

A Fire Risk Assessment of Scripps Ranch 2 1/2 Years After The October 25, 2003 Cedar Fire for **The City of San Diego Fire Marshal**

1.0 Introduction:

Scripps Ranch is one of the many distinct communities that comprise the City of San Diego. Built in the late 1970's, east of the I-15 Freeway and accessed by Pomerado Road, many of the homes were built to fit a community theme consisting of large rustic homes with shake siding and shake roofs nestled in groves of highly flammable eucalyptus trees and highly flammable landscaping consisting of pines, junipers, melaleuca, eucalyptus and cypress trees planted immediately adjacent to the structure often over topping the structure and highly flammable shrubbery. A strong community association was formed to maintain compliance with these standards. Over the years the realization set in that the Scripps Ranch Community was extremely vulnerable to loss from potential wildfires when similarly designed communities in other areas of southern California experienced severe losses. Many far-sighted Scripps Ranch homeowners began to replace their shake roofs with Class A roof assemblies. Their far sightedness was often met head on by a Community Association that resisted the changes. Other homeowners totally remodeled their homes, removing the shake roofs, shake siding, single pane windows and replaced their roofs with Class A roof assemblies, fire resistant sidings and stucco exteriors, boxed and stuccoed eaves, installed fire resistant attic ventilation systems, installed double pane energy efficient windows and fire resistant landscaping. These changes proved very prophetic in the aftermath of the 2003 Cedar Fire as very few of the retro fitted homes burned. A number of Scripps Ranch homeowners were in the middle of these changes when the Cedar Fire occurred and many, in the midst of change also survived.

In addition to the abundant, highly flammable eucalyptus groves found throughout the Scripps Ranch Community, the community is surrounded by vast stands of coastal sage scrub and chaparral vegetation to the north east, east and south sides of this Community. There are also large islands of chaparral vegetation on steep hillsides interspersed throughout the Scripps Ranch Community.

In the late afternoon of October 25, 2003 a lost hunter started a signal fire in a very remote section of the Cleveland National Forest in the area of Cedar Creek, a tributary to the San Diego River, which is about 6 miles east of the east end of San Diego Country Estates and a good 25 miles north east of the Scripps Ranch area. About 11:00 PM the predicted Santa Ana winds arrived. By 1:00 AM on October 26, the Cedar Fire was going through the San Diego Country Estates.

By 3:00 AM, the fire had burned south down Wildcat Canyon and began claiming its first victims while attempting to evacuate from the Muth Valley Road area in the Lakeside Fire Protection District.

By 7:00 AM the fire had begun burning westerly and was impacting the Poway, Scripps Ranch areas. Homeowners were ordered to evacuate. Over 300 homes were destroyed within the Scripps Ranch Community.



Photo #2: One of the hundreds of shake roofed homes like those in Scripps Ranch on October 26, 2003. These homes typically ignite by windows blowing in due to radiant heat and or embers landing on highly combustible roofing materials.

Now 2½ years later many of the destroyed homes have been rebuilt. Although the new homes meet current codes, many of the homeowners have compromised the fire resistance of their new homes by attaching wooden fences directly to the homes directly under eaves. Inappropriate flammable species have been planted in the yards. In addition, eucalyptus has resprouted and reseeded and is rapidly colonizing many of the burned over areas. And lastly, highly flammable chamise and other highly flammable species are rapidly revegetating the burned over open space areas within and adjacent to Scripps Ranch.



Photo #3: One of the many interior islands of chaparral that ignited because of burning debris and embers that fell into these areas. The home on the right hand side of the photo had a new fire resistant roof, but still has shake siding, however, did not burn. The second home to the left of the shake sided home had a shake roof and burned to the ground.



Photo #4: The only two homes that survived on Meadowdale Lane. Both had been remodeled just prior to the 2003 Cedar Fire.



Photo #5: The reddish roofed home is at 12868 and the gray home is at 12878 Meadowdale Lane. Note the lack of vegetation on the hill behind the homes following the Cedar Fire.



Photo #6: All the other homes on Meadowdale Lane had shake roofs and shake siding in accordance with the Scripps Ranch Community Plan.



