

SECTION V: PRE- FIRE MANAGEMENT TACTICS

DIVISION / BATTALION / PROGRAM PLANS

Determining the wildfire problem in Los Angeles County involves assessing the interrelated results of chaparral covered, fire adapted ecosystems, the resulting weather of a Mediterranean climate, the values at risk, and the fire protection system's ability to deal with the occurrence of wildfire. A major element of the California Strategic Fire Plan is an extensive assessment process that graphically depicts fuels, weather and assets at risk data, in a computer based Geographic Information System (GIS). The GIS thematic layers are then continually field-validated and used to identify the wildland urban-interface/intermix fire problem.

It is a commonly accepted concept, that fire is part of the natural life cycle of the chaparral ecosystem in Los Angeles County. Without fire, the chaparral-covered terrain of Los Angeles County reaches a mature state where the ratio of dead material to live plant structure becomes unbalanced. As the chaparral ages, more and more decadent growth adds to the fuel load (expressed in tons per acre), which contributes to the high intensity, costly, large loss wildfires. Historically, fires occurred naturally as a result of lightning and were introduced by native inhabitants. Native Americans, 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 whether natural or introduced tended to promote ecosystem health and reduced the number of large acreage, high intensity fires. As the County continues to grow in population, values at risk are encroaching on and intermixing with the wildlands. Consequently, wildfires threaten the values at risk and are seen as bad and should be extinguished promptly. Suppression efforts are quite successful, but result in the eventual, build-up of fuel for fire in the wildland or in and around the structures, making wildfires more intense and more destructive. Although the fire protection system has become more efficient, those fires that do escape initial attack efforts can quickly overwhelm the available suppression resources. Wildfires under certain severe fire weather conditions, such as a Santa Ana wind event, can prevent initial attack resources from suppressing the fire, while still small, and can spread so quickly and threaten so many values at risk that suppression resources cannot arrive quickly enough to prevent a majority of the damage.

FIRE SUPPRESSION PHILOSOPHY

As mentioned in other areas of this document, "initial attack" is the focus of all wildfire suppression activities for the County of Los Angeles Fire Department. With so much emphasis placed on quickly extinguishing all wildfires, it might seem that all fire in the wildland is a bad thing. Quite to the contrary, fire is absolutely a necessary element in the County's ecosystem. Since too many assets are at risk to allow the natural occurrence of wildfire, prescribed or controlled burns must take the place of naturally occurring wildfire.

The human element is always the number one priority for all fire suppression efforts. Many rules and guidelines have been developed to stress firefighter and public safety during wildfires. These rules and guidelines can be helpful for the layperson to understand why firefighters may say or do certain things related to wildfire. Some of these rules and guidelines are: "The Ten Standard Firefighting Orders," "The Eighteen Watch out Situations," "Common Denominators of Fire Behavior on Tragedy and Near-miss Forest Fires," "LCES - Lookouts, Communications, Escape Routes, Safety Zones," "Look Up, Look Down, Look Around." With all wildfires, certain strategic and tactical actions must take place. From the time of alarm to the abandonment or closure of a wildfire, one single unified entity must be in command of the incident. To accomplish this, all fire agencies in the County and in the State, for that matter, use the Incident Command System (ICS). Tactically all wildfires must be anchored, which means that a secure starting point is established from which all other strategic and tactical decision-making can build upon.

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

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

The County of Los Angeles Fire Department actually has a dual fire protection role. The County of Los Angeles Fire Department provides structural fire protection and rescue services to the Los Angeles County unincorporated areas and contract cities.

PRIORITY AREAS

The fire plan assessment process utilizes weather, assets at risk, fuels and input from the various Regions, Bureaus, Divisions and Battalions to help target critical areas and prioritize projects. Fire plan assessments aside, it is extremely difficult if not impossible to achieve fuel reduction on the ground without community involvement and stakeholders, whether that be in the form of a community fire safe councils, homeowners association or other organized forum. 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 that there is a significant need throughout the foothills, especially in the urban interface areas of Los Angeles County for hazardous fuel reduction.

Each of Department's battalions were consulted for pre-fire projects they consider

important to achieving their goals of reducing the potential and impact of catastrophic fire. Projects are assigned a relative ranking by the Department's Vegetation Management Task Force. Theoretically, the project with the highest hazard would have the first priority for funding of any given project or other pre-fire program. However, there are a number of circumstances where other than the highest priority would be given preference to a project. Circumstances when this might occur include the following: the Department's current commitment to an existing pre-fire project, community participation necessary to complete a project, preparatory work and ease of instituting the project, project type and match for grant funding and simply sharing the wealth and commitment toward pre-fire projects between the Department and communities. The Fire Plan Unit function is to coordinate countywide projects, and projects occurring between battalions, and provides direction in the planning of pre-fire projects.

