

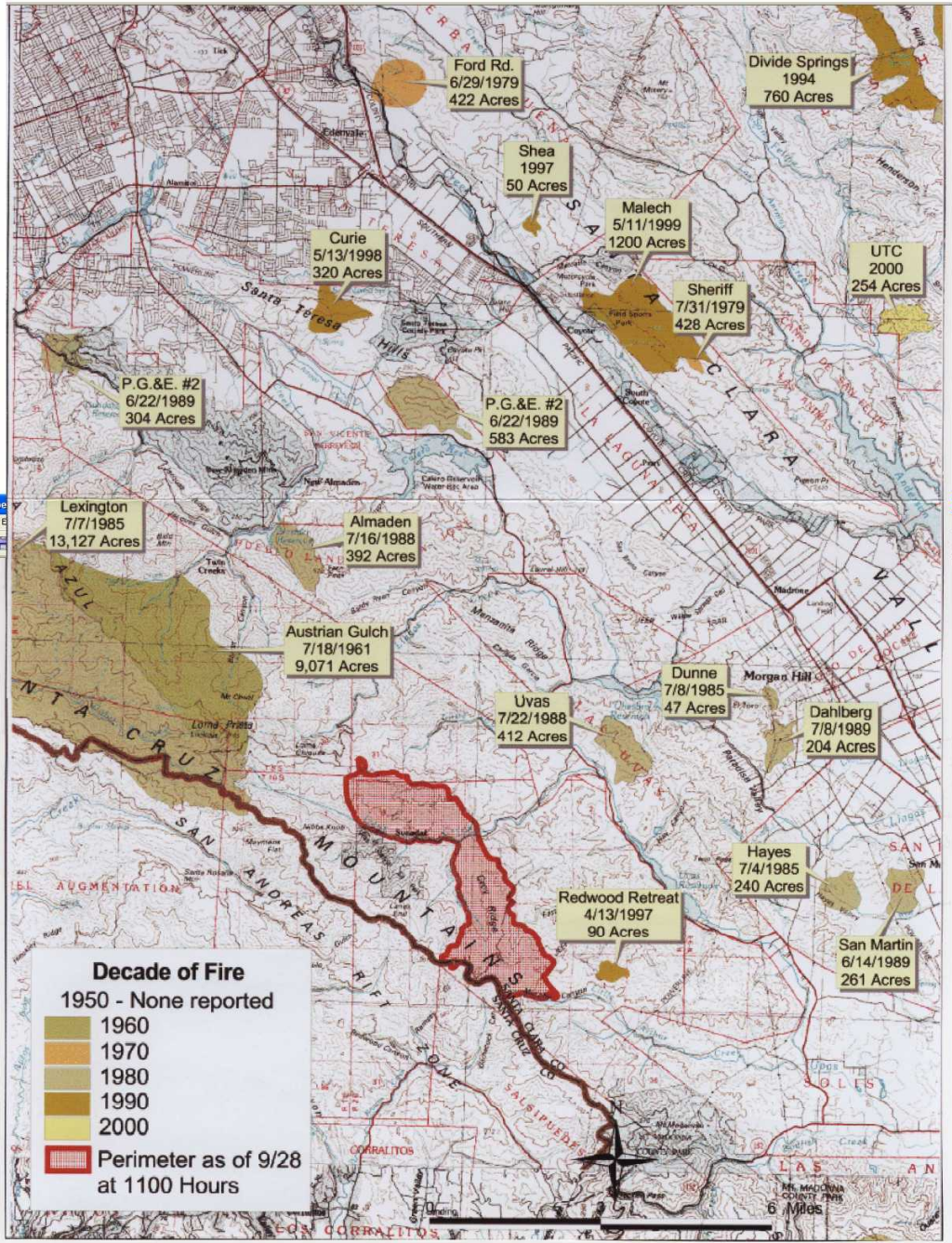
Fire Season 2006 – Protecting Your Home from Wildfire
By Rick Parfitt

As a long time resident of Summit Road, I still have a vivid memory of the 1985 Lexington fire which almost burned down my home. The fire charred the trunks of the trees around our property. My neighbor still tells the story of singed hairs on his arms as flames shot-up the side of a tree. He refused evacuation orders staying behind to protect and save his home with a garden hose. The fire lasted a week, destroyed 24 homes, burned 14,000 acres and involved the gallant efforts of fire fighting crews from all over the state. Property loss was 7 million dollars and suppression cost was 6 million dollars. 4,500 people were evacuated.

We live in an area prone to wildfires. Local, state and federal officials have learned a lot since 1985. By studying the behavior of wildfires throughout California and the rest of the country, fire experts have established a set of guidelines for homeowners. By following these guidelines, a homeowner can reduce the chances that their home will burn down to 1% or less. Santa Clara and Santa Cruz County provide brochures, DVDs, chipper programs and courtesy site inspections to aid home owners.

We all have a responsibility to take the necessary measures to protect our homes. When homes are close together, that responsibility can extend to our neighbors. In this article I outline some things that every home owner should do to greatly reduce the risk that their home will perish in the next wildfire.