Photo #7: These are the two homes that survived the 2003 Cedar Wildfire. All of the other destroyed homes have now been rebuilt. Note the regrowth behind the homes.



Photo #8: This Photo corresponds to photo No. 6. The home on the right is the survivor at 12868 Meadowdale Lane. The home on the left burned to the ground and has been rebuilt. The badly scorched street tree survived.



Photo #9: The home to the right of the surviving home has been rebuilt. In just 2 years the chamise is rapidly revegetating the slopes behind the homes as is the eucalyptus. These slopes will soon be fully revegetated in a Fuel Model 4 highly flammable chaparral shrubs.



Photo #10: Highly flammable wood fences are being attached to structures directly beneath the eaves.



Photo #11: This is an example of a noncombustible fence solution that meets the Building Code and poses no threat to the structure should the side yard fencing burn in a future wildfire.



Photo #12: The canyons are also being choked with highly invasive, highly flammable species such as pampas grass. This highly invasive vegetation is not only an extreme fire hazard, it also displaces critically scarce riparian corridors essential to a variety of wildlife by sucking up all of the available water.



Photo #13: This individual is 6' in height. The skeletons from the chaparral vegetation left from the 2003 Cedar Fire are over 6' in height. The wooden privacy fences are not a problem except where they attach directly to the structure. A minimum 5' noncombustible transition wall or fence is required by the Building Code. There are no required transition walls.



Photo #14: These newly rebuilt homes will be subjected to intense radiant heat from the next wildfire without adequate fuel reduction. This is an ideal situation for goats. Herded goats will reduce the volume of standing vegetation but leave the ground cover intact, which prevents erosion.



Photo #15: There are several open space areas that did not burn in the 2003 Cedar Fire that will burn in a future wildfire. The impacts from radiant heat can be neutralized by well maintained fuel modification zones and fire resistant structures. The use of goats in the fuel modification zones as measured 200' horizontally from the back of the structure is a viable option. The impacts from wind blown embers can only be compensated for by having fire resistant structures.



Photo #16: Because of the 100% slopes, eucalyptus seedlings invading the burned areas and eventual Fuel Model 4 chaparral; 200' of fuel modification is needed between the back of the homes and undisturbed native vegetation. This slope burned and is rapidly recovering. Most of the destroyed homes in this area have been or are being rebuilt.



Photo # 17: From the street all looks well, however, all of these homes burned when the canyons out behind these homes, as depicted in photo 16, burned in the early morning hours of October 26, 2003 in the Cedar Fire driven by extremely dry, unrelenting Santa Ana winds. Again, these brand new code compliant, fire resistant homes are being severely compromised by the attached wooden fencing and inappropriate landscaping, such as the highly flammable pine trees. Pyrophytes, plants that have high oil or resin content, such as pines, firs, cedars, junipers, cypress, eucalyptus and some palm species SHOULD NOT be planted within 100' of structures.



Photo # 18: Many unburned areas still pose a threat to the Community of Scripps Ranch. Fortunately the Chimney Canyon Firesafe Council has initiated action to reduce the extreme risks to the greater community through grants from the US Forest Service and a host of community partnerships with organizations such as the California Conservation Corps and others.

There are still a large number of homes that require retrofitting to Class A roofs, fire resistant siding, double pane windows and modifications to the current landscaping around these homes.



Photo # 19: This wood shake roofed structure is only one of many that still exist within the Community of Scripps Ranch. The combination of highly volatile eucalyptus and wood shake roofs make this structure susceptible to ember laden winds blowing into Scripps Ranch from fires a mile or more away from Scripps Ranch. This particular structure, along with several others, is at the intersection of Semillion Blvd and Spruce Grove Avenue. In addition to retrofitting the structure, all eucalyptus within 200' of any structure in Scripps Ranch should be removed. Follow up treatments will be needed for several years to kill returning sprouts and seedlings.

