

The Homeowner – The Forgotten Firefighter

-The Saga of the “Wildland Firefighter.”

Hydrants, Hydrants Everyone and not a Drop of Water-

(By code, on unstriped roadways, blue markers shall be set in the center of the roadway to mark water hydrants. On undivided striped roadways, blue markers shall be set 6" to the hydrant side of the center stripe. On divided roadways, the blue marker shall be set 6" to the side of the lane striping which is closest to the hydrant.)

The Old Topanga Fire, Santa Monica Mountains, CA

Behind the Fire Line Homeowner Interviews
Fire Investigation
Nov. 2-3, 1993

Draft ‘Finals’: July 30, September 30, October 30, 2019

by

Klaus W.H. Radtke and John W. Thomas

*The blue markers probably did not save a single home as the hydrants went dry when needed.

*Homeowner and professional firefighters had to evacuate/abandon homes as their garden houses and fire hydrants went dry and onrushing flames endangered them.

*Water systems are not designed for wildland fire fighting but most homeowners were not aware of this and fire hydrants provided a measure of security.

*Homeowner auxiliary water systems such as pools are the most important on-site source of available water provided fire engines are equipped to hook up to them.

*The County of Los Angeles Fire Department requires hydrants in Fire Zone 4, where single family homes exist, to have a fire flow of 1,250 gpm. at 20 psi residual for two hours which largely requires 6" non-corroded lines. It knew that nowhere in the mountains these requirement could be met and fire flow would be available only from 2" lines such as from water tanks at Carbon Mesa and Las Flores Mesa providing water flow for fighting largely only single family home conflagrations.

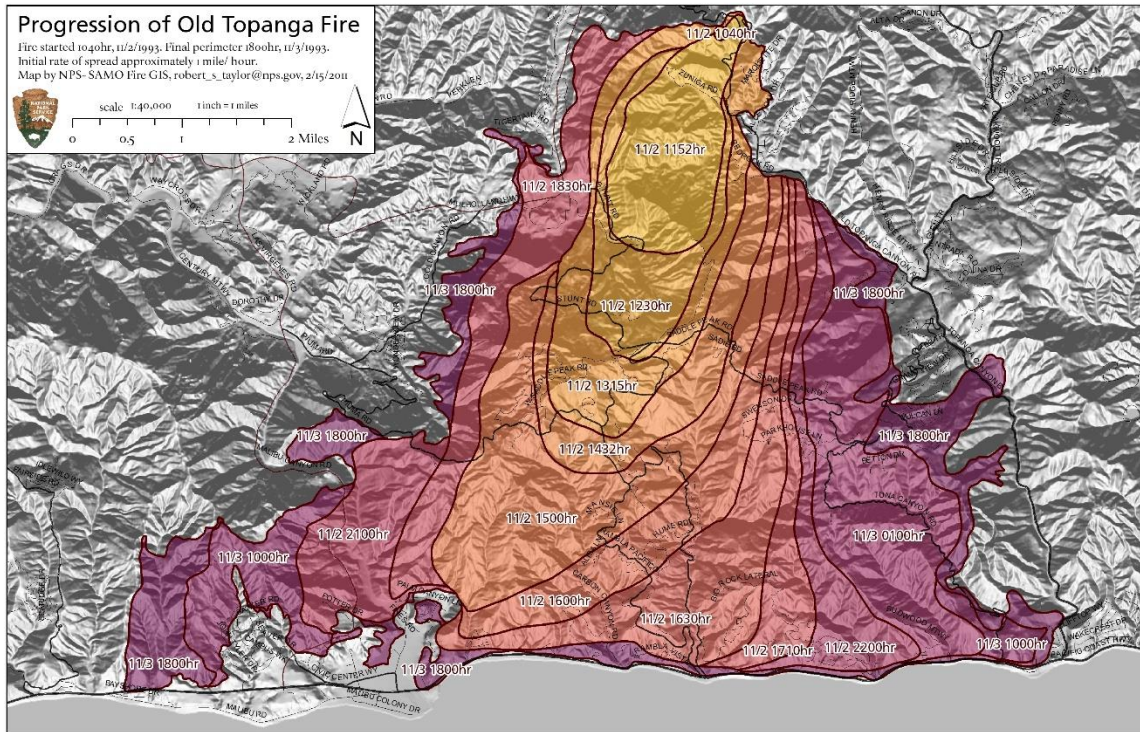
*Carbon Mesa: "served by 100,000 gallon gravity feed water tank, but its 2-inch water main delivers at most 340 gallons per minute and would not allow for simultaneous operation of multiple hydrants."

*Las Flores Mesa which was left undefended, only had two 10,000 gallons tanks fed by two 40 hp. electric booster pumps located along lower Las Flores Canyon that, unprotected, as could be expected, caught on fire as the fire front went through.

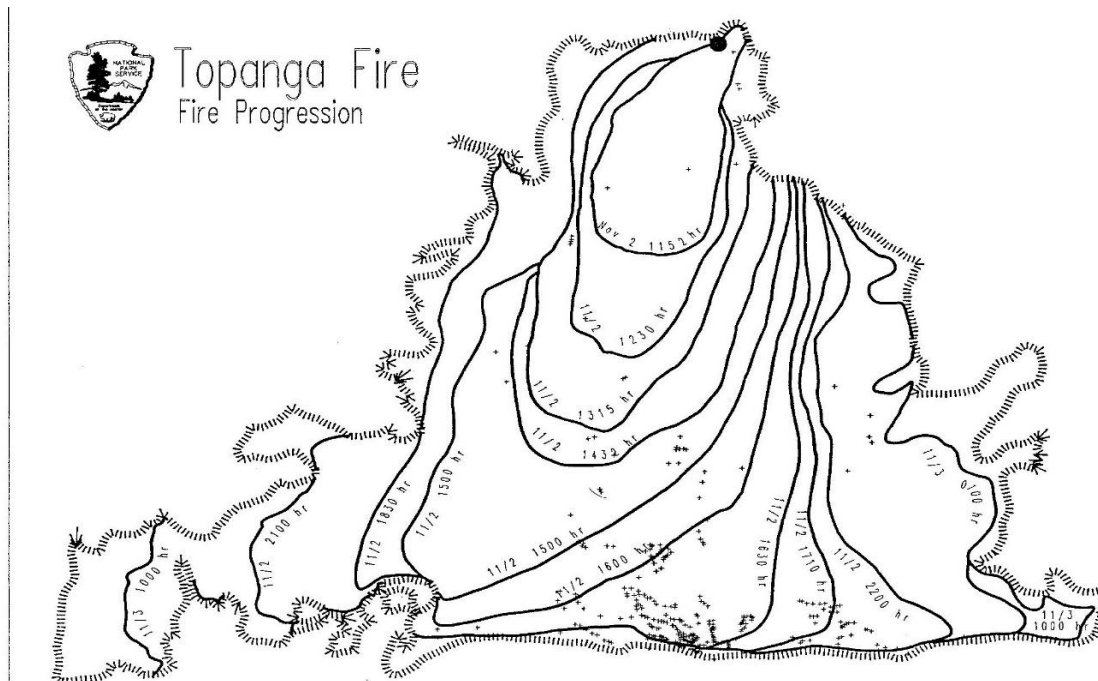
*Since the 1970's it had been discussed within the County Fire Department to develop a meaningful auxiliary water system in conjunction with homeowners but it was never followed through.

*Class A foam has been demonstrated by CDF and Forest Service to be an effective firefighting tool and L.A. County Fire Dept. supposedly retrofitted its engines after the Old Topanga Fire to have the flexibility to use foam in combination with water. However, this still leaves homeowners' garden hoses and hydrants dry.

Note: In 1993 PST daylight savings time extended from April 4–October 31 while in 2019 PST daylight savings time started already on March 10 and extends through November 3, 2:00am. This means that on November 2, 1993 sunset was an hour earlier than it will be in November 2, 2019. Specifically PST daylight saving time sunset was at 16:59 (4:59pm) on November 2, 1993, civil twilight 25 minutes later, nautical twilight another 30 minutes and astro twilight another 30 minutes so that it would have been totally dark about 85 minutes after sunset. PST daylight savings time sunset is 17:59 (5:59) on November 2, 2019.



National Park Service – 1993 Old Topanga Fire Progression Map (Topography).



National Park Service –1993 Old Topanga Fire Progression Map (Burned Homes x)



11-2-1993 15:45 Aerial photo –Fire moving east (up-slope out of Carbon Cyn. across La Costa).



1980 Aerial Infrared (Lower Carbon Cyn., Rambla Pacifico, La Costa).

Table of Content

I. Introduction.....	06
II. Las Flores Canyon.....	14
Manzanita Park Ave., McCray Ln., Las Flores Hts. Rd., Gorge Rd., Deerpath Ln., Las Flores Canyon Rd.....	15
III. Las Flores Mesa	24
IV. Azurelee Drive, Briarbluff, Castlewood Drive, Hume Road, Lamplighter Lane.....	29
V. Rambla Pacifico Area.....	43
A. Rambla Pacifico - Fire Camp 8 to Azurelee	43
B. ‘Central’ Rambla Pacifico (Azurelee to Hume).....	58
C. Rambla Pacifico (Hume Road to Rambla Pacifico Slide).....	61
D. Rambla Pacifico (Above Slide)	63
E. Rambla Pacifico (below slide to coast).....	69
VI. La Costa Area.....	74
A. Calle Del Barco (downhill of Rambla Pacifico)	77
B. Paseo Hidalgo	79
C. Paseo Serra	81
E. Rambla Vista	86
F. Villa Costera (west boundary of La Costa)	90
VII. Big Rock	94
A. Seaboard Road	100
B. Big Rock Drive	103
C. Little Rock Way.....	106
D. Piedra Chica Rd.	111
E. Rockpoint Way	112
VIII. Appendices	113
Appendix 1 – Fire Hydrant and Road width Map – La Costa	114
Appendix 2 – Wildland Fire Safety Panel Hearing – Homeowner Comments.....	115
Appendix 3–Noted Fire Expert Urges City to Learn from Fire (Emphasize Education)	116
Appendix 4 - Basic Wildland-Urban Interface Fire Safety Concepts.....	117
Appendix 5 – Incident Command System (ICS) and FIREScope ⁶	124
Appendix 6 - Los Angeles County Subdivision Codes Pertaining to Wildland Fire Safety	132
Appendix 7 - Wildfire Safety Panel Mtg. June 1, 1994 -Discussion Highlights	133
Appendix 8 – County’s Full Report Waters Down Fire Danger - August 25, 1994.....	134
Appendix 9 - Malibu Emergency Task Force "Things Will Improve"	135
Appendix 10 - The Yarrows “Loving Caretakers..... <i>Los Angeles Times</i> Nov. 6, 1993.....	136
Appendix 11 – Abstracts of Homeowner Comments	138

Introduction¹

This report highlights recorded oral homeowner interviews conducted by the National Foundation For Environmental Safety (NFES) and will take you behind the fire lines as seen through the eyes of desperate homeowners knowing their disaster-prone neighborhood and attempting to work with firefighters hampered by not knowing the area, with both groups of firefighters being overcome by a fast-running but predictable wildland fire with often locally unpredictable, gusting wind patterns. Written homeowner documentation still in existence such as completed Questionnaires, etc., forwarded to the then Citizen Fire Investigation arm of NFES are quoted and on file.

Being dismayed by the continuing predictable and seemingly endless wildland fire home losses, my long-time associate John (86) and I, Klaus (77) have searched through our old fire files for some meaningful information that can be an eye-opener for why and how homes are lost in a wildfire. We hope that this information, along with this web site through which it is provided, lets homeowners and public agencies work more closely together rather than continuing the seemingly never-ending Russian Roulette “game” of all-to-predictable wildland fire losses accelerated by poor land use planning, inadequate access, an insufficient water supply, often fire-trap construction in largely non-defensible locations and often limited clearance of flammable vegetation.

Revisiting the previous investigated areas in August 2019, it is encouraging that individual communities are generally more fire-safe maintained than prior to the 1993 Old Topanga Fire except for individual properties that, however, are not focused on in this report. However, topography, limited ingress and egress and often no turn-arounds and an uncertain water supply are still of major concern especially with out-of-the area firefighters that are unfamiliar with what they are facing along with equipment not suitable for firefighting under these conditions.

Do we have to wait for the often fire-trap homes to burn down in subsequent wildland fires before meaningful changes are made? Why do we allow further construction/buildout in predictable fire-, slide-, and flood-prone environments supported by seemingly perpetual public subsidies? Why don't we properly educate homeowners living in these areas and tell them the facts? Why don't we acknowledge that many of the firefighters responding to all-too-predictable wildland fire emergencies in mountainous terrain are improperly trained and are often responding with equipment not suited for wildland fire fighting? We must acknowledge the facts, starting with #1, namely, that there will never be enough water from hydrants for effective wildland fire fighting as the systems are primarily engineered for providing just enough water pressure for fighting single-family home fires.

Homeowner interviews also indicate that the local fire department did not prepare the wildland fire residents for such a predictable disaster, and that they therefore also had expectations of support and assistance that could not be met. We apologize if some of the homeowner interviews and background information is incomplete and encourage owners that were part of this wildfire fire experience who took notes, photos, and movies, to add information of help to others.

¹ The homeowner interview section of the report is based on electronic files backed up and still in our possession. Telephone numbers provided in 1993-94 by individual homeowners/residents have been excluded. Unfortunately, files with then still handwritten field notes pertaining to further interviews of the five areas highlighted as well as Las Flores Mesa, Sweetwater Mesa, Tuna Canyon, and the homes above Fire Camp 8, along with photos pertaining to them and further documentation provided by homeowners, could no longer be located in 2019. Some of these notes pertained to review of the water system, interviews with fire and police professionals affected by the fire, and certain homeowners that had requested that such information not be made public for at least ten years because of possible career-ending retribution and possible threats of lawsuits such as were directed at Ed Hill, the then-president of the Santa Monica Mountains Residents Association, by Los Angeles County Council at the direction of the then County of Los Angeles Fire Chief in 1983. In response, Mr. Hill, assisted by resource professionals throughout the state, then co-founded the National Foundation for Environmental Safety (Experts Helping People) by the end of the year and became its first president.

If homeowner information could shed further light on how to protect life and property during fire emergencies and is desired to be included by affected residents reading this report, it can be added at a later time.

As the president of the National Foundation of Environmental Safety (NFES), I stated during the Los Angeles County Fire Department's Wildland Fire Safety Panel's public hearing in Malibu on April 13, 1994, *"Given the fire start, the fire path was one of the most predictable fires in the Santa Monica Mountains in the last 30 years, and up to 75% of the fire losses could have been prevented through proper pre-planning inclusive of acknowledging road closures, limited ingress and egress, and working with homeowners (Appendix 2).* This bold but, I believe, factual conclusion was based on extensive field experience gained as I was personally familiar with most of the fire area, as Fire Camp 8, the former cold-war Nike site with its underground missile silos located almost in the center of the fire area, was my last H.Q. up to the fall of 1982. I also based my conclusion on ten years of research experience gained working cooperatively with the U.S. Forest Service Riverside Fire Laboratory on wildland-urban interface fire problems and knowing how the local Fire Department was operating behind the scenes. All this had already been translated in preparing my new, highly exposed hillside home to survive an expected wildfire, which engulfed it momentarily when overrun 18 months later by the advancing fire front of the September 25, 1978 Mandeville Fire, fueled by explosive, almost fifty-year-old chaparral. My wife, self-trained as an experienced homeowner firefighter, did the final, so important "beyond defensible space" preparation directly around the house as the fire front approached. At that time the lessons learned working for almost ten years for the Los Angeles County Fire Department (Forester and Fire Warden) had convinced me that to survive a wildfire, you could not depend on the Fire Department but had to prepare your home so that it could survive unattended, as you may not be at home, firefighters may not be there to save it, and you may not have any water for firefighting, even though I was looking at a 2 mil. Gal. water tank across the street at almost eye level. Personal communication with County Fire personnel that had fought the 1993 Old Topanga Fire and its shortcomings, and my by-then over 25-year attempts to make wildland areas more fire safe through often personal inspections of hundreds of home sites throughout California, provided me with further insight. The postfire 11-11-1993 edition of the *Malibu Surfside News* had already stated under their heading *Noted Fire Expert Urges City to Learn From Fire* that "Radtko's research indicates that Malibu will face fire in one location or another every seven to ten years." (Appendix 3) This I had indicated on large fire history and vegetation maps prepared as visuals.

We now have finally acknowledged that wildland fires are quite predictable and will regularly burn the mostly fire-adapted vegetation in California while we live there and cannot be controlled unless they run out of fuel and the wind dies down. Home losses are also highly predictable given their location, structure, and lack of clearance of flammable vegetation. Only some still "politically correct" fire codes may differentiate between clearance requirements for flammable native and ornamental vegetation. The flames and firebrands from a wildfire do not. Living more safely at the wildland-urban interface therefore requires a basic understanding of fire behavior, pre-planning, and constant maintenance/vigilance not to fall victim to the predictable fire-flood cycle. Neighbors are also important in creating a fire-safe environment, as the maintenance of their property, siting and construction of their homes, and distances from adjacent structural improvements, is critical in this respect.

"Defensible Space" starts with acknowledging that landscape vegetation can be as flammable as native vegetation and must be "fire-safe" as also dictated by topography. However, "Brush Clearance Inspections" by their very nature only address a small portion of the firestorm scenario, as they largely address defensible space for firefighters to protect a structure. This concept is often hard to achieve in mountainous communities where topography becomes the limiting factor and does not really address the fact that most homes will not be attended by firefighters as the firestorm passes. Beyond "defensible space" is then the final and most important key to a structure's survival but is largely not addressed in a fire department brush inspection as stated before. Building materials (no wooden roofs, wooden balconies, or wooden fences), how the home is built (not a fire catcher nor windows that can provide ready fire entrance), and how clean of flammable personal items the lot and a neighbor's lot is kept (not a rat's nest), especially around structures, are often keys to home survival after the fire front has passed. Perhaps non-permitted structural fuel add-ons such as highly flammable decks, staircases, storage sheds, lack of adequate clearance around Butane tanks, etc., are additional reasons for fire losses after the fire front has passed.

As already described in the fire booklet *A Homeowner's Guide to Fire and Watershed Safety at the Chaparral-Urban Interface* (HOGFW) that I wrote in spring 1982 at the request of the Los Angeles County Board of

Supervisors, the effects of conduction, convection, radiation heat sources, and firebrands are also highly predictable, easy to understand and are not based on rocket science. So the key to reducing home losses during wildland fires is understanding these basic concepts and then being prepared through continuous education, both of the wildland resident and the firefighters. For example, for a point source of radiation such as a tree or bush, the heat intensity decreases with the square of the distance from the source. Therefore, a tree burning within 20 feet of a window transfers only one-fourth the heat to the house compared with a tree burning within 10 feet and only one-sixteenth of the heat compared with a tree within five feet. In other words vegetation burning within five feet of your picture window radiates sixteen times more heat onto the window than vegetation burning within twenty feet. Depending on the wind, flames will then also be large enough to impact the window directly with conduction heat, perhaps the immediate cause for blowing out the window and allowing flames to enter the house (**Appendix 4 - Basic Firestorm Safety Concepts**).²

While the Incident Command System (ICS) and FIREScope (**Appendix 5**) have been touted as the key to effective fire-fighting, as they are designed to manage people (largely mass evacuation?) and firefighting resources “if everything goes as planned,” they have many shortcomings that have not been properly addressed in many wildland fire evaluation reports and therefore not corrected. This was strongly stated by off-duty fire personnel fighting the fire in their own neighborhood. Depending only on these systems and resources to save your home if you were not prepared, again, is like playing Russian Roulette.

The key to greatly reducing local fire losses therefore still falls largely on the local fire departments, also hopefully backed by cooperating agencies and dedicated local and state officials. Being proactive and preplanning means that a well-trained local fire department takes the lead in working closely with homeowners in preparing for predictable wildland fires where predictable losses can be expected under predictable fire weather conditions. This also means that this well-trained local fire department takes the lead—along with homeowner firefighter volunteers—in directing out-of-town fire services such as bird-dogging them throughout the fire area (letting them know about topography, fire-safe hunker-down areas, life-saving water sources inclusive of pool supplies, most vulnerable and dangerous places to advance into, where to safely lay and extend fire hoses, etc.). However, there was no such preparation done for, and therefore little or no coordination with, out-of-town fire services during

²Wildland residents should be educated members of the fire safety triangle and understand how to live more safely in fire and flood-prone watersheds that often suffer from poor or inadequate land use planning. If not, wildland fire home losses will continue to greatly increase along with mandated (forced) mass evacuation, as firefighting personnel can rarely attend to the many unattended homes at risk. Understanding this, the US Forest Service funded research for homeowner protection under cooperative research agreements with the County of Los Angeles with Dr. Radtke acting as principal investigator/lead scientist for the County and the Fire Department. The culmination of such research was for Dr. Radtke to publish a homeowner's guide in 1982 based on his document *Living More Safely at the Chaparral-Urban Interface* which was supposed to be published by the U.S. Forest Service Forest and Range and Experiment Station already in 1980/81 but had it printed release held up by Congress-imposed budget cuts. The National Park Service was also supposed to be part of this vision and all three logos were to be shown on the front of the new homeowner fire booklet. I promised representatives of the County Board of Supervisors to write such a fire booklet and have it in print by the beginning of the 1982 fire season over the strong objections of the then County Fire Chief who was fighting the Board of Supervisors against cost-saving streamlining of his department during an election year. The first 7,000 copies of the then state-of-the-art fire safety booklet *A Homeowner's Guide to Fire and Watershed Safety at the Chaparral-Urban Interface* (**HOGF&W**) came off the presses in June 1982 and were supposed to be immediately distributed to every resident in fire-prone areas in the Santa Monica Mountains while a second printing of 25,000 copies ordered by the County Board of Supervisors a few months later was further to be distributed and also provided to wildland residents during “brush inspections.” Requests for over 100,000 copies were also received from fire services throughout the state inclusive of the California Department of Forestry soon after its June 1982 publication. However, its distribution was largely shut down as the then County Fire Chief undermined its further release as he fought for years the implementation of a post-Proposition 13 audit of his department that recommended the “civilianization of 123 fire department positions not requiring firefighting experience (Fire Fighter Specialist to Deputy Chief)” while proposing, among other things “Establishing the completion of the Forestry Bureau's scientific management/fire suppression projects as a departmental priority”. I had initiated the latter under the Chaparral Research and Development Program under Cooperative Research agreement between the Forest Service and the County Board of Supervisors, closely working with scientists of the Riverside Fire Laboratory but all official research had already been shut down by the then fire chief during the previous year. The question can be asked “How many homes could have been saved throughout the State if homeowners would have been allowed to freely receive such fire safety information not only in 1982 before the October 1982 Dayton Canyon Fire in Malibu but also in subsequent years? How about in 1993?”

The June 17, 1994 Los Angeles County Fire Dept. Wildland Fire Safety Panel report (WFSP) stated on P.8 as to Site Location of Homes and indirectly in reference to fuel modification “No workable plan for this type of effort was developed since we determined that there was little Fire Department staff could add to a routine site review over what is not already included in the Homeowner's Guide to Fire and Watershed Management...(**HOGF&W**) which is a cooperative publication by County Fire and the U.S. Forest Service (the Radtke 1982 fire booklet). I disagree as learning never stops.

the 1993 Old Topanga Fire. Home losses were greatest in the "backyard" of Fire Station 70, H.Q. for Battalion 5 where a design-for-disaster situation also existed, How ill-prepared local fire personnel was in understanding the direction and devastating impact of the fire on its immediate La Costa neighborhood is shockingly documented on the next page by an election precinct worker to the County Wildfire Investigation Committee (Hays Feb. 21, 1994).

February 21, 1994

Matt Mattheson
County Wildfire Investigation Committee

Dear Matt,

Regarding the Firestorm in Malibu on November 2, 1993 there is some information which I would like to share with you and members of the Committee.

I was a precinct worker at the Carbon Canyon Fire Station during the Election on November 2, 1993. I arrived at the station at 6:30 a.m. and remained there until approximately 11:10 a.m. when I went for my lunch break. At no time during the morning did any fire station personnel speak to any of the four precinct workers about a local fire, imminent danger, questions about where we lived, or the possibility of closing the precinct. In fact, except for the constant ringing of bells, this morning was not unlike the other four elections in which I worked in the Fire Station. In fact, in one respect, we had even less concern since there had been no positioning of fire trucks outside on the driveway for quick response in an emergency, such as had happened in the past. Only one truck had left the station sometime after 10:00 a.m., and to my knowledge did not return while I was at the Station.

There was even one fireman, whom we have known before, who spent a great deal of the morning transporting his personal belongings to his car because he had several days off. At one time there were two male fire personnel looking at a wall map of the Malibu area. Their backs were to me, but I tried repeatedly to question them about the location of the fire, where it was headed and in fact simply to be able to see where they were pointing on the map. I was completely ignored, but thought there could not be much danger because of the academic way in which they were discussing the location of the fire.

Because of the atmosphere in the Fire Station, I was not concerned about imminent danger to myself or my home from the fire. However, after going to the Hughes Market during my break, when I came out of the market I could see an immense cloud of smoke above the hills and knew there was a crisis for our area.

I immediately drove home, located my cats, filled a trash barrel with water, warned several sets of neighbors then returned to the Fire Station with the intention of closing the precinct. I arrived at the Fire Station at about 12:20 p.m. to find the remaining two precinct workers standing in the doorway of the Station looking at the smoke. When I asked them if they had called the Election Commission of the County Registrar/Recorder to say we were closing, they did not believe we could do so. From this I assume that even at this point there still had been no fire warning.

At my insistence the Precinct Inspector, Vidya Ghosh, went into the Fire Station office to make the call. While she called, the other worker and I collected all the voting materials we could and put them in Ms. Ghosh's car when she returned. 'At this point, approximately 1:15 p.m., I ran to my car parked on the opposite side of the street in the cut out about 50 feet from the station. I saw flames already halfway down the hill on the same side as the Fire Station, about 150+ feet from the Station. I stopped my car in front of the Station, wondering if I should honk my horn to alert the firemen, but as there were no firemen in the engine part of the station at that time, I felt I did not have time to jump out of my car and locate the firemen. Since the flames were already within a half mile of the fourth precinct worker's home, my concern was to warn her.

I drove to Claire Grenville's home at the west end of Rambla Vista where she and her husband were actually eating lunch. They were not in the least concerned about fire until I warned them that I had already seen flames in Carbon Canyon and they must get their things together and prepare to evacuate.

I still cannot believe that we, as precinct workers in the Carbon Canyon Fire Station received no warning what-so-ever about the fire which consumed all three of our homes. (The fourth worker was a substitute from Pt. Dume). I personally was home no more than 40 minutes when we were advised to evacuate, and I'm sure Mrs. Grenville at the end of Rambla Vista had less time than that. Ms. Ghosh received burns on her arms and body and smoke inhalation during her evacuation from Calle del Barco. It is ironic too, that the majority of our neighbors who voted at the precinct also lost their homes.

Beyond the obvious sadness, anger and a feeling of betrayal on a personal level, there is an obvious question about how could the fire personnel in the Carbon Canyon Station and Chief Sheppard in particular, not have been more aware of the fire danger. I do not have any answers, but would appreciate your investigation into the situation I have described.

While some homeowners risked their lives to protect homes, out-of-town fire-fighting units, not knowing the area or water supplies, proceeded more cautiously while homes burned even for some time after the fire front had passed. The latter scenario was repeated in many other areas. On the other hand, firefighters with proper training and equipment for fighting mountain fires such as U.S. Forest Service and CDF (California Department of Forestry and Fire) at times risked their equipment and lives unnecessarily to save homes.

Air and ground units must also be provided with the most up-to-date information on effectively pinching off the flanks of the fire, which in chaparral depends on the type of chaparral and the age classes. This was done effectively for the eastern flank of the fire with the fire history maps provided by the National Foundation for Environmental Safety (NFES) during previous public seminars.

What about effective ingress and egress (**Appendix 6 - Los Angeles County Subdivision Codes Pertaining to Wildland Fire Safety**)? This was especially problematic in the mountains where landslides and narrow, often dead-end roads are a given, as the subdivision codes often do not apply to the buildout of an area with single-family homes. For years it was also well known that the Rambla Pacifico landslide near PCH would prevent safe and effective firefighting in the area and that the wooden Las Flores Canyon bridge would be the only (but not safe) ingress and egress. Apparently not being foamed or protected, the bridge caught fire soon after the fire

front went through and almost cost the lives of homeowners and residents that were trying to escape. Needless to say, the Rambla Pacifico landslide and the burning bridge blocked all ingress into the upper fire area from PCH after the fire front had passed and was a factor in losses of homes that ignited and burned hours later.

While the County Fire Department had greatly limited the release of public safety information in response to its audit as discussed in the above footnote, the National Foundation of Environmental Safety (NFES) stepped up to the plate. It had been actively disseminating public safety and fire prediction information to Santa Monica Mountain residents for the ten years prior to the 1993 Old Topanga Fire through seminars, newspaper articles, fire history and fire frequency maps, and fire pattern predictions, as well as on-site field trips based on "common sense" fire research that I had been conducting for more than twenty years with fire professionals.

Based on such information and continuous pro-active preparation, the past president of NFES was able to save his home during the November 2, 1993 Old Topanga Fire despite it being located in the center of the firestorm that advanced down Las Flores Canyon. NFES thereafter established a self-funded volunteer Citizen Fire Investigation Committee (CFIC) in response to the Old Topanga Fire, composed of citizens living in the area affected by the fire. Its main purpose was to provide an objective evaluation of the fire from the citizens' viewpoints based largely on field investigations and citizen interviews.

While independent, CFIC worked with other groups such as Operation Recovery Organization, liaison between governmental agencies and insurance companies, whose main purpose was to assist the greatest number of people to rebuild in the minimum amount of time. To be kept further in the loop, I, Klaus Radtke, also joined Los Angeles County's Wildland Fire Safety Panel (WFSP) as "observer." The panel was established on November 9, 1993 by the Los Angeles County Board of Supervisors to "Review present Building Codes to determine what modifications should be made to provide greater protection to residents who live in areas prone to wildfires." However, the panel was also charged with reviewing and accepting community input on matters related to the review of building material and construction" (**Appendix 7 - June 1, 1994 K. R.'s Memo: discussion highlights**). In fairness to the new County Fire Chief, I was impressed how internally he openly attempted to investigate the subject matter despite legal concerns raised by other departments and county council and how inquisitive he was, even taking notes, when I pointed out to him the potential fire code violations at Fire Camp 2 during the party celebrating the completion of the report published on June 17, 1994. The report itself, along with "Fire Storm '93 Topanga Incident Report," was subsequently analyzed by local newspapers (**Appendix 8 - County's Full Report Waters Down Fire Danger - August 25, 1994 Topanga Messenger**). Both are further reviewed in this report in relation to what homeowners and firefighters experienced in attempting to save homes.

The Los Angeles County Fire Department and the Board of Supervisors made it clear that the County Fire Chief is the only person authorized and responsible for investigating the fire and writing of an official fire investigation report which was called "Fire Storm '93 Topanga Fire Incident Report." The Fire Chief was subsequently honored by the Board as Los Angeles County's *Citizen of the Year* for the "heroic" way he and his personnel performed in the fire. The draft "Fire Incident Report" had already been completed by January 1994 by County Fire Department staff, with even members from within the County Fire Department being quite critical of how the fire was fought, as reflected in the report. The release of the report was therefore stopped and was being "polished" (criticism eliminated to accommodate the fire chief) prior to its public release. This mirrored the release of the January 1984 Malibu Emergency Assessment Task Force Report required by the County Board of Supervisors to be completed by County agencies by the end of 1982 in response to the 54,000- acre October 9, 1982 Dayton Canyon/Paradise Cove Fire. It took so long to release it because, among other things, the then-County Fire Chief (who also strongly opposed the publication of Radtke's June 1982 *Homeowner's Guide to Fire and Watershed Management...*) found it offensive because it implied criticism of his department, and had certain sections rewritten (**Appendix 9 - Malibu Emergency Assessment Task Force "County Says Things Will Improve" - Topanga Messenger January 26, 1984**).

While many citizens believed that the Wildland Fire Safety Panel was established to assist in investigating the fire itself, its co-chair made it again clear at the panel's emotional public hearing in Malibu on April 13, 1994 that investigative analysis of the fire inclusive of fire history, fire patterns, and how the fire was fought (or not

fought) was not within the mandate of the panel and could not be brought up. Individual homeowners, Operation Recovery, and the Fire Investigation Committee ignored these directives and testified about how the fire was fought (or not fought) and how homes were lost as well as saved.

There is no question that the County of Los Angeles Fire Department did not prepare proactively for fire emergencies such as the predictable Old Topanga Fire, as also stated by its then new Fire Chief from Texas who was quoted in the media as stating that “I never thought that a fire could get that big.” He nevertheless was open-minded to finding solutions and therefore changed the Fire Department’s policy of “force evacuation” to educating homeowners to assist in saving their own homes. Sponsored by the City of Malibu, a well-attended Wildfire Preparedness Fair was therefore held at the Malibu Civic Center Malibu on August 13, 1994. NFES, as a major sponsor and participant, provided extensive prefire and post-fire aerial and ground documentation under the heading “The Homeowner – The Forgotten Firefighter.” Other vendors displayed and demonstrated firefighting equipment that can be purchased by homeowners.

NFES also asked homeowners the following question in its Questionnaire pertaining to the fire which almost every single homeowner answered in the affirmative.

“Would you support a certified (40-hour) citizen training course (with bi-annual re-certification) that would teach you how to make your home and neighborhood more fire-safe and how to protect your home in a wildfire provided your certificate would allow residents access in fire closure areas (under most situations) if your house and neighborhood meets certain fire safety standards?”

However, this must have been forgotten by the Fire Departments, may be too much work for them, or they perhaps lack the expertise to conduct such certification.

Gretchen Hays (3885 Rambla Oriente, La Costa), who was also a precinct worker at Fire Station 70 on the day of the fire, summarized this well on page 2 of her April 25, 1984 letter to the County of Los Angeles Wildfire Safety Panel at the Fire Department’s headquarters in Los Angeles.

2) TRAINING OF LOCAL FIRE FIGHTERS AND RESIDENTS:

“It appeared that neither the fire fighters nor residents had a clear plan on what to do as the fire raced toward us. Residents relied on old wives tales from old time residents. Our residential area had not had a fire since 1956, although we had been directly threatened in 1970 and again in the 80's. We are well warned of the impending earthquake danger, that within a period of time we can expect "the big one". Now I realize, that we should have expected a burn each year until it happened.

This anticipation would have triggered a very different preparation by residents. That it did not trigger a vigorous preparation by the Fire Department alarms me. Number one, were they truly aware of the yearly danger? If so, why not share the knowledge with residents. And if not, there is need for a major overhaul of the department with more emphasis on prevention and pre-planning to fight fire storms.

If our neighborhood had realized that the Fire Department considered us “indefensible”, I can only believe that we would have remedied the situation. After the fact, the neighborhoods are working together through Operation Recovery. Wish that our leaders would have organized an “Operation Fire Prevention” before the fire and saved us from this ordeal but it’s not too late for other areas in Southern California. A collective human failing is to wait for and rely on “heroic” intervention.”

Could more homes have been saved, millions and millions of dollars in property damage prevented, homes converted to “Shelters in Place”, and the threat to firefighters and homeowners greatly diminished? Of course, but only through “out-of-the-box” thinking, preplanning by fire personnel in their local stations by “strapping on their boots” and working with homeowners directly. For example, it was well-known by Fire Sta. 70 fire personnel that the Carbon Mesa 100,000 gallon gravity feed water tank had only a 2-inch water main delivery system that would at most only deliver 340 gallons per minute and would not even allow for simultaneous operation of multiple hydrants. Without any preparation and without water available for firefighting, the lives of firefighters as well as homeowners would be endangered as there would be few places for homeowners to “Shelter in Place” and for firefighters to have save “hunker down” areas.

A notice should have been provided by fire personnel to all homeowners, stating the facts, and encouraging them to prepare for a wildfire by having their own emergency water source such as filling up trash cans and bath tubs with water, having gunny sacks ready to knock down firebrands or smother burning grass or shovels to smother railroad ties with soil if they want to stay with their home (“Shelter-in-Place”). As a follow-up, fire personnel should have visited every Carbon Mesa property and inspected it with the understanding that there would not be water available, therefore further encouraging homeowners to do extensive clearance of both flammable native and landscape fuels, also making sure that the area around the home is not a rat’s nest. With such preparation, some of the homes could have been readily converted by homeowners to “Shelters-in-Place.” Instead, the area was a “design-for-disaster” with homes just “sitting ducks” and many of them unnecessarily lost.

Are comments by out-of-area firefighters as stated in the post-fire-evaluation reports of different agencies and repeated below not really a reflection of their “heroism” but a failure by local agencies (and not just the fire department), to educate and prepare the community.

*“...dense foliage around structures and over roads denied fire companies the necessary defensible space from which to operate effectively”

*“... gutsy fire fighters who rode out the hell-like conditions...” (This is not a movie script and should not be a PR publication but a factual account of the fire).

