

## 2009 Riverside Unit Fire Management Plan

### ***The Fire Situation***

#### ***General Description***

Riverside Unit has not experienced a major wildland fire since the Esperanza Fire burned more than 40,000 acres in October of 2006. The massive Freeway Fire in 2008 started in extreme western Riverside County, but burned most of its acreage in surrounding counties. The absence of large fire events in Riverside during this time period cannot be attributed to any one reason; certainly aggressive, effective initial and extended attack efforts, fire prevention efforts and/or pre-fire projects can be listed as contributing factors. Riverside Unit experienced the same extreme fire weather events of 2007 and 2008 as San Diego, Orange Los Angeles and other Southern California counties but did not suffer a major wildfire even though the number of fire starts may have been more than surrounding counties.

During the October 2007 Southern California Fire Siege, four different major fires threatened to move into Riverside County from adjoining counties. The Rice, Poomacha and Ammo fires in San Diego and the Santiago fire in Orange County were all poised to make potentially strong runs into Riverside County with the Santa Ana wind reversal that has caused many problems in the past. Riverside CAL FIRE Unit Chief/Riverside County Fire Department Fire Chief John Hawkins ordered a Strategic Contingency Planning Team be formed which included members from Cal Fire, Riverside County Fire, Riverside County Office of Emergency Services and the Riverside Sheriff's Office. The team members worked to assist some of the Incident Command Teams on the adjacent major fires with their contingency planning and also developed the Riverside County Strategic Contingency Plan which covers the southern and western borders of Riverside County. Three community informational meetings were held during this event to advise and inform local residents. They were in the City of Temecula, 5000 attendees; Temescal Valley, RivCo (Sup's Buster & Tavaglione), 500 attendees and Riverside County-San Jacinto area, 200 attendees.

This plan is currently being expanded to cover additional areas of the county and is being incorporated into the Mobile Data Computing Solution in order for responding resources to have access to this information readily.

Riverside Unit has an elevated potential for large fires in 2009. The Energy Release Component (ERC) at our weather station facilities are predicted to spike to extreme levels after the traditional "June Gloom" marine layer gives way to normal hot summer temperatures and low relative humidity. A "bad" Santa Ana season in the fall may be blowing over a very dry and flammable fuel bed.

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### General Description of Desired Future Condition

#### *San Jacinto Mountains*

- 1) Reforestation efforts will help restore species forest stand structure and composition back to uneven-aged mixed conifer.
- 2) Reforestation efforts will aid preventing erosion and protect water quality.
- 3) Shaded fuelbreaks are a method of protecting communities from catastrophic fire by removing (Brush) ladder fuels and while retaining larger mature trees
- 4) Generally, Height growth is a function of tree genetics and site quality; while diameter growth is a function of stand stocking or number of trees per area.
- 5) Fire behavior is a function of fuel, weather and topography. The amount and type of fuel can be treated so that catastrophic fire is mitigated.
- 6) An overall goal of 40-80 Trees Per Acre (TPA) is recommended, and staff is currently working to educate the public on the concept of Basal Area/Acre as the preferred method for determining stocking standards.
- 7) Our goal is to manage the watershed to result in a more fire safe and healthy forest and chaparral ecosystem.

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### ***Vegetative Wildfire Fuels***

Wildland fuels (live and dead vegetation) are a key component of fire behavior. The various fuels found in California have specific characteristics, which allow fire behavior analysts to categorize them based on how they burn. The Fire Behavior Prediction System (FBPS) was the method chosen for categorizing fuels for the fire plan process. This method classifies fuels into 13 different fuel models, each of which has specific physical and burning characteristics. The models include 3 grass, 4 brush, 3 timber and 3 slash fuel types. Custom fuel models have also been developed from these basic models to take into account the variations found in desert areas and wildland areas with an urban component.

The fuel models are used to label current and historic fuels. Historic fuels, those fuels that existed prior to a significant wildfire or VMP burn, are important because they tell us what the climax vegetation and fuel type will be for a particular area. The historic fuel models are used to label the Unit's planning belts in the fire plan.

Current fuel models are used along with slope class, ladder fuel component, crown closure, and difficulty of control rating to derive the fuel hazard rank for each quad 81st. It has been determined that in California no wildland fuel can be considered to have a low hazard rating, so the adjective descriptions only include medium, high or very high.

In Riverside County, as well as San Bernardino and San Diego, we have seen dramatic and historic changes in our montane chaparral and timber fuel types in the last few years. The persistent drought, bug kill, frost kill, and disease have killed huge stands of timber and brush over tens of thousands of acres in our wildland areas. It has become the number one fuel problem for our County. Mortality mapping is constantly being updated cooperatively through the MAST using GIS technology.

