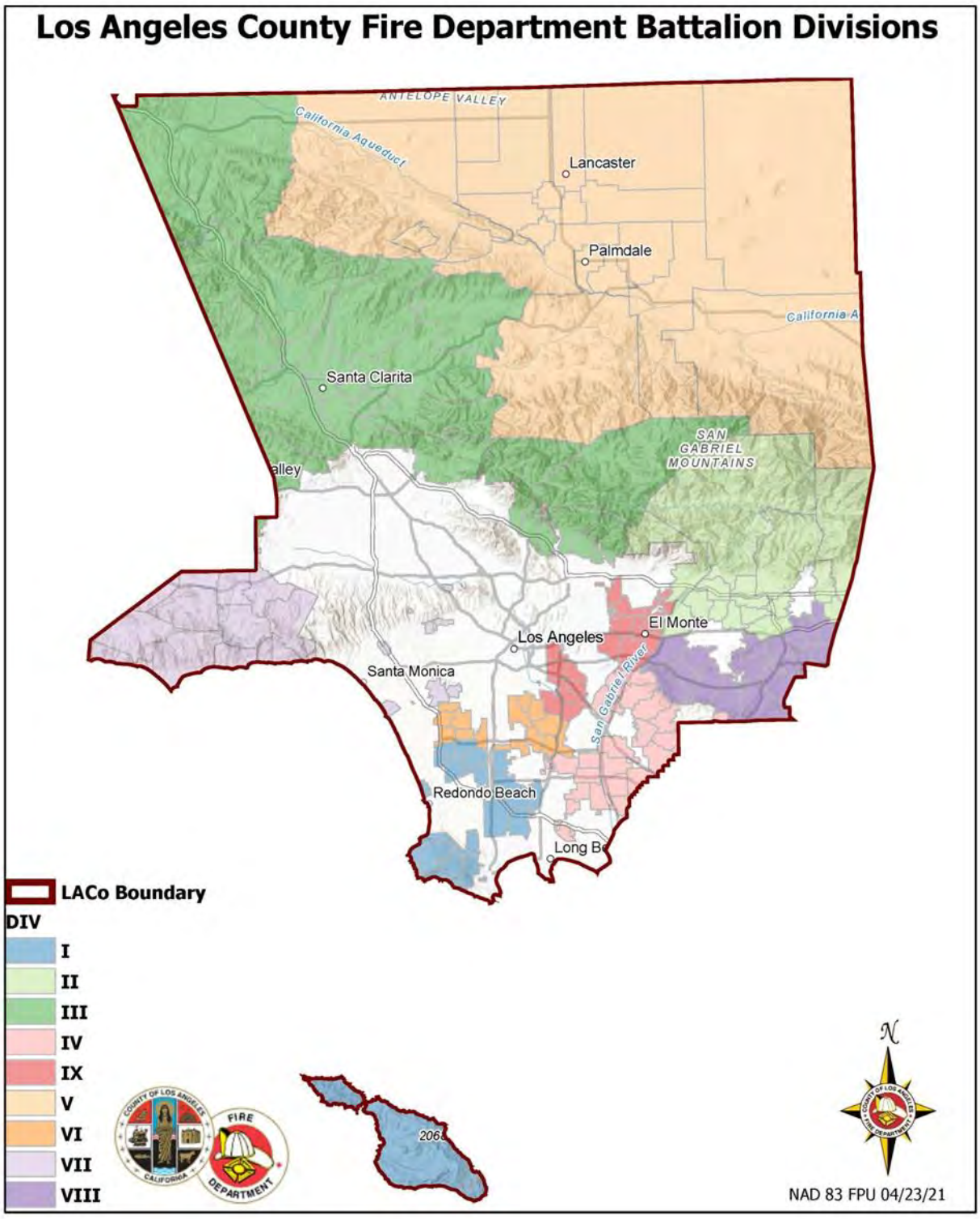
*TOTAL AREA IN ACRES WITHIN THE STATE RESPONSIBILITY AREA (S.R.A.).

**TOTAL AREA IN ACRES WITHIN A HALF-MILE BUFFER OF THE STATE RESPONSIBILITY AREA (S.R.A. BUF.). ***TOTAL AREA IN ACRES WITHIN THE CONSOLIDATED FIRE PROTECTION DISTRICT (C.F.P.D.).

EXHIBITS: MAPS




Los Angeles County Direct Protection Areas
ANTELOPE VALLEY
California Aqueduct
Lancaster
Palmdale
Santa Clarita
SAN GABRIEL MOUNTAINS
Los Angeles
El Monte
Santa Monica
San Gabriel River
Redondo Beach
LACo Boundary
FEDERAL
STATE
LOCAL
FIRE DEPARTMENT
N
NAD 83 FPU 04/23/21


Los Angeles County Fire Department Battalion Divisions
ANTELOPE VALLEY
California Aqueduct
Lancaster
Palmdale
California A
Santa Clarita
SAN GABRIEL MOUNTAINS
El Monte
Los Angeles
Santa Monica
San Gabriel River
Redondo Beach
Long Be
LACo Boundary
DIV
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VIII
206
FIRE DEPARTMENT
N
NAD 83 FPU 04/23/21

SUPPLEMENT: 2020

ANNUAL REPORT OF UNIT ACCOMPLISHMENTS

In 2020 the Department completed 39,877 Fire Hazard Reduction Inspections and issued 2,247 Official Inspection Reports for non-compliant parcels. There were 2,133 citations cleared by homeowners upon the second inspection by fire station personnel. The rest were forwarded to the Forestry Division Brush Clearance Unit (BCU) for non-compliance follow-up. The BCU consulted with the property owners and 114 non-compliance letters were sent. Eighty-eight properties were cleared by owner, 26 structures were cleared by the Los Angeles County Department of ACWM, Weed Hazard, and Integrated Pest Management Bureau.

The Department's Fuel Modification Unit reviewed over 1036 Fuel Modification Plans and performed over 2,654 follow-up inspections on previously approved Fuel Modification Plans.

The Department's Air and Wildland Division brushed and maintained roughly 250 miles of motorways and fire roads with the assistance of our Heavy Equipment Section. The Fire Suppression camps, both paid and correctional, treated some 815 acres, which protected 425,123 structures, 99 communities, and involved approximately 4,898 crew and personnel hours.