*Mid Rambla Pacifico: “... many fire fighters were inexperienced with brush fires. These fire fighters were from jurisdictions where brush fires do not occur and several had received no wildland training.”

Footnote: LAC FD conducts brush fire training for its members.... many of those hired by LAC FD over the five years before the Old Topanga Fire Incident had limited actual brush fire experience.

*La Costa: “... the hydrants provided no water and it took 20 minutes to refill an engine's tank on PCH.”

*“... we classify Big Rock as a success because 75 of homes were saved which is a much larger percentage than that in La Costa and Las Flores Mesa.”

*“In most of the neighborhoods where the fire fight was successful, water was available when the fire first went through Big Rock is intermediate as water was apparently not lost until 9 PM, and fire fighters were able to access water in swimming pools.”



NFES Board member Dr. Wakimoto with Mrs. Hill.



Klaus Radtke at the NFES booth with homeowners.



NFES display – Pre- and postfire aerial flights along with ground photos of the Topanga Fire area.

Summary of Homeowner Interviews

II. Las Flores Canyon

The fire front moved through upper Las Flores Canyon at Las Flores Heights Road at about 1530-1600 and moved through lower Las Flores Canyon Road to Pacific Coast Highway (PCH) by about 1630.

- ✓ Homeowner interviews indicate that there was active firefighting by both homeowners and fire personnel within the lower Las Flores Canyon area until the area was overrun by the fire, and fire personnel were forced to evacuate the area (see Los Angeles City Fire Department Report).
- ✓ Active firefighting by homeowners that refused to evacuate was instrumental in saving homes.
- ✓ As the fire front passed, the most vulnerable houses (wooden decks, wooden siding, wooden eaves, open windows, trellises, lack of proper “brush” clearance, highly flammable landscape trees such as Blue Gum eucalyptus and pine trees, etc.) caught on fire.
- ✓ Lack of water was the overwhelming reason for the loss of homes after the fire front had passed.
- ✓ Re-igniting railroad ties were often a primary reason for the loss of homes.
- ✓ The surest way of saving a house was if the news media was also there and when the homeowners assisted with firefighting and/or refused to leave (homeowner statements).
- ✓ The wooden bridge (with asphalt base) across Las Flores Creek (located 0.5 miles north of PCH) caught fire about 1645 to 1700 after the fire front had passed. At 1839 L.A. City Strike Team 57 reported that they were blocked by the burnt bridge from moving back up Las Flores Canyon.
- ✓ Lack of radio communication among different agencies forced them to operate independently.
- ✓ The fire road at 21535 Deerpath Ln. (emergency connector between Rambla Pacifico and Las Flores Canyon Rd. located about 0.5 miles north of PCH and just above the bridge) was open as the fire front moved through lower Las Flores Canyon. However, the heat sources from burning homes along lower Las Flores Canyon Rd. made this area not passable for at least 45 minutes.
- ✓ The closure of Rambla Pacifico 0.2 mi. uphill of PCH because of the slide and the—predictable—burning of the Las Flores bridge played an important part in home losses.
- ✓ Los Angeles County Fire Camp 8 in the center of the fire area was the destination of many fire trucks as food, water, rest, and safety was assured there. However, it was largely in disarray as it had not been fire-safe maintained, and some buildings and stored woodpiles also burned there.
- ✓ Homes burned at night after the fire front had already moved through the area for many hours and still could have been saved. However, firefighters were tired, had largely bedded down for the night inclusive of Fire Camp 8, and water was a limiting factor.
- ✓ Saving wooden homes requires much water and manpower that could be shared by others.

The June 17, 1994 Los Angeles County Fire Dept. Wildland Fire Safety Panel report (WFSP) states

Water availability (p.5): Summary of Report, *“The water distribution system may have only enough water flow to fight one structural fire.* Appendix 1 (the Water Subcommittee Report) on page 3, then summarized the lack of water for firefighting as follows: *“When applying current design standards, the water systems are sized to combat structural fires rather than wildfires... Systems sized to combat large wildfires are neither environmentally nor economically feasible.”* Use of homeowner water supply sources such as swimming pools, portable pumps, portable generators, and other home operating systems were recognized/acknowledged by the Panel as being critical to protecting homes and for more effectively fighting wildland fires.

Site location of homes (p.8): *“No workable plan for this type of effort was developed since we determined that there was little Fire Department staff could add to a routine site review over what is not already included in the Homeowner’s Guide to Fire and Watershed Management...(HOGF&W) which is a cooperative publication by County Fire and the U.S. Forest Service (the Radtke 1982 fire booklet).*

Manzanita Park Ave., McCray Ln., Las Flores Hts. Rd., Gorge Rd., Deerpath Ln., Las Flores Canyon Rd.

Manzanita Park Ave.

1500 (?) Fire Front - 2850, 2860, 2870, 2880 Manzanita Park Ave. (Tom Banks)

Tom fought the fire with Roger until the fire front had passed and saved his four homes which he had built. They have tile roofs, stucco siding and good clearance. Then he drove down Las Flores Canyon Rd. to join his family at PCH.

Live Oaks Meadows Rd. was on fire. Tom and Roger cut the wires dangling across the road to get through. Near Hume Rd. they looked towards Gorge Rd. and it looked like a fire pit. As they drove down Las Flores Canyon Rd., Las Flores Canyon was fully engulfed. The Carden School and the Cal Trans Road Yard were on fire. The bridge was fully engulfed. Tom hesitated, then gunned across the bridge with Roger. A fire chief in a patrol car (car had "chief" written on its side) was on the downhill side of the bridge and Tom drove down Las Flores Canyon Rd. behind him. Fire trucks were lined up on the left side of Las Flores Canyon Rd. Tom drove around the chief's car when it stopped and went on to PCH. Houses on Las Flores Canyon Rd. were on fire.

McCray Lane

1953 McCray Ln. (Julie & Less Thompson)

Their guesthouse was destroyed by the fire but not the main house. Julie and Less had evacuated and theirs was the first car sitting at the bottom of Las Flores Canyon Rd. near Rambla Pacifico. They watched in disbelief as fire truck after fire truck went up Rambla Pacifico from PCH towards the slide and then turned around, came back, and sat at PCH at the bottom of Las Flores Canyon. **Las Flores Heights Road**

21657 Las Flores Hts. Rd. (Ganser)

The site, overall, was not fire-safe maintained, and, despite having a pool, could have readily burned as the firefront went through because it was rimmed along in northerly site by a tall wall of flammable Bluegum Eucalyptus trees. However, the trees did not ignite as the fire roared downed Las Flores Canyon. This can best be explained by the hill directly uphill of the property which apparently deflected and compressed the fire winds within Las Flores Canyon rather than expanding them onto the trees and the house below it. The property was attended by Mr. Ganser, who had a large pool for firefighting and chased firebrands after the fire front had gone through. One large shed burned.

Fire winds decide at any given time what will and will not burn. The house, with unprotected wood-framed windows, is highly vulnerable to be overrun by fire winds approaching from slightly different directions. Without a garage on site, cars parked in the open among flammable vegetation, also remain highly vulnerable to be destroyed by a future wildfire.



21656 Las Flores Hts. Rd. (Louis E. (Ed)³ and Lyllis Hill)

Klaus, as County F&W Research Forester, had helped organize, along with the UC extension services at Berkeley, the June 2-3, 1978 fire safety symposium titled *Chaparral—Fire & Man* held at the Salvation Army Camp in Tapia Park. There he met many inquisitive local mountain residents inclusive of Ed Hill, who also requested follow-up inspections of their properties. Ed's parents had previously owned a summer home in central Las Flores Canyon that was destroyed during the 1942 Las Flores Canyon Fire, and he was building a new home in this fire-exposed location. It was situated along the downhill side of a narrow, one-lane road that had been cut side-hill along a steep canyon wall with minimal slope setback. Ed subsequently built a single-story home with detached garage with all exterior surfaces stuccoed, a large, roofed fire-safe deck, upper vents located near the roof line away from the exterior walls, and a fire-stopped tile roof. To truly make the house more fire-safe, he understood that all parts of potential fire entry such as windows and vents had to be sealed off during a firestorm so that the house could have a chance to even survive unattended. In addition, Klaus walked with Mr. Hill throughout his property, further advising him on "brush clearance," fuel modification, and effective erosion control on the steep slopes below the house to make sure that the flames that could be expected to impinge on the house during a wildfire would be of short-enough duration so as not to preheat (and char) the wooden shutters to the ignition point.

Mr. Hill subsequently pro-actively fabricated wooden plywood shutters that were placed from the outside against the windows where feasible and otherwise from the inside where the windows were too high to reach from the outside. Each vent also had a prefabricated wooden shutter. Whenever Mr. Hill left the house during the fire season, he would protect it by covering windows and vents with the labeled wooden window shutters and vent covers. Klaus subsequently featured Mr. Hill and his emergency fire-safety measures in his interagency June 1982 booklet *A Homeowner's Guide to Fire and Watershed Management at the Chaparral/Urban Interface* (HOGFW).

What happened before and during the fire was documented in a November 5, 1993 Los Angeles Times article reprinted below⁴:

Louis Hill was sitting on the porch of his Las Flores Canyon home Thursday when a firefighter rode by and flashed a thumbs-up at him. "You're lucky," firefighter Keith Carlson shouted as his engine rumbled past. But luck had nothing to do with why Hill was relaxing at his house when virtually all of his neighbors were homeless. The 80-year-old mountain man had meticulously built his house on Las Flores Heights Road to survive the kind of fire that roared through the canyon three days earlier--the kind that had burned down his parents' home on the same land half a century ago.

Besides using "fire-resistant" plants and a non-combustible roof, Hill had built his own miniature fire station. It was made of concrete and equipped with a 100-foot fire hose, high-pressure nozzles, a gasoline-powered pump and valves connected to a 12,000-gallon water tank designed to never be less than half-full. He had designed plywood shutters--complete with handles for easy carrying and labels to tell him which shutter went on which window--for his entire two-story, four-bedroom home. He had a dozen 50-gallon plastic trash cans scattered outside the house. Each was filled with water and had a burlap bag hanging on it.

Before planning his house across the canyon from a spectacular grove of oaks and about 500 feet above year-round, spring-fed Las Flores Creek, Hill read every book on fire safety he could find. He enrolled in a fire safety seminar conducted by one of Southern California's top wildfire experts. In class, he took good notes. My parents built a little

³ Ed Hill was the president of the Santa Mountains Resident Association in the early 1980s. In 1982 he withstood the extreme harassment, threats, and intimidation directed at him by the Los Angeles County Fire Chief and the Fire Department Union for spearheading the distribution to mountain homeowners of public safety information such as *HOGF&W* that did not fit the immediate political needs of the County Fire Chief fighting with the County Board of Supervisors who wanted to streamline the Fire Department in response to Proposition 13. Mr. Hill, in response, charged the County Fire Chief the following year with dereliction of his duties and endangering the life and safety of mountain residents at the height of the fire season, documenting these charges in an explosive booklet titled *Firegate 1* that his group and others provided to the County Board of Supervisors. *Firegate* supported the many charges with written internal Fire Departmental, County Interdepartmental, and outside agency communication.

⁴ Pool, Bob Los Angeles Times THE SOUTHLAND FIRESTORM: HOLDING THE LINE: Preparedness, Not Luck, Saved Home : Fire safety: Owner of a house overlooking steep canyon built in careful precautions, including a 12,000-gallon water supply and high-pressure nozzles. 11-5-1993.

cabin up here back in 1927 when I was a 12-year-old,” Hill said. “I loved that place. But it burned down in a big fire in 1943. And that really drove home the need for fire protection for me.”

Las Flores Canyon could not be more susceptible to brush fires.

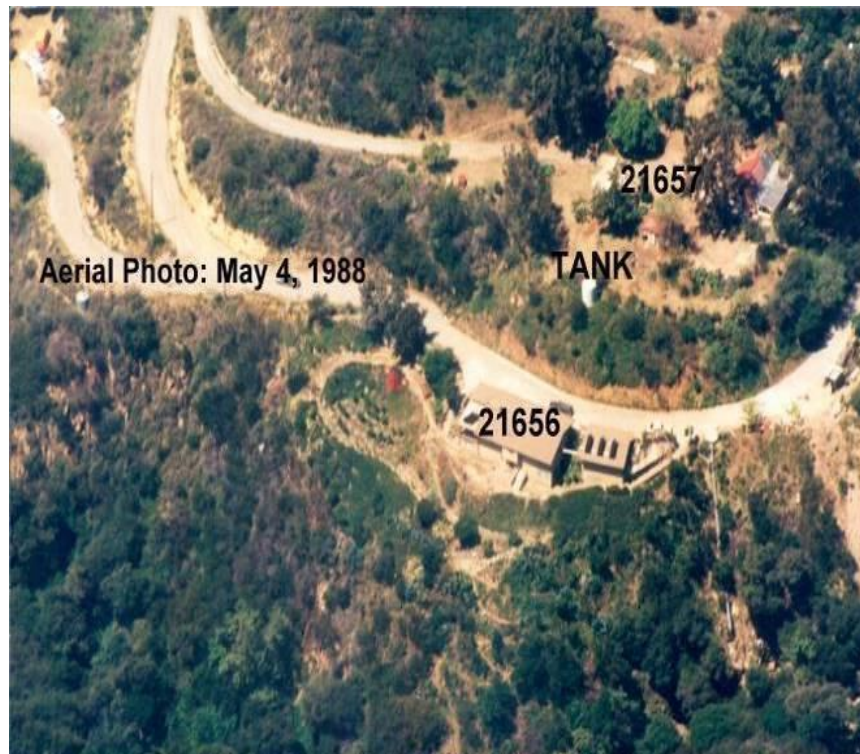
Its sides are steep, fanning out from towering Saddle Peak down to the ocean. Santa Ana winds that whistle down the canyon each autumn are almost guaranteed to send brush fires that start in Calabasas or Agoura through the area.

Hill’s 3 1/2 acres are among the steepest in the canyon. He has a small, flat pad for the house, which overlooks a sheer drop-off. That means that fire in the canyon below is likely to shoot up the hillside like a rocket. So Hill built his house out of stucco in 1978. He made its roof from concrete tiles. Its eaves were enclosed. All of its vents were designed to be shut at a moment’s notice. He planted fire-resistant cactus and low-growing coyote brush to stabilize the slope beneath the house. Ice plant was placed in flat areas that were not paved. He removed the site’s eucalyptus shade trees and replaced them with fire-resistant fruit trees and grapevines. His woodpile was carefully positioned downwind from the two-story house. When this week’s Santa Ana winds kicked up, Hill and his wife, Lyllis, 69, began placing the shutters on the windows. Ground-level shutters covered the windows on the outside, but the upstairs shutters had been designed to fit on the inside of the glass so Hill wouldn’t have to climb a ladder.

When the fire broke out Tuesday morning, Hill’s longtime friend, Michael Tellesfson, 34, rushed to the canyon to see if the couple needed help. Tellesfson is a heating and air-conditioning technician who as a teenager helped Hill build the house. When the smoke became too dense to breathe, Tellesfson urged the couple to leave. He stayed behind and started up the Hills’ pump. When the fire roared over the house, Tellesfson ran inside. “I checked the rooms with a flashlight for sparks. The wind was rocking the house. It sounded like a jet engine,” he said Thursday. “I was shaking and praying. But in about 10 minutes, the main fire had passed.” Tellesfson ran out and used Hill’s fire hose on blazing trees and brush. Where the hose could not reach, he used the wet burlap bags to slap out flames. For 10 hours he ran from place to place, putting out sparks and using up most of the water from the trash cans.

As hundreds of other evacuated Malibu mountain residents were returning with trepidation Thursday to see if their homes were standing, the Hills were confident. “I would have been very surprised if it wasn’t there,” Hill said. “We tried to do everything right.” Wildlands management and environmental safety expert Klaus Radtke says Hill did things perfectly. Radtke, of Pacific Palisades, is a former Los Angeles County forester who taught the 1978 seminar Hill attended. He is also the author of a fire safety pamphlet that has been distributed over the past 10 years to thousands of mountain residents. “With his location, if anyone should have lost their house, it was him,” said Radtke—who was curious enough to hike five miles up the canyon Wednesday afternoon to see for himself whether the Hill house had survived.

Canyon neighbor Wilmer Lewis, 78, stopped by to congratulate Hill on Thursday afternoon after returning to find his own home of 22 years destroyed. “He did a good job preparing,” Lewis said. “He came out smelling like a rose.”





Preparing for a wildfire by protecting windows and vents on a stucco home.



21656 Las Flores Heights Rd. – Postfire

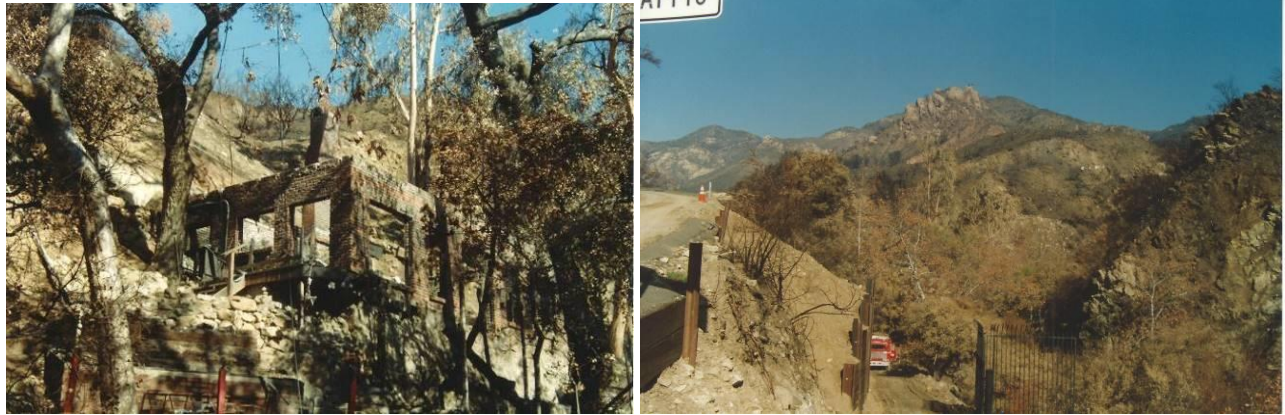


Post fire: Broken window at fire-catcher overhang. Melted pipes, fire-stopped vent cover.

Gorge Road
1545 Fire Front - 100 Gorge Rd. (Chris Kourtlander)

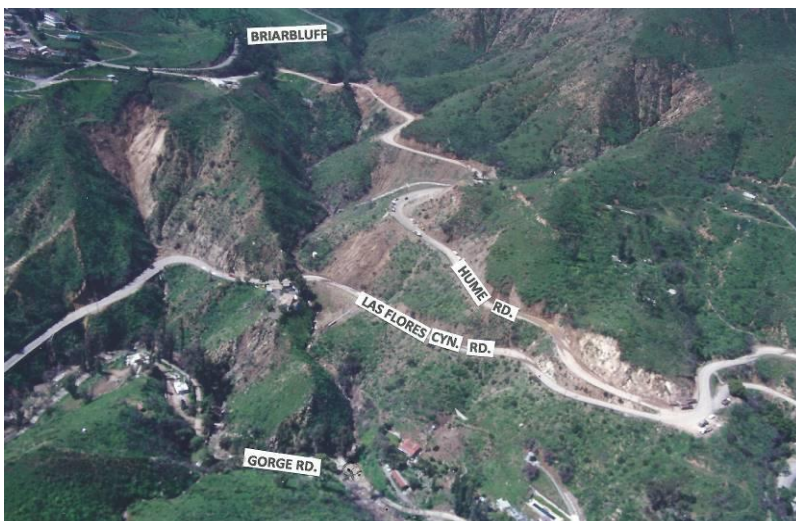
The old stone house with many unprotected windows burned down. It was nestled side-slope, adjacent to the creek bed at the confluence of Little Las Flores and Las Flores Canyons, only accessible via a steep, narrow dirt road (a design-for-disaster location).

Since the house cannot be seen from the road, a neighbor had sent down a Forest Service fire engine (green truck) at about 1500 hours. The three-man crew instructed Chris on helping the team in discharging fire hoses and the entire structure was foamed down. At 1545 hours foaming was completed when suddenly a 100-foot- tall wall of flames was heading down at them from Little Las Flores Canyon. John and Chris were on the roof. The team leader immediately cut the hoses from the truck. Chris ran out of the house just in time to see a "300- foot-long" fire tornado coming down Little Las Flores Canyon. They retreated to the top of the driveway where the Forest Service crew tried to radio for a helicopter drop but they could not get through ("Damn, we can't get through to the County"). Then the Forest Service crew evacuated the area. Chris retreated to Gus Olnert's house.



1600 Fire Front - 2939 Gorge Rd. (Gus Olnert)

By about 1615-1630 the firestorm had rolled over, but Gus, his cat, and Chris were safely in the underground concrete vault. From inside the fire vault they could look out through a small, screened opening. It was pitch-black except for red embers (firebrands) swirling rapidly through the air in small funnel clouds. To save the inside air and prevent smoke from blowing in, they sealed off the opening with a towel. By 1645 hours they removed the towel and looked outside. It was total devastation. There were plumes of smoke, charred remains of trees, billows of smoke, and black skies with red embers flying everywhere. Ten minutes later they realized that the fire storm had passed. The sun was setting as they left the house. Gus was fortunately well prepared. They kicked on the generator, positioned his 2" fire hose and started pumping from the pool.



By 2200 Chris left to call his wife by cellular phone. As he left, he saw the house (fortunately it was just the shed) burning at 21657 Las Flores Hts. Rd. (Ganser). Peter Alexander's house at **3134 Las Flores Cyn. Rd.** (only accessible from Gorge Rd.) was fully engulfed. Kip Corley's house at **2982 Gorge Rd.** was also burning. Chris

believes that the houses really caught fire hours after the fire front passed and believes that they could have been saved if fire trucks would have come in after the front had passed.

First Chris went down Las Flores Canyon but found the wooden bridge burning that crosses lower Las Flores Canyon. Chris turned around and headed uphill Las Flores Cyn. Rd. towards Fire Camp 8, where he could get good reception and call his wife and parents. He cut down power lines with a wire cutter and made it to the top of the hill and made his phone calls.

At about 2230 hours Fire Camp 8 was in total chaos. Apparently the fire command structure had totally broken down and the fire trucks could not communicate. They did not know where to go or what to do. Chris saw some buildings within the fire camp area that had burned. **1601 Rambla Pacifico** (Logan) was fully engulfed. Chris could see at least three houses with small flames not exceeding 3 feet at and around the houses and saw these houses finally burning about an hour later. (One of these was sitting on the rock at **24442 Piuma Road**). He asked the firemen why they wouldn't go and put out the fires. They said that they had nobody.

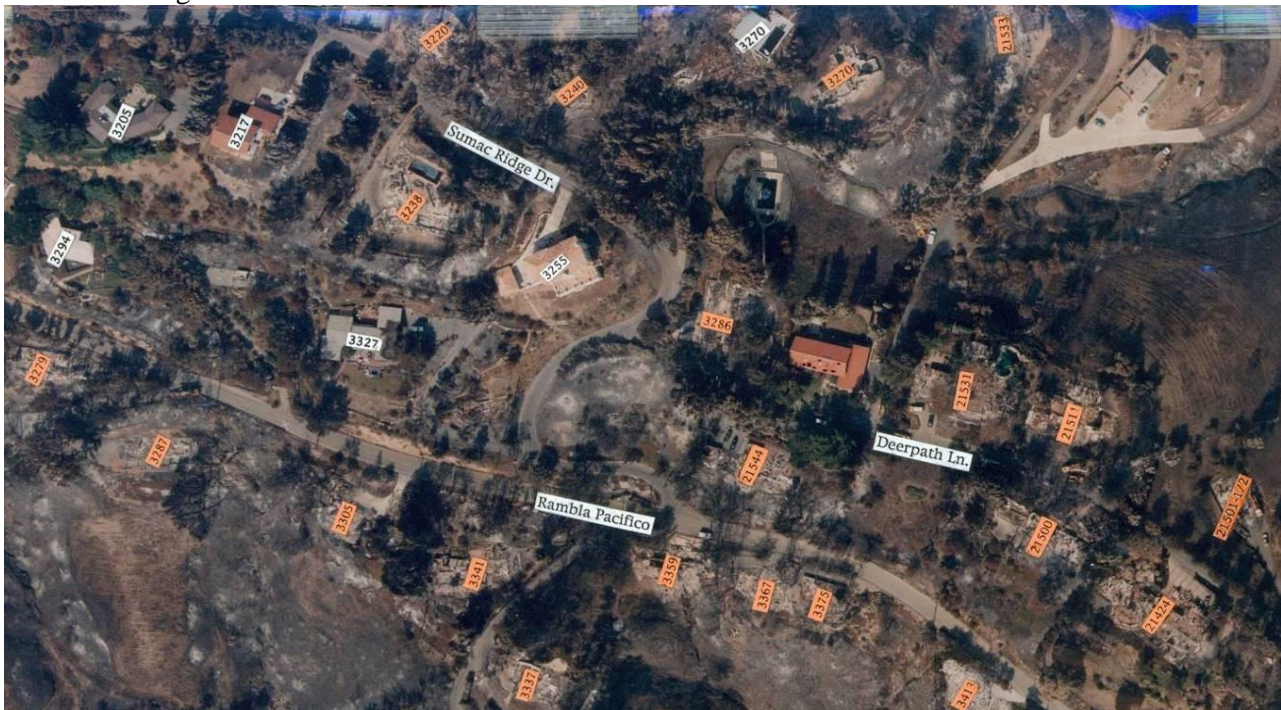
Deerpath Lane

1600 Fire Front - 21535 Deerpath Ln. (Edward & Ruth Rafeedie Interview of Judge's wife)

A stucco house with red tile roof, thick, tempered glass and few trees or shrubs close to house.

Ruth came home early to evacuate. A truck (County Fire Dept?) came by about 1400 (unlocked the gate to the fire road?) and a fireman told her to leave the gate to the fire road adjacent to her house unlocked (the gate has a County Fire Dept. lock). This is the fire road emergency connector between Rambla Pacifico Rd. and Las Flores Cyn. Rd. that started to ignite as the fire front went through about 1630. Ruth left down the fire road about fifteen minutes before the fire hit the area.

The house was unattended when the fire front went through. The wooden trellis attached to the front of the house had caught fire and was burning towards the front door and window. Downhill neighbor Tony DeVivo, who had lost his house but whose rental house had survived, saw the trellis on fire. He brought five-gallon bottles of water up, knocked part of the trellis from the house, and doused the trellis with water. House only sustained about 3% damage.



As indicated above, 21535 Deerpath Ln. (red tile roof, not labeled), saved by a neighbor, is the only home that survived the fire in the Deerpath Ln. area.

Las Flores Canyon Road

1630 - 1645 Fire Front - 3550 Las Flores Cyn. Rd. (Robert Newlon)

A large, wooden home at a highly exposed location at the top of a knoll. Robert (Bob) did not clear his slopes and is James Allard's neighbor. Since James shares a common driveway with Robert, James stated that he had the Fire Marshall inspect three times, who then each time requested that Bob clear the hill. But the Fire Marshall did not follow through. The heavy brush on the steep slopes below Newlon's house was instrumental in starting to ignite it. Bob had water pressure throughout the fire but his pipes burst (plastic waterline burned?).

1630 - 1645 Fire Front - 3560 Las Flores Cyn. Rd. (James Allard)

It is the last steep driveway on right side of the bridge going north that leads to a two-story house with wood siding. The house had a class A asphalt shingle roof with a steeply pitched gable and non-boxed wood eaves. The bottom of the rear balcony was boxed and stuccoed.

Three days before the fire, James soaked the vegetation around his house real heavily because there was a fire at the Ventura County line. James and his mother were home when the fire started and both could see the smoke. James had two sprinklers on the roof which he turned on all day. The water pressure never failed. His mother also watered down the walls of the house, filled trash cans with water, and both cut all trees around the house as fast as they could. The mother evacuated about an hour before the fire hit. James then loaded his car with belongings, drove down to the Sea Lion Restaurant, dumped them in the parking lot and returned. Two fire trucks came up the upper driveway and rolled out the hoses. One truck parked in the lower driveway. Four fire trucks were parked across the street along Las Flores Cyn. Rd. They were "stocky," medium-sized trucks (CDF or Forest Service). At about 1630 to 1645, flames suddenly crested the ridge to the northeast and within a minute flames were everywhere. Firemen told James he would die if he stayed with his house, as there would be no oxygen. He ran down the driveway to his truck as two fire tornadoes roared down the canyon. All eight fire trucks went with him to PCH.

James waited about 1/2 hour to 45 minutes at the Sea Lion Restaurant. While there he watched as about three houses situated above and to the left of the country store first caught fire on their eaves. He then decided to attempt to make it back home to save his house. He drove very slowly to the middle of the street as if to ask the Sheriff a question (he also figured that the Sheriff might draw on him if he approached fast). As he was next to the Sheriff, he hit the gas pedal and shot past him up Las Flores Canyon. The Sheriff gave him his fist.

At about 1715 to 1730 when James drove by the pump house for Las Flores Mesa, the area had burned and water was shooting about twenty feet up into the air. It was dark by then and the night was illuminated by burning homes. Utility lines were down. Wind had shifted and most flames went straight up in the air. The houses were about halfway burned down along Las Flores Canyon (**3656, 3659, 3709, 3713, 3731, 3757, 3753, 3761**). These homes burning unattended since the canyon was evacuated may also have been instrumental in igniting the large homes located side-slope above at **21132, 21114, 21108, and 21100 Las Flores Mesa Rd.** James stated that it got so hot in the cab of his pickup as he drove past burning houses that he ducked low in the cab to protect himself, as he expected the windows to melt. Boulders were also laying in the street. Flying embers burned his rubber brake hose but luckily not his tires.

When James pulled up to his driveway at about 1715 to 1730, the Las Flores Canyon bridge was fully engulfed but still standing. At his house as he was putting out fires, two major explosions from the Cal Trans Equipment Yard across the canyon rocked the area followed by a fireball. James hid momentarily behind the house as he was afraid to be hit by flying materials. The wooden deck attached to the rear of his house and extending to the edge of the slope had caught fire. James kicked over a trash can full of water on the burning deck and doused the flames. He then fell through the burned hole of the deck near the house. This hurt, and he told himself to calm down. He hooked up the garden hose to the back of the house and doused the deck and hot spots.

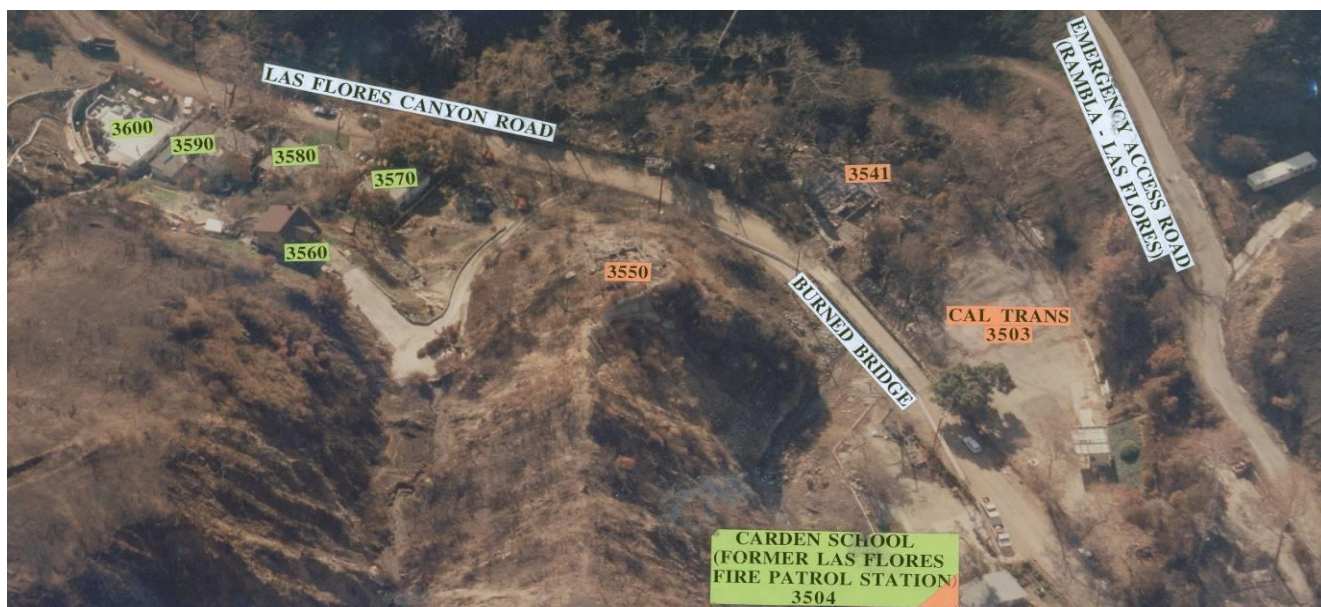
By about 1930-2000 he had his house under control. He grabbed two fire extinguishers and ran to the house (3570 Las Flores) below him. The bridge had fallen into the creek by this time. A bush adjacent to a window on the uphill side of the slope was fully engulfed in flames and was igniting an adjacent pine tree. James extinguished this fire and then patrolled this as well as the two adjacent houses (3580, 3590 Las Flores Canyon Road) and extinguished all burning vegetation and other hot spots between the houses and on the uphill back slopes. He was concerned that if any of the houses would catch on fire, they could then ignite a neighboring house and of

course his house which was located uphill of 3570 Las Flores. The burning houses along Las Flores Canyon and still burning vegetation provided him with some light as he put out the fire around neighbor houses. The noise was the scariest part of the fire storm.



Homes shown with red and orange labels burned (Photo by K.R. looking south towards PCH and the ocean).

James stuck around until 0300 on November 3. He never lost water pressure during the fire and doused everything well before he left. He drove to Vons in Pacific Palisades to buy food because he was hungry and totally exhausted. He realized his mistake when he could not return. The next morning he walked back home, arriving at about 0800. His roof sprinklers were still operating.



Carden School: Buildings were foamed by F.D. personnel before evacuating the canyon. Some of the buildings then burned.



3590 Las Flores Canyon Road



3580 Las Flores Canyon Road



Left: 3550 (rebuilt after the fire). Right 3560.



3560 Las Flores Cyn. Rd. Repaired for sale after the fire.

1615-1630 Fire Front - 3860, 3864, 3872, 3900, 3908, 3912, 3932, 3936(?), 3950-52, 3966 Las Flores Cyn. Rd.

As stated in the Rand Report on the Old Topanga Incident (RROTI), firefighters retreated to the mouth of Las Flores Canyon at PCH when they evacuated the lower canyon about 4:00 p.m. Los Angeles City Fire Department (LAC) units then focused on protecting the above listed structures, abutting Las Flores Canyon along its east side, from burning. These structures consisted of apartments and single-family homes.

L.A. County Fire Department (LAFD) reported at 16:20 on their radio that the fire “is hitting this area hard,” referring to Las Flores Canyon at PCH. They also reported “At 17:27 the bridge over Las Flores Creek had burned.” At 1839 LAC Strike Team 57, apparently not being able to communicate with LAFD by radio because of lack of interagency communication, also reported that they were blocked by the burned wooden bridge from advancing uphill into Las Flores Canyon.



Location of burned Las Flores Bridge



1994 3-7 - Flash flood under rebuilt Las Flores bridge

III. Las Flores Mesa

The Las Flores Mesa community consists of more than 40 homes, 26 of which burned according to the City of Malibu “Burned Homes List.” Their locations are indicated on the Lower and Upper Las Flores Mesa Google Maps shown below.

Homes are largely located along the steep, private, dead-end Las Flores Mesa Road that leads from lower Las Flores Canyon Road to a long, narrow “mesa” wedged between two steep, brush-covered canyons but with just enough room for an additional side street (ocean-facing Eagle Pass Drive) where many homes also burned. The community is therefore divided into lower Las Flores Mesa and upper Las Flores Mesa. More than twenty-five years later this small community is still a potential design-for-disaster entrapment situation as it is largely still not prepared for a possible recurring wildland fire.