### ***Battalion 1 – Perris***

Generally Battalion 1 consists of a light grass in the populated areas on the west and east sides of the Battalion. The medium fuels are in some of the same areas, but in the more sparsely populated areas, such as Santa Rosa Mine Road and Juniper Flats.

### ***Battalion 2 – Lake Elsinore***

The Battalion 2 area East of Interstate 15 is comprised mainly of type 1 fuels that have a significant fire history. The West portion of the Battalion consists of a mix of SRA, LRA, USFS land with CAL FIRE DPA and USFS land with Federal DPA. This area is known collectively as the Ortega Front country and is bordered on the South by La Cresta and to the North by the Battalion 2/4 border. This area poses one of the greater fire risks in Riverside County and consists primarily of a fuel model 4 (Coastal Chaparral). There are portions of this area with significant fire history and areas that have no recorded fire history.

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### ***Battalion 3 – Beaumont***

The fuels in Battalion 3 are widely varied, ranging from grass, coastal sage scrub, chamise, Russian Thistle to scrub oaks. In the area north of Cherry Valley, manzanita is the predominate fuel. The South area of the Battalion, on the Northern slopes of the San Jacinto foothills have been primarily reduced to annual grasses with some larger pockets of coastal sage and chaparral, due to fuel model conversion from recent fires.

### ***Battalion 4 – Corona***

In the Santa Ana River bottom there is a continual bed of fuels just east of the Van Buren Boulevard bridge in Pedley extending west to Highway 71 along the county line. The river bottom fuel load is made up of annual grasses, bamboo, various brush species and various types of trees.

In the Chino Hills area annual grasses are abundant, with small patches of brush and a few oak/sycamore trees in the canyon areas. Most of this area was burned in the 2008 Freeway Fire.

In the Dawson Canyon and Spanish Hills area the fuels are annual grasses and light brush. These hills have been burned numerous times over many years, with the exception of a few canyons. Because of the light fuel load, the large fires in this area have been predominantly wind driven.

In the foothills that run along the Cleveland National Forest the fuels are generally light grasses with heavy brush. CAL FIRE and USFS have been maintaining the fuel breaks that run along the Main Divide Truck Trail and down several main ridge lines into the Temescal and Corona Valleys.

### ***Battalion 5 – San Jacinto***

The fuels in Battalion 5 below 2000' in elevation mostly consist of grasses and coastal sage scrub (Fuel Model 2). Above 2000' in elevation the fuel type is dependent on the length of time since last fire, i.e. less than 20 years ago - grass and medium brush (Fuel Model 6), greater than 20 years ago - heavier mixed brush (Fuel Model 4). A high dead to live ratio exists in the mature chaparral fuels due to the persistent drought over the last few years.

### ***Battalion 11 – Mountain***

#### **Station 23 – Pine Cove**

The fuels in the Pine Cove/Idyllwild area are composed of mature chaparral with a mixed conifer forest over-story. The predominant understory species include manzanita, chaparral whitethorn, deer brush and chamise. The tree over story consists of mixed stands of Jeffery Pine, Ponderosa Pine, Coulter Pine, Incense Cedar, White Fire and Sugar Pine. There is no recorded fire history for the area since fire records started being kept around 1924; therefore it is assumed the vegetative community is at least 75 years old.

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### **Station 29 – Anza**

The fuel types in the Anza area consist of approximately 25% fuel model 1 mostly located on the valley floor on the Cahuilla Indian Reservation and along the Cooper Cienega Truck trail to the south. Fuel model 4 is approximately 30%, inter-mixed in areas through the valley. Fuel model 6 is approximately 45%, consisting of larger stands of manzanita and red shank with plant height as high as 10-15 feet on average.

Overall, the area has a grass under story, which is 12-18" in height. The grass is also matted down, which adds to the fuel loads. The red shank is showing new stringy bark, which adds to the ladder fuels in the brush fields.

### **Station 30 – Pinyon**

The fuels in the Pinyon area consist of Fuel Models 4 and 6, with patches of Fuel Model 1 located throughout. A fuels reduction project has thinned and removed fuels along Hwy 74 and around some communities, to allow safe egress from the mountain.

### **Station 53 – Garner Valley**

The persistent drought has left an abundance of dead and downed fuels as well as a high dead to live ratio in the chaparral fuels. The understory and grass crop is continuous. The brush that is not dead is showing normal growth this year. Some areas have had fuels reduction projects to thin and remove fuels near transportation corridors and communities and camping areas.

### **Station 77 – Lake Riverside**

The Lake Riverside area is located near Aguanga. The fuels near Highway 79 and Highway 371 consist of grass (Fuel Model 3) and progressing northeast on Highway 371 the fuels change into fuel model 4.