2.0 Predicting Wildland Fire Behavior

“Can wildland fire behavior really be predicted? That depends on how accurate you expect the answer to be. The minute-by-minute movement of a wildland fire will probably never be totally predictable—certainly not from weather conditions forecast many hours before the fire. Nevertheless, practice and experienced judgment in assessing the fire environment, coupled with a systematic method of calculating fire behavior, yields surprisingly good results (Rothermel 1983)”.

The BEHAVE PLUS: Version 2.0 Fire Behavior Prediction and Fuel Modeling System—Burn Subsystem, Part 1 by Patricia L. Andrews, is one of the best systematic methods for predicting wildland fire behavior. The BEHAVE fire behavior computer modeling system was developed by USDA—Forest Service research scientists at the Intermountain Forest Fire Laboratory, Missoula, Montana, and is utilized by wildland fire experts nationwide.

“Because the model was designed to predict the spread of a fire, the fire model describes the fire behavior only within the flaming front. The primary driving force in the fire behavior calculations is the dead fuel less than one-fourth inch in diameter; these are the fine fuels that carry the fire. Fuels larger than three (3”) inches in diameter are not included in the calculations at all (Andrews 1986)”. The BEHAVE fire model describes a wildfire spreading through surface fuels, which are the burnable materials within six (6’) feet of the ground and contiguous to the ground.

Regardless of the limitations expressed, experienced wildland fire managers can use the BEHAVE modeling system to project the expected fire intensity, rate-of-spread and flame lengths with a reasonable degree of certainty for use in fire protection planning purposes. The *Fire Management Consulting*. evaluation team used the computer based BEHAVE Fire Behavior Prediction Model to make the following fire behavior assessments for the Scripps Ranch Community.

2.1 Wildland Fire Behavior Calculations for the off-site and off site hazardous vegetative fuels.

Wildland fire behavior calculations have been projected for the hazardous vegetative fuels on the undeveloped sites adjacent to and bordering Scripps Ranch. These projections were based on the following “Worst Case” (extreme) interior zone fire weather condition assumptions:

South, Southwest and West Wind Condition Fuel Moisture Assumptions:

A Typical Prevailing (normal summer) Afternoon Wind Pattern.

- * 1-Hour Fine Fuel Moisture of.....4%
- * 10-Hour Fuel Moisture of.....6%
- * 100-Hour Fuel Moisture of8%
- * Live Woody Fuel Moisture of.....80%

South, Southwest and West Wind Condition Fuel Moisture Assumptions:

Late fire season above-average southwest wind pattern. A rare event under the following fuel moisture conditions, usually associated with the break down of an intense Santa Ana wind episode.

- * 1-Hour Fine Fuel Moisture of2%
- * 10-Hour Fuel Moisture of.....3%
- * 100-Hour Fuel Moisture of5%
- * Live Woody Fuel Moisture of.....50%

North, Northeast and East Santa Ana Wind Fuel Moisture Assumptions:

An annual event often occurring two or three times a year.

- * 1-Hour Fine Fuel Moisture of.....2%
- * 10-Hour Fuel Moisture of.....3%
- * 100-Hour Fuel Moisture of.....5%
- * Live Woody Fuel Moisture of.....50%

Table’s 2.1 through 2.3, which follow, display the expected Rate of Fire Spread (expressed in feet per minute), Fireline Intensity (expressed in British Thermal Units per foot per second) and Flame Length (expressed in feet) for five separate BEHAVE–Fire Behavior Prediction and Fuel Modeling System Computer Calculations.

TABLE 2.1	
Expected fire behavior for a Prevailing Southwest Wind Condition in a Fuel Model 4 (A Fuel Model 4 is a continuous cover of native chaparral vegetation over 6 foot tall)	
RATE OF SPREAD	348.9 feet/minute
FIRE LINE INTENSITY	16,817 BTU's/foot/second
FLAME LENGTH	39.5 feet in length
Additional Fire Behavior Calculation Input:	
<ul style="list-style-type: none"> • 15 mph 20-foot wind speed (6 mph mid-flame wind speed) • 100 percent slope • 0° direction of wind vector to uphill slope 	

This equates to 516 acres in 30 minutes and 2,064 acres in 60 minutes assuming no initial attack.