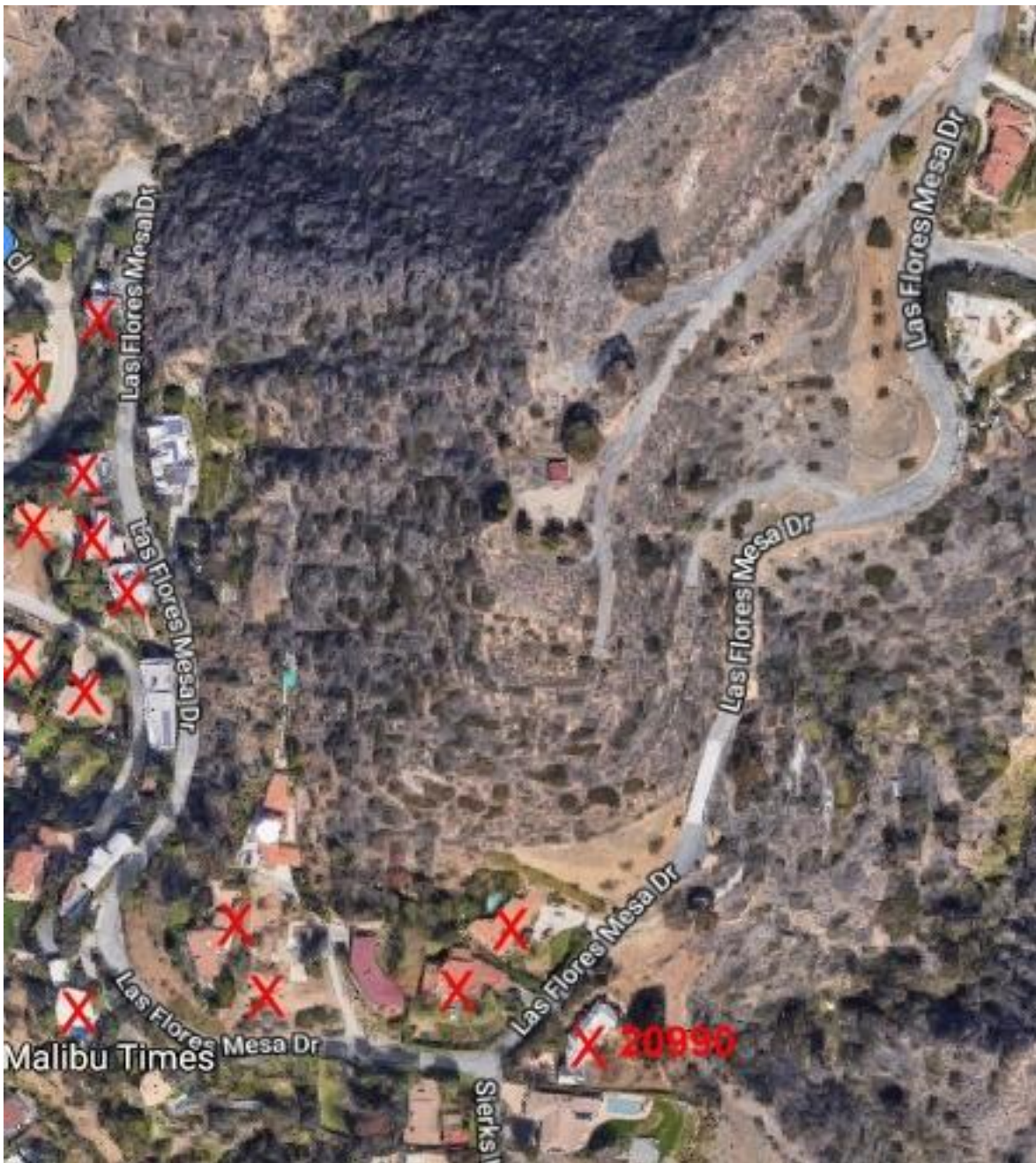
Las Flores Mesa private road at Las Flores Cyn. Rd.



Eagle Pass Road: (1) Home with limited clearance



(2) Empty side-slope lot of home destroyed in 1993.



Lower Las Flores Mesa: Las Flores Mesa Drive starting at Las Flores Canyon Road (upper left).

There was no firefighting done by professional firefighters at Las Flores Mesa with fire department personnel reporting that “they had to retreat to the mouth of Las Flores Canyon as they were overrun by the fire with Las Flores Mesa partially blocked by overhanging eucalyptus trees.” This led to the entrapment of about thirty residents and it could be almost considered a miracle that none were killed trying to escape or trying to find shelter as surrounding homes burned.

As the fire thus descended from the north down Las Flores Canyon as well as moving east out of Carbon Canyon and started burning homes along the creek, it is well-documented that the escape route to the beach and safety via Las Flores Canyon Road was quickly cut off. At the mouth of the canyon the largely big fire rigs successfully saved homes while the mesa, as stated by residents, remained “abandoned” without water and firefighting forces. However, such “big fire rigs” are not suitable to fight wildland fires in mountainous terrain characterized by narrow, dead-end roads with limited ingress and egress and without proper turn-arounds as it could become a life-and-death entrapment situation for firefighters, especially if no water is available for firefighting. Nevertheless, unless short-handed, there was no excuse (except that nobody knew where Las Flores Mesa was!) that no assistance was rendered for hours after the firefront had moved through to at least inquire about life safety needs.



Upper Las Flores Mesa: Las Flores Mesa Drive and Eagle Pass Drive.

It has also never been explained why not only the Las Flores Mesa community but all other communities such as LaCosta were not immediately warned that they would be overrun by a wildland fire as soon as the Old Topanga Fire started. Cooperative research conducted by the Forest Service with the Los Angeles County Fire Department as directed by the County Board of Supervisors during the 1977-1982 5-year Chaparral Research and Development Program, and published and also available in the Los Angeles County Fire Department files, clearly documented the predictive path of a wildland fire starting during Santa Ana wind conditions. A wind-driven fire could not be stopped unless the wind dies down, or it runs out of fuel which would normally is the beach

Such lack of preparedness by local fire agencies again clearly points out the Achilles heel of Firescope and its Incident Command system where out-of-area firefighters are send to fight fires in communities without the proper

equipment and without any knowledge of what they are facing. Unless corrected, this will lead to continues loss of life and property as witnessed during the 2017-19 California wildfires inclusive of the 2018 Woolsey Fire in Malibu.

Since there are no additional documents existing anymore of possible homeowner interviews conducted by NFES, the three written documents provided by homeowners themselves are reprinted below. The locations of these homes are also indicated on the Las Flores Mesa Google Maps along with the locations of burned homes.

1. Constance M. Cornett 20990 Las Flores Mesa Dr. reported the following in writing:

The day, November 2, 1993, started like any other Tuesday, except for the fact that the Santa Ana winds were blowing hard. To us, they mean "fire weather". We had been through three major fires before, having lived in our home for 39 years. About 10:45 A.M., we heard that there was a fire in Old Topanga Canyon, so we turned on the TV to keep track of its progress. Meanwhile, we went about our ordinary business of the day. Things seemed all right but about 3:00 P.M. we lost our power. At that time we had no way of knowing what was going on. My husband thought the wind was blowing away from us TOWARD THE PIER. We never saw a helicopter, a sheriff's car, or any fire equipment--nothing! For that reason, we did not seriously prepare to evacuate as we should have. I kept watching the smoke but was not unduly alarmed because the smoke was moving away from us.

Little did I know! A bit later, I looked out the kitchen window and saw very large flames in Dave and Audrey Magee's back yard, our neighbor from across the road. It was time to leave in a hurry. We grabbed what we could in the 15 or 20 minutes we had. If only we had some time, even one hour, we would not have lost all the things we did. For the most part, they were heirlooms and we will never replace them. A bit later I was shoved into a car with my 22 year old grandson and we headed down Las Flores Mesa Drive toward Las Flores Canyon. We did not know we were going into an inferno. At NO TIME were any fire department personnel, sheriff or any other emergency vehicles on our Mesa. We were on our own. We drove down through flames and smoke on the rims of the front wheels as the tires had deflated due to the heat.

We went to the Sea Lion parking lot where there was a ROW OF FIRE RIGS PARKED. Both Jason (my grandson) and I told them that there were at least 30 people trapped up on the Mesa which was CLEARLY BLAZING BY THEN. They looked at me and said: "Lady, get out of your car and start walking down the highway." That was it. Nobody made any effort to try to save the homes on the Mesa or to protect the residents. We have never been given a satisfactory reason for this inaction. They must have decided to just let our homes burn. We lost everything! There was not a trace of any usable objects left when we finally went back the next day to see what had happened. We were very fortunate that no injuries occurred. Elderly women in their 80's were forced to hike down a trail at the end of our cul-de-sac and a few even had to go down the cliff by rope, hand over hand. Of the over forty beautiful homes on the Upper and Lower Las Flores Mesa, only 9 or 10 remain. This is inexcusable.

My husband was informed by a ham radio operator, that the head security officer at Pepperdine University who is also a ham radio operator, reported hearing a request over the air to send a helicopter to the second major canyon East of Malibu Canyon to warn the residents of the fire direction, and to evacuate. The second major canyon East of Malibu Canyon is Las Flores Canyon. Apparently the pilot was confused as to where he was and instead warned the students at Pepperdine to evacuate their dormitories. Ironically, the students had already evacuated into the Field House and were completely safe.

2. Sandra Price of 20740 Las Flores Mesa Drive reported the following in writing as part of the NFES questionnaire:

She walked eight miles as there was road closure at Topanga and arrived home at about 1:00pm. Fire trucks never came and they were never told to evacuate. Water pressure was lost at about 3:00pm⁵ and the fire front hit at about 4pm with about 10% of homes igniting then in her neighborhood. All of these homes were lost within an hour after the fire had passed and homes igniting/burning continued for several hours after 8pm. Neighbors and friends had

⁵ *The County of Los Angeles Fire Department requires hydrants in Fire Zone 4, where single family homes exist, to have a fire flow of 1,250 gpm. at 20 psi residual for two hours which largely requires 6" non-corroded lines. It knew that nowhere in the mountains these requirement could be met and fire flow would be available only from 2" lines such as from water tanks at Carbon Mesa and Las Flores Mesa, providing water flow for fighting largely only single family home conflagrations.

*For example, the public water system of Las Flores Mesa which was left undefended, only had two 10,000 gallons tanks fed by two 40 hp. electric booster pumps located along lower Las Flores Canyon that, unprotected, as could be expected, caught on fire as the fire front went through.

stayed behind because they could not get out when the firefront suddenly arrived at Las Flores Mesa and lost their homes because there was no water for firefighting. She further states "At no time during this terrifying afternoon did fire dept. warn us to evacuate! Assist us, drop water, etc. I was able to stay alive at my neighbor's home who pumped his pool and was able to save his home. At approximately 8:30pm a pickup truck arrived (after everything had burned) and told us it was safe to leave. I really believe the fire department failed us miserably....At no point during this ordeal did we receive any assistance whatsoever."

3. Michael Wilson of 20607 Eagle Pass Drive reported as follows:

He was at home, was not evacuated and lost his home and lost water pressure about 3:00pm. The firefront hit about 5:00pm. The roads were not adequate to evacuate/return or let firefighters reach the area. He asked for firefighter help via telephone. He evacuated because he had no water pressure or electricity. He never heard any notices/orders to evacuate. He does not feel that the fire department handled the fire competently. They called 911 twice and L.A. County once requesting help – no response to our area. Fire trucks all standing by at PCH. No attempt was made to get into our area to fight fire. If he had water (and was trained) he could have saved his home. He supports a citizen certification fire training course. "The biggest problem was lack of water. The Fire Dept. totally abandoned our area. I talked with firefighters later and was told that they were ordered out of the area by their supervisors."

IV. Azurelee Drive, Briarbluff, Castlewood Drive, Hume Road, Lamplighter Lane

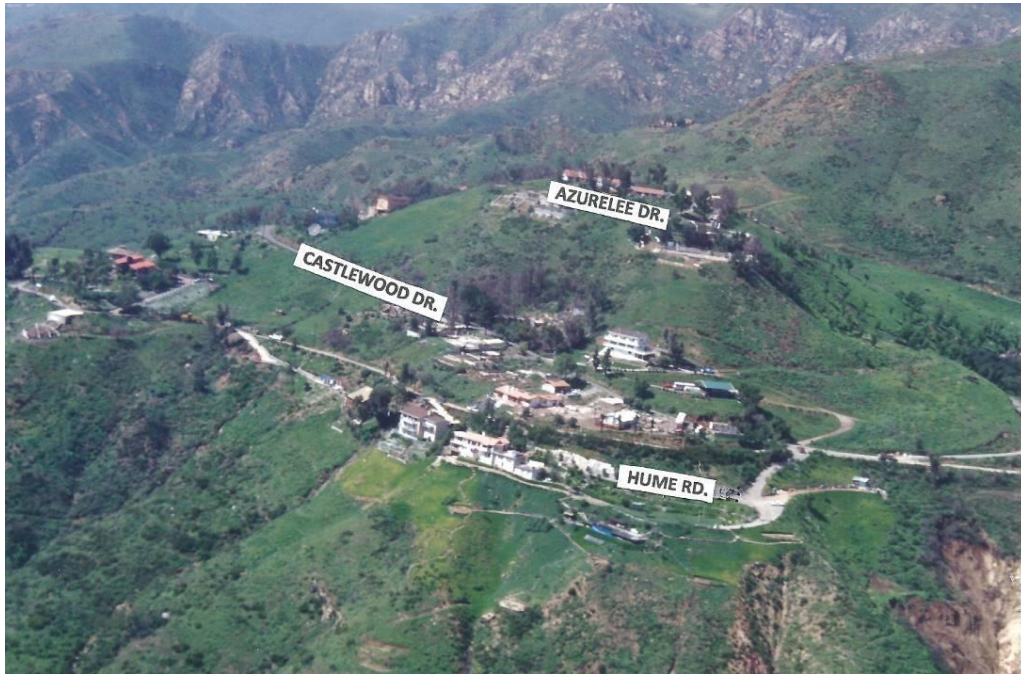


Photo Flight 3-13-1995 (K. Radtke)

Azurelee Drive

1600 Fire Front - 21751 Azurelee Dr. (Craven Family. Son Daniel)

One-story older Spanish-style building complex. Red tile roof. Stucco or wood siding. English family. Bought house 17 years ago. Exquisite ocean view. Only house to survive on Azurelee Dr. as other homes burned unattended (**21740, 21766, etc.**). Only accessible by a steep and narrow dead-end road.

One-story extended Spanish style structures and courtyard with stucco siding and old fire-stopped tile roofs but edges of plywood exposed. Overhangs mostly stucco boxed. Relatively large attic vents. Many exposed pines on north side (south of water tank) that scorched heavily. The house is located just south of but above the Azurelee water tank located at 1,060 feet elevation. It is also called the Hume water tank/reservoir and serves zone 1. It also feeds the zone 2 tank at 750 feet elevation located at the end of Sumac Ridge. The Azurelee (Hume) water tank was surrounded by Aleppo pines landscaped by the County to hide it from view. These pines are now largely dead and were undoubtedly contributing fuel sources for the fireball that carried down the length of the courtyard and ignited the house. Nearby Canary Island pines, located primarily along the road, are resprouting.



Every year fire clearance was done by the Cravens to the property line in preparation of a wildfire. The father and two sons work together in west L.A. At about 1100 a friend called and informed them that there was a fire in Woodland Hills. They grabbed all five-gallon drinking-water bottles from the office (could find about 4-5) and

raced up PCH to Las Flores Canyon. They knew that they would not have water as their house is situated at the end of Azurelee Dr., adjacent to but slightly higher than the Azurelee/Hume Tank. They use an electrical pump to pump water from the tank up to their house.

Son Daniel drove behind fire trucks and got up Las Flores and Hume Roads before any road blocks. He arrived at the house about noon. The mother and sister packed the cars and evacuated to the Sea Lion Restaurant about 1300. As soon as the men arrived, they started the gasoline fire pump (bought about 15 years ago) to draw water from the pool and started hosing down the structures. All outdoor furniture, etc., as well as firefighting tools, were placed in the garage. As time permitted, all vines were torn from the buildings and trees were cut down.

Suddenly the firestorm hit with full force from the north, coming above the Azurelee water tank. A fireball (flames) came from above the water tank and its surrounding pines and carried the whole length of the courtyard (stretching up to a hundred feet). Everybody ran into the east-west-facing main building at the end of the courtyard, dropping the fire hose which was still squirting water. This was about 1600.

The interior of the former garage caught on fire, as well as the tool room and a Honda car, the latter two being located along the driveway just north of the water tank. The clock in the garage melted, showing 1615. The firestorm passed over for about six minutes with a great amount of noise and heat. At 10-12 minutes after the fireball had forced them to seek refuge inside the house, they emerged to fight the spot fires. The fire pool pump was still running and the hose was still shooting water onto the ground. They put out the spot fires on the eaves of the structures. Eaves, cars, the tool shed, as well as trees, were on fire. They systematically knocked down the spot fires as it got dark. They did this until about 1900.

There was no phone or electricity. Neighboring homes (they could see) started igniting within 15-30 minutes after the fire storm went by. Neighbors had evacuated when told to do so by helicopter, but the Cravens choose to ignore the orders. By 2300 they established sleeping shifts with some sleeping while others patrolled the area, checking for and extinguishing spot fires.

The first fire engine showed up at about 2300. It was not local. None of the firemen knew how to get up or down the roads. They did not know where they were and asked for drinking water, as they had none. The Cravens had used up almost all of their pool water but had drinking water. Since they had used up most of their water during the fire, they used the swimming pool of a neighboring house that burned as a water source and to bathe until their own water was restored.

In the event of another fire, they would again stay and save their house and would not leave it up to the Fire Department. The Fire Department really can't do it.

Also, as we get older, it will be more difficult to maintain and properly dispose of flammable vegetation at large, hidden but highly exposed properties characterized by limited ingress and egress. With a possible repeat in the fire that could happen more than 26 years later, we may not be that lucky.

21766 Azurelee Dr.

House with an extensive foundation. A big white house with a large deck overhanging the eastern facing slope on which cars parked. At about 2000 or later Jack Cashin (**2818 Hume Road**) saw flames on the wood struts of the deck. The deck burned for hours and the car on the wood deck caught fire and rolled down the hill. The house finally caught on fire and burned full blast about 0200-0230 at night.

Briarbluff

21877 Briarbluff (John Brechner)

According to Darlene Reed, John went to Cosentino's house looking for liquids. He broke the front door, drank some wine and left a thank you note. His house got engulfed in a fireball during the second fire wave coming up from below. Firemen told him to go down the road. As he did so, he went directly into the flames, hid in drain and survived.

21900 Briarbluff

Fire-safe rebuilt, the pines on the properties are well maintained as indicated in the August 2019 photos shown below. However, potentially flammable vegetation near even double-pane windows is always of concern. Even if not carrying the fire, broken branches can break windows.



Castlewood Drive

21716 Castlewood (Rita Templeman)

According to Jack Cashin of Hume Road the trees had ignited around the house as well as the house as the forefront moved through.

21732 Castlewood (Bright)

According to Jack Cashin the trees had ignited around the house as well as the house as the fire front moved through.

21740 Castlewood (Butts)

According to Jack Cashin the vegetation had ignited around the house as the fire front moved through and the house ignited soon thereafter.

21821 Castlewood (Armine Amler)

German family. Bought house in 1989. Two-story white house with blue trim. Owner works for German television stations and has good before-and-after videos of area. Single-pane glass windows (not thermal). Non-boxed eaves. Class A roof and stucco siding.

Armine was at the dentist in Woodland Hills. He could not return home because of road closures and got stuck on Sunset and PCH. Wife works at hospital in West L.A. and came home with a friend to evacuate some belongings. House left unattended.

As witnessed by neighbors, no firefighters were on the property during the firestorm and the burnout period thereafter. As the fire front went through, most houses did not ignite but because of heat and firebrands, they started smoldering and finally igniting.

Armine's second-story wooden porch burned. It is situated near the edge of and overlooking the south facing slope. Some of the 4x4s supporting the porch also burned and the porch partially collapsed against the stucco siding of the house. Pine trees (a few) surrounding the house as well as the pepper tree scorched. Most pines are dead now.

The large uphill neighboring house (Gary Shepherd-TV) burned as well as pine trees and eucalyptus trees surrounding it. Away from the house the cables on the TV dish melted. Inside the house it did not even smell like smoke after Armine returned the next day and was surprised that his house was still standing.

The morning of the fire the gardener came as part of his normal route. As he saw the smoke from the fire, he turned on the automatic landscape watering system (cycles on all stations) and probably also the roof sprinkler. The roof sprinklers must have run until water pressure ran out before the fire hit. The week before the fire, Armine had installed a new roof sprinkler nozzle because of concerns for fires after watching the Green Meadow Fire in Ventura County. The month before the fire Armine used about \$700 in landscape watering to deep water all plants, and a few days before the fire he also soaked all landscape vegetation heavily.

21844 Castlewood Dr. (Daniel Maziarz, Terry Cole Whittaker)

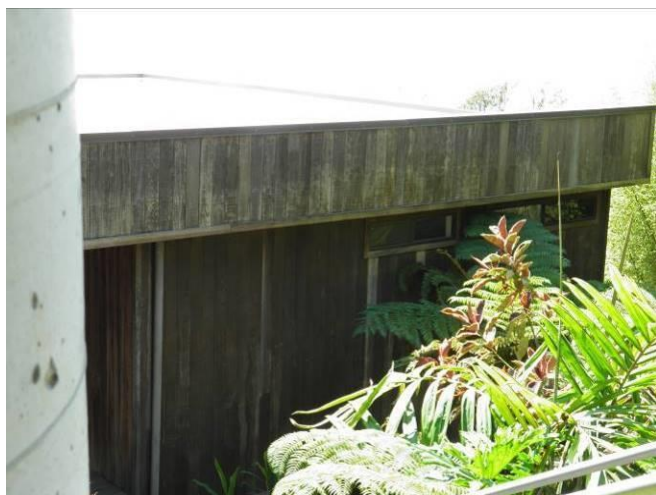
Two-story. Wood siding. Wood decks on downhill side.

Daniel Maziarz and his writer associate were renting the house and had just moved into it in July 1993. Daniel was home during the fire.

Daniel was watching TV at about 1000 and heard that there was a fire in Calabasas. He drove to the top of Saddle Peak Road. The hillsides beyond were all orange. He went home and prepared for the fire for the next four hours. He flooded the roof and filled all trash cans and any containers he could find with water and placed them around the house and on the deck. He got out tools and fire extinguishers. It was the hardest day of his life in terms of physical work, praying and chanting. Helicopters came around and told everyone to get out. Daniel had second thoughts about staying when the flames came over the hill. About 1400-1430 the fire first came over the hill behind the Reid house. Then four big red fire trucks from the City of Pasadena pulled up. They had hosed down the 1-story wooden house directly east uphill of Reid's (**21875 Briarbluff**) which had a pretty good firebreak all around except for the eucalyptus trees. The mountain was shielding the wind and the fire was just moving down slowly towards the house and the firemen were able to save it initially. They also helped Daniel out and also tied into the Singh house at the corner of Azurelee and Castlewood (**21881 Castlewood**). Thus the firemen stopped the first assault of the fire.

After the first fire front was over, Daniel walked uphill to 21875 Briarbluff Road and gave the firemen water. Then he left while the firemen were relaxing with the owner. He also felt safe as the fire had burned the brush behind the Briarbluff house and thus provided a firebreak to the north. However, another fire front was still at least half a mile away below Briarbluff Road. The northerly facing slopes between Briarbluff Road and the large house on the hill above the road (**21888 Briarbluff**) were heavily wooded with Coast Live Oaks as well as Laurel Sumac and other native chaparral vegetation.

About 1600-1630 the second fire front hit coming northeast from Las Flores Canyon up Briarbluff. Water had failed at the same time. Daniel had just gotten into the house. Suddenly a fireball (it felt like a flamethrower) flew over Azurelee and incinerated **21875 Briarbluff Rd.** which was directly in its path. It also engulfed his house with smoke and flames. The fire alarms went off and firebrands were bombarding the house. The lower envelope of the fireball left a black scorch mark on the wood siding along the upper east wall of the house.



Daniel Maziarz ran outside right away after the fireball had passed. It had gotten so hot that all plants on the east side of the house were scorched. Most of the leaves were burned off the Blue Gum eucalyptus trees along the slope near the southeast side of the house and the trees were on fire. The wooden hot tub near the eucalyptus trees was burning. At this point the firemen helped Daniel remove flammable materials such as wood away from the house and extinguished spot fires. When the fireball blew over it ignited the meditation pillow on the southwest upper deck. Suddenly one of the four firemen who was with Daniel on the rear lower deck saw the deck on fire and jumped up while Daniel ran upstairs with a 5-gallon container of water which the fireman used to extinguish the fire. The fire had burned through the wooden deck and had also cracked two of the adjacent single-pane picture windows. The firemen left in the four fire trucks about an hour later, driving uphill towards Fire Camp 8. Daniel was up until 0400 on fire patrol extinguishing spot fires here and there. When the fireball hit, one upstairs bedroom sliding door facing towards the south (and thus away from the fireball) had been left open. He discovered the next day that firebrands had burned small holes into the linen.

At about 1800 the wood deck surrounding the raised plastic pool at 2736 Rambla Pacifico (Elliot/Croff) caught fire and burned the pool as well, but the house survived. The house was in foreclosure. The house at **2760 Rambla Pacifico** was the easiest to save if the owner had been home and should not have burned. It was all stucco and had practically no flammable siding. Its wood fence and outdoor furniture did not burn. However, it had two small wood balconies and one of them caught fire. If the owner would have been home, he could have stomped out or pissed out the fire. For 10-15 minutes the balcony burned before it started igniting the house. Then it took a couple of hours for the fire to eat through the house.

The two houses on the slopes along Castlewood Dr. (**21838, 21826 Castlewood Dr.**), which Daniel could readily see from his house, burned somewhat later. The initial fireball may have ignited something which may have been smoldering for quite a while and could have been easily extinguished.

21881 Castlewood (Spooney Sundher)

Spooney and his son had driven down earlier to evacuate a truckload of valuables and were not able to return. They had a pool. As observed by neighbor Daniel, the wooden deck of the overall fire-safe house caught on fire and firemen on the fire truck at the corner of Azurelee and Castlewood tried to cut it off with a chainsaw but were not successful. The house subsequently burned.



Hume Road (2700, 2794, 2810, 2828, 2855)

Hume Rd. had been closed from Easter 1993 for slide repair and the County Road Department worked feverishly to reopen it as soon as possible. Fortunately, it was reopened August 14, 1993 or greater fire damage or even fatalities could have been the result.

2700 Hume Rd. (Cosentino)

One-story. The house consists of two house trailers that were put on the lot in a U-formation, interconnected and stuccoed (white). Flat roof (hot mopped?). Good clearance. The house was unattended during the fire.

2794 Hume Rd. (Peter Hueber)

Split-level 3-story. Red tile. Stucco siding. Minimum wood decks. Peter was tied with a fire hose into the County fire hydrant in front of house. He left when the water failed. A friend came by and saved his house.



2810 Hume Rd. (Jack & Felicia Cashin)

Two-story stucco house with Class A roof and stuccoed eaves. Decks had Class B rated surfaces and the areas under the decks were also stuccoed. All brush had been cleared for 100 feet down the slopes and no woodpiles or debris had collected around the house. Landscapes plants near the house were very low profile.

Jack, a friend of Ed Hill, was one of the most-prepared homeowners in Malibu.

Jack had a 1,600-gallon water tank and used the water to help save **2828 Hume Rd.** He had consulted with Dr. Radtke before the fire and installed roll-down aluminum hurricane shutters on his windows to protect them from fire. Both were concerned that neighbor's nearby pines and eucalyptus may break his windows and catch his house on fire. There was good downhill clearance but many railroad ties (steps, decks, walls) adjacent to the house. Jack provided notes on how to save your home and the house was featured at the NFES January 1994 field trip "How to Save Your Home". Good community organizer.

Felicia evacuated but Jack stayed with the house. Before the fire came Jack moved the propane tank and other combustible materials away from the house. The openings that did not have shutters were covered with plywood. He then also hosed down the decks with his 150 feet of fire hose connected to a gas-powered fire pump being fed by the water tank.



The Cashin residence with fire shutters rolled up after the fire.

Jack ran into the basement as an about hundred-foot-tall wall of flames approached. It was dark in the basement but he could hear the wind hauling and propane tanks exploding in the distance. As the firestorm passed over and around him it sounded like a train coming through a station. After about 10-15 it became quiet and he went outside where it was quite smoky. It looked like everything he could see

on Castlewood was on fire. The Templeton (**21716 Castlewood**), (**21724 Castlewood**) and Bright houses (**21632 Castlewood** [surrounded by eucalyptus trees, etc.]) were on fire. The adjacent Butts house (**21740 Castlewood**) had a big redwood deck surrounded by a lot of brush. Jack believes it also started to burn about this time. The house behind it (**21750 Castlewood**) had a lot of brush. Their dog Bear burned to death in it. The house behind it (**21764 Castlewood** - with "For Sale" sign?) had wood siding. Frieda's house behind it (**21756 Castlewood**) was an older house with stucco and wood siding.

At his own house the firestorm had also ignited some railroad ties and the wood fence. He restarted the pump, extinguished the fires and continued to knock down the flare-ups of the railroad ties during the night.

Hume Rd. was closed by fire rather quickly. Firemen were in area from early afternoon, but before fire hit, fire engines took off and roared down Hume and Las Flores Canyon. Some engines were at Camp 8 as well as at the housing development above.

See narration by Bryan Flak. After fire went through, some houses were immediately engulfed (wooden exterior, wood decks, brush) while others took hours to ignite. Engines from Camp 8 could have saved about half of the homes.

The Las Flores bridge gave out about 1800. Spooney's (fellow who owns wax museum) house burned hours after the fire went by. The 3-story wooden house on Hume Road (**2858 Hume Rd.**) virtually exploded and blew up in minutes.

Bryan Flak (Personal Computers)

Bryan is a business associate of Jack Cashin. Bryan and Colin (Jack's Cashin's friend) got to Jack's house at 1130 to evacuate. They came in from Piuma and all roads were still open. It was not clear that the fire would get this far but smoke could be clearly seen at Las Flores Canyon. Felicia (Mrs. Cashin) left at 1300 and went down Hume and Las Flores Canyon and north on PCH. Bryan stayed until 1530.

Jack's house had a good vantage point of Hume Rd. and Las Flores Canyon; could see the corner of Hume and Las Flores. They cut down the large pine trees along the right side of the house on the neighbor Jay's property with the help of Jay. The neighbor on the left had a fire hose and tapped into the fire hydrant and watered down his house to keep it wet. Jack had a 2,000-gallon water tank. At 1400 the water pressure was low. Bryan and Colin were at Jack's house watering it down with garden hoses. Neighbor to the left was still tied to the hydrant water main.

At about 1530 (3:30 p.m.) water was cut off. There was suddenly absolutely no water. Bryan drove down Hume Rd. before he realized that flames had already come down and crossed about 1/4-mile up-road from Las Flores Canyon Rd. He drove through a wall of flames (the fire had already come down the western wall of Las Flores Canyon and went down south on Las Flores Canyon Rd.).

Large red square fire trucks (box car type: probably inmate crew trucks) and 1 to 2 firemen were standing at the corner of Hume and Las Flores Canyon Rds. The firemen were just standing there. Bryan drove down Las Flores Canyon towards the ocean and witnessed some firefighting activities. About 4 to 5 red fire trucks (apparently a strike team) were foaming houses on both sides of the road. One was foaming the school. The only fire truck (large, yellow) near Jack's house drove by at about 1300-1400 and then down Hume and down Las Flores Canyon Rd.

The only helicopter Bryan saw was a County Sheriff helicopter with a P.A. system telling everyone to leave. Came by about every twenty minutes between noon and 1400. Between 1300 and 1400 the helicopter said several times "You must leave or you will be arrested." About 5-10 minutes later (about 5 minutes past 1400), two sheriff cars drove down from Rambla Pacifico past Jack's house without stopping and left via Hume and Las Flores Canyon towards PCH.

Bryan was on roof of Jack's house and never saw an instance of firefighting by (ground) fire equipment, helicopters, or airplanes. He saw no firefighting until he left and drove down to the bottom of Las Flores

Canyon Rd. Bryan was stopped at Las Flores Canyon at PCH for quite a while (15-20 minutes) because PCH was closed to the north, and PCH traffic was totally stopped. It was stopped in front of Charley Brown's (Sea Lion) at PCH and Las Flores, and Bryan sat there about 30 minutes. The fire had gone across PCH from the north. Fire trucks from lower Las Flores Canyon that had hosed down houses passed Bryan and went south on PCH (more than 5 red trucks). PCH was lined with red, yellow, and green fire trucks.

While Bryan was sitting at PCH & Las Flores at about 1600+, he saw flames overtaking Jack's house and Las Flores Canyon. Since he was making phone calls with his car phone, he could check the times. Jack and Colin stayed with the house until 1930-2000.

By about 1630 to 1700, most of the fuels had pretty well burned and Bryan could have actually turned around by 1730 latest (about as it became dark) and gone back to Jack and helped him. Jack's steps and patios were made of railroad ties soaked with creosote. Since the ties kept re-igniting, they had to extinguish their own fire and could not save other homes.

According to Jack, one house burned near his house after the fire front had moved through because burning embers fell on the wooden deck. The house could have been saved with a garden hose. In the evening they tried to find out where fires were still coming from in the neighborhood and found that all of the propane tanks were still turned on (these were normally 500-1,000-gallon tanks). For example, someone had a swimming pool and the water heater was engulfed in 10-foot flames. Bryan found the propane tank and turned the gas off. They did this with about 6-8 tanks. Many of the houses would have been simple to save. They had big swimming pools and hot tubs.

The next day Bryan went to the valley and bought fire extinguishers and came back to Jack's house in the afternoon. He went up Malibu Canyon Rd. through Stunt Rd., and Felicia met him about 1530 to get him through, as one had to be a resident to get past the road blocks. Past Stunt Road he went Schueren Road, then Rambla Pacifico to Jack's house. Jack and Felicia had gotten in earlier. Everything was destroyed like it looks today. Fire Camp 8 was deserted at 1530. No vehicles. Jack's neighbor has 1-2 minutes of video as flames went over Jack's house. Bryan has a tiny bit of video from the next day. Most of his video is from two days after the fire (Nov. 4).

2828 Hume Road (Gerald [Jay] Sumner Partial burn

2-story wood house. Neighbor of the Cashin's on W side. According to Jack Cashin, friends from upper Rambla Pacifico saved the house when Jay evacuated for about an hour. There were many trees around house. Windows broke and firebrands ignited the interior. When Jay returned, the house was on fire and he helped save it by extinguishing the firebrands in the interior while Jack aimed water at the house. Prior to the fire front hitting the area, Jack had helped Jay cut down the big pine tree between both houses.

Jay had left the house by or before 1630 after water had failed, and returned within the hour after it had just gotten dark. When he evacuated and drove up Hume Rd., **2858 Hume Rd.** was burning well.



1993 – Burned, thick timber deck.



Fire entry through stucco siding of burned pipe (replaced)



6-12-1994 - Loeffel stones have replaced the railroad ties.

Jay parked his car in the plowed field with the fire trucks and stayed there for a while, watching as **2882 Hume Rd.** ignited. One or two trucks were also on Hume and Rambla Pacifico. Fire came from several directions.

Jay then parked his car in the group of cars on Rambla Pacifico Rd. described by Darlene Reid. He pulled away from the group as the huge eucalyptus trees caught fire. It was extremely smoky. He tried to get out of the car but it was too hot. Thus Jay decided to drive back to his house after sitting 5-10 minutes with the group of cars at Hume Rd. The telephone pole had not yet fallen across the road; it burned later and blocked the road.

As Jay was driving back, **2882 Hume Rd.** was still burning but **2858 Hume Rd.** had burned down. He parked on Hume above the house. He had lost a carport, two sheds, extensive decking. Lots of fuel consisting of a mat of overmature coyote brush had burned on the downhill slopes. Taller acacia trees below the coyote brush had also burned. Thus he had a ladder fuel effect into his trees surrounding the decks and the house. A Canary Island pine within 10-15 feet of the west side of the house had scorched the big timbers on the wooden eaves (beam ceiling) but had not ignited them. Upon his return the tree had already burned or singed. Spot fires were all over.

When Jay returned the fire had gotten into the house. All picture windows (single-pane), except for the small leaded glass windows facing the south slope, had broken despite his generally good down-slope clearance of about 150-200 feet (some plants had regrown). He had not kept it quite as clean as his neighbor Jack Cashin. Two windows had fallen to the slope below. The others were still hanging in the frames. The carpet as well as a sofa had caught fire. The sofa was mostly smoldering and was filling the house with smoke.

All decks had caught on fire. Fortunately, they were made of thick 3" wood and burned slowly. A staircase made of 2" wood had already burned down. The small deck on the SW side of the house was burning on the outside edges. It was made of big 3" timbers. Firebrands had caught near the wooden deck door and had burned through the bottom of the door into the house and cracked a window. The plastic drain pipe along the east side of the house had caught fire and the fire followed it right into the house.

Jay had filled up two garbage cans with water. One had melted. This left him with one garbage can and two toilets full of water, and all the liquids in his refrigerator as well as beer and wine. He was afraid to use hard liquor for extinguishing the fires because he was fearful of their high alcohol content. Diet Pepsi turned out to be a good fire extinguisher (carbonation?). He used wet towels to carry the water around. He put out all deck and interior house fires except the deck on the north side, which kept re-igniting because the railroad ties kept re-igniting. He fought the fires for 8-10 hours. (Railroad ties are like birthday candles. They keep re-igniting after being extinguished.)

About 2100+ hours a fire truck came along Hume Rd. and stopped. Firemen watched Jay fight the spot fires for about five minutes. Jay was too exhausted and tired to say anything and they left, maybe thinking that everything was under control.