### ***Battalion 13 - Menifee***

Battalion 13 is 42 square miles and has roughly the following boundaries: north of the Cities of Murrieta and Wildomar, south of City of Perris, west of the Winchester area and northeast of the City of Lake Elsinore. The fuels consist of light native California vegetation, i.e. brush. The area is surrounded and interspersed with a healthy grass crop that has already "turned".

### ***Battalion 15 – Temecula***

#### **Station 12 – Temecula**

The fuels in the Temecula area include annual grasses (Fuel Models 1 and 3) and brush species chamise, sage, buckwheat (Fuel Models 4,5 and 6).

#### **Station 75 – Bear Creek**

Within the SRA of Station 75's IA there are Fuel Models 1 and 3 (Short and tall annual grasses) along with Fuel Models 4, 5, and 6 (Chaparral and dormant brush including chamise and coastal sage).

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### **Station 92 – Wolf Creek**

Station 92's fuels are generally made up of annual grass, chaparral and, dormant brush including chamise and coastal sage.

### **Station 96- Glen Oaks**

Station 96's fuels are generally made up of annual grass, chaparral and, dormant brush including chamise and coastal sage.

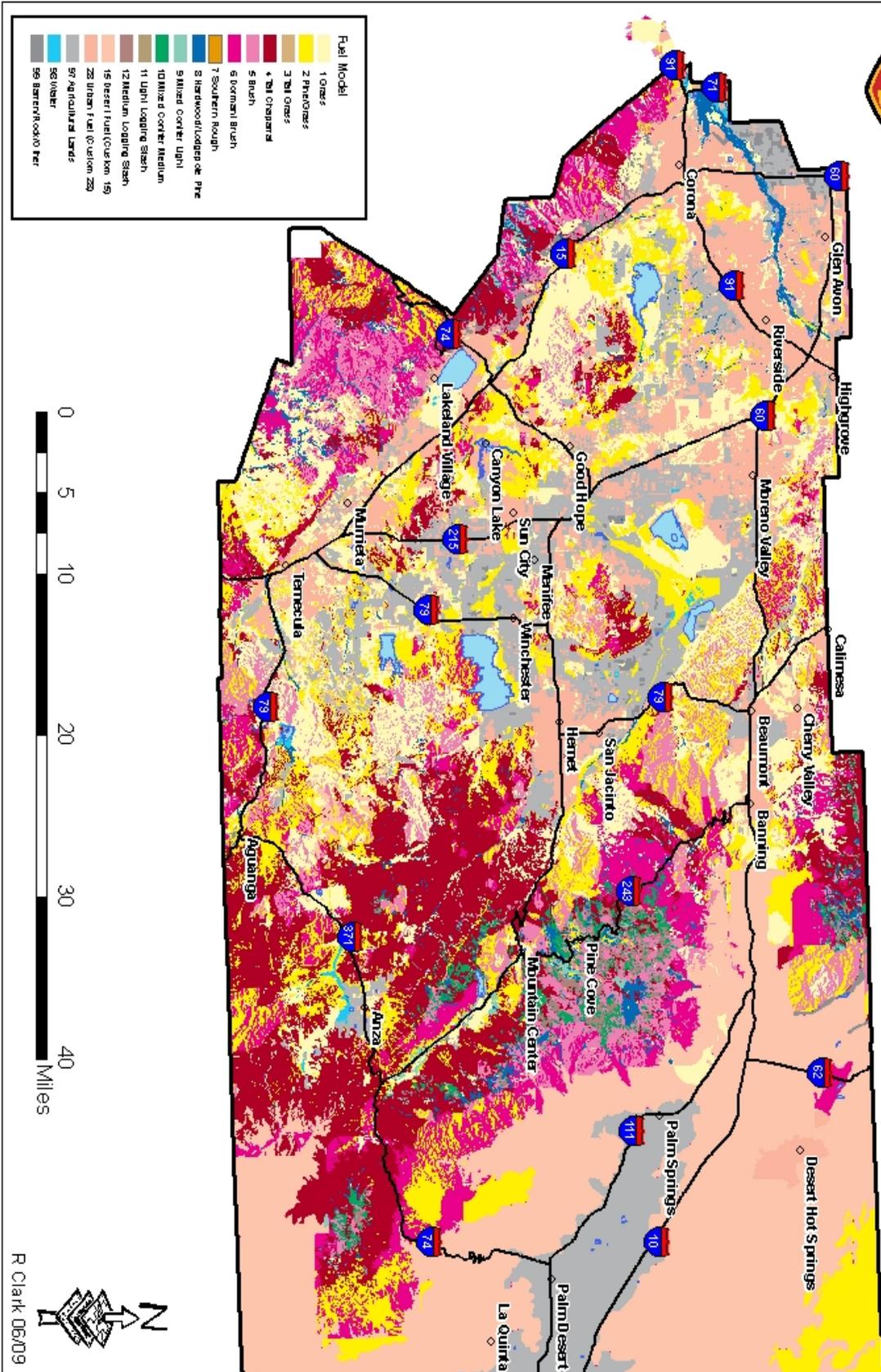
### ***Battalion 17 – Cajalco***

Battalion 17 is located between Perris Valley to the East and Temescal Valley to the west. The battalion also contains two Ecological Reserves, the Lake Matthews Estelle Mountain Reserve and the Harford Springs Reserve. The fuels in the area consist mostly of annual grasses and coastal sage scrub with some pockets of chaparral species in canyons and on the northern slopes.



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## Fuel Types



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### Structure Fuels

#### Defensible Space/Fire Safe Inspections

Riverside Unit is conducting Fire Safe Inspections utilizing the LE-100 program throughout the county. The LE-100 form contains a compilation of codes, from both the Public Resources Code and the Riverside County Ordinance 787.2, which adopts the Uniform Fire Code. This allows for the utilization of PRC 4291, and some more site specific regulation required by the County Ordinance.

As a part of the MAST Organization the private lands in the San Jacinto Mountains are being inspected by three different agencies, the California Department of Forestry and Fire Protection/Riverside County Fire, the United States Forest Service, and The Idyllwild Fire Protection District.

<b>LE-100 INSPECTIONS REPORT 2005-2008</b>					
<b>YEAR</b>	<b>2005*</b>	<b>2006*</b>	<b>2007</b>	<b>2008</b>	
<b>Number of Inspections</b>	2277	3169	34113	39968	
<b>Number in Compliance</b>	2135	2691	30818	34664	
<b>Number of Violations</b>	142	478	3295	5304	
<b>Number Cited</b>	13	27	**	16	

These numbers reflect inspection by Riverside County Fire and CAL FIRE only.

\*2005 & 2006 only tracked State engine inspections

\*\* No citations listed due to change of PRC 4291 and public awareness program.

<b>2008 FFI AUGMENTATION STAFFING</b>	
<b>Total Inspections</b>	5458
<b>Hours Spent</b>	986