Most of California is periodically visited by wildfires. In fact, after tens of thousands of years, the ecology of the area has adapted to fire. Many of the plants and trees in our area require scarification, or the heat of a fire, in order to germinate. If you think fire occurs infrequently, consider Figure 1 which shows some of the recent fires in our area. We will have more wild fires in and around our homes!



Perhaps the biggest single preventive measure you can take is to make sure you do not have a shake or wood roof. If you do, replace it with a Class A roof. The biggest contributor to home loss during a wildfire is ignition from flying embers on a wood roof!

Once you have a fire safe roof, the next task is to create a defensible space. Figure 2 is an example of a home in Santa Cruz County that was surrounded by fire and survived

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unscathed. This homeowner created a space around their home where a fire could not easily spread or burn hot enough to ignite their home. For many years, the size of the defensible space required in California was a radius of 30' around the home. In January 2005, the size was increased to 100'. Inside the defensible space, the type of vegetation and its spacing is managed to reduce the chances of a wildfire igniting your home. Maintaining a defensible space requires attention to detail. As an example, keeping dry needles out your rain gutters and dead branches away from the house are important.



To understand the purpose of a defensible space it's helpful to look at the two ways a home can burn: one is fire from a distance and the other is fire close to the house. During a wildfire, the heat radiated from the advancing fire can be so intense that the wood siding on a home can ignite without ever being touched by actual flames. In theory, if there is no combustible material within 100' of your house, even the fiercest crown fire or

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forest fire will not ignite your house from a distance. This theory was tested using a dense forest of Jack Pine and Black Spruce. In practice, different species of trees burn differently. The spacing of trees, reduction of ground fuels and other factors make it possible for flames to come much closer to your house without causing ignition. Each homeowner needs to look at the unique mix of vegetation and topology around their home. At the other extreme, a home situated on a knoll where a steep canyon below may act as a chimney for flames to travel along needs to take additional precautions.

A 100' of defensible space does not mean a barren landscape – see figure 2. It means managing the mix of trees and shrubs around your home. When choosing landscaping, you want plants that don't burn easily. Keep highly flammable brush away from the sides of your house.

Let's look at direct ignition. Direct ignition can occur from the flames of flammable material near your home or from flying embers. During a large fire, embers or firebrands can travel over a mile, land on your roof, deck or flammable debris around your home and cause ignition. The firebrands can also cause spot fires often jumping over fire breaks ahead of the main fire. During the 1985 fire, a strong wind did spread firebrands igniting spot fires far ahead of the main fire.

Our goal is to reduce the likelihood of a fierce fire within 100' of your home and make sure any flying embers or spot fires are not going to find flammable material on or around your house to ignite. There is expert help readily available. Local fire fighting agencies in both Santa Clara and Santa Cruz are available to do a courtesy site inspection. Phone numbers and who to contact are listed at the end of this article.

My On Site Inspection

Since my home is located in Santa Clara County, I called SC County Fire for a courtesy inspection. About a week later, they sent a knowledgeable inspector to my home, Deputy Marshal Julie Lenney. Together we walked around my home and she wrote a list of items that she wanted me to complete before the beginning of fire season (approximately May, depending upon weather). At the end of the visit we scheduled a time for her to return for a follow-up inspection. Here's a quick checklist to think about:

- 1) Eliminate all flammable materials (potential fuels) within 10 feet of the house
- 2) Remove dead debris from decks, wooden walkways, rain gutters and roofs
- 3) Keep tree limbs 10' away from the house
- 4) Inside the defensible space create breaks in the vegetation to prevent ladder fuels
- 5) Store firewood at least 30' away from the house
- 6) Clear brush around your driveway and roadway to allow fire truck ingress of 13.5 feet high and 13.5 feet wide.
- 7) Make sure your street address is clearly marked with reflective number at least 3" high on a contrasting background
- 8) Staple metal window screening over any openings or gaps in the eaves including low decks, walkways and crawl spaces

- 9) Reduce or eliminate surface fuels for a radius of 100 feet around the house and prune lower limbs of trees at least 10 feet above the ground
- 10) Remove fuels from around propane tanks
- 11) Close-in elevated decks to protect from flying embers
- 12) Remove dead trees and other highly flammable vegetation, i.e. Tanoaks and French broom

The site visit was also a great opportunity to discuss some of my concerns and go over the basic check list that I work from each year. One of my personal goals is to preserve as much of the natural setting as possible. Our home is mostly surrounded by large trees, some steep slopes and a lot a native plants. All the trees within our 100' defensible space have had the lower limbs removed to a height of 15'. The one thick strand of trees that provided a path for the 1985 fire to approach our house is now covered by mostly mature trees. Over the years, I've slowly thinned the shaded canopy below these trees to reduce the amount of ground and ladder fuels.

I've only scratched the surface here. Other parts of our mountain community have different vegetation patterns. Homes that are surrounded by dense and highly flammable chaparral will need a very different approach to fuel reduction. These two guides provide lots of excellent information:

- 1) ***Living with Fire*** – This brochure is a good general guide for homeowners.
- 2) ***Controlling Nature's Wrath*** – This DVD shows both the fury of fire and a broad range of actions that we can take to protect our home.