After midnight but by about 0200 hours, water had returned. Jack Cashin or someone else at Peter Huber's house had found firemen within walking distance sleeping. Firemen said that they could not come because of downed power lines. They also did not know that some water pressure had returned to hydrants. Apparently, the Las Virgenes Water District had bridged the water from their lines (had turned on a valve) onto the County District 29 lines. Jack cleared the power lines from the road as well as the road and a fire truck came up to mop up.

Burnout of adjacent homes

Jay had a view of about five homes uphill on Castlewood Dr. The O'Malley house (**21764 Castlewood Dr.**) caught fire about 1900. **21756 Castlewood Dr.** - Fiebig) might have burned earlier. There are no houses on/at 21772 and 21786 (County records list houses—it should be checked out).

About 2100 hours **21750 Castlewood** (the house across and north of Jay's), stucco house with no decks or exposures, started burning enough so that he could see it. All houses that were visible to the left had ignited before that.

2858 Hume Rd.

An all-wood 2-to-3-story house with dried-out wood siding west of Jay's. The roof was asphalt. The upper floor was slightly cantilevered slope-side over the lower floor (up to about four feet). As witnessed by neighbors, it ignited as the fire front passed.



2858 Hume Rd. Only the pad and Eucalyptus trees remain.

2855 Hume Rd. (Graeme Clifford)

He got home in time, evacuated his family and got the fire pump running. He lost water pressure about two hours before the fire hit. Fire engines (at least five red structural fire rigs: at least a strike team) were lined up on Rambla Pacifico bumper to bumper, giving him a feeling of security. However, about ten minutes before the fire front hit, there was an announcement on the truck's loudspeaker and then the trucks were suddenly gone. They never stopped by his place to help. He did not see them again for 48 hours.

As the fire front went through, the house across the street (**2858 Hume**) was engulfed in fifteen seconds. The smoke got so thick that the fire pump stopped running. He jumped in his pool but it was hard to breathe because the pool was in a low spot. The fire was directly above the pool and even his plastic snorkel melted. He then got out of the pool and ran up the driveway to an area clear of foliage. There he could breathe better and lay on the ground for about five minutes until the fire front passed.

When he tried to use the fire pump again, the hoses had melted. He then got buckets and saved his house three times (it re-ignited several times). At night he saw houses burning one by one. The last house did not burn until 0400.

In 1970 they had fire trucks everywhere. This time all trucks were from out of the area. They took off because they did not know the area. There were plenty of level, safe places to park trucks and quickly return to the area after the firestorm. Graeme lived at his house before the slide happened. Hume used to be a fire road.

Lamplighter Lane
(21832, 21858, 21920, 21940)

21832 Lamplighter Lane

Octagonal house saved by caretaker Rodger Ruckstuhl and fire crews.

21858 Lamplighter (Rodger Ruckstuhl-renter)

Has home business and was at home. He is also the caretaker (for the absentee owner) of the adjacent octagonal house at 21832 Lamplighter. He believes that his efforts are the only reason why the two houses are still there. He believes that if he would not have been there, the fire department would have pulled out. The news crew being there also helped.

Rodger left about noon to go to the bottom of the hill to get gas at the 76 station at PCH. He suddenly saw the smoke and went immediately back after getting gas. He drove to the top of the mountain to investigate and saw fire heading towards Rambla Pacifico. He came back to his house and turned on the sprinklers on the side of the house and also placed a sprinkler on the roof. This he did from about 1230-1300. At about 1300 a helicopter flew by very low and told people to evacuate.

About 1330 a small red pickup (he believes a chief's vehicle) came by and surveyed the situation. Rodger told the chief that this area was open and safe enough to make a stand. He agreed, radioed for his crew, and within five minutes two large red fire trucks (one was from Monrovia or Montebello: name started with M) arrived. One fire truck connected a garden hose to truck at 21858 Lamplighter and the other did the same at 21832 Lamplighter. The Fire Department was joined by an NBC news vehicle with 3 people. (On Wednesday morning the fire chief that was at the house was interviewed on the Tom Brokaw show. NBC had shown excellent fire footage around Lamplighter and Rambla Pacifico. Rodger was on the NBC TODAY Thursday show).

Between 1330-1400 (?) the fire came from west up the canyon.

At 21858 Lamplighter a big firestorm developed at the draw near the down-drain and went over the house. All the cypress trees in front of the house caught fire. At 21852 Lamplighter flames also went over the house and melted the seals of the double-pane windows. They also caused much interior smoke damage because some of the windows along the north side were open. Some planks of the extensive wooden deck were also ignited by burning embers.

Rodger was on roof of his house at 21858 Lamplighter with a garden hose until the firestorm hit, and 3-4 firemen went around both houses with hoses and water from the fire trucks. They waited to use the water until the fire was endangering the homes. From the roof of his house, Rodger watched as flames were engulfing the area where the houses at 21920 and 21940 Lamplighter Ln. were located. He as well as the firemen thought that they were burning down. The dark smoke made the area pitch-black and he could not see the houses themselves but could only see the flames on the trees at the houses. As the flames hit the eucalyptus trees they gave off a cloud of dark gas.

Since it was so dark, the fire trucks and film crews had their lights turned on. They fought spot fires next to the structures for the next three hours. The fire came up-canyon and from the top at the same time.

Rodger was interviewed at his house by NBC at 1720 for about 10 minutes. Thereafter the firemen and everybody were in the driveway and talking. There was no fire danger to Castlewood and Briarwood. At about 1800 the fire chief and firemen asked Rodger how to get to the beach and where the roads went to. Rodger told them that they could not get to the beach anymore and explained the road system. Between 1800-1900 the fire came back up Las Flores Canyon. Between 1830-1900 houses started to burn on Castlewood and Briarwood. On Castlewood the houses burned from the left (south) to the right (north). The large house in the center was a wooden house.

The trucks had no or little water and one truck had problems with the gearshift for about 15 minutes. Finally they left at about 1900 and drove up and then down Rambla Pacifico from about the area at 3021 Rambla Pacifico uphill to 2501 Rambla Pacifico, perhaps patrolling. It was dark so Rodger judged locations by their lights.

Houses burned all night. The two-story wood structure side-hill at Rambla Pacifico, surrounded by eucalyptus trees, ignited right away as the flames had moved up-canyon earlier.

Rodger stayed with his house all night. His water lines had broken the previous afternoon just about the time they had run out of water. However, a big puddle had formed where the water line was broken and he scooped up this water with buckets.

At about 0130 to 0200 a big red fire truck backed down the road to within 200 feet of 21920 Lamplighter, laid 200 feet of hose line (firemen told Rodger they laid 200 feet) and extinguished the wooden telephone and railroad tie retaining structures which had re-ignited.

About 0700-0800 the next morning, Rodger extinguished the railroad ties at 21920 Lamplighter with a garden hose as they had re-ignited. Most of the water pressure had returned (Las Virgenes gravity flow?). Rodger's own railroad ties also kept re-igniting.

Rodger does not think that fire departments could have saved more homes if Rambla Pacifico would have been open. Most homeowners except for some housewives were not on hill.

A big red fire truck burned up at the corner of Hume and Ramble Pacifico.

21901 Lamplighter

2-story. Asphalt roof. Stucco siding. Wood deck.

House on long, narrow driveway on right side when driving down to 21940 Lamplighter. Did not burn.

21920 Lamplighter (Barbara & Bill Burtee

1-1/2 story. Asphalt shingle roof. Wood siding. Located above David Williamson's house in the middle of a long, narrow driveway serving both houses as well as 21901 Lamplighter. The house is surrounded by pine trees and eucalyptus trees.

By all logical accounts this house should have burned. The neighbor David Williamson told this investigator that he watched the Blue Gum eucalyptus trees around the house being engulfed in a wall of fire that extended from the slope to about twice their height. He believes that the heat was so great that it was uplifted by the trees above the house and thus away from the house. He therefore believes that in this case—as unlikely as it may sound—the eucalyptus trees saved the house.

Barbara and Bill were at their home when fire crested the ridge top above Rambla Pacifico (as seen between their two trees) about 1330. They left for PCH and were there until 1530. At PCH firemen told people they cannot do anything to save the houses in the hills because they have no water. The Burtees thought that their house had burned. When they returned the next day they found a note written with ashes on their wall "Saved your house CDF." Since their garden hoses were untouched, they were not certain what was done to save the house. The neighbor David Williamson mentioned that he saw CDF extinguishing the re-igniting railroad ties once but otherwise they did not protect the house.

The flames came from the canyon up the draw behind their house. They believe that the overall slope clearance helped save the house. The adjacent lot was empty (no house built yet), but it contained flashy fuels.

David told Bill that he saw flames engulfing the eucalyptus and pines trees around their house that shot up in the air to 150-200 feet or twice the height of the trees. This investigator measured the trees with clinometer after measuring off 66 feet by tape, and found that the tall trees around the house measured up to 60 feet in height and the trees on the street around the house up to 45 feet.

Upon further inspection of the trees this investigator noted that the tall eucalyptus had not burst into flame but the pines had badly scorched. The Canary Island pines were resprouting. The trees had been cleared of understory vegetation.

Barbara and Bill believe that if Rambla Pacifico would not have been closed by the slide (near PCH), fire trucks would have been there and about 90% of the homes could have been saved. "Castlewood could have been an easy save if Rambla Pacifico would have been open."

Their house survived the 1970, 1985 and 1993 fires. They believe that their clearance and removal of the many pine needles prior to the fire saved their home, but admit that it is a bad idea to have railroad ties or telephone poles for hillside stabilization or retaining walls on slopes, as these kept burning and endangering the house. A retaining wall made up of telephone poles caught on fire just north of their house across Lamplighter Ln. and kept re-igniting. David Williamson also extinguished the re-igniting poles once.

Bill and Barbara replaced the wood directly around their house with concrete "Loeffel" stone retaining walls.

21940 Lamplighter Lane (David Williamson)

Last house on Lamplighter at end of narrow driveway. Two-story white stucco main house with good clearance. At confluence of two very steep and extended draws. A low-set wooden deck surrounded the house on the east to west towards the downhill facing slopes. It had a stuccoed top surface but was open (non-skirted) along the sides. South (towards ocean) and below the main house, a redwood deck surrounded the pool and the pool house below the deck. The roof was designed to be flooded with water.

David credits the extensive clearance and nonflammable roof with being instrumental in saving the house. The tall, towering eucalyptus trees had no ladder fuels. Because of the good clearance, flames did not even reach his redwood pool deck that was totally exposed on the east to west above steep slopes. The deck was ignited by flying embers. All decks are being rebuilt and their surface will be covered with ceramic tile and their sides skirted.

The decks burned but the house did not. David also credits the deck around the house with helping to save the house, as it trapped the heat and flames. The glass facing the slopes consisted of two layers of thermal pane 1/4" tempered glass separated by 1/2" airspace. It got so hot along the west side of the house that even rock boulders within three feet of the house were discolored by the heat, but the windows did not break.

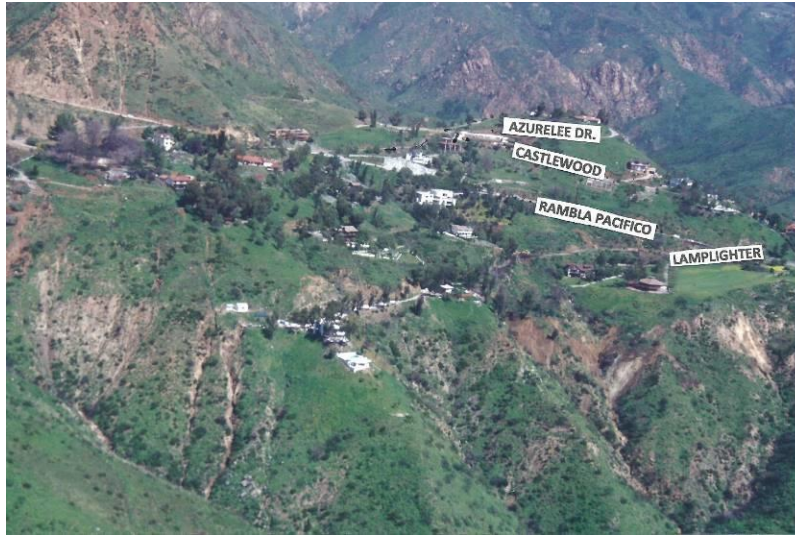
Before the fire arrived, David flooded the slightly sloping roof which has parapets all around. He has a perforated hose attached permanently on the roof which allows this. He thought that the fire would go over the house. The fire came up the canyon from the southwest and hit the eucalyptus trees. As the fire burned the woodworking shop north of the house and his antique car that sat adjacent to it and right in front of the Butane tank, David retreated up the driveway to the octagonal house at 21832 Lamplighter (the Butane tank never burned). He parked his four-wheel drive in the center of the large disked field near the house which is accessible via the gate on Rambla Pacifico across from the terminus of Hume Road. During his stay at the house, he watched as the thick rain of flying firebrands was being pushed underneath the car by the strong winds. He was afraid that the car's tires and the car itself would catch on fire. He brought the fire commander (strike team leader? lead captain?) to the deck of the octagonal house as it had a sweeping view of the area and briefed him on the situation. David stood there and watched as the woodshop, the deck around his house and the eucalyptus trees were a ball of fire as it got dark. He thought that his house was gone. It took about 45 minutes for the fire front to pass and burn itself out. David had to wait a little longer until the trees along Hume Rd. that had caught on fire had burned down, as he had to get his truck out of the plowed field at Hume Rd. David then asked a fire truck from Redding to help him and they backed down his driveway ahead of him as he ran back. The truck was manned by four people with a woman named Debby Brady being in apparent command. David believes that the truck would have gone down even if he would have been unable to do so. David spent the night dousing the burning deck around the house with buckets of water from the pool. His pool pump had burned as the deck around the pool (sitting down-slope away from the main house) burned.

Since the deck around the house kept re-igniting, the fire crew cut holes into the deck to get underneath. Three times they thought that the deck fire had been extinguished and started to leave and three times the truck backed down the driveway again as the deck kept re-igniting. He saw **21812 Castlewood** (the last house on Castlewood Drive before Hume Road) catch fire; the last of the row of houses that ignited there (**21818, 21836, and 21838**

Castlewood Dr. ignited slightly earlier). This was about 1830-1900 or slightly later. The houses burned from north to south and the flames got underneath the decks, blew out windows, and rolled into the interior of the houses. It was very hot.

The next day David was amazed to see that none of the chickens in the coop adjacent to the Butane tank had burned.

V. Rambla Pacifico Area



A. Rambla Pacifico - Fire Camp 8 to Azurelee (1900, 2050, 2145, 2185)

1900 Rambla Pacifico (Los Angeles County Fire Dept. Fire Camp 8).

The property was not overall safely maintained and several structures and woodpiles burned.



Entrance to Fire Camp at 1900 Rambla Pacifico

Revisiting the site during mid-August 2019, there were still concerns about the overall fire safety and perhaps lessons from the 1993 Old Topanga Fire not learned or forgotten. Every public facility in fire-prone areas should be fire-safe maintained, especially fire facilities.

The row of largely Aleppo Pine trees (*Pinus halepensis*) adjacent to the Fire Camp 8 entrance must be well-maintained through pruning and thinning so as not to become a fire hazard. This becomes more expensive and more difficult as the trees grow taller. The trees, as shown in the above photos, can be instrumental in feeding a wildland fire as it advances and then can spread firebrands, actually fire bombs as witnessed during wildland fires. Aleppo pines have thin bark and are therefore readily killed by direct flame impingement. They also have small, generally light pine cones that have matured, are open and are dry at the height of the fire season. Should the trees catch on fire, the small cones also readily ignite, separate from the trees and can be carried hundreds of feet through the air, now not as small firebrands but literally as fire bombs.



August 12, 2019 – Row of flammable pine trees adjacent to entrance of Fire Camp 8.

2050 Rambla Pacifico

New house with large concrete driveway above Fire Camp 8 (1900 Rambla Pacifico). Tile roof, stucco. Pool. No landscaping yet, so it had good clearance. Survived.

2145 Rambla Pacifico (Bill & Vicky Higgins Partial burn)

2-story stucco house with wood framing, wooden balconies on downhill side of house, tile roof. Many railroad ties prior to the fire. Many pine trees lined the driveway near the house. They have been cut down. Las Virgenes Fire hydrant at top of driveway on Rambla Pacifico. North edge of house being repaired. Wooden balconies on downhill side of house. Bill took video tapes of the terrain and vegetation two weeks before the fire as well as up to the time they evacuated a few minutes before the fire.

Vicky was at work and called her brother at Santa Monica High School. Electricity was lost about 1030 hours. The downhill neighbor Richards came and got his dogs out. He lost his house. The fire at the Higgins house came up the hill and through the air vent into the kitchen.

Wooden decks have a mist-head sprinkler system. Bill turned on the system about five minutes before the firemen arrived which was about eight minutes before the fire got there. The water pressure was failing about the same time but the system was fed by gravity flow in the line for at least five minutes. Three trash cans full of water were stationed in front of the garage.

About three to four USFS fire trucks were going down Rambla Pacifico from Fire Camp 8 and one peeled off to back down his driveway. The others stopped past Mansie Ln. near the orange sign because the fire had moved uphill from west to east and had already crossed the road in front of them.

The fire truck from Butte County with three firemen burned up on their driveway as the fire swept over it. The fire was at the bottom of the driveway. One man stayed in the truck. One man ran into the kitchen. Another broke a door down and rolled up in a carpet (?). The injured firemen called the other trucks parked near Mansie Ln. for help. The fire came uphill and went into the air vents of the house; it was only saved because there were so many firemen after the initial crew got injured. It sustained extensive fire damage in the kitchen.



The firemen told Bill and his son to evacuate as they were not properly dressed to fight the fire. They left to his mother's house on Rimmer (Tuna Canyon), taking more photos at night.

Impressions

Firemen were worn out but saved the house. There were too many fires. Firemen from different jurisdictions could not get together and could not get organized fast enough. The fire was just too overwhelming for them. Bill's tape shows the big fire trucks running west, then east on PCH. Apparently they were not communicating with each other as to needs and were under different jurisdictions.

2185 Rambla Pacifico (Bill Graham)

2-story white stucco house. Red tile roof. Pool. Upper house on Mansie Ln. Prior to the fire it had many pine trees. The owner had come home and stayed with the house. He had no water and the pool pump he had ordered had not been delivered yet.

According to Mr. Higgins, one fire truck was initially there but left. Bill fought the fire by himself as the fire front went by, but he then went to Fire Camp 8 by motorcycle and asked for help. They said that they had no truck but would send an inmate crew. As they went down, the foreman flagged a fire truck down whose crew said they had no water. The truck went to Camp 8 and filled up with water, came back and helped save the home. Bill lost an accessory building and part of his deck.



Mansie Lane **(22452, 22581, 226344)**

22452 (?) Mansie Ln.

Trailer burned.

22581 Mansie Ln. (Richards)

Stucco, Red tile roof. French doors. Wooden fascia. Wood decks. The house is located downhill of the Higgins and Graham houses. The owner came home to evacuate his dogs and left just before the Higginses did. The wooden deck started to ignite about the same time the Higgins house ignited, then the wood fascia around the windows, etc., burned. A newscaster can be seen on TV walking around the house while the deck was burning.

22634 Mansie Ln. (Matt Sorumer - Mansie Ln. and Cold Canyon Rd.)

2-story white stucco house with red tile roof. Pool. Basically fire-safe landscaping coupled with a fire-safe house. It just came out of escrow prior to the fire and has been remodeled. Nobody lived in it. Janet Magana had put the house on the market on September 1 and it sold right away. They then moved to Pacific Palisades on October 15, 1993. Susanne and Mike Bonjirnos had lived below Janet but Susanne had moved out-of-state September 15 while her ex-husband stayed. So Amy Yarrow and her husband were left all alone in the area.

Narrow Coal Canyon dirt to Yarrow's trailer homes

The dirt access route to the trailer home (no address) of Amy Yarrow and Donn, her disabled, elderly husband, who were killed in the fire, started past the 22634 Mansie Lane driveway. The access is a steep, unpaved road

not passable during most of the wet season and leads into Cold Canyon through a “dry” creek. Amy and her husband were mountain volunteers known to everyone in the area. They were living in a firetrap location (side-slope non-permitted trailer home “off the grid” without water and power) in Cold Canyon near Fire Camp 8 at the end of a dirt road past Janet’s house and past the Bonjirnos trailer that burned. Many people in the area knew and supported the Yarrows inclusive of fire personnel at Fire Camp 8. Amy (Yale) Yarrow, age 67, was very inquisitive and conscious of the dangerous location she was living in and attended the original 1978 Fire seminar as well as a later, 1986 NFES seminar.

Amy was working in Santa Monica. When she heard about the fire and not knowing whom to call and apparently being unable to reach anyone for help, jumped in her pickup and drove back to Malibu to evacuate her husband Donn. After picking him up and driving along the narrow dirt road cut through the tall chaparral, her car may have stalled out and subsequently caught fire, burning both of them to death (Appendix 10 - Loving Caretakers... *Los Angeles Times*, November 6, 1993). The Los Angeles County Old Topanga Incident Report (OTIR), on P.57, incorrectly stated the following “a couple in their mid-eighties who, while traversing a motorway in a remote area above Carbon Canyon in an effort to escape, became entrapped in a chimney above the fire.”

Amy must have been well aware of the danger to her life when she drove frantically along the small dirt road/path bounded by tall chaparral to rescue her husband and turn her truck around near their trailer home. Unfortunately for her, the fire winds had shifted about noon from south to southwest, therefore directing the fire

first into Cold Canyon to the west instead of Las Flores Canyon to the east. This did not provide her the few additional minutes needed to escape the fire descending down Cold Canyon.

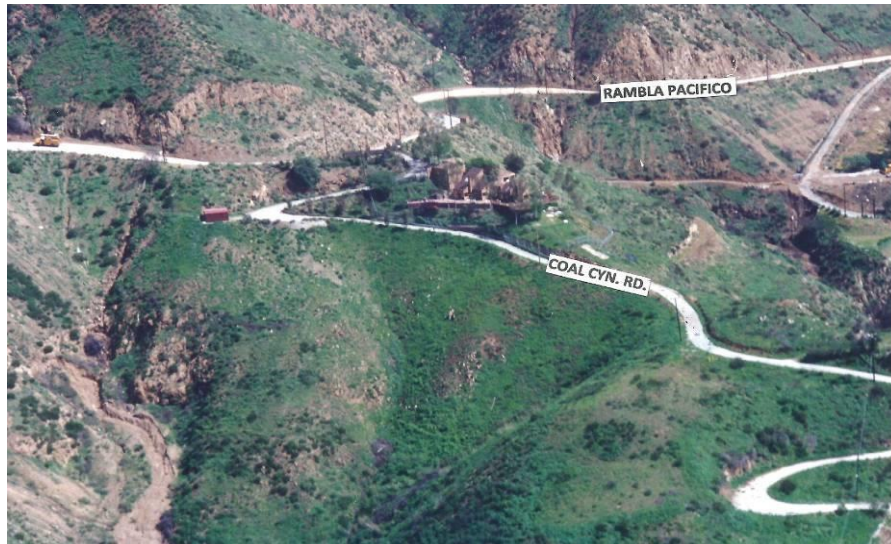
In the location where the Yarrows lived and died, the 1993 Old Topanga Fire had burned through an incomplete burnout within the 1985 Piuma Fire. This 1985 burnout was characterized by standing dead fuels characterized by a much higher dead-to-live fuel ratio than would have normally been found in 8-year-old chaparral regrowth. Additionally, because of disturbance, the degraded woody chaparral had a high herbaceous, explosive flash fuel component.

first into Cold Canyon to the west instead of Las Flores Canyon to the east. This did not provide her the few additional minutes needed to escape the fire descending down Cold Canyon.

In the location where the Yarrows lived and died, the 1993 Old Topanga Fire had burned through an incomplete burnout within the 1985 Piuma Fire. This 1985 burnout was characterized by standing dead fuels characterized by a much higher dead-to-live fuel ratio than would have normally been found in 8-year-old chaparral regrowth. Additionally, because of disturbance, the degraded woody chaparral had a high herbaceous, explosive flash fuel component.



Coal Canyon Road/Rambla Pacifico (Common Access Road)
(2501 Rambla Pacifico; 2627, 2629, 2633, 2657, 2485 Coal Cyn. Rd.)



2501 Rambla Pacifico (Watt and Wendy Webb)

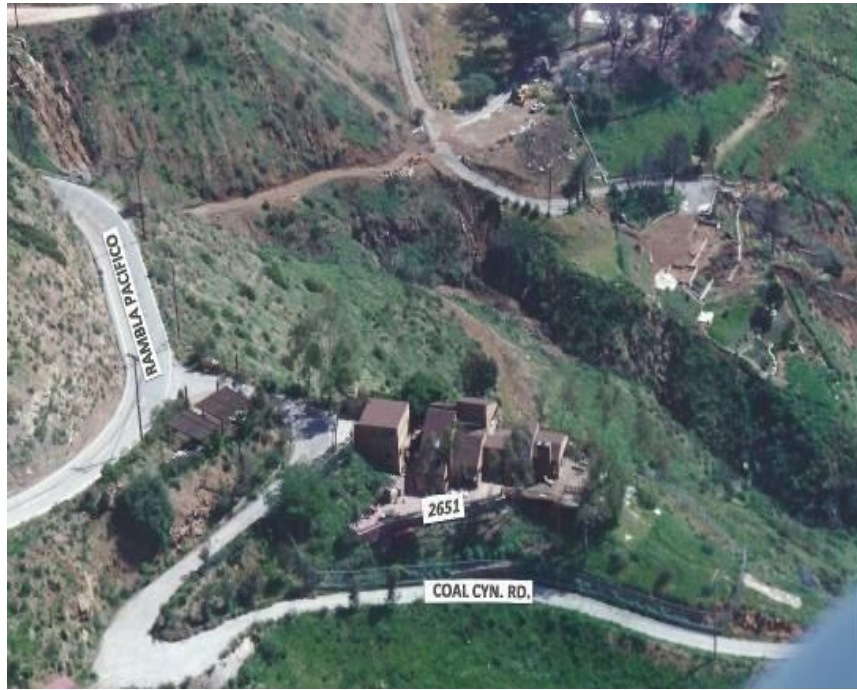
One-story house with wood siding and old asphalt roof along a narrow ridge. It consists of a parking structure and the main house interconnected with a wooden walkway. Open wood deck overlooking the slopes from south to west. Many railroad tie walls. Would not and could not have survived without lots of water. Coyote brush and rosemary vegetation directly adjacent to the house.



According to Neil Petzing, at about 1330 a strike team (5 engines) from CDF stopped at the wood house (Watt Webb) above at 2501 Rambla Pacifico and gave him advice. Mr. Webb had his own 1-1/2" fire hoses tied into the Las Virgenes water hydrant and also had good water pressure. (Webb's house is the house with the American Flag on the garage door that can be seen in the video by Al Simmons). Webb had excellent clearance of at least 200 feet around the house, stayed with the house and saved it.

Homeowner interview:

Watt Webb, a geologist by trade but now a businessman, investigated the area prior to buying the house in 1990. He studied the geology around the house for three days and would not have bought it if the fire hydrant was not in front of the house. In 1993 he had cleared earlier in the year than normally because of an appraisal and some weeds and mustard had come up again. Clearance extended for a minimum of 200 feet to a maximum of 600 feet. His insurance company was Lloyds of London which has just recently cancelled him. He looks at the upper Rambla Pacifico homeowners as self-reliant mountain people that generally prepare for a fire as they cannot rely on outside assistance.



Aerial photo 3-13-1995 (K. Radtke)

Kathleen McGloflin (spelling?) has video of flames surrounding Webb home.

The Webbs were out of the house from March 18-May 1 as it was being repainted, etc. They were told that the 1985 fire burned non-threateningly to the end of the house and stopped, but that the 1993 fire was a "100-year fire."

Watt was at work in Commerce when he received a phone call at 1130 from a neighbor who told him that a huge fire was in Woodland Hills. He tuned in his desk TV and was informed about a fire in Woodland Hills out of control. Watt immediately chased home. His wife Wendy was at home with their 3-week-old baby boy. At PCH near Topanga Canyon, his neighbor Kirk Wood (2485 Coal Cyn. Rd.) passed him, racing in the center lane. They came up to the property about the same time at 1230.

The Las Virgenes Water District had locked the fire hydrants on Rambla Pacifico in front of his house, the next hydrant above on Rambla Pacifico, as well as the hydrant on Coal Canyon Road. Watt had good bolt cutters and took care of the lock in front of his house. Watt and Wendy had preplanned strategies for emergencies such as fire and earthquake. Wendy already had the baby, the nanny, the dogs, cats, and miscellaneous valuables in the car ready to evacuate. Even the cat Ted came home, sensing trouble and was willing to be evacuated. Tripper, another cat, jumped out of the car window at the last minute but survived the fire.

Watt had about 1,000 feet of single-walled 1-1/2" fire hose (good lightweight mountain fire hoses but they kink easily), about 1,200 feet of double-walled fire hose, as well as a 2-1/2" water chief (Halpin Supply Co in L.A.).

His water chief reduces the fire hydrant to 2 ea. 1-1/2" and 1 ea. 2-1/2" outlets. This way the firemen have first right to the water hydrant while he was using hydrant water. To his knowledge none of the fire crews had 4" connectors for the fire hydrant (the fire hydrant has a 2-1/2" and a 4" outlet). Watt laid out one hose to the deck while Kieran and his friend O'Shan (both had heard about the fire and had come unsolicited to help) tied the other hose to the garage. Both made several trips to the Sea Lion Restaurant parking lot with their cars loaded with valuable items from their homes.

At about 1400 hours the Sheriff's chopper demanded evacuation, but they just ignored the orders. Suddenly a fireball of flame appeared out of the smoke near Piuma Road and flashed (rolled) along the east side of the Yarrows' slopes just below the crest of the ridge (the Yarrows were found dead after the fire by Kirk Wood).

Wendy evacuated. Watt and Kieran kept wetting down the west side of their slopes that face the Yarrow ridge across Carbon Canyon. At about 1430, approximately 50-foot-tall flames moved down the slopes north of their house from Rambla Pacifico toward Kirk Wood's house in Carbon Canyon. Firemen from the Redbluff engine co. (CDF?) tried to light backfires (threw down flares) along the NW side of the common street to the lower houses but it was probably too late at this time. Carbon Canyon was in smoke and fire covered the area where Kirk Wood's house was located, and Watt thought that the house was lost (Wood was well prepared with a pool, pool pump, etc., and saved his house).

Firefighters gave Watt some good advice such as "There is good clearance. Keep after it. You have a good chance." Kieran was at the garage with a hose as well as on the roof fighting the fire and Watt was in the back at the deck. Suddenly the fire hooked around over the small ridge and through the saddle (the way it was described in the Radtke book) and attacked the house from east to west. It became a roaring inferno. For almost one hour it was like being in back of a jet engine.

It got extremely hot and the men were only lightly dressed. Watt opened the door to the dining room, went inside, closed it as much as he could but held out the firehose with his arm and kept shooting water on the deck. Just as the firewall hit, a woman firefighter yelled to Kieran on top of the roof that he should mist out his nozzle and stand underneath it as he would be safer and would be able to breathe. Kieran stayed on the roof as the fire front went by.

A firefighter was on the east side of the deck and ran around to Watt and told him to get his hose to the east side. However, there was only enough hose to reach the end of the deck along the west side, so Watt threw open the sliding doors and ran through the house and gave the hose to the fireman who held the hose for a while. Watt ran back east and, having quick couplers throughout the garden, reconnected the garden hose closer to the house and knocked out some spot fires. Then he ran back to the east side and the fireman gave him back the firehose, telling him that he was just doing fine and to keep after it as he had to bump on to the next house. About 10-foot-high flames from spot fires were still all around the house.

After the fire front went through which took from 3-5 minutes, Watt went back out and there were spot fires everywhere and the railroad ties were burning on the top and other exposed sides (in Watt's opinion, railroad ties and telephone poles are the same as installing permanent torches). Watt did not have any hose clamps to shut down the firehoses that were under pressure, to add hoses. Watt and Kieran were both very exhausted from running up and down the driveway to shut off the valve at the hydrant to add or adjust hoses.

Up to about 1630 Watt could only concentrate on the first 10 feet in front of him. Often Watt and Kieran lost contact, not knowing if the other was still alive. At about 1630 Watt's vision extended slowly beyond fifty feet of his body and he could now concentrate and see through the smoke at what happened from 50-100 feet. After knocking down the flames, both made an adjustment to their equipment and added hoses.

At 1730 both felt safe to take a break. Smoke had cleared in parts of Carbon Canyon and Watt saw Kirk Wood's house still standing. Smoke had also cleared to the east for at least 500 yards and he saw Herb Klingerman's house at **2653 Ramble Pacifica** on fire (there is a long, narrow driveway with maximum width of 15 feet and slope of 15 degrees. No fire hydrant near the house; an indefensible situation without lots of water. In the past, a County fire truck had to go to Herb's house and it took them almost 45 minutes to get back up the driveway). **2651 Ramble Pacifica** (house among the trees) was also on fire.

Watt called his mother on his portable phone about 1730 and told her that the house was safe and that he was alive. His mother always relays messages via their telephone tree and about 1815 his wife knew about it. His wife was at the Sea Lion and had seen the men folks coming out of the canyon, saying they lost their houses. However, Watt never came out. So, she was frantic and feared the worst, leaving desperate phone messages with his mother and others to find out the whereabouts of Watt. At about 1730 Steve Dunn and Patty Wells (**2629 Coal Canyon Rd.**) drove up in a pickup from Coal Canyon Rd. (CCR) below Watt's house (western-facing side-slopes of Carbon Canyon along Coal Canyon Rd.) and said that they lost their house as the pool pump quit, but that they saved the two adjacent houses (**2627, 2633 CCR**). Gershan at **2657 CCR** had panicked

and left but Dunn used his fire equipment inclusive of pool pump to save the houses until the pool pump quit. (Watt pointed out that few people use fuel stabilizers [which prevent old fuel from becoming bad] which may be a problem in pump failure with old equipment. Additionally it should be investigated as to whether a diesel generator uses less oxygen than a gas generator).

At 1830 Watt and Kieran took a victory cocktail break (Kieran did not know that the fire had gotten to Carbon Mesa and was burning down his rental house with all his belongings and equipment. He was new to the area and did not know—and neither the firemen knew when later asked—where Carbon Mesa was). There had been a lull in the wind from about 1700-1830, then the Santa Anas picked up again, pushing up to 60 mph from 1830 to 1900. Carbon Canyon looked like a picture from Star Wars with big chunks of firebrands landing on the deck as well as the roof, melting holes in the old asphalt shingle roof. Both men pumped for about 2.5 hours with two 1-1/2" hoses as they had already pumped for about one hour before the fire hit. They knew in general that it was wasted water before the fire hit but it did some good. At midnight there were no more firebrands or embers. Kieran then left to Carbon Mesa (his rental house—the end house on the bluff—had already burned). Kieran drove through the whole fire zone.

Suddenly about midnight the home at the top of Saddlepeak (in line of sight) burst into flames. For about a half hour Watt did not know that it was a home as he thought that it was a new fire front. At 0100 there was no more water until 1400 the next afternoon (about 13 hours). Watt believed that either the one-million-gallon Las Virgenes tank was empty or the switch from the Las Virgenes water system was thrown to connect to L. A. County District 29.

The firefighters that helped them were magnificent. They were from Redbluff (CDF?). They “had balls” and knew what they were doing in contrast to other firemen that ran and hid. None of the firemen knew the area. Their (Redbluff) engines kept coming back at night and filling up from the hydrant in front of the house until 0100 when the water failed. Then they left. Ashes were baked into the rental 600 Mercedes parked in front of the garage. Packrats were everywhere around the house after the fire as there was no food, water, and shelter. Right after the fire Isabel, the day laborer and his crew, cut all the dead standing stems for a distance of about 1,000 feet around the house and rolled them down the hill.

Lessons learned

The hose equipment will be updated. A 4" fire hydrant adapter will be added as well as a large fire hose clamp and fire foam. The wooden deck will be sheeted in. Nomax clothing will be bought. A 20,000 to 30,000-gallon water tank will be added in the form of a raised pool. The house may eventually be stuccoed. Remaining good exposed railroad tie walls that did not burn were stuccoed along their exposed surfaces.

Coal Canyon Road

2627, 2629, 2633, 2657, 2685, 2651, 2653

2627 Coal Canyon Rd. (Loan & Ut Tran

1-story wood. Asphalt shingle roof. Saved by neighbor Steve Dunn with equipment from Gierhan who evacuated.



2629 Coal Canyon Rd. (Steve Dunn, Patty Wells)

1-story old wood house. West along slope without setback. Caught fire about 1600 and burned when neighbor's pool pump operated by Steve Dunn failed.

2633 Coal Canyon Rd. (Ghazi & Beverly Taki)

3-story split level. Asphalt shingle roof. Saved by Steve Dunn with equipment from Gierhan who evacuated.