<b>Prevention Contacts</b>	382

- Firefighter I hired under Governors Executive Order S-03-08

#### Ordinances Regarding Construction

The Riverside Unit has adopted the 2000 Edition of the Uniform Fire Code, which specifies various requirements for the development of new construction within the County. The Planning and Engineering Department of the Riverside County Fire Department is responsible for ensuring new developments within the county meet the various ordinances pertaining to building homes in the wildland. These ordinances include PRC 4290, PRC 4291, Riverside County Ordinance 787.2, and the new Fire Marshal Building Standards.

- Unit Staff are working with the local Fire Safe Councils to disseminate information and educate the public on the message of Firewise home construction practices. The LE-100 program at the station level provides for a one-on-one contact with residents. This is the opportunity for residents to discuss what they can do to ensure their homes survivability in the event of a catastrophic wildland fire.

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### ***Frequency of Severe Fire Weather***

Fire behavior is dramatically influenced by weather conditions. Large costly fires are frequently, though not always, associated with severe fire weather conditions. Severe fire weather is typified by high temperatures, low humidity, and strong surface winds.

The Fire Plan's weather assessment considers different climates of California, from fog shrouded coastal plains to hot, dry interior valleys and deserts to cooler windy mountains. Each of these local climates experiences a different frequency of weather events that lead to severe fire behavior (severe fire weather). The Fire Plan's weather assessment uses a Fire Weather Index (FWI) developed by USDA Forest Service researchers at the Riverside Fire Lab. This index combines air temperature, relative humidity, and wind speed into a single value index. This index can be calculated from hourly weather readings such as those collected in the Remote Automatic Weather Station (RAWS) data collection system. The FWI does not include fuel moistures, fuel models and only uses topography to the extent that RAWS station weather readings are influenced by local topography.

Weather assessment information will be used to help analyze how changes in fire suppression forces will affect the Unit's level of service.

### ***Riverside Unit weather narrative***

Riverside Unit is characterized by typically long fire seasons with periods of severe fire weather. Significant rainfall in Riverside has been trending toward starting well into December and ending by the end of March, with just a few exceptions over the last several years. Except for the typical "June Gloom", our summers can have temperatures well into the hundreds with RH typically in the teens or single digits. Santa Ana Foehn wind events occur both in the spring and the fall with extreme winds, high seasonal temperatures and very low RH. Our worst fires tend to be in fall Santa Ana events due to the combination with very low live and dead fuel moisture in the vegetation.