Wildland Fire Protection Strategy

Prevention

The most effective way to limit damage and loss due to wildfire is to prevent all but the most blatant ignitions due to arson or unforeseeable circumstances. The focus of the entire Department is on prevention through educational programs, support to Fire Safe Councils, development and enforcement of fire codes and building codes in the Very High Fire Hazard Severity Zones, Fire Planning, Vegetation Management, Brush Clearance, Environmental Review and Fuel Modification Programs. These programs are focused on awareness and mitigation of fire causes, fire spread potential, total costs and effects of fire damage associated with the protection of life, property and the environment. The Department's Fire Plan Unit coordinates the efforts and activities of these programs with the intent of creating efficient and timely Pre-Fire Management projects.

Vegetation Management

Vegetation management, as it relates to wildland fire, refers to the total or partial removal of high fire hazard grasses, shrubs, or trees. This includes thinning to reduce the amount of fuel and modification of vegetation arrangement and distribution to disrupt fire progress. In addition to fire hazard reduction, vegetation management has other benefits. These include increased water yields, improved habitat for wildlife, reduction of invasive exotic plant species, and open access for recreational purposes.

The Vegetation Management Program (VMP) is a cost-sharing program that focuses on the use of prescribed fire, mechanical, biological and chemical means, for addressing wildland fire fuel hazards and other resource management issues on State Responsibility Area (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 that enhance public and firefighter safety.

VMP allows private landowners to enter into a contract with CAL FIRE to use 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 the VMP projects

which fit within the Department's priority areas (e.g., those identified through the fire plan) and are considered to be of most value to the County will be completed. The Vegetation Management Program typically treats about 40,000 acres each year statewide.

Brush Clearance

The Brush Clearance Program is a joint effort between the County of Los Angeles Fire Department and the County of Los Angeles Department of Agricultural Commissioner/Weights and Measures, Weed Hazard and Pest Abatement Bureau (Weed Abatement Division). This unified enforcement legally declares both 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 property, life and the environment. The Department's Brush Clearance Unit enforces the Fire Codes as it relates to brush clearance on improved parcels, coordinates inspections and compliance efforts with fire station personnel, and provides annual brush clearance training to fire station personnel.

Fuel Modification

The Fuel Modification Program objective is to create the Defensible Space necessary for effective fire protection in newly constructed and/or remodeled homes within the County's Fire Hazard Severity Zones (FHSZ). Fuel modification reduces the radiant and convective heat, and provides valuable defensible space for firefighters to make an effective stand against an approaching fire front and fire brands. Fuel modification zones are strategically placed as a buffer to open space, or areas of natural vegetation and generally would occur surrounding the perimeter of a subdivision, commercial development, or isolated development of a single-family dwelling.

The fuel modification plan identifies specific zones within a property which are subject to fuel modification. A fuel modification zone is a strip of land where combustible native or ornamental vegetation has been modified and/or partially or totally replaced with drought-tolerant, low-fuel-volume vegetation.

The Fuel Modification Unit provides guidelines and reviews the landscape and irrigation plans submitted by the property owner for approval before construction or remodeling of a structure. The fuel modification plans vary in complexity and reflect the fire history, the amount and type of vegetation, the arrangement of the fuels, topography, local weather patterns, and construction, design and placement of structures.

Environmental Review

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

Passive Protection

When the inevitable wildfire does occur, the primary protection of life, property, and the environment will come from passive protection such as defensible space (fuel reduction/brush clearance), fire-resistive landscaping, fire-resistive construction and good housekeeping. Sufficient firefighting water sources must be on site for use by the property owner and/or the fire department. Moreover, residents must have the means of self-evacuating and escaping danger through safe and sufficient egress routes while maintaining appropriate ingress routes for responding fire equipment. 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 them for other uses.

Pre-Fire Management

Fire Plan Unit Pre-Fire Engineer; The County Pre-Fire Engineer coordinates the creation of the Unit Fire Plan and then assist with its implementation. Under the direction and authority of the Forester and Fire Warden/Fire Chief, the County Pre-Fire Engineer works with unit chief officers (Battalion, Division and Deputy Chiefs) and stakeholders to develop the Unit Fire Plans which are designed to achieve the goals and objectives of the 2010 Strategic Fire Plan for California. The County Pre-Fire Engineer and unit staff work with many stakeholders/cooperators (federal, state and local government entities, Fire Safe Councils, individual citizens and many other organizations) to assist with the development and implementation of their Fire Plan. Each CAL FIRE Unit and Contract County has a funded position for a Pre-Fire Engineer. The Pre-Fire Engineers in all CAL FIRE Units and most Contract Counties are Deputy Foresters/Fire Captains. The program in which the Pre-Fire Engineer works varies from unit to unit and includes the following: Prevention; VMP; Resource Management; Administration; and in some cases directly for the Unit Chief.