2657 Coal Canyon Rd. (Chuck Cancellier, Gail Gierhan)

1-story wooden house with extensive lattice work and Bougainvillea facing downhill slope. West above slope. No setback. Owner evacuated. Caught fire about 1600 and burned. Pool pump run by Steve Dunn failed.

2685 Coal Canyon Rd. (Kirk Wood)

2-story stucco. Rock hot-mopped roof(?). Carport. Pool. Named 'Coal Creek Ranch.' At bottom of long, narrow driveway. Kirk came home at 1230 and saved the house. Well prepared with pool pump, hoses, etc.

2651 Rambla Pacifico (Tom Zutaut - burned)

House had a large pool as well as a pool pump but was surrounded by many trees. Owners evacuated quickly. CDF tried to save it but could not. Too dangerous, too many trees. Burning by 1630 or before.

2653 Rambla Pacifico (Herb & Dolorers Kliegerman)

House is in draw near the bottom of the hill below 2651 Rambla Pacifico. House was overlooking a steep draw about three hundred feet long (chimney effect) with little brush clearance. A wooden deck overlooked the steep slopes. Owners evacuated quickly. One of the first houses to ignite as the fire front went through. No attempt was (could be) made to save it.

**Rambla Pacifico (Eldermoor Drive) common driveway
(2613, 2639, 2665, 2675, 2677, 2679, 2681, 2683, 2688)**

2613 Rambla Pacifico (Neil Petzing)

Two-story white stucco house with Class A asphalt shingle roof but large vents for gable-type attic. Empty lot to west. Many large coniferous trees to east. Neil does not believe the house would have survived the fire unattended.

At about 1130 hours Neil drove up to Lorna Matisse at Saddle Peak and saw the fire just cresting over the hill. He drove back to his house and told his wife to pack up clothes and pictures. He attached a single 1-1/2" line with 250 feet of hose to the lower District 29 fire hydrant. On the Las Virgenes hydrant he attached a gated Y and attached 200 feet of 1-1/2" hose on one side and 300 feet of 1-1/2" hose on the other side. He laid the 300-foot-line down the upper driveway and behind the Myoporum tree north of his house, and the 200-foot-line straight down the slope to his patio. His wife left about 1300 hours.

At about 1330 a strike team (5 engines) from CDF stopped at the wood house (Watt Webb) above at 2501 Rambla Pacifico and gave him advice. Mr. Webb had his own 1- 1/2" fire hoses tied into the Las Virgenes water hydrant and also had good water pressure. Webb had excellent clearance of 200 feet around the house.

One type 3 engine from CDF with four firefighters (three men, one female) tied into 2651 Rambla Pacifico down the driveway above Neil's house. This house had a large pool as well as a pool pump. Another house at **2653 Rambla Pacifico** sat near the bottom of the hill at the bottom of the narrow driveway with little brush clearance, overlooking a steep draw about three hundred feet long (chimney effect). A wooden deck overlooked the steep slopes. This house ignited quickly. 10-12 private cars from surrounding neighbors were parked along Rambla Pacifico near the driveway of 2653 Rambla Pacifico. The owners of **2651 and 2653** were evacuating about 1300 as they feared for their lives. Neil told them that they had time to get more things out of the house and they went back to retrieve more items.

The fire crested the mountain top above the all-wooden Webb house and spotted into the canyon below (Webb

said it happened about 1445) and caught **2653 Rambla Pacifico** on fire (no pool, very little brush clearance). **2651** was not yet on fire but CDF pulled out. The 10-12 homeowners had already pulled out about ten minutes before the CDF strike team left. Neil said that he would have stayed but, in retrospect, the house could not have been saved because of the many trees surrounding it.

Al Simmons (off-duty Burbank Fire Captain) in his black Bronco was taking pictures as CDF pulled out (see 2653 in video). His assistant had an L.A. County jacket and helmet on and Neil therefore thought that he was a County Fire Dept. photographer. About 1430 (?) Neil told Simmons in not-too-polite English (edited out of tape by NBC) to get the video out of his face and help him or leave, and Simmons took off after CDF and went down around the corner (look at video for time). Sheriff had also arrived. Neil asked the Sheriff for flares as he wanted to start a backfire on the uninhabited hill across from his house on Rambla Pacifico as the wind was going uphill. Just as he was about to do so, firebrands had already ignited the hill.

Neil took the 1-1/2" hose that was laying along the driveway connected to the Las Virgenes hydrant (County line also still had water) and took it to his patio. He sat down in a chair and aimed a fog stream of rain over his house for 3-5 minutes using an adjustable plastic nozzle. He had good water pressure estimated at 70-80 pounds. After about five minutes the house across the street at **2679 (?) Rambla Pacifico** ignited. Then Neil took the hose and aimed a water curtain along the eaves at the front of his house. Then he saw smoke coming from the trees in the back of his house. Probably firebrands burned a hole through the 1-1/2" hose line laying there. The leak in the hose put a good spray on the back of the house. At that time (about 15 minutes later), a Captain and two firefighters from Downey came and asked if they could help. Neil asked them to check on the north side of the house and they told him that everything was OK. It was about 1430-1500.

At this time four off-duty firefighters from his own Fire Department arrived (a captain, engineer and two firefighters). Neil had called them at home about 1230 for help. They came in a suburban truck but got stopped in traffic at PCH. But then they tied in behind a strike team that happened to drive by and thus got past all the road blocks. They came up through Las Flores Canyon Rd. and up Hume Rd. about the time the fire went across Hume. This was about 1415-1430.

Neil told the Downey Captain to forget about **2675 Rambla Pacifico** (Logan) because the wood balcony had taken off. Neil had to take time out to extend and repair the hose line in back of his house that had burst. By this time **2675** was pretty well involved. From across the street Neil laid an exposure line. His Captain friend ran up to the Downey truck that was on the County hydrant and was dry and was told that they were out of water (and thus could not do anything). The Captain friend told the Downey engineer to tie into the Las Virgenes hydrant, which he did. He laid a 2-1/2" line to his pumper and a 1-3/4" line from his pumper. This line had excellent pressure and the Downey guys started to squirt water on the house that was fully engulfed instead of on the surrounding exposures. Neil and his crew saved the adjacent motorhome and adjacent house at **2639 Rambla Pacifico** which had only about 15 feet distance to the fully engulfed house. Fortunately, there was a concrete wall between both houses and two men crouched with the fire hose behind the wall and put a stream of water on the exposed house for about twenty minutes.

The adjacent house (about 2,000 square feet) burned down rather quickly. Part of the reason for the quick burnout was the fact that the owner was apparently a machinist and the place was full of highly flammable hazardous materials such as four Acetylene tanks, motor oil, lots of paint thinner, etc., as well as a fiberglass boat stored in the garage.

The engine Co. from Downey finally brought down the 1-3/4" hose. At this time the car started to burn which sent the fire over the stone wall to Neil and his friends. They kicked in the door of the house and checked for any extension of the fire into the interior. Fortunately the house had open-beam ceilings without any vents or they would have lost the house. (Neil's house had big vents but fortunately also a good water curtain aimed at them.)

After midnight (as late as 0300?) Neil drove up to Fire Camp 8 to get help. He woke up the Camp supervisor (the crews were asleep) and asked for help and told him that he had saved four houses in his neighborhood. He told him that there was no water, no manpower, and houses were still burning. He asked why there was nobody down there and asked him to give him a break and give him an engine company. The strike team leader then sent an engine down. They stayed there for fifteen minutes and said they were out of water. No night bird-

dogging was done in the area. (Neil never allowed himself the luxury of going to sleep during the Green Meadows Fire.)

At the first Malibu City Council meeting after the fire, Petzing and Schafer told the council that since you did not open up Rambla Pacifico, you therefore condemned the people on Rambla Pacifico.

County Fire Department is reactive, not pro-active. However, they only have three-man engine companies. There is too much complacency. (Other areas are different; for example, seemingly everyone in Seattle knows CPR. Homeowner fire training is a good idea.) The amount of burning firebrands and the wind (up to 60 mph) was unbelievable.

2651 Rambla Pacifico could not have been saved because of the trees.

NBC bought Neil Petzing's video. He will be interviewed on TV about saving houses and will emphasize that the following helped him:

1. Very well-trained at local and state level
2. Planned for this fire for fifteen years
3. Over 100-foot brush clearance
4. Noncombustible roof
5. Stucco eaves
6. Good water system

Neil got I. C. (Incident Command) certification while he was still a captain. Certification consists of ten subjects inclusive of hazardous materials, finance, computer, etc. Neil and his crew saved 4-5 houses. His own home would not have survived without him. He will remove the cypresses/cedars.

In 1973-74 there was a Captain at Kagel Canyon Fire camp with an advanced degree that did the statistical analysis regarding wood shingles and clearance distances. He taught at Moorpark College and Neil took a class from him.

When Neil went to Fire Camp 8 to get help, people were asleep; however, he will not make an issue out of it. He does not know how fire was fought below him as he was too busy with his own house. Firemen apparently did not do a good job with saving houses in the area. 19 of 21 houses above and around him burned and 12 of 16 below him.

2639 Rambla Pacifico (saved by Petzing)

2-story split level. White stucco. Red tile roof. It would have ignited if Neil Petzing and crew would not have saved it. Next-door neighbor burned.

2665 Rambla Pacifico (saved by Petzing)

House below the wooden house at 2675, which burned down. It was saved by Neil Petzing and his volunteer off-duty fire crew. Fortunately the owner finished clearing about 200 feet the day before the fire. It was also fortunate that the eucalyptus never caught on fire.

2675 Rambla Pacifico (John & Louise Logan)

Wooden house with wooden balcony. The balcony ignited quickly as the fire front went through and was fully engulfed within a short time. Lots of hazardous materials stored in garage. Unattended. Could not be saved.

2677 Rambla Pacifico

2-story split-level. Wood siding. Class A old green asphalt shingle roof. Separate garage. Last house at bottom of long, winding driveway. Unattended. The tenants had just moved in the day before and had cleaned and watered everything. No landscape plants burned near the house. Fire may have swept around it.

2679 Rambla Pacifico (John & Norma Hall, est. Bruce Hall)

Ignited as fire front burned through the areas (witnessed by Neil Petzing),

2681 Rambla Pacifico (Dr. Tuck, single driveway)

3-story split-level side-hill white stucco house. Red tile. Side-slope neighbor of Gil Chasen. Generally good clearance. Lawn in front of slope providing setback.

Dr. Tuck did a total yard clean-up about a year earlier, filling at least ten large dump containers full of debris. He had heard that there was a fire and chased up Las Flores Canyon Road and collided at the corner of Hume Road with a girl trying to get out. The cars were crashed there when Gil was racing home. Tuck showed up before the fire. No one was at the property during the fire (?).

2683 Rambla Pacifico (Inge Finnegan)

Single driveway. 2-story split-level main house and guest quarters separated by garage. Red tile roof. White stucco. Wood decks on guest quarters. Wood trellis. Across from Reid's. Good slope clearance but many trees near the house.

Inge was at PCH about 1130 and saw smoke billowing up over the mountains. She chased back up and remembered an evacuation drill from way back she had done with her husband. She first put insurance papers and architectural drawings into her car. Then she put her dog and her friend's birds in the car and filled trash cans and buckets with water and placed them around the house. She then turned off the gas tank. It was starting to get very smoky and she thought that the fire was coming from behind. There seemed to be nobody on the hill except for a neighbor's friend who helped her place the chickens and the ducks into her bathroom after she had filled up the bathtub with water (some chickens had drowned after she returned). She did not think that her house would burn but was concerned that her wooden fowl coop would burn. She also placed some sprinklers on the wooden deck and turned them on. Neil Petzing, who was reassuring, probably turned the sprinklers off sometime before or after the fire reached the house. He helped save the house after she evacuated.

A friend called her and told her that if she could taste the fire it was close (wet your lips and see if you can taste the smoke). The fire was close! Then the Munros came about 1300 to get Inge. The electricity and water were on when she evacuated.

According to witnesses, the fire came from Carbon Canyon below. A fireball engulfed the house. The seams of the copper rain gutters show heat discoloration. It must have gotten very hot before the fireball died quickly because of lack of fuel directly around the house. A winter woodpile burned which had been placed against the concrete wall near the house. There were no railroad ties near the house. The neighbor's cabin (old Quonset hut) burned to the ground.

Evaluation

Rosemary, mature coyote brush, pine trees and eucalyptus trees burn well and carry the fire. Inge is cutting the scorched trees on her property for about fifty feet around the house and is also relandscaping with iceplants.

2688 Rambla Pacifico/2688 Hume Rd. (John & Darlene Reid)

2-story long, wooden home with wood decks built in 1978. In 1985 Mrs. Reid had been told by fire personnel that they would not save her house as it was a big long, wooden house and would use up at least three times more water than nearby homes.



Darlene was a stewardess for TWA for 25 years and was always prepared. Husband John was at the Criminal Courts Building at downtown and Temple and was stopped by the Topanga roadblock from returning home. Darlene went to school in the morning as she has children in 3 different schools. She came home by chance at 1045 to do some unfinished homework. There were three messages on the machine and she spent about 20 minutes on the phone. She then turned on the TV and watched about the fire on Topanga Canyon Blvd. and Mulholland Hwy.

She had a fire check list in the closet (they have a house at Mt. Baldy where there are always fires) and, in the response to the Laguna Fire, had just talked the day before about what valuables to evacuate in a fire emergency. She started putting valuables into the car when she heard and saw helicopters. At 1145 she called the schools to tell them that there was a fire. They knew about it and helped relocate the children as per the parents' wishes. Her daughter Stacy came home from Marymount College about 1215-1230. She took out the dogs and other items on the fire list. Since she was in panic her mother calmed her down.

The power went out about 1230-1245. The phone kept ringing. Larry Larson (Santa Monica Fire Dept. Captain at Arizona and 15th) came by in his Mercedes loaded with another 3-4 off-duty firemen. He stopped and told Darlene that the fire was coming her way and that she may be OK because of the good brush clearance around the house. She would only have three minutes before the fire would hit. Darlene had problems connecting the sprinkler system on the roof because it had not been used since 1985 (the last brushfire in the area). Larry hooked up the hoses for her and she credits primarily him with saving the house.

Daughter Stacy's car was heavily loaded with architect drawings and tax records (as well as with misc. belongings from all rooms) because Darlene thought that they would be needed if they had to rebuild. Before Stacy left, both went from room to room to take out items that are costly. Stacy evacuated down the hill with the dogs about 1400 when helicopter with loudspeaker first told everyone to evacuate. Larry Larson took her husband's BMW to Larry's house at PCH next to La Costa (the old Malibu style house with flowers and sundeck on roof top around wooden house).

Darlene filled up garbage cans and placed them strategically along with rags. Before Larry left he told her to turn on the sprinklers just before she would evacuate. However, she turned on the roof sprinkler system immediately and the backslope sprinklers about 1300. A Batt. Chief came as well as the helicopter and told her to evacuate but she didn't really want to go because her dad (who died when she was 13) was a fire captain and had told her that to stay if you want to save your house. Larry had told her the same thing. Darlene had concerns as she knew about the Laguna Fire and knew that the firemen that fought this fire did not know their area. Many homes in the Laguna Fire burned unattended, no one expecting a wildfire. After the fire chief left, Darlene went back into the house and gathered additional things of value. About 1430-1500 the fire reached the top of the hill behind her house and Darlene left for the first time with her car loaded. She started up Azurelee (Castlewood?) but stopped to watch for a few minutes the beautiful display of nature. She wanted to know if her house would bum down. There was no fire on Azurelee and Briarbluff yet. About 8 firemen supported by two fire trucks were laying hose lines on Castlewood between John Cosentino's trailer house (it has been stuccoed and cemented) and Azurelee. They were hooking up to the fire hydrant. John Cosentino had come home and left immediately. His house had no trees around, good clearance, and survived.

Darlene counted at least 50 fire trucks coming uphill from Hume/Rambla, Azurelee/Castlewood, etc., and felt they were saved. The flames were still up the mountain. However, these trucks kept going uphill past their house and went probably to the valley side and Piuma, etc. She went back to the house, parked the car and checked the house again. Fire trucks were still coming up the road for about 30 minutes in large groups (convoys) and later in smaller groups (strike teams?). They were hook and ladders, old ones, new ones, tankers. Different colors.

At about the same time, animal control officers were picking up animals, and road crews followed the fire trucks (God bless them as they are the unsung heroes of wildland fires; the Fire Department does not move without them). Telephone repairmen also came.

As one fire truck slowed, she flagged it down, yelling, "If you are looking for a house to save this is mine and I am staying." This truck came up the driveway. It was a stocky truck from around the Chino area and had one or two women firefighters. She told the fire people that there was a hydrant. Another truck parked on the road. One fireman fixed the roof sprinkler. However, there was no water pressure. The fire was now coming from the northeast to east from Las Flores Canyon. As the wind changed and whipped up, the 8-to-10-foot flames changed to tall flames. Cinders as big as tennis balls, even grapefruits, were coming through the air. It was a pyrotechnical display of awesome proportions.

The woman firefighter told her to get out of her dress and put on jeans and boots. Darlene watered down the deck, changing at the same time into jeans. She had a T-shirt on but no sweater. The fire was all around now. Earlier Larry had removed the gasoline can from the steps. After the fire front abated, the two units left and proceeded uphill. A few minutes later the fire came back. Darlene was alone, running through the house, using water to put out hot spots. A fire truck was at the big wooden house at the corner (Bass at **3045 Rambla Pacifico**).

She waved at an Ojai Fire Dept. truck, "also showing some leg," and a crew of at least seven came right up. The foreman turned out to be Shan McAwee who knew the area as he was raised in Malibu but had moved to Ojai about two years ago. He asked Darlene if they had evacuated the Lady of Malibu Church and how the boy scouts were (his wife had been a Girl Scout leader). She asked if he was Shan McAfee and he said yes. He tied into her house and decided to save it if possible, saying that he will try and do his best and not to give up hope. Other firemen came and Shan was directing them. Because the road is wider at her house than most other parts of Rambla Pacifico, fire equipment was parked there everywhere and fire trucks were in every driveway. She watched all homes on Rambla Pacifico from her house at Azurelee Dr. to Hume Rd.

Darlene finally left at about 1630. She did not go uphill because Azurelee was on fire. She saw the trees on fire that were rimming John's house and then she saw the house on fire (her neighbor Inga Finnegan, an environmentalist, knows all the people's names; she came, took her animals and left). Darlene drove down Rambla Pacifico while cars with news media personnel came up the street. She saw the Bougainvillea on fire on the Hough house (now sold) and the fire catching all the exterior portions of the house on fire. At **2760 Rambla Pacifico** the wood around the windows and the wood columns of the deck were on fire. It looked as if someone had decorated the house with Christmas lights. The house burned later to the ground. She thought that the house should not have burned if there was someone there to flag down a fireman.

The water never failed until she left. Firefighters always had water (perhaps from their trucks). They did not use the water until the fire was near the house. Every house on Rambla Pacifico she could see seemed to be on fire on the left side as she was driving down to Hume Rd. It was hard to see. At Hume Rd. people (all newscasters like ants out of an ant hill) were turning back. Wherever they were, the newscasters never did anything to help but were just in the way doing their news. Interviewing her, they wanted her to cry to alter their news story but Darlene refused. On the other hand she loved everyone that could help her such as fire people, animal control officers, road crews.

A fire truck was parked at the Hume intersection heading downhill (near the mail boxes), and Darlene (with engine and air conditioning going) parked next to the fire truck so that it protected her car. The fireman rolled down the window and said, "It is going to get real hot. Do you have anything to cover your face?" Darlene covered her face with a towel and used the water Gil had given her. Every newscaster had a face mask and an orange identification sticker that had admitted them up into the fire area. Fire trucks were facing downhill.

At about 1635 the cars were momentarily engulfed by fire. Darlene watched the paint peel off the newscaster truck and the newscasters looked real nervous. She was never afraid because the firemen were there too, telling her everything was OK. A tree (limb?) fell and first hit the newscaster car before bouncing off the top of her car. The firemen got briefly out of their truck and hosed both cars down. When there was an opening in the flames, the cars moved instinctively forward by a few feet or so. When the flames closed in, they stopped. The cars that were flanked by the fire moved more often. A fire truck was at the Hough house earlier in the day but not during the burnout. At about 1705 the firemen in the fire truck said that they could leave to Fire Camp 8.

Darlene's was the lead car of a caravan of about 4-5 cars. The newscasters were behind her. Near her house she slowed down to look, and her house was still there. There were huge boulders on the road but the newscasters passed her because their car had good clearance. There were rings of fire around palm trees from the bottom to the top. Trees were on fire across the road from her house and the fire blew across the road to her eucalyptus trees. When Darlene had left her house at about 1630, her trees were not yet burning. The fire came to her house after 1630 (1630-1700). Nobody was at her house and she drove to Fire Camp 8. As she drove there it was burning along the road but it was safe to drive. The trees got caught in the fire that came from Las Flores Canyon. A huge wave of fire also came up from Carbon Canyon about 1710. Lance and his road crews cleared boulders and rocks. They were the unsung heroes.

Fire Camp 8 was full of trucks, workers, and crews. It had been the election headquarters for the day. There were fire crews and the crewmen were eating. There were also road crews, telephone and Edison crews, and Red Cross personnel. Darlene asked jokingly if she could vote but was told that the buildings were full of smoke and nobody could get in there. When Darlene asked questions, she was told to ask a fireman in a white hat. Shan had a white hat and people came to him.

Darlene left Fire Camp 8 at about 1730 to go back to her house. Mrs. Burkhardt from Sumac Ridge hitched a ride with her. Darlene told Mrs. Burkhardt that she would take her only as far as it was safe. Mrs. Burkhardt crowded into Darlene's backseat and talked her down. Everything was on fire but not serious flames that could get you. The flames were only 4-5 feet. As they passed Sumac Ridge, Burkhardt told Darlene that her house was gone as she could not see it through the smoke. Darlene took her all the way to the barrier at Rambla Pacifico as her truck was there. Burkhardt's truck started but the lights were not working. Belongings in pickup had not burned.

The Sumac Ridge sign was burning. The Hinderes' house and everything around it was on fire. All wood fences were gone and the Carpenters' house was gone. The house was mostly down-slope. The houses on lower Rambla that one could see were burning. The house on the road at Castlewood and Azurelee (Spooney Singh, Indian, wears turban) had a pool and pump. Exterior stucco, tile roof, large pool. Good, safe location for a turn-around. House in front of him made it. He was home but left after the first wave of fire. Had a fire hydrant.

The fire burned intensively and had a backdraft. The wind swept through and caught bushes on fire. Then it caught the wood parts of the houses. Window frames were mostly wood. Darlene thinks that the hillside clearance saved her house because the fire came downhill slowly. Additionally, there were no neighbors behind her or on either side so that there was discontinuous fuel.

Since the lights on Burkhardt's car did not work, she followed closely behind Darlene as Darlene drove back to her house. Darlene was back at the house between 1830-1900. The side of the house had burned but Shan had put out the fire (when she met Shan at Fire Camp 8, he told her he was sorry that her house had burned, as he believed it did). Her house was still smoldering and the creosote railroad ties were burning. She closed all the doors and the garage as they were left open by the firemen. Embers had blown into the house. The fire was not intense anymore, but discontinuous lines of flames (not walls of flames or hail of flame walls like before) up to 10-15 feet in height still came from Carbon Canyon. Neil Petzing told her she was OK, so she left with Burkhardt.

Summary and Evaluation

Shan told her to leave as the fire came (first wave) from the north above the house. The second wave came from the east and southeast. Darlene was at the corner of Rambla Pacifico and Piuma Rd. for about 30-45 minutes. If they could have left people in the area just a little bit longer or if Rambla Pacifico would have been open, more homes could have been saved. She was very disgusted with the news media.



August 12, 2019 - 2688 Rambla Pacifico/2688 Hume Rd. still a potential design-for-disaster.

B. 'Central' Rambla Pacifico (Azurelee to Hume)



Rambla Pacifico Common Driveways
(2669, 2690, 2736)

The Los Angeles County Old Topanga Incident Report as stated in the Rand Report (p.112) summarizes the following for the mid Rambla Pacifico area (Rambla Pacifico below Las Flores Canyon Rd. to below Hume Rd. and intersection roads):

"There were three engine strike teams in the area before the fire arrived." "After arriving in the neighborhood, these units lost radio contact with their division supervisor." "They were unfamiliar with the area and it was possible that many roads were closed due to downed power lines." "When the fire arrived all the units had deployed for structure protection." "The men and equipment were overrun by flames while trying to protect structures with limited water." "Most of the units experienced serious difficulty, with injuries to men and damage to equipment." "Repeated requests for water drops went unanswered." "After the fire front passed, they regrouped and found (Los Angeles County) Fire Cp. 8 by 'accident,' where they were able to repair their equipment and obtain water." "Several homes burned while they were gone." "The water supply in the Hume area went dry when the fire front passed. It was later connected into the Las Virgenes Municipal Water District supply which provided water for several hours." "Many of the fire fighters were not experienced with brush fires. These fire fighters were from jurisdictions where brush fires do not occur and had received no wildland training." A footnote also states "The extent of actual brush fire experience of Los Angeles County (LAC) fire fighters is limited by the success which the county has had in extinguishing brush fires before they become large enough to provide experience for thousands of (their) fire fighters...." "Thus many of those hired by LAC over the last five years before the Old Topanga Incident (of November 2, 1993) had limited actual brush fire experience. Unlike some of the fighters from outside agencies that had, however, received brush fire training."

2669 Rambla Pacifico (Gil Chasen)

Two-story wood-siding house with wood decks and Class A Cal shake-type cement roof. Many eucalyptus and pines (County Fire Dept.!).

If the firefighters (CDF) with the brush-fighting knowledge and experience that saved his house would not have been in Laguna to respond to this fire, the disaster would have been much greater. CDF saved his house. The crew said they had come from Laguna.

Gil had watched the smoke for about an hour from Brentwood. Then he decided to leave for Malibu and came home about 1300-1330. He ran all red lights. Nobody was blocking any intersections at Sunset Blvd. yet. He told the Sheriff at Topanga Canyon Blvd. that his wife and children were at home and he had to evacuate them. Once home, he loaded the car to the top (but unfortunately in the panic had no evacuation list telling him what to do). He took all pictures off the wall, took photographs, VCRs, cameras, etc. His wife was not home after all, as she could not get back in and was stuck at the Sea Lion Restaurant.

Gil parked the car in the upper driveway near the Pepper tree. Neighbor Darlene Reid, some of whose relatives are firefighters, had told him that if you want to save your house you have to stay with it. Gil had hired two crews the Saturday of the Laguna fire who cleared all the flat fields on the downhill lots. The debris from the clearing was stacked in two huge piles. He put his rabbit and two huge piles of belongings into the center of the clearing. All survived the fire.

At about 1430 he saw flames coming down the mountain above Reid's house (large, totally wooden house on Rambla Pacifico at corner of Hume Rd.). There were three fire trucks at Reid's house that extinguished the hot spots around the house. The head of the fire was not so intense (going uphill with shifting wind behind Reid's house? See comments by Petzing about backfiring). Suddenly Gil saw the Blue Gum eucalyptus behind his house catch on fire and rushed over there. He had previously laid out 400 feet of garden hose. Then the tires of the two-wheel utility trailer parked near the eucalyptus trees caught on fire. Now the fire came down the hill from the north. A *Los Angeles Times* photographer on the hill was taking many pictures. Suddenly surrounding eucalyptus trees were also on fire.

Gil ran to the top of the driveway and asked CDF crews that happened to be there (not Reid's crews) for help. After about ten minutes of telling him that they cannot do it but had to wait for orders, they suddenly showed up and put out the eucalyptus and trailer fires. Other eucalyptus trees further down the hill were smoking at this time. The CDF crews could not save the Logan house which was burning. A helicopter dropped a load of red material (phoscheck?) above Lamplighter (below his house). He saw only one drop the whole day. A siren came on when the load was dropped.

Suddenly the upper hillside was on flames and everything re-ignited. Fire was now surrounding the house. Gil was choking from smoke and hid at the back wall of his house. CDF crews kept putting out the fires below his house. Gil asked the CDF to come behind the house and help him extinguish the eucalyptus fires. Now Gil realized that the fire was coming uphill and a little from the draw. Because of his previous clearing, flames were not that great but the heat was still intense. The lots of absentee neighbors which were never cleared ignited. Smoke got extremely intense and Gil ran up and down the road to find a place to breathe.

Gil jumped into the CDF truck as instructed which went partially up the driveway with the crew. However, the house was smoking at this point and the truck backed down. All trees (eucalyptus and pines) were blazing. To escape the flames the CDF truck backed into the driveway courtyard in front of the house where it was partially protected by low concrete walls. The heat was very intense and the garage was on fire. The 500-gallon Butane tank filled with about 300 gallons of gas suddenly blew its lid (safety seal) with a loud explosion. For the first two hours the tank whistled loudly (still had lots of pressure). For the next two days a flame up to eight feet high lit the area. The flame came in very handy at night when Gil was patrolling for and fighting spot fires.

The CDF crew decided to retreat into the unburned house adjacent to the garage. The wood fences along the driveway were on fire along with the hedge. Foreman Bill Walters of CDF said that they were now in the middle of the fire storm and that they had to find some clean air to breathe inside the house and that the fire

storm would go over in about fifteen minutes. It would take at least 1 to 1.5 hours for the house to burn down and that they would exit after the fire storm had passed. It was now pitch dark and it felt as if Gil was in his own world. So much smoke was in the house that the alarm was going full blast. The living room and upstairs were full of smoke (unfortunately the upstairs windows had been left open and they had no screens). So Bill Walters took everyone down to the third and lowest level of the house below the driveway where there was good air to breathe.

After about 15 minutes, Walters yelled that he is seeing some rays of light through the smoke and that the fire storm is almost over and that they could get out of the house. They ran out, and the truck still had some foam, so the CDF guys with the foam nozzle jumped into the burning interior of the open garage and put out the fire. When they ran out of foam they said they had to leave. The wind was so strong that it blew out the tree fires. The sound of the firestorm was unbelievable, like out of one of the horror movies. There were still red ashes everywhere. Now Gil was completely alone but without any water to fight spot fires as the garden hose had no water. But luckily the fire storm was over and the burning embers put themselves out.

By 1600-1700 the fire storm had passed. It was still light but it was getting dark. An L. A. County fire truck came from Camp 8 about 1700 and was facing down-street on Rambla Pacifico. The garage of Roger Croff's house (repossessed by Neil Elliott and now rented out) across Rambla Pacifico was on fire. Gil ran up the hill to the house and tried to kick the fire out with his feet. It did not work. He asked firemen on an L. A. County fire truck (that had come down from Camp 8 after the fire storm) parked in the middle of Rambla Pacifico in front of the Reid's house for help with the neighbor's garage. But they declined to do so and told him they had to wait for orders. Gil then tried to put out the fire on his own but could not. He went back to the truck and demanded help and they told him not to get excited. Gil then went back to the house thinking that the firemen would not help as they drove up the road above the house. However, they then stopped and dropped a hoseline down to the house and had the fire put out within three minutes. The extensive wall of railroad ties north (uphill) adjacent to the house was burning. The deck on the side of the house was also burning. In the backyard the wooden deck around an above-ground swimming pool had burned and melted the pool. The water cascaded down to the guesthouse below. It may have helped save it.

At about 2000-2100 Gil decided that he had to find his wife. He had been told by 1800 by someone that tried to go down Las Flores Canyon Road that the bridge had burned. He therefore drove up Rambla Pacifico over Saddlepeak and Piuma Roads to Malibu Canyon Road, removing telephone poles from the road. Malibu Canyon was on fire but passable. Gil went to the Civic Center and Point Dome but could not find his wife or children. He finally called his office in Santa Monica and found out that his family was staying at the guest quarters. He took Kanan/Dume Road to get to Santa Monica.

The next day Gil was still in total shock (and did not recall a thing for about a week thereafter). He needed to know if his house was still there. He parked at Temescal Canyon and walked up Las Flores Canyon near the Carden School. Hundreds of fire trucks were parked at PCH as he walked by. A guy in a jeep on the uphill side of the bridge gave him a ride to the top of his driveway. Across the street from him along Rambla Pacifico, three houses had burned that could have been easily accessible from the street.

One CDF fireman on a different truck fighting a neighbor's fire sustained burns. He had been carried up Gil's driveway right after the firestorm had passed. A CDF truck burned completely in a driveway north of Coal Canyon (Mansie Ln.?). The County Fire Department was not prepared for the fire. The Fire Department cannot get it done without a plan. If Rambla Pacifico would have been open, lots of fire trucks would have been there. 6-8 huge helicopters with 1000-gallon+ buckets could have put out the fire at Topanga Canyon before it came over the hill.

Gil's Opinion

Bill Walters, the foreman of the CDF crew truck who yelled orders, was very sharp and knowledgeable and did not panic. He was composed and cool under fire. For example, he had four fire blankets. When the fire was about to overrun them, he ordered that Gil be given one blanket and that two of his men double up on the other blanket. According to Neil Petzing the wooden house was completely surrounded by fire. Gil was there but had

left his windows and door open. He lost his garage, his fences and many trees. CDF saved the house.

2690 Rambla Pacifico

2-story white stucco house at bottom of long, narrow driveway. Did not burn.

2736 Rambla Pacifico (Neil Elliott-old owner. Roger Croft forecl.) 5% burn.

A two-story main house with wood siding situated at the corner of Rambla Pacifico and Azurelee across from the three-story wooden house owned by Judge Reid. Accessible by a steep driveway about 100 feet long. Nearby one-story guesthouse with wood siding is accessible from Rambla Pacifico by a separate, less steep driveway.

Neil was not there during the fire and the new owners had left. He had heard that a fire truck was there, probably the same team that helped save the Reid house and had tied into the Las Virgenes water system. About 100 square feet of roofing above the garage had to be replaced. There was extensive smoke damage inside the house and the extensive railroad tie retaining walls above the house had burned, as well as part of the staircase deck surrounding the house and several railroad ties in other locations close to the house. An above-ground pool and its surrounding wood deck behind the main house burned.

There were many trees along the driveway and around the house. About 35 conifers were lost. The California Pepper trees scorched but resprouted quickly.

Neil had retired and moved to Willits in northern California about seven years ago and had sold the house. Because the new owner did not make mortgage payments, Neil was in the process of repossessing the house and learned that taxes had not been paid for about five years and that the house was not covered by fire insurance. So, just a few weeks before the fire he reinstated the insurance.

At home in northern California, Neil watched on TV (CNN or Channel 4 San Francisco) as a neighboring house on Castlewood burned. He thought that his houses had also burned. When he came to Malibu about a week later, he was amazed to find that both the house and guest house had survived the fire.

Neil had learned his lesson about railroad ties and replaced them with walls of decorative stones that do not need concrete foundations or need to be backfilled with concrete. He nevertheless established them with a concrete foundation and steel. He indicated that the new walls were not that much more expensive than the railroad tie walls.

C. Rambla Pacifico (Hume Road to Rambla Pacifico Slide) (2899, 3045)

2899 Rambla Pacifico (Bernard Patrick)

House just south of Hume and Rambla Pacifico. One-story. Asphalt shingle roof. Trees around the house scorched inclusive of junipers in front of/almost touching the house. Adjacent lots on either side are still empty. Good downhill clearance. Bernie said he was lucky that he had no neighbors. He therefore did not have additional fuels around his house and was in total control of fuel reduction.

The large Blue Gum eucalyptus trees along Rambla Pacifico (at the end of the asphalt road) were never maintained by the absentee landowners, and County easements and clearance of hazardous or flammable materials was not enforced by the County Fire Dept. Such eucalyptus trees are torches just like pine trees. The people along Hume Rd. are crazy because of their many eucalyptus trees.

Prior to the fire arriving at his property, Bernie had soaked down the hillside behind his house for about two hours with garden hoses because he had water. He estimates that he had three hours of preparation from the time he heard the news and saw the smoke. The flames first came from the west (uphill behind his house). They went thirty feet past the hillside but did not reach the house as they were cut off by the vegetation clearance he had done.

During the fire Bernie flagged down a Montebello (big red) fire truck with 5-6 firemen on it and asked for help; he did not dictate how to fight the fire. The fire truck parked in front of the fence along Rambla Pacifico across from the large Blue Gum eucalyptus trees. The firemen rolled out their hoses and hooked up two hoses to the fire hydrant and went to the rear of the house to douse the vegetation on the western-facing hillside behind the house as the flames were approaching. Within about three to five minutes water pressure suddenly failed. Suddenly the fire came also from the east (Hume Rd.) up the draw, surrounding them with flames. The firemen were totally taken by surprise and ran to their fire truck to protect it but by this time (within one minute) the area was completely engulfed in flames and the fire truck was burning. Two firemen ran away from the truck (down the street?), the captain went inside the house, and one firemen sought shelter underneath the truck. The truck burned about 50% and its equipment apparently malfunctioned but the radio still worked. It never used any of its water.

After the fire front went by, Bernie stuck his head into the toilet and ran around the outside of the house to fight the spot fires with any nonflammable liquid he could find, such as soda, milk, beer, etc. The firemen seemed confused and did not help Bernie at all. After Bernie ran out of liquids, he ran around the house putting out spot fires with his shovel and soil as the firemen watched.