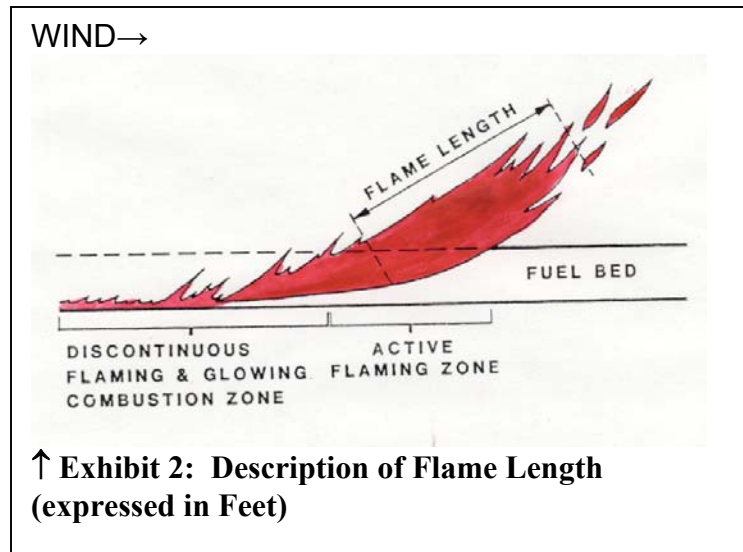
TABLE 2.2	
Expected fire behavior for a Late Fire Season Above Average Southwest Wind Condition in a Fuel Model 4. (A Fuel Model 4 is a continuous cover of native chaparral vegetation over 6 foot tall)	
RATE OF SPREAD	1015.2 feet/minute
FIRE LINE INTENSITY	58,379 BTU's/foot/second
FLAME LENGTH	70.1 feet in length
Additional Fire Behavior Calculation Input:	
<ul style="list-style-type: none"> • 30 mph 20-foot wind speed (12.0 mph mid-flame wind speed) • 100 percent slope • 0° direction of wind vector to uphill slope 	

This equates to 3,031 acres in 30 minutes and 12,122 acres in 60 minutes assuming no initial attack.

TABLE 2.3	
Expected fire behavior for a North, Northeast and East Santa Ana Wind Condition in a Fuel Model 4. (A Fuel Model 4 is a continuous cover of chaparral vegetation greater than 6' in height)	
RATE OF SPREAD	2,273.3 feet/minute
FIRE LINE INTENSITY	130,731 BTU's/foot/second
FLAME LENGTH	102 feet in length
Additional Fire Behavior Calculation Input:	
<ul style="list-style-type: none"> • 60 mph 20-foot wind speed (30.0 mph mid-flame wind speed) • 100 percent slope • 0° direction of wind vector to up hill slope 	

This equates to 9,211 acres in 30 minutes and 36,846 acres in 60 minutes assuming no initial attack.

The most useful output from this modeling is the flame length calculation, which is used for designing the fuel modification zones. Flame length has a precise definition and is best depicted by the following two exhibits:



As shown in the previous tables, the flame lengths for each of the three depicted scenarios is as follows: the prevailing summer condition is 39.5', the late summer southwest wind condition is 70.1' and for the north, northeast and east Santa Ana wind condition is 102' (all distances are measured horizontally). Of these three flame length scenarios, the latter two, representing “worst case” conditions, dictate the design of the fuel treatment areas adjacent to structures. Clearly, more than 102' of physical separation will be required between undisturbed native fuels and fire resistant structures.

Table 2.4 is included below to indicate the change in flame length after the fuel modification plan has been implemented. There is no “fuel model” for the low growing, low fuel volume irrigated landscaping in Zone 1. Zone 1 is the irrigated, low growing landscaping from each side of the structure out to the lot line or edge of pad where back yard lots extend down into the canyons. For analytical purposes, Fuel Model 1, which is based on 1’ tall grass, has been used in the following analysis. In actuality, Zone 1 would be much less flammable because of the shorter heights of the proposed irrigated plant material and will produce much shorter flame lengths if this zone were to burn. Zone 2 will also produce much shorter flame lengths due to the non-continuous nature of the remaining vegetative fuels and their reduced height of the fine fuels (4” stubble) due to grazing or weed whipping. It is expected that the flame length produced in Zone 2 would be less than 33% of the predicted flame length for a fuel Model 1, which is continuous one-foot tall grass.