Fire Suppression

The most effective time to control a wildfire is in the incipient stages when intensities are lower and the perimeter is small. The combined resource attack is a coordinated suppression effort including ground assets (engines, crews & dozers), aviation assets (fixed and rotary wing), passive fire protection measures, and command elements. Using in-place passive fire protection systems, incident commanders weave the varied active fire suppression assets into an aggressive and coordinated firefighting effort.

Community Participation

Fire Safe Councils (FSC)

Fire safe councils are grassroots community-based organizations which share the objective of making California's communities less vulnerable to catastrophic wildfire. Fire safe councils accomplish this objective through education programs and fire hazard reduction projects such as shaded fuel breaks or home structure hardening to protect area residents against an oncoming wildfire and to provide fire fighters with a place to fight



the oncoming fire. The first fire safe councils started in the early 1990s, and there are now over 200 statewide. Through the Fire Plan Unit the Department supports these community-based organization and efforts. In early 2000's, the Los Angeles County Fire Department set in motion the support mechanism to the FSC. Currently, there are more than 25 active Fire Safe Councils in Los Angeles County. <http://www.firesafecouncil.org/>

Firewise Communities Program

Brush, grass or forest fires don't have to be disasters. The National Fire Protection Association's (NFPA) 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. <http://www.firewise.org/Communities.aspx>

Community Emergency Response Teams (CERT)

The Community Emergency Response Team (CERT) Program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. Using the training learned in the classroom and during exercises, CERT members can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help. CERT members also are encouraged to support emergency response agencies by taking a more active role in emergency preparedness projects in their community. In June 2003, the Los Angeles County Fire Department began offering the FEMA-approved 20 hour CERT training curriculum to the cities and communities we serve. The program operates from the Public Affairs Section under the direction of a fire captain who serves as the Department CERT coordinator.



Priority Landscapes of Los Angeles County

The recent *California's Forests and Rangelands: 2010 Assessment* 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 Los Angeles County are high priority areas as well.

The State Mandate

By state law (Public Resource Code 4789) CAL FIRE must periodically assess California's forest and rangeland resources. The last assessment was completed in 2003 (<http://frap.fire.ca.gov/assessment2003/>) by the Fire and Resource Assessment Program (FRAP), a unit within CAL FIRE whose mission is to produce these periodic forest assessments. Results are used by the State Board of Forestry and Fire Protection (BOF) to develop and update a forest policy statement for California. The last

BOF statement was finished in 2007 and reflects various strategies designed to address key issues defined by the 2003 assessment (http://www.bof.fire.ca.gov/board_joint_policies/board_policies/policy_statement_and_program_of_the_board/policyprogram_050107.pdf).

The Federal Mandate

The 2008 federal Farm Bill amended the Cooperative Forestry Assistance Act to provide for development of state forest resource assessments and related resource strategies. Among other things, the intent of the amendments is to facilitate identification of priority forest landscape areas, to underscore work needed to address issues on these landscapes, and to frame and focus related strategies and actions.

The U.S. Forest Service State and Private Forestry Program (S&PF) in 2008 “redesigned” its approach to reflect these plans and funding strategies, and Program Redesign has strongly shaped the approach CAL FIRE has taken with the California 2010 Assessment.

The 2010 effort covers two components of the Redesign approach:

- Statewide Assessment of Forest Resources – provides an analysis of forest conditions and trends in the state and delineates priority rural and urban forest landscape areas.
- Statewide Forest Resource Strategy – provides long-term strategies for investing resources to address priority landscapes identified in this assessment, focusing where federal investment can most effectively stimulate or leverage desired action and engage multiple partners.

The Redesign approach emphasizes, where possible, use of available data and of a spatial framework for analysis and to delineate priority landscapes. The focus is on incorporating existing plans and information within states. Some categories of plans are specified, such as the state wildlife plan and community wildfire protection plans. Outreach to stakeholders is encouraged, though the outreach process and extent is left to the states. However, a requirement exists to seek input from specified stakeholder categories or entities such as federal management agencies, the state wildlife agency, the urban forest council and others.



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