After the fire went through, Bernie saw the trees on fire on the large house (described as about 5,000 square feet by another neighbor) on Castlewood Dr. It burned down approximately 2-3 hours later. About an hour after they arrived, the firemen left on another fire truck that arrived to pick them up (probably contacted via radio). From the time the Montebello firemen left, Bernie and two CDF trucks that arrived thereafter spent the whole night putting out spot fires in the neighborhood. In summary, Bernie patrolled all night and CDF crew helped. They knew what they were doing.

At about 2100 Bernie put out the fire on the nearby orange trees because he was afraid that the eucalyptus trees may re-ignite, while the firemen on the large fire rigs just watched. The houses on Castlewood were burning to the ground about this time.

About midnight Bernie noticed that a propane tank (Clifford's) at the corner of Rambla and Hume was about to burn (explode?). Fearing for his life, he flagged down the CDF truck and they put out the fire (closed valve on tank?).

The 3.5 acres of bare land south of Bernie's house had not been cleared prior to the fire. The owner told Bernie that he was legal because he did not have to clear the brush prior to the fire because the Fire Department had given him an extension.

The L. A. County Fire Incident Investigation Team came a few months after the fire to investigate the burning of the Montebello rig and told Bernie that the assisting agencies are simply not trained to fight these wildfires.

Bernie believes that if the eucalyptus trees would not have been there, the fire truck may not have burned. He believes that the truck would have been safest if it would have backed up into his driveway against his garage.

His biggest criticism is "total lack" of air support. He believes that the assisting agencies in general had no idea of how to fight a brush fire. The big fire rigs parked up and down along PCH were just there for show but are worthless in rugged mountainous terrain.

3045 Rambla Pacifico (Kenneth & Cindy Bass)

2-story wood house at edge of slope without setback. Pool. Wooden decks facing down-slope. A stone wall adjacent to the street as well as a driveway and parking area between the wall and the house provided added separation from fire exposure of burning uphill vegetation on the slopes above Rambla Pacifico. Only a few trees around the house. Lush vegetation.

The Besses could not get in during the fire. According to neighbors, fire trucks made a stand at the big white

house below (Peter McNulty 3083-112 Rambla Pacifico) and surrounding houses. Peter flagged down the Santa Fe Springs Fire Department and evacuated with his laborers before the fire came. There are scorch marks from firebrands on the wooden deck (probably saved with the assistance of fire personnel).

D. Rambla Pacifico (Above Slide)

(above major Rambla Pacifico slide blocking access to and from Pacific Coast highway)

The homes listed in red below burned along this stretch of Rambla Pacifico.

(3021, 3077, 3079, 3081, 3083, 3083-1/2, 3085, 3095, 3203, 3211, 3215, 3222, 3231, 3235, 3279, 3287, 3294, 3305, 3337, 3339, 3341, 3343, 3345, 3347, 3359, 3367, 3375, 3413, 3433, 3443, 3453, 3457, 3565 (slide), 3615, 3667

The Los Angeles County Old Topanga Incident Report as stated in the Rand Report (p.116) summarized the following for the Lower Rambla Pacifico area (historically part of the La Costa area but cut off by the Rambla Pacifico slide of the early 1980s. At the time of the fire the only access to it was up Las Flores Canyon Rd., across Hume Rd., and back down Rambla Pacifico. There were 63 single-family homes on this part of Rambla Pacifico and the adjacent Deer Path Ln. and Sumac Ridge):

"We estimate fire arrival here at about 3:30 PM (1530), based on interpolating between La Costa and mid-Rambla Pacifico. Two LAC fire engines were in the neighborhood... and a third engine from Santa Fe Springs. All three engines had to take cover during the fire. LAC E-8 personnel provided protection to 5 civilians in 2 parties during the firestorm. While trying to unsuccessfully save a structure, one fire fighter received second degree burns and several others were injured by smoke inhalation."

"LAFD attempted to send companies here by going up Rambla Pacifico which was closed by the slide. 50 of the 63 homes in the area were completely destroyed (79%)."

No mention was made in this part of the report that water for firefighting was not available from the hydrants.





The postfire rebuilding phase along Rambla Pacifico.



The postfire rebuilding phase along Rambla Pacifico (aerial photo 3-13-2015 by K. Radtke).



3413 Rambla Pacifico rebuilt much more fire-safe.

3021 Rambla Pacifico (Lynda Sullivan, Robert Young)

Now living at 416 Highland, Manhattan Beach CA 90266.

2-story split level. Wood. Tile roof. First house not in City of Malibu (unincorporated area of County) along Rambla Pacifico. Side-slope along steep slopes. A long, narrow, private driveway leads uphill to the house. It burned after 1800 (Ben the Sheriff witnessed it).

According to David Williamson of 21940 Lamplighter Ln., two helicopter drops were made on the house but it could not be saved. It was an all-exterior wood house. The big trellis on the downhill side covered with Bougainvillea ignited with a big bang. Then the house ignited. Many pine and eucalyptus trees below the house and along the sides. Photos by K. Radtke 6-11-94 documented the site.

3077 Rambla Pacifico (Dana & Cynthia Christiansen)

One-story stucco house with tile roof overlooking steep, westerly facing slopes. Fire-stopped tile roof (every tile individually fire-stopped to keep out birds?). Extensive new treated wooden 4x4s (not railroad ties) used for retaining walls across the driveway from the house along the uphill slopes. Wooden retaining wall had burned. It was separated from the house by a 10-foot-wide driveway and a five-foot-tall stuccoed block wall.

Dana was home doing work on the house but the tenant was not there. He closed all the windows but forgot to fill up trash cans with water. They had done excellent weed abatement in excess of 100 feet down the slope about three weeks before the fire (Cynthia said that they should really have done it three months before the fire). He went up the road to the Bass house and saw a Santa Fe Fire Department fire truck backing down. He escorted the truck to the flat area in front of the McNulty house and told the firemen that there were about six houses to protect in the area. The firemen were impressed with the clearance around the Christiansen house. Dana followed instructions by firemen such as turning on the hydrant at Rambla Pacifico, etc. Two helicopter drops were made on the backside of the Christiansen house and the McGlothlin house next door. Firemen laid on the ground for cover when the drops were made. Dana left about 1800 when he was told by firemen that they were in good shape and things were under control. So he thought the danger was over.

Dana walked back up from Pepperdine entering Rambla Pacifico via a trail near the slide. Spot fires were burning everywhere. He returned back to the house about 0200 and stayed with the house. The McGlothlin and the Monroe houses had burned. The firemen told him about a week later that they stayed until about 2230 when things got out of hand. They had no water.

Summary

Dana flagged down a Santa Fe Fire Department strike team, asked them for help and bird-dogged engines down the steep narrow driveway leading to about a half dozen homes. The Fire Department tied into the fire hydrant at Rambla Pacifico and initially had water. Two helicopter drops were made on backside of the house.

3079 Rambla Pacifico (Marcella McGlothlin)

Fiberglass shingle roof. Wood downhill balconies.

Marcella came in about 1400 and stayed about an hour. She does not quite remember the time sequence. She had done good clearance around the house, also down-slope, and thought about doing even more. She did not really want to evacuate, but a helicopter came around with a bullhorn ordering her "You must leave now" when she was trying to run back into the house looking for her cat. Since she was only a woman and alone, she heeded the orders and went up to Rambla Pacifico. Since firemen had arrived, she thought that it was safe to leave. She drove down Rambla Pacifico and went over Sumac Ridge and Deerpath down the private road to Las Flores Canyon. The whole west-facing slopes of Las Flores Canyon were on fire, all behind the Carden School. She was about the last one to leave down the private road as fire was also approaching along Hume. There were still people (firemen?) at the Carden School. She stopped and asked a fireman if he had time, as she needed help with her car and he told her that he had all the time in the world as fire was now all around them. She drove down Las Flores Canyon to Rambla Pacifico and by this time the traffic on PCH was moving.

Her house burned around 1900 or thereafter. Marcella thinks that the house caught on fire from the wooden deck or that fire may have entered the crawl space below the house where there is an opening (door) to service the heating equipment, vents, etc.

3081 Rambla Pacifico (?)

They attended the house until 1800 (now rented out to Jo Kerry Ewes).

She had built her first house in 1956 and her house burned down six months later in the 1956 fire. She is the oldest resident in the area. She has succulent plants around the house which survived the fire. A shed burned. Dana lives below her.

3083-½ Rambla Pacifico (Peter & Karen McNulty, attorney)

Large, two-story stucco house with tile roof. Has extensive down-slope groundcover greenbelt which is constantly watered. He was at home and saved his house.



3083 Rambla Pacifico (Sylvia & [Frank] Craig Kowalski)

Old one-story house, recently stuccoed (formerly wood). Now a Class A roof. Old wood window frames and wood water heater closet still attached to west side of house. A retaining wall on the adjacent property (McNulty) to the west acted as good heat shield. The house to the east (**3085 Rambla Pacifico**) burned down but a stone wall, acting as heat shield, separates the two properties.

Good clearance around house except for three large Aleppo pines to the west adjacent to the McNultys, which did not burn but will be cut down. Large Oleander hedge along steep and narrow **driveway uphill to the north just scorched partially but did not burn. House was protected to the west from fire by** the McNulty property with its extensive greenbelt on the slopes below the house and its fire-safe designed building. McNulty was at home and saved his home and assisted in saving neighboring homes with the help of the Santa Fe Fire

Department. Moderate brush clearance below house. Brush burned but heat and flames were deflected onto the Munro property where they scorched the fence and burned railroad tie steps.

3085 Rambla Pacifico (Ron & Sally Munro)

The two-story house with Class A rock roof was built in 1972-73 and burned unattended. It had an open carport in addition to the garage, with wooden cabinets lining the walls. The downhill side of the house was stuccoed but there was exterior wood within the courtyard. There was a wooden hot tub with a small wooden deck in front of the carport on the downhill side. There were also railroad ties behind the aluminum greenhouse which burned (shell still standing).

Some pine trees were given away free by the County Fire Department. They encouraged them to get additional pine trees for their hillsides and Ron drove to Gardena and bought 100 pine seedlings. Pine trees, a few eucalyptus, and five sycamores surrounded the house on the south (downhill), east (downhill), and north (uphill).

They shot approximately a one-hour video tape which includes many shots of fire trucks attempting to go up Rambla Pacifico from PCH. During the 1985 fire there were at least 30 fire trucks parked up and down Rambla Pacifico, and the fire road at Sumac Ridge was open. During the 1993 fire the fire road at Sumac Ridge was not open initially as told to them by friends. Cathy McCoslin went down the Sumac Ridge firebreak.

K. Radtke walked the property investigating the fire burn pattern. The fire went up the wooded draw east of the house and burned and disfigured a 10-foot section of the chainlink fence, charring the pine trees uphill of the fence, but only scorching vegetation such as a Myoporum tree closer to the house. Up to 200 feet of the slopes south of the house, while wooded, had good understory clearance. Except for trees near the draw and on the adjacent **3083 Rambla Pacifico** property to the west, most trees only scorched and actually did not carry the fire. Near the house, char and heavy scorch marks were most evident on the side of the tree trunks facing the house, suggesting that they got charred by the house burning down.

Trees on the uphill side to the north were actually touching the house and some limbs were also overhanging the house. As evidenced by the charred marks on the trees, the fire was pushed downhill onto the house. The Santa Ana winds probably also blew into the locally generated fire winds as the fire burned back uphill from the south and east up the draw. It is believed that the house probably caught fire first along the north. While burning, the small wooden deck and exposed carport probably caught fire from a different ignition source than from the north side.

The Munros will cut all of their pines and the Blue Gum eucalyptus. They will start out with more fire-safe landscaping.

3095 Rambla Pacifico (George & Betty Francke)

A side-slope home off Rambla Pacifico, uphill of the Munros without setback. It had a Class A roof and stucco siding but still burned unattended.

3203 (?) Rambla Pacifico

Three-story house with tile roof and stucco siding located side-slope off Rambla Pacifico without a setback. Owner of **3222 Rambla Pacifico** believes that this house was the primary cause for his house igniting.

3211 Rambla Pacifico (Lazarow)

One-story concrete block house with red tile roof and boxed overhangs. Eucalyptus trees uphill of the burned garage/office were burned. Garage/office was built same as main house but it was below the trees and downhill of the house that burned to the east. Brush clearance was done to about 150-200 feet. The driveway in front of the garage/main house was a fire-safe hunker-down area. The wife evacuated before 1400. Fire Department did not come down thereafter. The house almost saved itself.

3222 Rambla Pacifico (McCarty's House-Michael's Rest.

One-story Spanish style tile main house with one-story tile guest house complex with pool. Both stuccoed. K. Radtke, on one of his many photo flights of the Santa Monica Mountains, had taken photos of this location as shown here because of the excellent vineyard greenbelt surrounding a seemingly fire-safe home. The main house burned unattended.

Based on common sense rules, the house should not have burned but its Achilles Heel may have been the small, wooden deck facing the downhill side of the house. There were also some eucalyptus trees uphill near the north side of the house and pine trees down-slope near the west side of house. The pine tree crowns were heavily scorched and their trunks were charred on their downhill sides. Minimal fuel on the downhill road cut could not have been the major cause for this. However, **3203 (?) Rambla Pacifico**, a large three-story house that was located side-slope and below **3222 Rambla Pacifico**, burned down and was apparently influential in charring the pines and showering the house with firebrands. The owner of **3222 Rambla Pacifico** believes that the burnout of this house was influential in igniting his house. This is supported by the fact that a wooden deck on the downhill side of his otherwise fire-safe home was most likely the recipient of flames and firebrands originating from the burning home and pine trees below. If attended, **3222 Rambla Pacifico** could have been saved.

Mrs. McCarty evacuated about 1400 hours. She knew that she could not get through Rambla Pacifico so she went over the top (Hume Rd.). She did not want to risk staying. Other people that stayed had traumatic experiences. She believes that the wood deck on the main house caught fire and ignited the house. Others stated that a wood pile near the house may have been the direct cause.



Prefire aerial photo (K. Radtke 1992)



Postfire: 3203 Rambla Pacifico side-slope foundation on right below 3222 Rambla Pacifico.

3594 Rambla Pacifico (Joseph & Barbara Yarman)

White house with long private, gated driveway. Much exterior wood. Pool. Neighbor east from 3222 Rambla Pacifico (vineyard). The owner was not home. According to Donald Gunn, Richard Lazaroff's house with its moist vegetation (even the eucalyptus scorched only lightly) north and uphill saved the Yarman (Smith) house. Fire burned front yard vegetation.

3565 Rambla Pacifico (Alexander Courage)

Pool on 2-acre lot. In slide area. Destroyed by slide.

E. Rambla Pacifico (below slide to coast)

(3849, 3855)



Los Angeles City Fire Department 'big rig' strike team blocked by the Rambla Pacifico slide

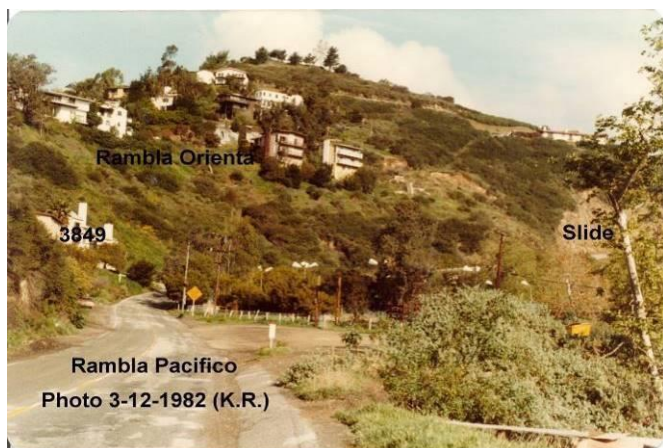
Because of lack of interagency radio communication, L.A. City Fire Dept. (LAC) strike teams were forced to fight the fire independently. Because there was no bird-dogging done, they were therefore not aware of the closure of Rambla Pacifico by the large slide just uphill of PCH “beyond the bend” and lack of water from hydrants in the mountains. At 1520 Strike Team 54 reported that they were blocked by the slide as they were trying to move up Rambla Pacifico as also documented with photos taken by homeowners. However, the closure of Rambla Pacifico by the slide may have saved Strike Team 54 from being entrapped by the fire similar to what happened to the Montebello big rig that burned in central Rambla Pacifico, also injuring some firefighters. As indicated in the photo above, Strike Team 54 consisted of big rigs earmarked largely for fighting structural fires not located in mountainous areas.

3849 Rambla Pacifico (Scott & Deena Grady)

Scott received a phone call about 1230 from his mother-in-law at his office in Bel Air, informing him that a fire is burning in Malibu and is going to go to the ocean. He drove down San Vicente and Channel Drive to PCH which was congested. He parked his car at the Chart House just south of Topanga along PCH. In order to get around the roadblock at Topanga Canyon, he walked along the beach for a while before going back on PCH. He arrived home at about 1500-1530, about one hour before the fire hit.

As Scott walked up Rambla he saw a big orange glow from the mountains. When he got to his house, he started watering it down with a garden hose as he had good water pressure. The neighbor Ms. Lee Clark did the same at her adjacent fourplex. Four crew trucks were parked at the turnout at Rambla Pacifico below the tennis courts with most of the men sitting outside (Lee took photos). These crews watched as Lee and Scott were watering down their houses. They were clearly visible from the deck of Scott's home.

The fire came down from the north while approaching at the same time from the western ridge above Rambla Pacifico. Scott saw the houses along Rambla Vista burning. It was hard to see because of the smoke. Lee Clark had evacuated about fifteen minutes before the fire approached the house, but her boyfriend Steve Spina (Spina's Moving Co.) stayed with Scott. When the fire reached the ridge at the slide, both evacuated because it got extremely hot and smoky. Firebrands were flying everywhere. The four camp crew trucks pulled out after Scott and Steve walked out. There were many fire trucks (at least 30) at PCH near Rambla Pacifico.



1982 - Rambla Pacifico with 3849 marked on left.



1993 – Fire moving down Las Flores Cyn., burning homes.



Scott and Steve on top of their roofs as the fire moves down Las Flores Canyon and uphill its westerly facing slopes on its way to Big Rock while also moving into Las Flores Mesa on the way to the beach.

Steve and Scott asked fire trucks at PCH for help. Two fire trucks then drove up Rambla Pacifico. The first truck went to the house and then backed down within two minutes as the fire reached the middle of the empty lot above Scott's home. The second truck pulled only up to the crew truck area and turned around. Suddenly a very strong wind from the ocean (at least 60 mph) pushed the flames back and redirected the fire NW around Scott's and Lee's properties where it then burned the vegetation behind the houses all the way to PCH and above the shopping center. Then the firemen went to work protecting the commercial center as the garage at the E end of the shopping center caught fire. Scott and Steve waited for about fifteen minutes as they could not see their houses because of the smoke but saw the palm tree between the two houses catch fire.

Lee said that a friend of hers walked up Rambla Pacifico about 2000 to see if Lee's house had burned down. When he got there, he noticed that the wooden porch at the back of the house had caught fire. When he went back to get help, firemen came but by then the house was fully engulfed, and the fence and the exposed side of Scott's house were catching on fire. The firemen said that Lee's house is too far gone but that they will save Scott's house.

Scott did not walk back after the fire storm had passed, because he thought that his house had burned and the fact that police had ordered everyone to leave the area to the Sea Lion Restaurant parking lot. Scott therefore hitched a ride at about 1730 to the Chart House Restaurant to get his car. He later saw on the news that Lee's house had burned but that his house was still there. While watering down his house, Scott saw many fire trucks driving by to go up Rambla Pacifico, apparently not knowing that the road was closed because of the slide. When they reached the slide they backed down. Lee and Steve saw it too. An API wire person took many photos.

3855 Rambla Pacifico (Ms. Lee Clark 4-plex)

Two-story 4-plex apartment house. Stucco, Class A rock roof. Sprinkler system on roof but non-operational. Fair Plan. Burned.

Lee and boyfriend Steve Spina got to Rambla Pacifico about 1230 just before the road closure. They did not think the fire would come down Las Flores Canyon. Steve sails boats and is attuned to the wind direction. Winds were blowing from the NE to SW.

Lee was helping a tenant who was moving out the same morning while Steve was hosing down the roof and the vegetation behind the house with a water hose. There was excellent water pressure throughout the fire. At about 1400 the power went out and they could not watch the update of the fire on TV. They then turned the radio on. The wind was now shifting slightly from northeast to north. Then Steve saw smoke at the top of the canyon. He shut off the gas about 1420 and helped people evacuate. He filled up two plastic trash cans with water and went back on the roof with the water hose. Neighbor Scott Grady arrived about 1500.

Lee thought that they were in trouble but never thought that they were really threatened and never thought that she would lose the apartment house. She had good water pressure and there was a fire hydrant in front of the

neighbor's house. It needed only one section of hose for each house. While she was at the house, she watched approximately 30-40 fire engines coming up Rambla Pacifico past the house. They turned around or backed down when they came to the landslide on Rambla Pacifico (no communication from command center or among trucks that Rambla Pacifico was closed?). There were also three to five crew trucks sitting in the turnout below the tennis court at any time, along with 15-50 crew people (firefighters).

When Scott and Steve left (Lee had evacuated about fifteen minutes earlier), Steve's car was parked at the turnout below the tennis courts where the camp crews were. The camp crews were gone. Scott and Steve drove about 150 yards down the canyon. The fire was now in front of them and the crews were putting out the fire at the garage near the post office. They asked a fire truck to come up but the firemen said it was too dangerous. About ten minutes later a fire chief in a pickup with a utility body drove by and they begged him almost on their knees to go up and save the houses. Steve told the chief that there was a water hydrant in front of the house, that there was good water pressure, and that he knew how to get up there. The chief said that he would go there and went up with an engine company behind him. They went up about 150 yards into the smoke. About 2-3 minutes later they came back and said that it was too dangerous and that they would lose their equipment. Steve, however, suspects that the firemen heard on the radio that there was no water on Rambla Pacifico above and that fire trucks were burning.

A friend of theirs was a Sheriff who told them to leave as their house probably burned down. Everyone including the news media were forced to evacuate from the Post Office shopping center parking lot to the Sea Lion (Charley Brown's) parking lot across the street.

Lee and Steve left Big Rock about 1830-1845 and walked along the rocky beach (often in the water) back to Las Flores Canyon. Lee found a hard hat at the Sea Lion restaurant which made her look somewhat official. As they walked along the beach they could see that every house had a fire truck in front of it and people were being evacuated even though the fire danger was not great along the beach side (unless perhaps you had a wood shingle roof). They came up at the Sea Lion where two large CHP officers were on the lookout to take into custody every unauthorized person they could find. Lee and Steve escaped (circumvented) these guys and went across PCH to the bottom of Rambla Pacifico. They were ready to walk up the street when a fireman with a bad attitude blocked their way. Lee and Steve said that they wanted to see if their house survived. The firemen told them that they must leave right now or he would call the cops. Lee said that she would need to get her keys for her daughter's car from the house as the car was parked at the corner of PCH. Lee and Steve questioned why no firemen were there to help them save the house and why they were now being blocked from returning to verify if it was still there or to see what they could do. The fireman called the Sheriff who force-evacuated both in the back of the patrol car back to Big Rock by about 1945-2000. PCH was totally empty except for at least 200 fire engines sitting along PCH from Las Flores Canyon to Topanga Canyon. There were no life-threatening situations there.

Lee and Steve drove to Steve's home at Las Tunas. (The fire by this time had burned half of Big Rock and was approaching Las Tunas Mesa). Steve opened up his house to firemen as a command post by opening up his front door and guest house; the firemen were in fire engines with open cabs and had asked him if they could seek shelter inside the house. Steve had a wood shingle roof and the firemen protected it by running up hoses on the neighbor's roof and soaking his roof from above. Lee was amazed about this as she was given to understand earlier when evacuating that any house was a very unsafe place to be caught in a fire, as it may be immediately engulfed if it catches fire. Lee called a friend (Rick Wallace) whose house was at the base of Las Flores Canyon and told him that firemen did not allow her to go up and asked him to please go up and inspect if the house is there.

Rick walked across PCH and up Rambla Pacifico at about 2130. He saw both buildings still standing. Rick heard the radio playing on the roof which had been left there by Steve along with the car phone. The back storage shed on Lee's fourplex was catching on fire. Rick tried to extinguish the fire with a garden hose and was almost successful but the fire was gaining so he ran down to PCH to get a fire truck. Fire trucks came up but by the time they got there and got the hose hooked up (they had problems with hooking up the hose [connections?]) and lost at least five minutes precious time), the whole rear of the house was engulfed (see written report by

Rick). They told Rick that this house was lost and that they would try to save the adjacent house. However, they did not/could not.

21225, 21249 Pacific Coast Highway at Rambla Pacifico (mouth of Las Flores Canyon)

The shopping center complex, about to be overrun by flames and firebrands, was nevertheless saved by combined big rig fire fighting forces stationed in the area.

VI. La Costa Area

- The area where most of the home losses occurred is largely characterized by narrow roads with houses close to each other on small lots that may be cantilevered onto erosive slopes and interspersed with flammable landscape vegetation (primarily trees).
- Skilled day-laborers (largely from the labor exchange) were instrumental in homes being saved: first by performing brush clearance before the fire, and then in fire protection during the fire.
- Some homeowners, risking their lives, also saved homes while others, having pool water, directed tired fire-fighters to save nearby homes.

The Los Angeles County Old Topanga Incident Report as stated in the Rand Report (p.114) summarizes the following for the La Costa area (area accessed from PCH without going into Las Flores Canyon):

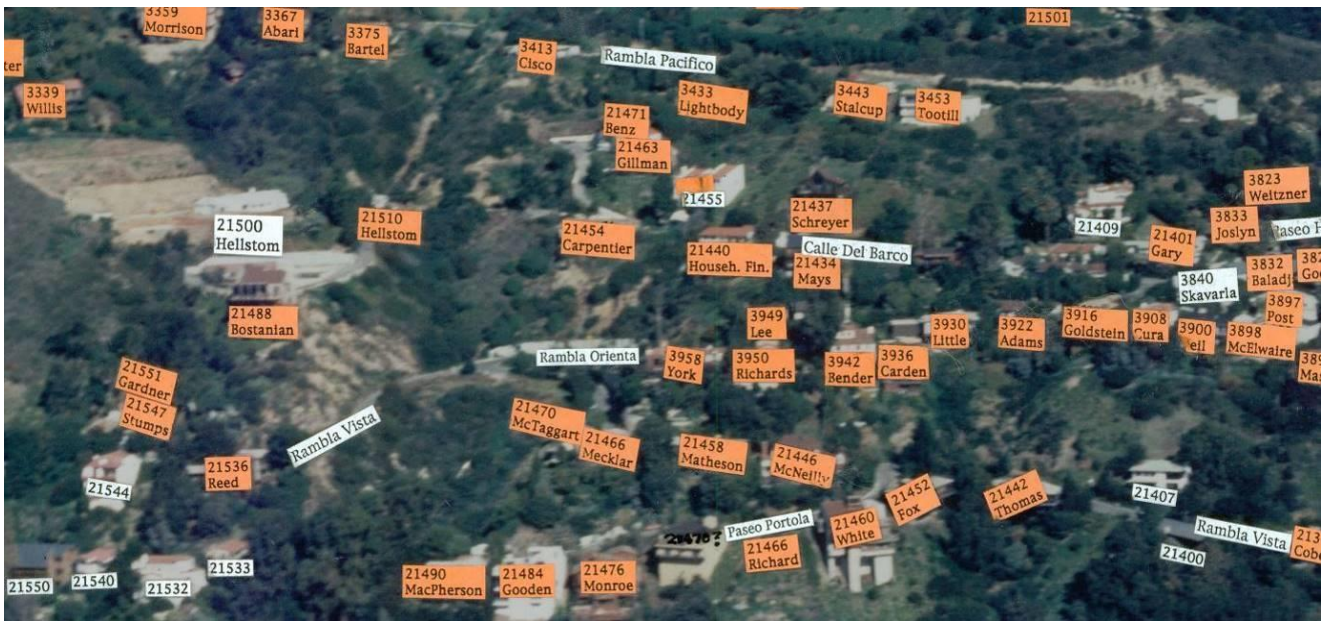
“There are a total of 243... single family residences... of which 120 are on PCH.” “The streets in La Costa tend to be narrow with many overhanging trees.” “Fire moved behind Fire Station 70 between 15:45 and 15:55.” “L.A. County engine companies attempting to defend homes on Rambla Orienta were seriously hampered by roads covered with vegetation, including ornamental eucalyptus trees. Fire behavior was unpredictable because of winds from multiple directions. The hydrants supplied no water and it took twenty minutes to refill an engine’s tank on PCH. Return to the fire scene was then hampered because other pieces of equipment blocked the narrow winding roads.” “LAC also apparently experienced communication difficulties.” “The devastation in La Costa was enormous with 87 structures destroyed (76 percent) including four multifamily dwellings which contained more than 15 homes. Two structures on PCH were destroyed.”

However, the following question was never investigated and therefore could not be answered in any of the reports: How and why was a true “Design-for-Disaster” situation allowed to exist almost within a stone’s throw (in the backyard) of Fire Station #70, the largest LAC fire station in the area? The flammability of the landscaping vegetation inclusive of many of the non-maintained “torch” palm trees was well-known. It was also well-known that there would be no water pressure in the area during a wildland firestorm. Additionally, the narrow roads and close proximity to each other of flammable homes would make it almost impossible to effectively fight a fire during such conditions. Agencies therefore were waiting reactively and not proactively for such a Design-For-Disaster and had not learned from previous wildfires in the Santa Monica Mountains or in other parts of California.

In at least partial response to the above, the Los Angeles County’s Fire Department Wildland Fire Safety Panel (WFSP) recommendation 36 on page 5 provides the following answer: “In high fire areas, the Fire Department should establish a public information program to inform property owners of how to effectively protect themselves and their property from fire dangers. This program shall include the following elements: a.) Building construction; b.) Information about the status of the public water systems in the area; c.) Use of on-site water supply resources such as swimming pools, portable pumps, portable generators and other home-operated systems.”

Addressing the common sense issue that a majority of wildland fire losses still pertain to wooden roof homes catching on fire from firebrands, WFSP’s Building and Fire Code Subcommittee stated the following: “Evidence from the recent series of fires and other major firestorms in the State lead us to conclude that a majority of structure fires are ignited by embers landing on combustible roofs.” (Therefore any type of wood shingle roofs should be prohibited in Fire Zone 4 and surrounding areas and only noncombustible—Class A—roofs should be permitted). More bluntly said, the often brutal behind-the-scene fire politics and the strong lobbying efforts of the wood shingle industry with local politicians overruled this common sense home- and life- saving issue for over 100 years and is responsible for the loss of thousands of homes in Los Angeles County alone. Another common sense issue suppressed for years by behind-the-scene fire politics but brought to the forefront in Radtke’s 1982, 1983 HOGF&W publications and finally also acknowledged by WFSP, is that landscape vegetation could be as flammable as native vegetation if not fire-safe maintained. The publications clearly explain how to maintain vegetation “fire-safe.”

With all that was said and done it still has to be acknowledged that a majority of the homes were lost because there was no water and the hydrants went dry. The Fire Department was well aware that this would happen.



1992 Prefire aerial photo by K. Radtke (1993 11-2: Orange=burned, white=no burn). Not all homes are shown.



Postfire aerial photo (1995 11-3 K. Radtke)



La Costa as viewed from PCH after the fire.



La Costa postfire: Destroyed homes on largely small lots, flammable landscape fuels and narrow streets.



La Costa as seen from PCH in 2019: A costly but more fire-safe urban renewal project supported by location.



Not properly maintained palm trees always pose a threat as burning or blowing fronds can readily break windows.

A. Calle Del Barco (downhill of Rambla Pacifico)

21409 Calle Del Barco (Glen Cairns, attorney)

4-story older Spanish-style home. Pink & white stucco. Red tile. Wood windows.

21410 Calle Del Barco (Susan Rossi)

Across from 21409 Calle Del Barco (CDB). Saved by firefighters.

21426 Calle Del Barco (Susan Rossi, see 21410 Rambla Vista)

2-story stucco. Hot-mopped. About 2 years old. Burned.

21454 Calle Del Barco (Nelson & Deborah Carpentier)

Across street from 21455 CDB. Mostly wood, some stucco siding, Class A roof. According to John Stevens it burned later at night.



The studio (round building) caught fire about six times during the night along the north end. Firefighters helped him put out the fire with pool water. The fire penetrated the one-foot-wide wooden fascia board at the end of the roof along the backside of the house where the slope almost meets the building. From there the fire went into the interior crawl space where the electrical wires were located. The railroad ties also were a problem and burned for days. The house north of their gate (and part of their estate) also burned. When the wooden house on the left side of 21455 Calle Del Barco caught on fire towards the early morning hours, Bank told the firemen to go over and save the adjacent stucco house (**21455 Calle Del Barco**) with his pool water. The firefighters were tired, but went over and saved the house. Many houses caught fire late at night and there was no reason for it. Bank had water and there were fire engines. He saw at least four houses with only small flames around them for some time before they caught fire. They did not have to burn.

B. Paseo Hidalgo



3820 Paseo Hidalgo (Stephen & Hannelore Klein)

Redwood deck overlooking slope towards southeast. He voluntarily evacuated his house as he saw the fire at the very top of the ridge. Since the streets were so narrow to PCH, he left early because of fear of traffic blockage. He parked at A&B Plumbing and waited until ordered to evacuate by police and Fire Department. He saw the fire coming down Las Flores Canyon.

3823 Paseo Hidalgo (Lillian Weitzner)

A fire crew of about 3-4 people with hand crews walked up the steep Weitzner driveway close to 1600. They were laughing and joking with neighbor Joey Goodman and were not aware that fire would hit them as the smoke was still blowing to the west. They had no water. Soon thereafter a lot of smoke was rolling over the Weitzner house and it became obscured. Neighbor Joey evacuated.

3824 Paseo Hidalgo (Joey & Georgia Goodman)

Dark asphalt shingle roof. Beige stucco. Redwood deck and hot tub towards southeast over hillside. There were some eucalyptus trees on either side of the house and a Chinese elm tree on the backside. Stephen Klein modeled his deck after Joey's deck and it was about the same size. Joey left close to 1600 just before the fire hit and was the last one on the street except for Tony Skavarla and the fire trucks.

A Laguna Beach fire truck was parked across the street from his house. Another truck was parked at the end of Calle Del Barco near the water tank at the Swedish fellow's home (21500 Calle Del Barco-Hellstein). Joey talked with the fire crews and they told him that they had low water pressure. Tony and Stephen were on their roofs as they had a little bit of water until about 1530. Joey left as it got dark from smoke and the embers started flying. He did not see the houses burning yet but the trees were on fire. Smoke came down Las Flores Canyon and was blowing to the west. He therefore thought the fire would not hit the area. Even a fireman made the comment that the area would be bypassed (spared). A fire crew of about 3-4 people with hand crews walked up the steep Weitzner driveway at 3823 Paseo Hidalgo. They were laughing and joking with him and were not aware that fire would hit them. They had no water. It was now close to 1600. Tony was wrapped in a white sheet and was trying to water down the house. At this time the fire crew from the truck were helping him. A lot of smoke was rolling over the Weitzner house and it became obscured.

When Joey evacuated, Tony and the fire crews followed soon thereafter. The brush around the sharp corner on Rambla Vista and Rambla Orienta was on fire and the fire was moving uphill and was running up the palm trees (right below the York house at **3958 Rambla Orienta**) and then onto the other side of Rambla Orienta. The palms and pines at the corner near the York house then started to ignite. It was about 1600.

3833 Paseo Hidalgo (Joslyn Roland)

House is across street from Joey Goodman. He used to live in Laguna Beach. Two Laguna (?) rigs passed Paseo Hidalgo about 1600(?) and went to Calle Del Barco. Carolyn Berry, Gretchen Hays, Tony & Michele Sarala were standing around wondering if they should stay or leave. Joslyn had filled three trash cans with water and had placed them strategically around the house. He left when the flames were on the far ridge. He was glad that he did not stay.

He wrote letters to the City of Malibu about opening up Rambla Pacifico and had also walked the area with John Harlow who should have his letters. After the fire they graded out the slide area behind the upper barricade above his house for drainage purposes.

3840 Paseo Hidalgo (Tony & Michele Skvarla)

1-1/2-story. Stucco with wood rear deck. Asphalt shingle roof. Small, level lot. Broadleaved trees in front of house.