With these two guides, some common sense and the help of a local fire expert it becomes clearer what has to be done.

Another resource is our local District Conservationist, Richard Casale, who works for the USDA. Mr. Casale also does courtesy site inspections and his contact information can be found at the end of this article. Our annual rainy season is another important consideration when creating a 100' defensible space. We get a large amount of rain in a short period of time. Many of our homes, including my own, are located near steep slopes that create ideal conditions for a mud slide. While trees and plants can provide fuel for fires, they also help hold down our hillsides. Protecting against both mud slides and fires requires a balanced approach. Mr. Casale has expertise in both areas and a library of free information guides and booklets. During his visit, Mr. Casale made a number of additional recommendations. He can also provide information on livestock management, road maintenance and creekside care. He suggested that I pull-up the French Broom (a highly flammable, non-native species with bright yellow flowers), while the ground is still wet. It is a 2-3 year project because seeds currently in the ground can continue to germinate for another year or two. He also recommended that I remove two dead Tanoaks, one standing and one on the ground. While these trees are both outside my 100' defensible area, he felt they provided unwanted fuel for any future fires.

Final Word

Preparing your home and property to survive a major wildfire is an annual chore. If you skip a year, or have never thought about it, the task can be daunting. Don't get discouraged. Think about dividing everything that would be nice to do from what must get done. Divide the tasks over several years. This year tackle the most critical items and start a long term plan for the rest of the items.

There are also number of contractors that you can hire to help with brush clearance and other tasks that may need to be done. The Mountain Resource Directory lists a number of such contractors.

If possible, give a helping hand. Sometimes, given the way property lines are laid out, it is important to collaborate with your neighbor. Let them know what you are doing, enlist their help, and don't forget to lend a helping hand to our seniors and others that might need a strong back.

Important Contact Information

Courtesy Home Inspections

- 1) Santa Clara County, the Fire Prevention Division, 408-378-4010
- 2) CDF – Burrel Fire Station, 408-353-1022
- 3) Richard Cassale, District Conservationist, USDA, 831-475-1967

Copies of Living with Fire, & Controlling Nature's Wrath

- 1) District Office at Loma Prieta School
- 2) Burrel Fire Station
- 3) Santa Clara Fire Prevention Division, 408-378-4010
- 4) Online:
 - a. Living with Fire:
<http://www.sccfiresafe.org/FireSafe/LivingWithFire.htm>
 - b. Controlling Nature's Wrath :
http://www.fire.ca.gov/php/education_video.php#1

Helpful Web Pages

1) Santa Clara County FireSafe Council – They are currently working on a Model for Community Wild Fire Protection Plan (CWPP) that could be applied to our Mountain Community.

<http://www.sccfiresafe.org/>

California Department of Forestry – Lot's of useful fire prevention information

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<http://www.fire.ca.gov/php/>

Firewise – A National Fire Protection organization

<http://www.firewise.org/>

Great Science Article on Defensible Space

Reducing the Wildland Fire Threat to Homes: Where and How Much?

http://www.nps.gov/fire/download/pub_pub_reducingfirethreat.pdf

“Home ignitability implies that homeowners have the ultimate responsibility for W-UI (wildland-urban interface) home fire loss potential. Because the ignition and flammability characteristics of a structure and its immediate surroundings determine the home fire loss potential, the home should not be considered a victim of wildland fire, but rather a potential participant in the continuation of the wildland fire. Home ignitability, i.e., the potential for W-UI home fire loss, is the homeowner’s choice and responsibility.”

Chipper Programs

Both counties offer some help at the beginning of the fire season with brush removal by providing a commercial grade chipper and a crew to chip the brush. Home owners are responsible for removing the brush and stacking it at a pre-arranged location. For more information about these chipper programs:

1) Santa Cruz County

Angela Petersen – Chipper Program in Santa Cruz County, 831-335-6794

Or your local fire agency

2) Santa Clara County

The current program is run through County Fire and the only planned chipping at this time is in Chemeketa. Chemeketa residents should work with the Chemeketa Water Board for details on that chipper program. Alex Leman of the Loma Prieta Volunteers may be setting up additional chipping locations.

Compliance with State Law

Both Santa Cruz County and Santa Clara County can cite home owners for not complying with California fire codes as they pertain to the 100’ defensible space. Santa Clara County Fire has indicated that they will not cite home owners in the unincorporated area who request a courtesy inspection. CDF in Santa Cruz County follows a different procedure. After three failures to comply with their recommendations, a misdemeanor can be issued. The purpose of compliance is to help you and your neighbors stay safe from wildfires.

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In Santa Clara County, if you feel there is an extreme fire hazard in your neighborhood that needs to be addressed (citation & fines), you can call the County Weed Abatement Program for assistance at 408-282-3122. Santa Cruz County does not have a similar program at this time.

CDF in Santa Cruz County, Santa Clara County Fire and the Santa Clara County FireSafe Council have been extremely helpful to me in the preparation of this article. They are eager to work with homeowners.