TABLE 2.4	
Expected Fire Behavior for a North, Northeast and East Santa Ana wind condition in a modified Fuel Model 1 (A Fuel Model 1 is cured grass one foot tall in height).	
RATE OF SPREAD	732.6 feet/minute
FIRE LINE INTENSITY	1,415 BTU's/foot/second
FLAME LENGTH	12.7 feet in length
Additional Fire Behavior Calculation Input:	
<ul style="list-style-type: none"> • 60 mph 20-foot wind speed (24.0 mph mid-flame wind speed) • 100 percent slope • 0° direction of wind vector to uphill slope 	
Adjustments for actual Zones 1 and 2 Fuel Treatments:	
Predicted Flame Lengths For Zone 1 and 2 Fuel Treatments	
RATE OF SPREAD	244.2 feet/minute
FIRE LINE INTENSITY	471.7 BTU's/ft/sec
FLAME LENGTH	4.23 feet in length

The expected outcome from implementing the Fuel Modification Provisions of this Fire Protection Plan is a decrease in the flame length in the fuel modification areas adjacent to each home in accordance with the following table as a result of modifying flammable vegetation within 200 feet of existing structures by annual weed whipping and hand pruning or through the use of goats.

TABLE 2.5					
Summary of Predicted Flame Lengths for the Scripps Ranch Fuel Treatment Plan					
Condition	Zone	Fuel Model	Predicted Flame Length for a 1' Tall Cured Grass Condition	Predicted Flame Length for a Continuous Cover of 4" Tall Cured Grass	Percent Reduction in Predicted Flame Length Achievable By Decreased Grass Height
Southwest Wind	1, 2	1	12.7'	4.23'	67%
North, Northeast, East Santa Ana Wind	1, 2	1	12.7'	4.23'	67%

Conclusion: This Fire Protection Plan provides a reasonable level of fire protection for Scripps Ranch. In addition, the worst possible 102' flame lengths will never reach the structures due to the absence of available FM 4 chaparral fuels within 200' of homes, which would be needed to carry fire and the radiant heat required for structure ignition. The fuel modification zones will do nothing, however, to reduce the impact from wind blown embers.

3.0 Assessing Structure Ignitions in the Wildland/Urban Interface (Intermix)

Structure ignitions during wildfires come from two sources of heat, radiant heat and windblown embers. Establishing appropriate and properly maintained fuel modification zones is the first step in preventing structure ignitions from radiant heat. This includes landscaping all developed areas with fire resistant plant materials. For the purpose of this Plan, Zone 1 extends out to the lot line from each side of each structure. In the case of the back yards, Zone 1 extends out to the back yard lot line, which is usually the top of the slope at the edge of a canyon or drainage. Zone 2 extends out from Zone 1 for a total distance of 200 feet as measured horizontally from the back of each structure. With only 100' of separation from native fuels flame impingement will ignite the structure with 102' flame lengths. In addition, because of the 100% slopes and the large amount of highly volatile eucalyptus that is capturing many of the burned over areas, a minimum of 200' of fuel modification will be required to protect structures in Scripps Ranch.

The second step in preventing structure ignition is guarding against the impact of wind blown embers through the use of fire resistant designs and building materials. During periods of high fire intensity and strong, dry winds, windblown embers can be transported over great distances ranging from several hundred feet up to several miles. You can have ½ mile of clearing, however, if you do not have a structure built with fire resistant materials, no amount of fuel modification will prevent the loss of a combustible structure down wind from a wildfire.