Around 1600 Tony Schafer surveyed the La Costa area when he came back from Don Wallace's place. Michele (at the corner of Rambla Orienta and Hidalgo) told him that they had no water. Four pieces of equipment showed up soon thereafter and placed themselves there, as there was a hydrant. Tony told the Captain that there was no water and the fire crews left soon thereafter (according to Tony Schafer). Tony Skvarla states: 3-4 fire engines were in his area with one engine parked at the intersection of Paseo Hidalgo and Rambla Vista and another ahead of it pointing towards Calle Del Barco. The fire front

seemed to approach from everywhere at once; the bottom as well as the sides. The trees and other vegetation seemed to be at once on fire, and fire personnel started hosing down the trees until they ran out of water. The vegetation caught the wood fences on fire and all these flames caught the houses on fire. Tony stayed with the Fire Department and evacuated with them about 1730 (it was dark). They told him that they would call the Sheriff if he did not go with them. At this time all the trees and houses (he could see through the smoke) were on fire and he felt that there was little hope for any houses to be saved. About forty minutes later he walked back up the north side of Rambla Vista because the two apartments along the south side of Rambla Vista (near Tony Schafer's) were burning and blocking his access along the street. As he walked up the north side it appeared to him as if every house was burning. It was quite smoky (he was amazed the next day that so many houses were actually still standing). When he got up to his house by about 1830, he noticed that it was not burning but that the adjacent house had caught on fire. He grabbed a garden hose to protect his house when two fire engines came by. He begged the first one for help. The second fire engine (apparently with the Captain or team leader) agreed, and the first engine rolled out the hoses and protected Tony's house. Every house he could see was fully engulfed at this time. In all, Tony stayed for about 20 minutes and evacuated as the Fire Department started hosing down his house. Michelle stayed with the house.

1992 Prefire aerial photo (1993 Old Topanga Fire overlay: Orange=burned, white=no burn).

The Seemans were home when the fire was coming over the mountains. They were packing when the Sheriff came by (flew overhead?) at about 1300 and told them to evacuate. Thereafter Kurt Pierose's brother Brad showed up. Melvin talked with him and reminded him that Kurt had a fire hose and connections for the water hydrant in front of Kurt's house. Brad hooked up the fire hose. Melvin and his wife then took off saying that they were too old (in their seventies?) to fight fires. Kurt came back in before the fire and helped save their house. Melvin heard that it was very smoky and that the brothers fought the fire until about 1800 when the water gave out. They almost got killed in the process and finally got out. Later, about 1830, they got back in. They told a fire engine to come up and help them, at which time the back of Melvin's house was burning. The back steps had burned down and the fire was at the back door. Kurt and his brother directly saved at least six homes (besides their own).

21540 Paseo Serra (Kurt & Michita Pierose)

1-1/2-story side-slope home (down-slope from the street) without setback (and) wooden deck.

Kurt and brother Brad were instrumental in saving a total of seven homes, including Kurt's own. They had a fire hose hooked to the fire hydrant in front of Kurt's house. According to Kurt's observations, at least 16-18 homes out of approximately 48 did not burn until hours after the fire front had passed. Good water pressure was available in the hydrants within an hour at most after the fire front had passed, so these houses could have been easily saved. Firefighters were not willing to come up Rambla Vista.

Kurt lived for seven years on Galloway in Pacific Palisades. One night his Labrador retriever puppy had started a fire in its dog basket inside the house by chewing on the tips of (fireplace striker) matches. This little house fire made a big impression on Kurt, who was in the construction industry and uses fire hoses for cleanup work such as hosing down parking lots. When moving to La Costa, Kurt had a fire hydrant in front of his house and bought about 400 feet of fire hose to protect his own house and neighboring houses in case of an internal house fire in the cul-de-sac neighborhood. Being that close to the ocean he never thought that a brush fire would ravage his neighborhood.

On the day of the fire, Kurt was at a meeting in Century City about 1230 and went from there to a meeting in downtown L.A. While in transit his wife paged him between 1230 and 1300. From L.A. he called his wife, who told him about the fire. He left downtown L.A. About 1330 and chased home. However, at Santa Monica Freeway before the tunnel, the Sheriff had just set up roadblocks and forced everyone off the freeway at 4th street. Kurt just shot back on the freeway at the narrow on-ramp after 4th street which had not yet been blocked off yet. There was no traffic on PCH up to Chautauqua. From there it was bumper-to-bumper. Kurt had a four-door red pickup truck and got behind a caravan of fire trucks going north. At the Chart House near Topanga Canyon, every lane was closed. The Sheriff, under tight control, let fire trucks pass. It was about 1430. Kurt was lucky to chase by behind the fire trucks but had a confrontation with a Sheriff who would not let him through. When the Sheriff's attention was diverted Kurt just followed the fire trucks.

Hundreds of people begged Kurt to pick them up. Others were running up into the hills. One of them, a head of Disney Co., jumped in the back of Kurt's pickup and Kurt gave him a ride to Surfrider Beach near Alice's Restaurant just south of the Colony and told him to walk the last 550 yards (the man saved his rare Porsches and wrote him a warm "Thank You" letter). On the way back, three lanes of PCH resembled a parking lot with people trying to go south. He got to his home about 1530 or about one hour before the fire front hit. Brother Brad had gotten in from Point Dume about an hour earlier, had hooked up the fire hose and was flooding surrounding houses and landscaping while drinking beer to quell his thirst. Kurt's wife Michita had evacuated the house with the children and the cats about 1400 and went to her mother in Hancock Park. Kurt filled all available trash cans, buckets, etc., with water and put towels and some large cloths in them.

Initially Kurt decided to evacuate but after calming his nerves while drinking a beer, decided to stay and save the house. He closed all windows, especially his louvre windows (nevertheless the wind forced flying embers through, which burned holes in the couch adjacent to the louvres). He also closed the blinds for protection in case wind blasts would break a window. Both brothers drenched the surrounding houses and vegetation with water, wasting a lot of water in the process. It was so hot that much water evaporated quickly. They dragged the hose about 350 feet in either direction of the hydrant. They had connected a 2-1/2" line for 100 feet from the hydrant and then reduced it to 1-1/2" for another 250 feet. Dragging the hoses back and forth on the street was hard work as they were full of water. They laid water curtains on both houses to the east at the end of the cul-de-sac **(21533, 21532**

Paseo Serra), on their own house at **21540 Paseo Serra**, as well as on the houses to the west (**21550-a wooden house, 21566 Paseo Serra**-tile roof & stucco). They could not reach the north side of 21566 Paseo Serra. Fortunately, this house had a tile roof and a vacant lot was at the other side of it. They could not reach the house past the vacant lot (**21590 Paseo Serra**) which burned down. North of the street they could only reach to the first story of the house at **21569 Paseo Serra** but laid a water curtain

on the vegetation in front of the house. Fortunately the house had a huge wall of cacti which took the brunt of the uphill-racing fire. They also shot water up to the rear of a house on **21544 Rambla Vista** which survived the fire. The three-story wooden house at **21536 Rambla Vista** north of their own home was one of the first houses to burn, catching fire almost immediately as the fire front went through.

As the fire front approached, Kurt and Brad backed their trucks into the end of the cul-de-sac and left the engine running and turned the lights on. It was very dark because of the thick smoke. The headlights gave them some light. Suddenly the fire was on top of them and all trees seemed to ignite at once. They sought refuge between the trucks and shot a wall of water from their fire hose. The fire was leapfrogging and winds picked up at the beach. Suddenly at the height of the fire, the water pressure went down but the garden hoses still had pressure. They left the hoses running with one hose still having enough pressure to move a fan sprinkler back and forth and another squirting water on the wooden house north of them. With no water for protection, both brothers made a run uphill Rambla Vista in separate vehicles. Brad drove through a wall of flames but Kurt had to turn around because the flames were too much. A fire truck was sitting at **21344 Rambla Vista** and probably saved the house (Kurt had watered down the rear of the house). Firemen told Kurt to stay with them. Kurt got out of the truck and they hosed him down and Kurt went back in. He was there about 10-15 minutes and saw the trees around his house on fire (he thought that all the houses on his street were burning). Wooden houses on the uphill side of Rambla Vista between 21547 and 21587 were also on fire. He then drove back and forth and was finally able to chase down Rambla Vista. Houses were on fire along the streets. **21623 Rambla Vista** (Dirmond) was fully engulfed with the broken gas line shooting flames across the street. Having lost contact, each brother thought the other had died.

There were fire trucks lined up wall-to-wall on PCH. Some were hosing down the houses on PCH. Kurt looked up to his house but could only see fire and did not know if it was trees or houses. He called his wife from the La Costa Beach Club and told her that the house had burned down. While there he saw the houses on Paseo Portola on fire. These were most clearly to see because they were right across from the Beach Club. One or two were wood and they started burning first. Stucco houses seemed to ignite somewhat later. The winds were so strong that the wooden tables at the Beach Club were bombarded by firebrands and started to burn. Kurt took a garden hose and hosed the tables down. But then he got curious to go back up and check things out, and about 1800 he walked along PCH towards the west side of Rambla Vista. Suddenly he saw and stopped his brother driving by on PCH. When they looked back again at the hillside through the smoke, everything seemed to be burning including the houses on their street. He told his brother that he wanted go back up there. His brother told him that he was crazy and would die but went along with him. The fire winds had gone through and instead of laying horizontal, the flames were now standing straight up. Fire trucks were parked all along PCH and they went around them up the west side of Rambla Vista. One or two fire trucks were coming down Rambla Vista and Kurt begged the firemen to come up but the firemen said that the houses were too far gone. When Kurt drove back up, **21642 Rambla Vista** was on fire. They arrived back about 30 minutes after they had left and the houses were still standing. They used the rags in the trash cans to put out spot fires. They then discovered that the garden hoses still had pressure and used them for about 30-40 minutes and saved several cars. They then found that the fire hose again had pressure and used it to knock down many of the spot fires.

After the Pierose brothers were sure that the spot fires which had threatened to ignite neighboring homes were temporarily knocked down, they chased to PCH and begged fire trucks to come up and help them. Initially they refused, saying it was too dangerous. At about 1930-2000 fire chiefs in suburban trucks drove around checking out the situation and damage. They still could have saved homes. About 2030-2100 when the worst of the fire was over, they finally convinced the firemen and one fire truck came up. The firemen helped the brothers knock out spot fires.

The house above at **21436 Rambla Vista** was still crackling with flames and sending down firebrands, but the winds had died down. Earlier the water heater from the house had exploded and had hurled through the air, landing in front of their house as 15-to-20-foot-high flames from the gas line shot into the air. Firemen watched (patrolled) for about an hour (an easy job compared to what

the brothers had gone through). Then the truck was called away. Suddenly they came back, pulled out their cots and went to sleep about 2200-2230 (10:00-10:30 pm). They told their chief (captain?) that they would keep an eye on the area. When Kurt asked them to get up and assist with saving surrounding homes, as some houses were burning while others were not burning yet, the firemen told him that they could not do anything more and that they had been up for 24-36 hours and were tired.

Kurt estimates that there were about 46 houses between Country Liquor to the south and the Carbon Mesa Fire Station just to the north and that about thirty homes had burned or were burning while about sixteen burned later and did not have to burn. For example, the Sloan house caught fire after 2300 as the railroad ties behind the house burned and "lit up some plants." The brothers went back to PCH and told sleeping firemen that houses had not yet burned. They were told that the firemen could not go up.

It was Kurt's impression that firemen had very poor communication and were ill-prepared to fight this kind of fire. Out-of-town firemen had no maps and did not know the area. The big fire trucks were ill-equipped for the area, and it seemed to be like a big McFire (McDonald) Department, everything the same, not geared to local needs.

21584 Paseo Serra (Betty Pringle Trust)

Firemen told neighbor Matt Salinger that trees, neighbor's house at 21590 caught this house on fire.

21590 Paseo Serra (Michael Rubin)

2-story. Composition roof. Wood siding. Surrounded by eucalyptus trees.

Firemen told neighbor Salinger that the trees were responsible for this house and the house to the east (21584) burning. The burning house almost caught the house on 21604 Paseo Serra on fire.

21604 Paseo Serra (Matt Salinger)

Large, white, two-story stucco house at the corner of Rambla Vista and Paseo Serra. Flat, hot-mopped roof.

Matt thinks that his house was saved for the following reasons: It was a newer house that complied with the new codes. He had double-pane windows and stucco siding. There was no flammable landscaping on his property but a row of large eucalyptus trees along the east side of his property were within 10 feet or less of his house. The eucalyptus trees are just on property line but on the neighbor's property and the neighbor did not want to cut them down, probably because of privacy. He also claimed that they were a Monarch butterfly habitat. A large lawn (and therefore no flammable vegetation) is taking up the downhill area of his property. Matt started watering one extra day a week in response to the Laguna fire. He also watered for five hours before this fire came. He also flooded the roof with about 2-3 inches of water and filled the bath tubs with water.

On the east side of the house, all outer-pane windows broke (exposed to radiation heat of neighboring house as well as eucalyptus trees burning). Two of the top floor windows fell out and broke in many pieces. Even the stucco surface (the stucco was smooth-finished) peeled off in places. Matt had built a small retaining wall with 2x4s touching the house along the rear wall. It burned adjacent to a vent and Matt thinks that he was lucky that the fire did not enter the house through the vents.

When Matt saw the fire coming over the top of the north canyon uphill from his house as well as over the top from Via Costera to the west, he evacuated. There was no water pressure. He closed the doors but kept the kitchen door unlocked and turned off the garden hoses. He drove down the west side of Rambla Vista. There were no fire trucks on Rambla Vista and fire trucks were going north on PCH. He could not go west (north) on PCH because the fire had come across Carbon Canyon near PCH and cars were on fire. He started to go south but PCH was madness. Ashes and smoke was everywhere and the wind kept changing direction. People stopped their cars and ran to the ocean. At the La Costa Beach Club a fireman told Matt that they would make Rambla Vista the next firebreak (they would make their next stand at Rambla Vista).

The next day a friend took him in his boat from the Marina and dropped him off about 100 feet offshore and Matt swam in. The ocean was littered with ashes and he encountered about a dozen dead

birds on the water. When he returned to his house the railroad ties at 21590 were still burning. Matt spoke two days later to a fireman from one strike team who told him that they had watered the east side of his house once while the house to the west (21590) and the eucalyptus trees were burning, and also watered down houses on Rambla Vista. Kurt Pierose questioned this as the Rubin house was long gone (had burned down) before fire trucks came by. A neighbor at 3989 Via Costera stayed at his house throughout the fire. He told Matt that the fire traveled along Rambla Vista from west to east (from Via Costera to Matt's lot), catching first the house, then the tree, on fire on each lot.

D. Rambla Orienta

3868 Rambla Orienta (Chad Harper, Posey Carpentier)

House built in 1930s. 3-story split level. Stucco. Red tile roof. They never thought that the house could/would burn. The house was full of art objects and treasures collected lifelong such as crystals, china, expensive vases, and antiques. One painting by San Francis was valued at \$75,000. Other paintings had been displayed in museums. They had called it their home for 35 years. Chad was evacuating items, but Posey told him not to take anything because the house had come through previous fires and would be safe. Chad brought down the car with Posey and computers, etc., about 1545 or about 15 minutes before fire front hit.



1993 Postfire air photo (Orange=burned homes)

Chad is a jogger and runs often up and down the steep hill. At 1600 he walked back up the first time and remained there until about 1730. From his house he was taking pictures before it got dark, shooting to the end of Rambla Orienta. He saw smoke from the north and then fire. Black & Whites ordered him to leave. Fire trucks were at Michele's at the corner of Rambla Vista and Paseo Hidalgo. It got very dark. The fire trucks at Michele's became hard to see. Finally he drove to 21452 PCH with his car partially loaded with clothes. At PCH it got real dark. Flames were glowing orange from Pt. Dume. The palm trees at 21631 PCH were on fire. Newspapers on the ground were on fire. He tried to stamp out the fire to no avail, causing sparks to fly. Firemen told him that there was no water and nothing could be done.

At about 1815 Chad decided to walk up a second time to get the jewelry. There were about four fire trucks at the wooden house (Schafer's) and he jogged past them. He could feel the heat at Posey Carpentier's Real Estate. Nothing there was on fire yet.

The McNealy's house (21446 Rambla Vista) was burning on the roof. The underpinnings of the down-slope homes (21458, 21466, 21470 Rambla Vista) were burning. Chad stopped on Rambla Vista below Arnold York's house as it was too hot to go on. He went back and forth to find a cooler

area. The York house (**3958 Rambla Orienta**) was on fire. The McNealy's house was now more engulfed. It had a down-slope braced wooden deck which was on fire and fell off as one piece. House was now burning good. The two houses on the same side as the McNealy's directly downhill from them were also on fire. The cars along the street were not burning yet. The Richards' house (**3950 Rambla Orienta**) next to York's was also on fire about 1830. Chad was still trying to find a spot to hide from the heat. He ran back to the corner of Paseo Portola, and the houses on the corner on either side of Paseo Portola were on fire. Chad spent some time at the three unburned houses at Rambla Vista (21400, 21410, etc.). Then he finally ran back past Schafer's house and the fire trucks and back to Posey Carpentier's at 21361 PCH. It was like a fire rain forest. The palm tree was still burning. The slope at the back of the building was also burning.

Chad started up the hill for a third time between 2100-2130 along with Tony Skvarla and Norm Curray. The flames were low but there was lots of smoke. They went up to Tony's house and it was still there. But the Curray house close to York's had burned. Chad went to Posey's house and only a burning timber skeleton remained.

Posey Carpentier saw her house burning from the beach along with York's house.

3958 Rambla Orienta (Arnold York-Malibu Times)

California Spanish. Stucco and tile roof. Split-level three-story. One story at street level. The house was pretty well isolated and there was an empty lot below. House on fire before 1830. Fire was coming from Carbon Mesa to Rambla Orienta. Smoke above Rambla Orienta was blowing west to the colony. Arnold only saw smoke from Sumac Ridge but realized that fire was also coming from Sumac Ridge. So he left. His house burned down.

3925 Rambla Orienta (Gretchen Hayes)

House burned. She evacuated. See her report.

3854 Rambla Orienta (Chris Riley)

Last house at Rambla Orienta at the end of the cul-de-sac (sign: "Do not pick flowers").

E. Rambla Vista



Greg Geiber (a L.A. City fireman who lives in the Green Meadows Fire area where 'all' the houses burned) and his wife Susie were evacuating friends' horses. They used to live off Stunt Road.

Susie gave Tony a brush jacket. Tony encountered his first roadblock at Pepperdine. From there he drove home and saw the fire moving south across the mountain. He drove up the west end of Rambla Vista. His wife made a phone call at 1600. The fire had not yet arrived. It was still light when his wife and daughter evacuated.

Tony's neighbor north across the street had done a good job of brush clearing. As it was getting dark, Tony went up the ridge above his neighbor's house and saw a solid firewall coming down within Las Flores Canyon (before the next ridge east of Las Flores Canyon). By then the fire had already come over the top of the little ridge from the north. Tony tried to set backfires but it had gotten too hot and he raced downhill, lost his footing, and rolled the rest of the way. The palm tree behind his house was on fire. He found shelter behind his own 4-foot-tall fence and sat out the fire front. He was later told that other firemen had set backfires along the west wall of lower Rambla Pacifico above the garage behind the shopping center.

The actual heat wave and the total engulfment of the flames was over in about two minutes (see video tape of fire front across area). Tony stood up. The neighbor's automobile was on fire. The leaves in the gutter of the neighbor's house were on fire. Hot spots were everywhere. Some of his trash buckets had water and he used it to douse hot spots on his deck.

After the fire blew through, Tony ran to PCH and begged for help. No buildings were on fire yet (about 15 firetrucks were lined uphill on Rambla Pacifico starting close to PCH). Two Orange Co. fire trucks with a total of 7-8 men drove up to help. Firemen also tied in hand lines to the back of the parking lot at 21361 PCH just downhill of his house. As the building west of Tony's burned out, it collapsed about 2100, bouncing off the eucalyptus tree (otherwise it would have hit his duplex with full force) and hit the base of his building.

The fire started burning the apartment across from him, moving from east to west. The house west of the apartment was probably ignited by the radiation heat. The apartment building south across the street was then ignited and the fire moved east to his own house, igniting three adjacent buildings. Thus, the fire moved east to west to east, counter-clockwise in a circle. The house west adjacent to Tony's house was 10 feet higher and had only ten feet of separation.

The Albatross at PCH west of the Sea Lion was also burning, ignited by firebrands. Firemen used the big 1,000-gallon squirt from 88's. The big squirt was probably largely responsible for the firemen tying into Tony's house, using water for about 7-8 minutes. When they used up the water, the Orange Co. men said that Tony should leave with them. Tony walked down-slope to the parking lots with boxes of belongings while the big pines were burning on the house to the east (Tony's garage was filled with belongings evacuated from Don Wallace). Suddenly the Orange Co. guys told Tony that they were back in business as water had returned.

The first house on the left side on Rambla Vista (past A&B Plumbing) had a wooden fence about 15 feet long surrounded by the stuccoed building. The fence caught on fire and the flames somehow got into the wall of the stucco building and set it on fire.

Tony called his wife at 2242 (telephones were still working) when the fire was out in his neighborhood and told her that the house was saved. Buildings were still burning on the hillsides.

Evaluation

In retrospect, one piece of equipment with a 5-inch line laid from PCH could have saved the surrounding buildings because they burned from radiation heat. A textbook battery wagon operation could have been set up at **21359 Rambla Vista**. This building could have probably not been saved, but the flames could have been knocked down before they spread from house to house. Knocking down the flames would have eliminated this chokepoint. The battery wagon operation could have then moved over and let other units extend up the street.

After the fire storm had passed, Tony was bombarded by firebrands for a long time. Many houses that burned later were ignited by firebrands. His own deck was scorched by them. Three structures were lost south of PCH because of firebrands.

There was a command system but no plan. There is a universal problem with FIREScope. They have to work towards effective deployment or it is a waste of men and equipment. We have huge losses because the strategy is not effective. Prevention-Strategy-Tactics.

Rambla Pacifico: With Rambla Pacifico closed, there was no opportunity to save these houses. Besides the water problem, the County knew that they had an access problem and did not prepare for it.

Preplanning—It was known that the water system was poor and that Rambla Pacifico was closed. All these houses burned. Even prior to the fire, Calle Del Barco homes often did not have enough water to take showers. The County Fire Dept. should have made plans for water shuttles, etc. With one mile of hose and one water shuttle, the whole area could have been covered.

1,250 gal/min. fire flow for two hours is required by the County for community standards. People look at lack of water as an anti-development tool. There are no directives in the OES objectives about how to put out a fire.

Look at the ICS system for high rises. The command is totally broken down in groups. The County Fire Dept. did not do it. There was no incentive to do it (i.e., Rambla Pacifico is closed, give up). During the 1978 Mandeville Cyn. Fire, the L.A. City Fire Dept. laid thousands of feet of hose lines in Marquez Knolls.

Neil Petzing (Fire Chief) told Tony Schafer that he went to Fire Camp 8 past midnight and people were in bed and he got them out of bed to help him save his house.

The corner of Rambla Vista and Rambla Orienta was a safe area for strike teams and water shuttle.

Fire Dept. Risk Analysis: Clearance, Water, Roads, Communication, etc. At the first Malibu City Council meeting, Tony Schafer and Neil Petzing told the Council that the area burned because Rambla Pacifico was closed by the slide.

21349 Rambla Vista

3-story stucco. Hot-mopped roof with skylight and vents along N side. Burned. It burned last about 2100. It could have been saved if it would have been laddered.

21359 (21351-63) Rambla Vista

3-story. Stucco & wood. 8(?) -unit apartment building. First building to burn in Tony's area. It started to burn by 1730. It had good clearance on uphill north side. Landscape scorched but pines burned (charred by burning building).

21369 Rambla Vista (house N of 21359)

Modern, flat roof hot-mopped with cedar siding. Few eaves. It started to burn about 1830.

21354-58 Rambla Vista (Hendler)

Fourplex. Probably ignited from radiant heat from house on N about 1900. It was the first house to burn on the south side of Rambla Vista in Tony's area.

21360-62 Rambla Vista (Hendler)

Fourplex. Probably ignited from radiant heat from house to west past 1900.

21366-68 Rambla Vista (Hendler)

Fourplex. Ignited from radiant heat from house across street to north (**21369 R. V.**) about 1900.

21390 Rambla Vista (Marshall & Linda Coben)

Next to 21400 Rambla Vista. Fire burned uphill. House burned about 2100. Firebrands and radiation heat a major fire source.

The owners evacuated about 1600 and their son came to the house about 1430 and fought the fire with a garden hose until after 2000. The neighbor's house caught fire about 1900. The pine trees had also started to burn but did not catch the house on fire yet. Some windows (all were double-pane) started to burn with the heat of the surrounding fires and the trees burning. Finally a large tree, adjacent to their property and overhanging their house, caught on fire and ignited the house. The son finally left when it became hopeless, and the house started to catch on fire without any help arriving. He was sure that the adjacent wooden house on **21400 Rambla Vista would** also catch on fire as he left. The father was in the backyard of the house below on PCH (McKellan) with several firemen and

hoses. When he saw his house ignite, he asked the firemen to help him but they said they had no water. However, his neighbor's house (Polly Pierson) was saved because there was water. He saw her house and trees catch on fire.

21400 Rambla Vista

Wood siding. Asphalt shingle roof. Water hydrant across street. Did not burn.

Fire came from bottom. According to neighbor Marshall Coben, there was water and an unknown neighbor used the water hose to save the house (Fire Dept. may have also tied into the house later).

21407 Rambla Vista

2-story stucco house. Wood deck.

21410 Rambla Vista (Susan Rossi)

Modern. Stucco. Class A roof. Fire hydrant across from street. Owners were not home. Sister in San Francisco saw coverage late Tuesday afternoon on TV showing a fireman that said in an interview that their house was saved. Susan credits firemen with saving house. They had an identically built house at **21426 Calle Del Barco** which burned. All pines along the west side of the house burned. Tree south downslope burned heavily.

21421 Rambla Vista

4-story modern white stucco house. Hot-mopped (?) & rock roof. Lot between 21421 and 21407 is empty. Metal frame windows. Owner believes that house was saved because of its new metal, fire-safe construction.

21580 Rambla Vista (Dick & Gisela Guttman)

Pool. Farmers Insurance.

The wife and daughter left when the fire came over the hill. Dick hustled and ran across the hill down Rambla Vista to get the Fire Department, but they would not come uphill. The Fire Dept. would not even use the pool. So he ran back up. He kicked over the fences which initially saved him. Electricity and water were out. He watched as it got so hot that first the paint on the wooden garage door of the neighboring house would bubble up, then the garage door would smoke, then it would ignite. He stayed throughout the fire storm, even going into the pool. He finally walked down to PCH with his cat after his house had burned. Dick testified at the Malibu Wildfire Panel.

Dick's interview continued. Review of Wildfire Panel testimony.

21601 Rambla Vista

Owned by contractor. Attended. Being recarpeted.

21605 Rambla Vista

1-story yellow stucco. Asphalt shingle roof. Open wood porch/garage. Wooden deck. At top end of private driveway shared with 21607 Rambla Vista. Just above the upper houses at Villa Costera. Did not burn. Carport is newly painted. Probably partially replaced. The house is situated above 2910 Villa Costera.

According to Mona Loo, Bill McGregor (2900 Villa Costera) helped save this house with a pool pump and water from the pool from the Brown's house (2910 Villa Costera). Bill helped the firemen hook up the pool pump. After the fire personnel left, Bill kept an eye on the house all night as the trees and spot fires around it kept burning. It had a wooden deck and was very vulnerable to spot fires.

The next morning Michael Sedgwick and neighbors from Villa Costera used pipes to pick the telephone poles out of the ground to be able to extinguish their fires. It was hard work. (The telephone poles had been laid into the ground to create and outline a parking lot.)

21607 Rambla Vista (Jim Plattner)

L-story white stucco. Red tile roof. Pool. Top house on Rambla Vista. Shares steep, long driveway with 2605 Rambla Vista. Jim came home and saved his house without fire department. A small part of the house burned but he extinguished the flames.

Mature, tall Aleppo pines along private drive badly scorched (and seem dead) after the fire except for a few live tips on some trees. Blue Gum eucalyptus at NW of house recovered well and were only lightly scorched.

21609 Rambla Vista (Emory)

House was ignited by radiant heat from the adjacent 3-story wooden house (**21623 Rambla Vista-Diamond**).

21613 Rambla Vista (Todd & Marsha Sloan)

Temporarily at 1127 Lachman Lane.

2-story house with tile roof and freshly painted tongue-and-groove wood siding. Class A roof. Side and roof caught fire from railroad ties between 2200-2300. The house burned from the roof down. TV dish also burned. A wooden trellis south of the house burned only partially. Front slope has one sycamore tree, Vinca groundcover, and (away from the house) rosemary groundcover, much of which burned. Other slopes were covered with ice plants. There was pampas grass on the slope above the house as well as some pine trees which scorched but did not burn. The trees were removed after the fire. Overall good, low-fuel, maintained landscaping.

At noon the Sloans were in their office in Pacific Palisades and received a telephone call from their painting contractor who told them to come home as there was a wildfire. Marshac called Barbara Boxer's local office requesting that the C130s be used immediately and to get them off the ground in Van Nuys. The local clerk did not know what to say.

They came home before any road closures and laid out the garden hoses around their house. They filled trash cans full of water and put gunny sacks inside. At 1430 they were ordered to evacuate. The next day they found out that their house had burned. One fire truck came up to the end of the cull-de-sac above Sloan's house. It later moved to Villa Costera.

Mono and Tom Loo on the next mesa west of the Sloan house had some day-laborers at their house who helped them save it. The fire storm came through their area between 1630-1700. The house survived the fire. Jim Plattner (who owns the house above Sloan's and who got back home to save it) and Mike & Dawn Sedgwick (helping Loos fight the fire) witnessed the house burning hours after the fire front had passed. A small railroad tie wall on the slope just a few feet behind the house (which had been installed a few weeks before the fire) caught fire and was flickering for hours before it finally caught the side of the house and the roof on fire.

Dick Butka's on Villa Costera had a City Fire Dept. Truck with Captain Hill. At about 2000 Mike and two laborers went down to him, asking him to go behind the Sloan house to put the fire out. Hill refused. Jim Plattner then drove to PCH and tried to get fire trucks but they refused. So Jim drove back up. By this time the fire had moved towards Topanga. Kurt Pierose also tried to get firemen to go up to the house, but to no avail. The house was engulfed by 2300. It was one of the last ones to burn in the area.

21623 Rambla Vista (Sherry Dirmond)

The 3-story wooden house of Sherry Dirmond ignited as the fire front went by, burning like a torch. Tom Torres witnessed it. It set the adjacent 2-story, stucco Emory house (**21609 Rambla Vista**) on fire. Both houses were unattended.

F. Villa Costera (west boundary of La Costa)

Private drive, gated (3900, 3909, 3910, 3919, 3929, 3930, 3939)

A gated subdivision that was built in the early 1980s. Much of the area to the south and east is fairly level and is disked every year. This provided a good firebreak in this area. To the west (Carbon Canyon), homes overlook steep slopes.

Houses on Villa Costera did not burn. Much of landscape vegetation to the south and east (protected by

the disked firebreak) did not even scorch. There were 8 to 10 day-laborers from the labor exchange helping homeowners protect their homes.

According to Tony Schafer, the area was attended by an L.A. City strike team and day-laborers.

3900 Villa Costera (Bill McGregor)

Bill McGregor has a pool and helped save this house with a pool pump he and Michael Sedgwick brought up his steep driveway from the Brown's house at **3910 Villa Costera**. According to Mona Loo, Bill helped the firemen hook up the pool pump. After the fire personnel left, Bill kept an eye all night on the Brown house and the house above at **21605 Rambla Vista** as the trees and spot fires around it kept burning. The Rambla Vista house had a wooden deck and was very vulnerable to spot fires.



1992 Prefire aerial photo (1993 Old Topanga Fire overlay: Orange=burned, white=no burn).

The large 2-1/2-story house above at **3231 Rambla Pacifico** was fully engulfed (the old house had now been torn down but one wall was kept for a huge remodel with stucco siding). Firebrands were raining from it and fireballs were also floating from it down to **3900 Via Costera** below. Michael and Bill were afraid that if any of the houses on upper **Via Costera** (**3900, 3909, 3919**, etc.) Would catch on fire, it would cause a chain reaction. They sprayed the back of Bill's house while the firebrands were raining down. They did their fire-fighting and fire patrols for about 90 minutes (Michael also went back to his house protected in the interim by day-laborers) and then migrated to Tom Loo's house for a chicken dinner.

3909 Villa Costera (Green)

This house is situated between the Sedgwick and McGregor houses and has a pool. According to Michael Sedgwick, there was a significant fire behind (uphill) of the stone wall where some yard-cleaning trash had been quickly dumped as an emergency. Michael told a tall Captain (Hill?) that there was a fire behind the wall and was told that "he should tell his Mexicans to put out the fire." The day-laborers protected this house as the houses above it on Rambla Pacifico were burning.

3910 Villa Costera (Brown)

The owners were not home but had a swimming pool and pool pump which Bill McGregor used effectively to lay lines above Villa Costera and save the home above at **21605 Rambla Vista**.

3919 Villa Costera (Michael Sedgwick)

Mona Lee is the head of the labor exchange and she was instrumental in getting 8 to 10 day-laborers to come up to upper Via Costera. The laborers fought the fire with chain saws and hoses. Earlier a young sheriff with a bullhorn had ordered everyone to leave but they ignored him. By about 1930 hours the fire had gone through.

Captain Hill (L.A. City Batt. 81 in red pumper) was approached by day-laborers Max Para and Oscar Osuna and asked to help save the houses they were protecting. Captain Hill was parked at the gate and declined to move up.

At about 1600 the fire came down the canyon. There were many fire trucks at the mouth of Carbon Canyon as well as in Carbon Mesa (the County Fire Dept. took responsibility for this area). The fire also went around the top of Via Costera near Rambla Pacifico. Michael was on the roof and had day-laborers helping him. Helicopters made several air drops at or near the Bodkin's house and were instrumental in saving it. Fire engines spent most of their time at the Green and Reich houses. The house above Michael (**3231 Rambla Pacifico**) was on fire and was popping, crackling, and groaning for about an hour or more while sending sparks and firebrands downhill.

There was a significant fire uphill behind Howard Green's wall at 3909 Via Costera. Michael and Bill McGregor found a pool pump full of gasoline sitting poolside at the Brown house (**3910 Villa Costera**). Brown had checked the pool pump out about three days earlier, so it started right away. There was a wood pile on fire behind the house and Michael and Bill put it out. Then they put the pool pump on a cart with wheels and brought the pump up the steep driveway of the Bill McGregor house, because Bill had a pool, and the large house above it (**3231 Rambla Pacifico**) was burning and sending showers of firebrands downhill to Bill's house. They were afraid that if any of the houses on upper Villa Costera (**3900, 3909, 3919, etc.**) caught on fire, it would cause a chain reaction. They sprayed the back of Bill's house while the firebrands were raining down.

As the fire abated between 1900-2000 hours, the neighbors and day-laborers met at Tom Loo's house to eat dinner and to assess the situation and take inventory. They wandered out of the open gate and could see that the Salinger and Sloan houses were still standing. The highway was lined with firetrucks from about 1900-2100. The Sloan's railroad ties (**21613 Rambla Vista**) were burning and there were small spot fires around but the house was not burning. Michael told Captain Hill (now stationed in front of 3903 Via Costera) the situation, and the Captain said that he would take care of it, otherwise they would have gone over with their day-laborers to protect the house. The Captain had the attitude that the homeowners and their helpers should not be here. Homeowners were outraged that the house burned later at night without being attended by the Fire Department.

The next morning they went up to **21605 Rambla Vista** where the owner had created a parking area outlined with telephone poles. The owner was not home and they had protected the house throughout the night. The telephone poles were burning, and Michael and his friends used pipes to pick the poles out of the ground to be able to extinguish the fires. It was hard work.

Batt. Chief Cliff Dysak at Fire Station 70 told Michael that the Fire Department became over-resourced (they rate from under-resourced, resourced, to over-resourced) by 1900. Michael thought the City guys did not know how to fight a fire without water. The County Fire Dept. would do better. Dysak had told him that once an area is assigned in a fire, the County Fire Department loses control of that area. According to Dysak (as related by Michael), State legislation is needed for local units to take over total control of an area as fire liaison and supervise and direct out-of-area firefighters. The local firemen should input the local knowledge and strategize. Lack of knowledge and communication loses homes. Everyone was on different radio frequencies.

3929 Villa Costera (Brodkin)

According to Michael Sedgwick, helicopters made several air drops at or near the Brodskins' house and were instrumental in saving it.

3930 Villa Costera (Dick Butkis)

All (red) wood house. The owner was not home and no Fire Department tied into the house. Neighbors and day-laborers protected it.

3939 Villa Costera (Tom and Mona Loo)

The Loos were home but did not have water. However, they had shovels and chainsaws and about eight day-laborers from the labor exchange that came up to help them. The men took turns sleeping and patrolling the immediate area. The fire burned to the ocean and then back up the western slopes (overlooking Carbon Canyon) behind the house. The storage shed near the tennis court caught fire and exploded. The day-laborers used buckets and water from the fish pond to put out spot fires. Tom went to sleep about 2100. He thought that the Sloan house (Tom's partner) was not in any danger. It burned later.

Mona Loo watched the fire burn one of the unprotected homes near the Carbon Mesa Fire Station. The fire burned around the house, then around the lawn, and then across an empty field towards the ocean. The smoke was so bad by about 1530 that it turned dark.

