

INTRODUCTION

Within the Orange County Fire Authority (OCFA) there is a growing recognition that past land-use practices and urban growth, combined with the effects of fire exclusion, have resulted in a variety of changes. These changes are demonstrated by:

- Heavy accumulations of dead vegetation
- Altered fuel arrangements
- Changed vegetation structure and composition throughout the County.

However, the general population of Orange County either cannot or does not understand that without fire, encroachment of non-native or competing species has been occurring in some areas of the local ecosystems. Likewise, the public does not understand that vegetation modification resulting from wildland fire exclusion can cause a shift toward species that are not adapted to fire (some of which are not native) and are therefore more susceptible to damage from fire.

Fire is inherently neither good nor bad, but it is the most powerful natural force that people have learned to use. Fire has shaped ecosystems throughout time, long before humans arrived in North America there was fire, therefore people and ecosystems have evolved with the presence of fire.

The intent of this plan is to satisfy State mandates to the California Board of Forestry to provide a fire plan for State Responsibility Areas (SRA) included in Orange County. It is founded on a computer based geographical information system (GIS) to aid in the on going analysis of the hazard and assets at risk within Orange County. The acquisition of new data from internal OCFA sources and California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (CalFire FRAP), computer tools and application programs require periodic re-analysis and changes in the future. The plan primarily addresses SRA lands within Orange County; however, the principles can be applied to all wildlands and open spaces within the County.

The goal of the Wildland Fire Management Plan is to educate the public of the benefits and risks of planned and unplanned wildland fire. It is also intended that OCFA will use this plan to reduce total government costs and citizen losses from wildland fire in Orange County by protecting assets at risk through focused pre-fire management prescriptions and continued initial attacks success. To do this the OCFA must:

1. Develop a process to address such factors as firefighter and public safety, planning, wildland urban interface issues, prescribed fire, suppression, preparedness, protection priorities, and cooperation. Naturally, there are other factors that when considered as a whole also play an important role in the overall plan and decision process.
2. Reintroduce prescribed fire and a variety of other practices into both management goals and protection goals of the Orange County Fire Authority. Prescribed fire is any fire ignited by management actions under certain, predetermined conditions to meet specific objectives related to hazardous fuels or habitat improvement, as opposed to "unplanned wildland fire" that defines any type of nonstructural fire, which occurs in undeveloped (wildland) areas of the county.

Throughout the planning process, the plan must consider and incorporate the cooperative interdependent relationships of wildland fire protection providers, provide for public stakeholder involvement.

This cooperation will allow us to incorporate the use of prescribed fire (the planned wildland fire ignition), fuelbreaks, vegetation manipulation (thinning, crushing, etc.) into management goals and planning efforts that will restore ecosystems and provide protection from the loss of human life or property. The current conditions on thousands of acres of wildlands, within Orange County, increase the probability of large, intense fires. These severe fires will in turn increase the risk to humans, to property, and to the land that we wish to enhance ecologically.

The magnitude of this plan and subsequent action items cannot be accomplished by any one single agency. It is paramount that the Orange County Fire Authority works in concert with stakeholders to encourage, gain consensus and to accomplish action items that will benefit the publics and provide for firefighter safety.

WILDLAND FIRE PROTECTION ASSESSMENT

The assessment framework will consist of a systematic set of tools that describe the existing levels of wildland fire protection services. Additionally, the framework will assist in identifying high-risk and high-value areas that are potential locations of costly and disastrous wildland fires, assist in ranking the areas in terms of priority needs and prescribe what can be done to reduce the future costs and losses. The Wildland Fire Protection assessment system has four (4) components. These are Weather, Assets at Risk, Fuels and Level of Service.

WEATHER. Fire behavior is dramatically influenced by weather conditions. Large and costly fires are frequently, though not always, associated with severe weather conditions, typified by high temperatures, low humidity and strong surface winds. The different local climates within Orange County experience a different frequency of weather events that lead to severe fire behavior (severe fire weather).

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

The following map shows the locations of the RAWS units and the areas of coverage for each station that has is used for this planning effort.