A USDA-Forest Service research study entitled the “Structure Ignition Assessment Model (SIAM)” by Jack D. Cohen, Intermountain Fire Science Laboratory, Missoula, Montana has helped to validate how much distance is required to keep structures from igniting due to wildfire radiant heat. Preliminary SIAM results suggest that for reducing structure ignitions from radiant heat, vegetation modification beyond 100 feet distance from a structure has no significant benefit unless there is supporting data justifying more than 100 feet of vegetation modification. **In this case fuel modification measures up to 200 feet based on the BEHAVE calculations, steep slopes and abundance of highly volatile eucalyptus seedlings and saplings will be required to protect fire resistant structures from undisturbed native fuels.**

The SIAM Ignition Study indications and the personal experience of the *Fire Management Consulting* evaluation team helped establish the fuel modification recommendations found in Section 4.0: Fuel Modification Descriptions and Required Treatments.

3.1 Terminology. Although any plant will burn, Wildland Fire Research has shown over and over that some types of plants, including many natives, are more fire resistant than others. The recommended plant list in Appendix “A” includes a listing of these low fuel volume, non-oily, non-resinous plants that are commonly referred to as “Fire Resistant”. This term comes with the proviso that each spring these plants are pruned, all dead wood is removed and all grasses or other plant material are removed from beneath the circumference of their canopies.

4.0 Fuel Modification Descriptions, and Required Treatments

4.1 Fuel Modification Descriptions.

All distances in this report are measured horizontally. This Plan requires 200 feet of fuel modification as measured from the outer edge of each dwelling unit on each side of each unit or to the lot line.

4.1.1 Fuel Modification Zone 1.

Defined: Zone 1 is the area immediately adjacent to each and every dwelling unit. Zone 1 includes all of the building pad areas and manufactured slopes out to the lot line of each lot. In the case of the back yards, Zone 1 extends out to the back yard lot line, which is usually at the top of the slope at the edge of a canyon or drainage.

Required Landscaping: Landscaping in all Zone 1 areas shall be irrigated and planted with a fire resistant plant palette taken from the list shown in Appendix “A”, consisting of a mixture of green lawn and bedding plants and maintained, fire resistant native or ornamental plantings less than 18 inches in height, and may contain occasional well spaced fire resistant trees. The outer edge of the canopy of a mature tree can be no closer than 10 feet to the edge of the structure and must have a minimum of 6 feet of vertical separation from low growing irrigated vegetation beneath the canopy of the tree.

In addition, single, well-spaced ornamental shrubs up to 24 inches in height, located no closer than 5 feet from the structure are allowed provided these plants will not carry fire to the structure. This plant palette applies to each and every structure within Scripps Ranch.

Plants in Zone 1 shall not include any pyrophytes that are high in oils and resins such as pines, eucalyptus, cedar, cypress or juniper species or retain an abundance of dead plant material such as fan palms and pepper trees.

Required Maintenance: All Zone 1 areas shall be maintained by the individual property owners.

Construction Standards: All structures in Zone 1 shall be constructed with Enhanced Fire Resistant Construction as stated below in **Section 4.3** of this Fire Protection Plan and as per the County of San Diego Fire Code and San Diego County Building Code due to the fact that the Scripps Ranch Community is within a Wildland Urban Interface/Intermix.

4.1.2 Fuel Modification Zone 2.

Defined: Zone 2 is the area from the edge of Zone 1 out to 200 feet.

Required Landscaping: All native plants shall be removed except for fire resistant trees and fire resistant native plants that can be limbed up 6' from the ground within the first 100'. Native plants can be retained in the second 100' provided the following native species will not be permitted to regrow on manufactured slopes or on the natural slope areas that are part of the fuel modification plan due to their extreme flammability: California sagebrush, (*Artemisia californica*); chamise (*Adenostoma fasciculatum*), flat-topped buckwheat, (*Eriogonum fasciculatum*); and black sage, (*Salvia mellifera*). Open areas can be reseeded to native annual and perennial grasses that are grazed weed whipped or mowed to a 4-inch stubble height after forming seed heads or by June 1 of each year.

The restriction listed in Zone 1 for no pyrophytes also applies to Zone 2.

Required Maintenance: Zone 2 shall be maintained by the Scripps Ranch Homeowners Association. Maintenance of all Zone 2 areas shall be required as needed.

4.2 Fuel Modification Maintenance Utilizing Goats.

Domestic goat grazing (at the rate of 240 goats per acre per day) has been used successfully to reduce fuel loadings and fuel continuity in Oak woodland and chamise/chaparral near housing developments. Goats are not selective in what they eat, however, they do have preferences. The amount of vegetation consumed can be regulated somewhat by how long the goats stay on an area. Two hundred and forty goats on one acre for one-day results in total consumption of all vegetation except for larger

woody stems. If fewer goats are used, the goats will need to stay on each area longer than one day. If the City continues to limit goat grazing to 75 animals the goats will need to stay on each acre for up to three days. Fuel reduction using goats requires temporary portable fencing, a water supply (a water trailer), supplemental feeds and a herder. Goat herders will not put their goats on a property if there is no chance for the goats to gain weight. The fees vary for fuel reduction by goats. There are a number of vendors available within California.

4.3 Enhanced Fire Protection Features Required For All Structures. Due to the fact that Scripps Ranch is within a Wildland Urban Interface/Intermix Area, “enhanced” fire construction and design features are required for all structures within the Community of Scripps Ranch. The “enhanced” requirements incorporate all of those items listed under “basic” requirements. All structures within the Scripps Ranch project shall eventually be in compliance with San Diego County Fire Code (Ordinance 9669) and San Diego County Building Code (Ordinance 9670).

5.0 Recommendations

The Community of Scripps Ranch can eventually be converted from a community of high risk subject to additional catastrophic losses to a “Survivable Community” where wildfires can burn through the community with no loss of lives or homes by implementing the following recommendations:

1. Work with the City to develop a timeline and obtain grant money for retrofitting the remaining homes with combustible wood shake roofs, combustible siding and single pane windows (through an inventory determine how many remain).
2. Require the removal of prohibited flammable trees and shrubbery from the homeowner maintained yards around each home (see prohibited species list in Appendix B). This includes all homes in Scripps Ranch including the newly rebuilt and landscaped homes.
3. Remove all eucalyptus and melaleuca trees and shrubs that are within 200 feet of homes. Replace highly flammable trees with native sycamores, oaks, alders and cottonwoods.
4. Remove all fire resistant trees that have limbs within 10’ of each home/structure. No trees are to extend over the roofs.
5. Install a 5-foot long non-combustible transition wall between the side of structures and wooden privacy fencing.
6. Update the attic venting systems when replacing the roofs.
7. Enclose all eaves.
8. Enclose all decks.
9. Prepare instructions for each resident regarding actions to take in the event another wildfire threatens Scripps Ranch (close all windows and doors, pull drapes away from windows, ensure enough garden hose is at each faucet to enable encircling the structure).

10. Through the HOA accomplish fuel modification out behind the back yards annually by June 1 and as needed. The first 100-feet as measured horizontally from the structure shall have no native plants (the fuel modification areas within the first 100-feet can be planted with low growing prostrate vegetation that is permanently irrigated and can also be planted with widely spaced fire resistant trees, or planted to native annual and perennial grasses that are cut or grazed to a 4 inch stubble height by June 1 of each year). If native plants within the first 100 feet can be limbed up into tree forms they may be retained provided they are well spaced from one another. The second 100 feet can consist of thinned native plants, however, due to their extreme flammability: California sagebrush, (*Artemisia californica*); chamise (*Adenostoma fasciculatum*), flat-topped buckwheat, (*Eriogonum fasciculatum*); and black sage, (*Salvia mellifera*) shall not be permitted in any part of the 200-foot Fuel Modification Zones.

11. As an incentive, work with City and County officials to delay increases in Property Tax Assessments as the result of replacing roofs, siding and windows for at least five years for those homeowners that up grade their properties

The adoption and implementation of these 11 recommendations by the entire Scripps Ranch Community will eventually result in Scripps Ranch becoming a “Survivable Community” that can with stand future wildfire intrusions without losing lives or homes when wildfires occur. This will require City Officials, the FireSafe Council and the Scripps Ranch Community all focusing on the task at hand and working together. One of the immediate benefits will be easier access to Fire Insurance coverage.

END