3969 Villa Costera

Pool. Attended by City Fire Dept.

3979 Villa Costera (Levine)

Lone house near lower end of street. Wood roof house ignited by many firebrands. Old lady refused to leave. Saved by L.A. City Fire Dept. engine.

3989 Villa Costera

First house on street. According to Matt Salinger, the owner at 3989 Villa Costera stayed at his house throughout the fire. He told Matt that the fire traveled along Rambla Vista from west to east (from Villa Costera to Matt's lot), catching first the house, then the tree on fire on each lot between 3989 Villa Costera and Salinger's at 21604 Paseo Serra.

21722 to 21323 Pacific Coast Highway (below the Rambla Vista loop)

The mix of residential and commercial structures located along PCH below La Costa was protected by big-rig firefighting equipment and personnel stationed there suitable for fighting such structural fires

VII. Big Rock

The fire did not jump Mulholland Highway, as the wind shifted and moved the fire to the ocean, then flanking west and east, also being fanned along by coastal onshore winds.

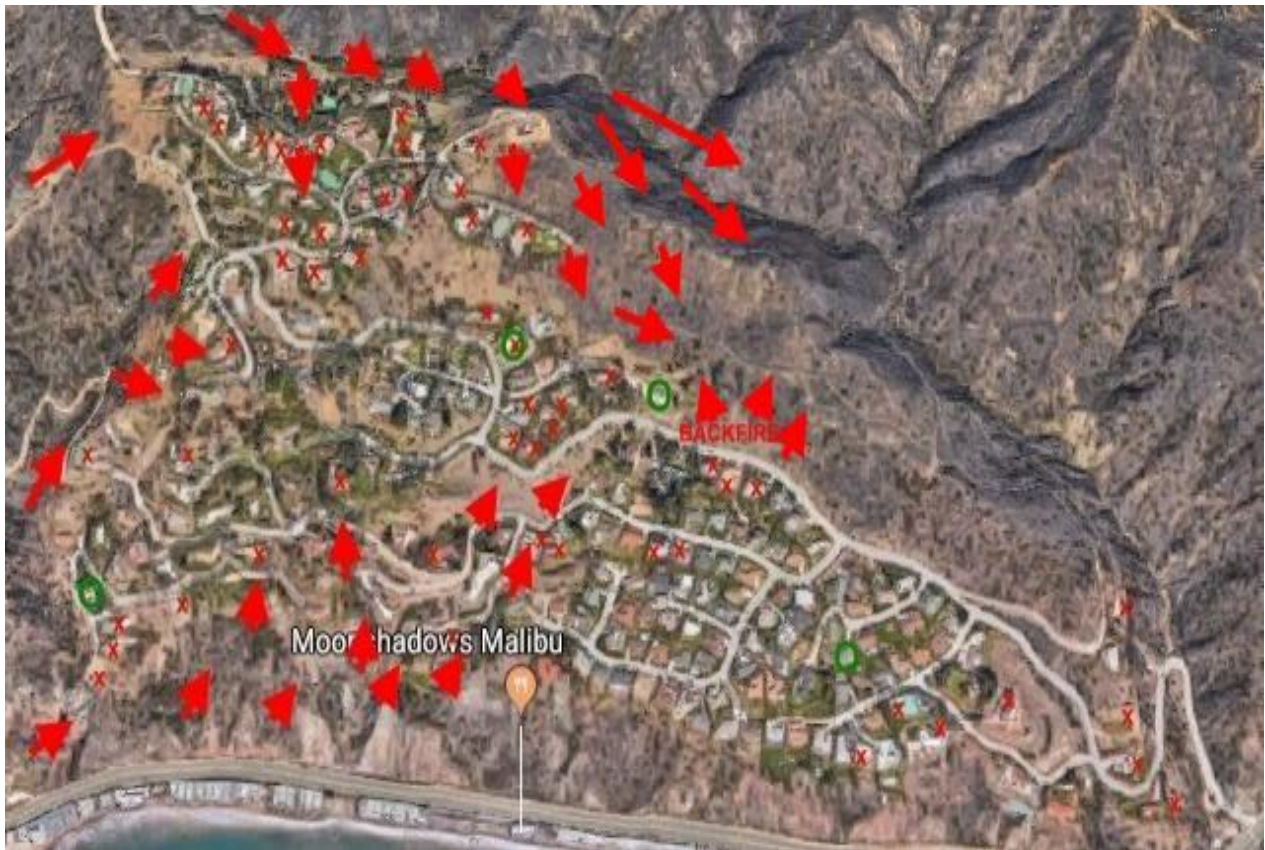
Big Rock Map 1 identifies the 51 homes that burned on Big Rock Mesa with a red x. The house at 20529 Big Rock Drive where only the garage burned is identified with a green O around the red x. The locations of the properties of the three homeowners that did not evacuate and provided documentation pertaining to saving their own homes as well as neighboring homes are indicated with a green O. Red arrows indicate the approximate fire movement and the location of the successful uphill backfiring along Big Rock Drive.

Official Fire Department postfire reports do not acknowledge that some homeowners did not evacuate and therefore gave firefighters credit for all the homes saved on Big Rock Mesa. However, homeowners that did not evacuate were also instrumental in personally saving homes and guiding firefighters to save additional homes. The testimony of three of the homeowners that did not evacuate is provided herewith.

1. Mr. Morris at 20762 Rockport Way (Big Rock Map 5) stated that he had water pressure until about 16:30 (4:30pm) and that the firefront moved through his area between 17:30-17:45 (5:30-5:45pm). Sunset was 16:59pm (4:59pm). His house was saved by him because of a great amount of watering, the wind being in his favor, and lots of luck. He also stated that the roads were not adequate or safe to evacuate/return or let firefighters reach the area.
2. Mr. Cords, who also took a video of the fire movement from his location at 20400 Little Rock Way, stated that the fire first came from the east (from Las Flores Mesa) along the lower, ocean side slopes in the area of Rockport Way, igniting houses there. Then the fire also came down from the top of the mesa (north) catching homes at Whitecap Way and Rockcroft Drive on fire while moving down along Big Rock Drive towards Little Rock Way (Big Rock Map 1). At about the same time the initial firefront had expanded along the ocean side slopes, came up from Seaboard Road, expanded along Pinnacle Drive, and, as indicated on Big Rock Map 2, ignited the structures between Big Rock Drive (20503, 20505, 20507, 20509) and Little Rock Way (20404, 20402). At about the same time firefighters had backfired/ignited the slopes below 20400 Little Rock Way which directed a seemingly “hell of flames” to the Cords fire-safe home above. A fire engine that had just backed down the steep and narrow common driveway leading towards 20400 and 20402 Little Rock Drive at his request saved his motorhome that was about to be overrun by the backfire flames igniting flammables around the motorhome, but could not save 20402 when its wooden deck ignited. The initial hose layout was not long enough to reach the deck and the engine ran out of water. Jürgen and Helma Cords saved their own home because of excellent clearance and also saved the home at 20415 Little Rock Way when wood lattice attached to the house ignited about midnight and a large railroad tie retaining wall was burning the following morning. Big rigs did make a successful stand along the homes of west Little Rock Way, a safe area half-encircled by Pinnacle Way and Big Rock Drive (Big Rock Map 3). No houses burned in this area.
3. Mr. Ihde of 20246 Piedra Chica Drive also did not evacuate, hiding with two neighbors in his garage. They saved his house, their own nearby homes, the house behind him at 20469 Inland Lane and also directed sleeping firemen to tie into the swimming pool of his neighbor at 20238 Piedra Chica Drive. He documented how late at night (hours after the firefront had moved through) about three houses below him (20252, 20272 [wood roof?] Inland Lane; 20178 Rockport Way) and four to five homes towards Big Rock Drive (20173 Rockport Lane; 20054, 20085, 20109 Big Rock Drive) caught on fire from floating firebrands (Big Rock Map 4). According to him, they could have been easily defended if homeowners would not have evacuated. Big Rock Map 6 identifies these homes and also indicates homes with addresses in blue that had swimming pools in the area.

The Rand Report states the following “*Not long after 1900, there was heavy fire in the area and six Los Angeles City engines were in the neighborhood as was Ventura County (1) and Orange County (1).*” Winds came from the east at 2100. Many fire engines were pulling out of Big Rock at about 2100-2115. At about 1700 at the top of Big Rock Drive, a 75-year-old man was forcefully evacuated by police. One Big Rock

homeowner had a 2-1/2" water hose attached to the hydrant and was using lots of water. There was some confrontation between police/firefighters and people who were forced to leave (force-evacuated).



Big Rock Map 1 *Red arrows = Fire movement based on eyewitness reports. *Three red arrows in almost semi-circle = Backfire uphill of Big Rock Drive. *Red X = Burned homes. *Green O = Homeowners that did not evacuate and provided testimony. Green O over red X = Only garage burned.

Needless to say, firefighters coming into Big Rock Mesa after dark were not familiar with the area and could therefore only defend homes in neighborhoods with adequate ingress and egress for big rigs. It seemed that when firefighters ran out of water, they pulled out of the area with little patrolling done at night as firefighters seemed to be tired and exhausted and bedded down for the night. Homeowners assisted firefighters in locating pool water sources.

As stated on p.132 of the L.A. County Fire Department's Old Topanga Incident Report as quoted from the Rand Report, there was hydrant water available until about 2100 (9 p.m.) but "...the hydrants went dry on Seaboard Road (about 2100) and some units were forced to temporarily withdraw to the coastline." "One LAFD engine was trapped on upper Seaboard Road for about 45 minutes with fire on both sides and flaming debris blocking their way." "After the leading edge of the fire front passed, strike teams re-assembled in a defensible area on lower Seaboard Road (more level, easily defensible) where they used syphon ejectors to draw water from swimming pools to assist in the successful defense of many residences." This was probably critical as wood shingle homes were still scattered throughout this area, dating back to the original development of the community. However, the Google Map indicates that only four homes in this area had pools, with three of these burning down (20284, 20394, 20468 Seaboard Road). These areas could have also been more easily defended with the assistance of homeowners if they were not force-evacuated as was stated by some residents.

While the report also mentioned that 56 homes were destroyed at Big Rock (25% of the total homes), as it expanded its Big Rock assessment map onto PCH, the Malibu City Disaster List (Burn List) identifies the following 52 homes.

Big Rock Burned Home List

23 Big Rock Dr. (20085, 20054, 20109, 20203, 20330, 20340, 20350, 20503, 20505, 20507, 20509, 20529 [garage only], 20563, 20721, 20734, 20743, 20765, 20776, 20777, 20779, 20851, 20871, 20933)
01 Cool Oak Way (20771)
02 Inland Ln. (20252, 20272)
02 Little Rock Way (20402, 20404)
02 McAnany Way (3648, 3651)
01 Pinnacle Way (20564)
05 Rockcroft Dr. (20600, 20628, 20659, 20723, 20725)
06 Rockpoint Rd. (20670, 20700, 20765, 20782, 20790, 20797)
02 Rockport Way (20173, 20178)
07 Seaboard Rd. (20384, 20394, 20468, 20470, 20540, 20585, 20649)
01 Whitecap Dr. (20650)

52

Big Rock Mesa provided a good visual setting for identifying the locations of these homes and perhaps identifying some of the risk factors. Big Rock Mesa was developed in the 1960s not only with a single ingress and egress road cut steep into the sidehill along with a dangerous half switchback, but also spaghetti-like dead-end side roads, some with long driveways. Wood roofs were seemingly then the norm on many of the smaller, single-story homes within the more-level mesa itself. Development was further expanded from the mesa into even steeper, more mountainous and less defensible terrain. This then became a true “design for disaster,” just awaiting its first wildland fire. Big Rock Map 2, the November 1978 aerial photo taken by K. Radtke of central and upper Big Rock Mesa, provides a good overview. Infrared aerial photos taken of the Santa Monica Mountains in 1980 as then part of Dr. Radtke’s research, such as shown at the beginning of this report for the Costa Mesa area, were very useful in identifying wood shingle homes with almost 90% accuracy. On the 1978 photo, 20433 Seaboard Road still had a wood shingle roof (replaced in the 1980s with an asphalt shingle roof). Did 20394 Seaboard Road that burned still have a wood shingle roof during the 1993 Fire? A fire hydrant was located on the opposite side of the street and a covered pool in the front yard. Unfortunately firefighters were not aware of the covered pool until its cover started burning.

Whatever the case, homes seldom burned alone unless isolated or perhaps attended by firefighters who kept the adjacent homes from burning if water or foam was available. Once ignited, wind-whipped flames, radiation heat and firebrands apparently preheated and ignited adjacent homes and their surrounding flammable, often largely landscaped vegetation. This is typical during a wildland fire if homes are unattended and water is not available for firefighting. The safety of your home then also depends to a large extent on your surroundings, such as the safety of your neighbor’s home and property as was so well documented with the home losses in Costa Mesa. The wind will then be the final, deciding factor of expanding the home-burning fire front, as it will direct/redirect flames, firebrands and convection heat.

With the advancement in technology, let us now look more closely at this wildland fire safety conundrum by evaluating postfire Google Map screen shots of the upper (northern), central (western) and lower (eastern) Big Rock Mesa in relation to the burned homes.

The maps seem to indicate that the bulk of the home fire losses were located:

- A.) Exposed within close proximity to highly flammable native chaparral that, when burning and depending on the wind and topography, preheated them to the ignition point and showered them with firebrands. Many of these homes were directly accessible street-side, but most of them were still located on side-slope roads such as Big Rock Dr., cut into the mountains.
- B.) Along outlying areas characterized by dead-end streets such as upper Big Rock Dr., upper Seaboard Rd., as well as lower Big Rock Mesa and its spaghetti-like dead-end side roads.
- C.) Largely in groups of burning homes, as it is difficult if not impossible to save adjacent structures without a water source because of the radiation heat that travels in all directions, irrespective of the wind, as close-by homes ignite.

The predictable lifespan of some of the “new” homes built in the graded areas along upper Big Rock Drive, as indicated on the 1978 aerial photo, such as along Rockcroft Drive, was less than 15 years.

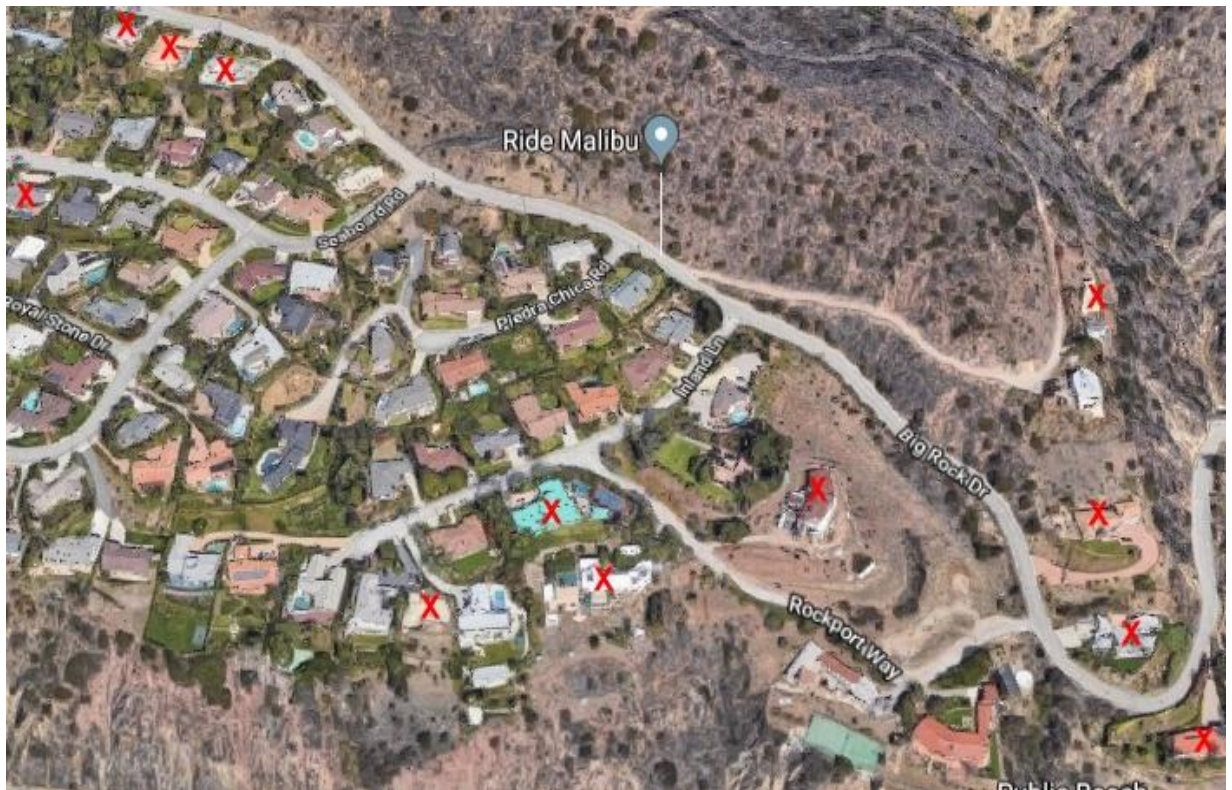
What about the next wildfire? While one cannot judge just from the present Google Map aerial photos without field-checking the information, both the ground and aerial photos combined seem to indicate that many home sites are not fire-safe maintained. However, a drive-through of the Mesa in August 2019 indicated that the community overall is more fire-safe than it was in 1993, with additional brush clearance carried out along Big Rock Drive as well as removal and thinning of flammable pines and some Eucalyptus. The community is also more fire-safe from the standpoint of having eliminated almost all its wooden roofs, as the 1993 Old Topanga Fire already eliminated/burned many. Yes, it is true that much more can be done by individuals to make their property more fire-safe. This not only depends on the removal of flammable vegetation but also by making sure that firebrands do not find any materials that can be readily ignited around a home.

We must again emphasize that effective firefighting comes to a standstill if water or foam is not available, as was again documented during the 1993 Old Topanga Fire. The water pressure is expected to fail as the fire moves through wildland areas, since the water systems are not designed to provide fire flow for such multiple emergencies. Along with this we must acknowledge that it is the homeowners’ responsibility to keep their properties fire-safe. Depending on largely out-of-town and often inexperienced structural firefighting responders, and depending on the local fire departments to strictly and timely enforce the fire codes while further educating and assisting wildland residents in cooperating with other public agencies, is like playing Russian Roulette.⁴

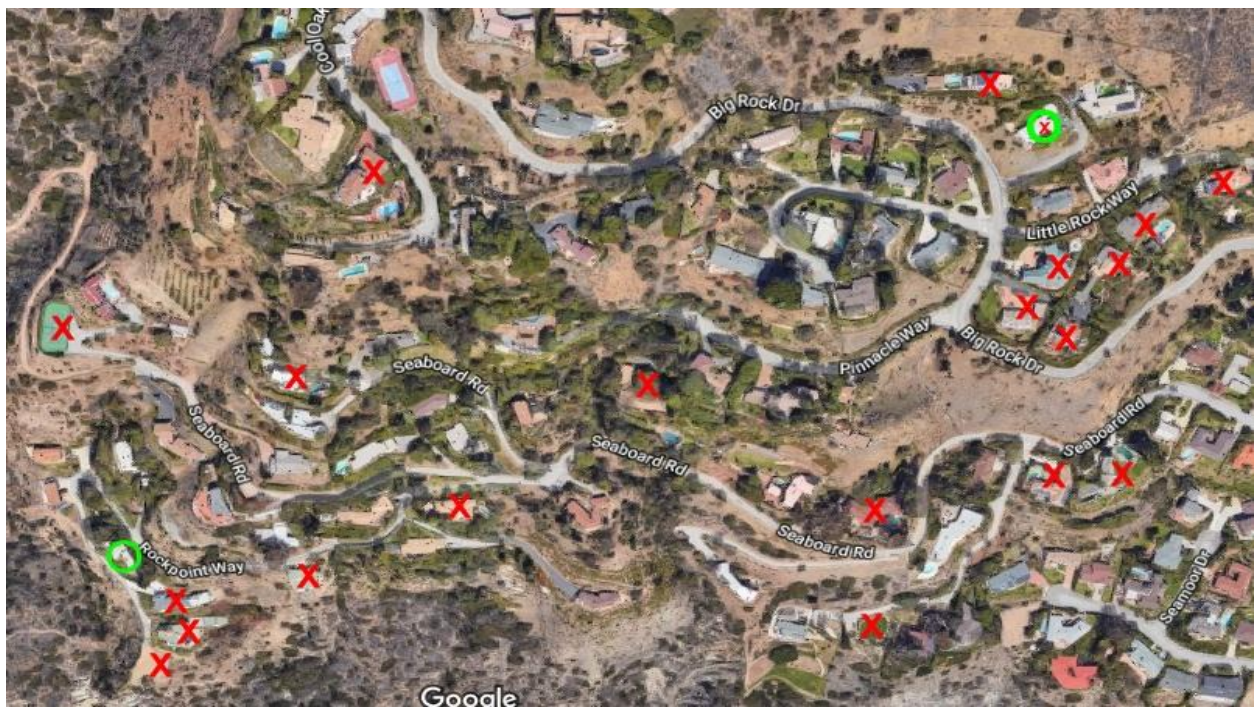
Playing Russian roulette with a single bullet in one chamber of the cylinder:

1. You did not maintain your whole property in a fire-safe condition, but the wind shifts and the flames and firebrands initially bypass your house (spin the cylinder and pull the trigger and the house survived).
2. While you may have a pool, you are not home to protect the house (spin the cylinder a second time, pull the trigger and your house survived again).
3. Experienced firefighters arrive at the scene through heavy smoke after the fire flashes through again and is licking on your house but the hydrants are dry and firefighters either do not have, or are out of, foam and cannot reach your pool to hook up to it (spin the cylinder a third time and see what happens). How long do you think your house can survive given these odds when not prepared?

⁴ The practice of loading a bullet into one chamber of a revolver, spinning the cylinder, and then pulling the trigger while pointing the gun at one's own head or home.



Big Rock Map 4 – Big Rock Mesa Eastern Section (Red: homes burned in 1993).



Big Rock Map 5 – Big Rock Mesa SW Section (Red: homes burned in 1993).

Seaboard Road, Big Rock Way, Little Rock Way, Piedra Chica Road, Rockpoint Way

A. Seaboard Road

Seaboard Road was lined with fire trucks downhill from the chokepoint above 20433 Seaboard Road where the road narrowed, became windy and went more steeply uphill, a potential entrapment situation for fire trucks attempting to venture further. Water was available from hydrants at this location and along the street downhill as the trucks arrived. The Big Rock main connected to Seaboard Road at this location along an old, abundant access road uphill of 20433 Seaboard Road.



Fire trucks lining Seaboard Road.

Fire trucks pulling out of Seaboard Rd., Big Rock Dr.

20433 Seaboard Road (owned by Klaus Radtke; leased to the Jeffries)

Since Klaus had a rental home in Big Rock, he decided to tie into it and stay with it during the burnout period of vegetation in the area but had not been overly concerned about its safety. While some people in Pacific Palisades were frantic, fearing that the fire would expand into their community, Klaus was not concerned about it as the likelihood of this was slim. Since he had studied and was therefore quite familiar with the age classes of chaparral in the Santa Monica Mountains and fire patterns given an ignition source during Santa Ana winds, he knew that the eastern flank of the fire was expanding during the night into young age, more fire-resistant chaparral within Topanga Canyon, while the western flank of the fire, still pushed by more stronger winds, was expanding towards the 1985 Piuma burn where it could also be more readily mopped up.

“With Klaus driving from Pacific Palisades, he and I (John Thomas) tied into/behind a strike team at PCH and arrived at the intersection of PCH and Big Rock Dr. at approximately 2130 hours. We started up Big Rock and it was like driving straight into Hell. There were roaring flames on both sides of the road and smoke so thick it made it difficult to avoid boulders in the road that were released by the burning chaparral.⁵ We crept on and when we arrived at 20433 Seaboard Rd., three nearby homes on Seaboard were in flames and a fire truck was spraying water from its tank on the “County” hillside above 20433 Seaboard along the disbanded connector road. (The connector road also served as pathway for an over ground water line from Big Rock Drive to Seaboard Road and was partially lined with Aleppo Pine trees which delineated the property boundary.) The firetruck soon left after our arrival and we went to work beating out the remaining flames here and there on the lower slope.

⁵ It was apparently during the final burnout period of the degraded chaparral on either side of lower Big Rock Road with firefighters having largely vacated Big Rock Mesa before this section of the road had become temporarily closed for safe ingress and egress. It was not life-threatening from a fire safety viewpoint (K.R.).



Photo 1-29-1990
Photo 1-13-1995
20433, 20434, 20468, 20470 Seaboard Road, 20380 Big Rock Drive.

Big Rock seemed to be totally deserted (evacuated). Vulnerable homes (somewhat surprisingly and probably from firebrands) were burning down across the street at **20468 and 20470 Seaboard Rd.** While a total of seven homes burned down on Seaboard, we were not aware of when and how the other homes burned as these sites were not visible from our location. While the Rand Report (p.122) stated *“the need for water in this neighborhood was so acute that the air units were recalled at approximately 2030 and they continued to drop in this area until 2200,”* we were not aware of any water drops. They may have happened in the less accessible areas of Big Rock not visible from our location.

20433 Seaboard Rd. was a one-story house with a non-wood “second-story” loft. Back yard and front yard lawns as well as the driveway provided a fire-safe zone. The row of Aleppo Pine trees along the Seaboard Rd.-Big Rock Dr. connector road provided some protection from debris rolling down the steep, largely chaparral-covered “County” slope below Big Rock Drive and was always a cause of concern. Klaus attempted to keep the disintegrating road base free of flammable litter that readily accumulated there, initially hauling out more than a truckload of highly flammable litter and dead tree branches.

Many older homes in the neighborhood had wood shingle roofs when Big Rock was developed and Klaus had changed his wood roof to asphalt shingles after purchasing it some time ago. He also spent some time under the house, re-leveling it in response to the Big Rock slide.

The sliding door of the upstairs loft had been left open by the tenants but the room had a linoleum floor (not carpeted, no drapery) and firebrands apparently did not ignite anything. Klaus then went around the immediate neighborhood, checking that all windows of homes had been closed (and closing them if not totally closed), while also making sure that no sparks and firebrands were still smoldering immediately around these homes.

John Thomas had recorded the following:

“Knowing that near-neighbor Mike Spaks house off Big Rock Dr. had a wood shingle roof, we took a ladder and went there (refer to continuation of narrative of 20380 Big Rock Dr.).”

“When morning came Klaus returned home to the Palisades with a small cat found wandering about during the night (later it was returned to its owners). I remained behind because vegetation was still smoldering here and there. Later in the day the hillside between the burned houses (**20468 and 20470 Seaboard Rd.**) and Ed Bell’s two-story house (**20434**) across the street from **20433**, burst into flames, which I (John) fought with a shovel until a fire truck came along. Klaus returned in late afternoon to pick me up and we both then drove up Las Flores Canyon Rd. to check on Ed Hill’s residence on 21656 Las Flores Heights Road (Ed Hill had been featured in Klaus’ June 1982 booklet *A Homeowner’s Guide to Fire and Watershed Management at the Chaparral-Urban Interface*. Klaus had advised him on how to build and protect a basically fire-safe-designed home in a not-too- safe fire environment at his father’s former summer residence erased by the 1942 Las Flores Canyon Fire. A fire storm, charging down Las Flores Canyon, could be expected to overrun the area again during the next wildfire).

“The bridge at Las Flores Creek had been destroyed by fire so we had to park and walk from there. About halfway up we hitched a ride on a fire truck. Although the Hills had left their house before the fire arrived (they were elderly and were concerned about smoke inhalation), it was standing unscathed, also thanks to a good friend who stayed with the house. After the firestorm had rolled over the house and it was safe to exit it about 10 to 15 minutes later, the young man used the generator-powered pump to extinguish spot fires with water fed by their nearby, uphill water tank. When we arrived, the Hills had returned and Mrs. Hill, in tears, embraced Klaus and said, ‘You saved our house.’ “Except for weariness, we were none the worse from the experience except for coughing spells that lasted for the next three weeks.”



Old Seaboard-Big Rock Connector Rd. with water main.

Temporary irrigation lines above scorched pine



Barley contouring slopes before covering them with straw.

Germinated barley in contours along Big Rock Dr.

Concerned about heavy erosion from the steep, bare slopes below Big Rock Drive and not wanting to wait for the belated “government funded” hydroseeding that was dependent on rainfall, we immediately installed irrigation lines, barley-contoured the slopes with pregerminated barley, and then covered the slopes with straw mulch and started watering. Since the water pressure from 20433 Seaboard Road was too low to cover the slopes effectively, an uphill neighbor on Big Rock Road provided the water via garden hoses connected across Big Rock Drive as needed. By early January, germinated barley started to cover the slopes.

20418 Seaboard Rd.

One story stucco home with wood roof.

Seaboard Road was lined with fire trucks as it is a wide road and water was available from fire hydrants as the trucks arrived. As the wood roof of the garage caught on fire firefighters were able to extinguish it almost immediately, limiting damage to about 5% burn or less.



20418 Seaboard Road – August 2019.

20649 Seaboard Rd.

House ignited before 1900?

20468 and 20470 Seaboard Rd. (Ignited about 1900?)

When John and Klaus arrived at 20433 Seaboard Road about 2130, both houses had already ignited and were burning down.

B. Big Rock Drive

20380 Big Rock Dr. (Mike Spaks)

A fire captain had been there earlier and left his business card saying the house was “secure” (“we saved your house”). When we (John and Klaus) arrived, a large pile of firewood within about twenty feet of the house was burning and a fire captain, dropping by to see what we were doing, advised us to scatter the burning firewood as its radiation heat could catch the side of the house on fire and blow out its windows. While we were concerned about the wooden roof catching on fire, we therefore also had to attend to all the other emergencies encountered. Klaus attempted to scatter the burning wood pile while at the same time trying to move some of the burning pieces further away from the house. It was “hot like hell” and every time a burning piece of wood was moved a shower of sparks would almost engulf us.

“Fortunately, the Spaks house was left unlocked and we were able to get a trickle of water from the sink faucet, which we used to soak cloths that we tied over our faces because of the smoke. **20402 Little Rock Way** above Big Rock Drive was going up in flames and the burning embers were floating down on the Spaks roof. We used a shovel and gunny sacks to beat them out as they landed. I (John) spent a good part of the night on the roof, for later the wind shifted to the opposite direction (onshore) and burning embers were again blown at us from a house in flames farther down on Big Rock Drive. Explosions inside this house could be heard as containers of chemicals, paint, etc., ignited.

In addition to attending to these emergencies, a small wooden bridge below the Hamill’s property (**20358 Big Rock Dr.**) that connected it to the Spaks property went up in roaring flames. Throwing dirt on it slowed the fire down. However, fire and sparks from it spread up the grassy slopes towards the Hamill house several times during the night and were beaten back/extinguished with shovels. With a shift in the wind the Hamill house could have burned.

Mr. Spaks told us later that his insurance co. paid for a new roof as he told them that firefighters had damaged the roof, trying to save the house.



John on Spaks' roof with shovel about midnight.



Burning wooden bridge contained.



Nearby homes burning down during the night.



Nov. 3, 1993 – Early morning. Homes burning out w/o firefighter patrols.



August 2019 – The Spaks house itself is now a more fire-safe stucco home with composition roof but roof extensions/overhangs that can act as fire catchers and many surrounding pine trees increase the fire risk.

20330 Big Rock Dr. (Ernest & Jane Ricket)

The adjacent house at 20340 started 20350 Big Rock Drive on fire before also igniting 20330 Big Rock Drive.

Mr. Ricket's written testimony submitted to NFES (fire questionnaire) reads as follows:

"I ignored Sheriff's Department orders and walked along the beach from Topanga to Big Rock, arriving at my house at about 3:30 p.m.

It was my intention to stay and try to save our house. I feel reasonably secure in my understanding of fighting fires my training as a Naval Officer. I was involved in preparing my proper clothing and firefighting equipment, constantly avoiding the helicopters and law enforcement officers at the door. At 6:30 p.m. an out-of-town fire company was parked in our driveway. The telephone which was still working summoned me at about 6:45; my wife and children asked me to leave because the media was repeating the command structure's demand for homeowners to evacuate. They were afraid for me.

With the fire company on my driveway, I felt reasonably secure in turning over the job to them. I showed the company the pool and I opened the gate for them."

John Thomas, on Mr. Spaks' roofs, saw the house igniting/burning after 2300+.

Soon after Mr. Ricket evacuated the uphill Big Rock Drive slopes were backfired as the fire moved down from the top of the hill. It was done to protect the large pine trees at 20358 Big Rock Drive across the street from bursting into flames and its house from catching on fire and also to protect the homes at 20330, 20340, and 20350 Big Rock Drive. Sadly, these three homes did not have to burn if there would have been a coordinated effort such if the chiefs would have been informed that there was a pool water source almost across the street from the lower back burn area (were they?) and if there would have been night patrols to follow through. However, the area had largely been evacuated by 2130 (9:30pm) as there was no hydrant water available and before the burning brush-covered slopes at lower Big Rock Drive would have at least temporarily closed off the area. When Klaus Radtke and John Thomas drove up Big Rock Drive to Seaboard Road at about 2130 these slopes were burning and rocks had rolled onto the road from the slopes.



August 2019 - A fire-safe home with small, protected windows. However, the “invisible” dead interior crown of the tree on the right should be of concern.

20340 Big Rock Dr. (Andersen)

Wood roof. This house started to slowly ignite sometimes after dark and then started to ignite the Strickland house (20350 Big Rock Drive) before igniting the Ricket house (20330 Big Rock Drive).

20350 Big Rock Dr. (Robert & Rosalie Strickland) (about 2330+)

A tile roof but with decorative overhangs covered with treated wood shingle roofing that ignited. There was a Jacuzzi for water. A fire engine was in front of house about midnight. The house ignited after the Anderson house and was fully engulfed by 0300. A chief's car was patrolling the area. At 0600 on November 3rd, there was a fire engine in front of the house pulling out hoses to extinguish embers within the burned-out structure.

20503, 20505, 20507, 20509 Big Rock Drive (1830-1930)

The initial firefront moving east along the costal slopes from the direction of Las Flores Mesa had expanded along the oceanside slopes, came up across Seaboard Road, expanded along Pinnacle Drive, and, as indicated on Big Rock Map 1, ignited the structures listed above, being also instrumental in igniting the adjacent homes at 20404 and 20402 Little Rock Way

C. Little Rock Way

20400 W. Little Rock Way (Jürgen & Helma Cords)

One-story stucco home with rock roof.

The Cords attempted to maintain their property fire-safe in anticipation of the next wildfire. A concrete retaining wall largely protected their one-story home on the uphill side where they had cleared the flammable vegetation so that even a beehive which they kept there within 20 feet of the house did not burn. A steep, largely ice plant-vegetated slope on the downhill side abutted Big Rock Drive. As was their standard procedure, they had placed plastic trash can filled with water and rags centrally located along the downhill side of the house and had no flammable fuels anywhere around the house.

When Jürgen saw the smoke to the north he jumped in his jeep and drove up Big Rock Drive as far as he could and also walked, looking down into Las Flores Canyon where he observed a wall of fire. He drove immediately home and he and Helma prepared for the advancing fire by installing wet cloth with duct tape as needed on all vents.

At 1625 a helicopter flew over ordering mandatory evacuation but the Cords ignored it and prepared for the fire. It was dark (about 1800) by the time he saw the fire moving across and up the bluff above Pacific Coast (coming from the Las Mesa Flores area). From there it expanded onto central Las Flores Canyon across Seaboard Road and Pinnacle Way. Jürgen had already his generators running to provide light.



Helma securing the vents.



Properly dressed, still patrolling after the firefront.

He immediately went with his jeep looking for firefighters to provide a firetruck for his home as he knew that the fire was coming over the top from Las Flores Canyon. He found three fire chiefs (white shirts, etc.) at the corner of Big Rock Drive and Pinnacle Way and urgently demanded a fire truck. One of the chiefs asked him “what roof do you have.” He answered “Rock roof.” “What house.” He answered “Stucco”. “Clearance?” “Good all-around clearance with ice plant slope at Big Rock.” The chief then answered “You will get a truck and radioed to get a fire truck from the top of Big Rock Drive. Jürgen drove back home and when no truck came, drove back up, met the truck and drove in front of him as it backed down the steep, narrow driveway leading to his house at 20400 and his neighbor’s house at 20402 Big Rock Drive.

At about this time another firefront was moving down Big Rock Drive from the top of the mountain to meet the firefront coming uphill while a strike team with five engines from the San Diego Fire Department came up from lower Big Rock Drive. Soon thereafter, at about 7:00pm, one firetruck came down from upper Big Rock Drive and stopped on the slope below him. Firefighters then immediately backfired/burned the largely grass and brush-covered hillside across from 20358 Big Rock Drive to the right of his property. They were concerned that the firefronts could catch the many large pine trees at 20358 Big Rock Drive on fire and burn the house down as well as adjacent downslope homes along Big Rock Drive. A backfire is deliberately set in front of an active, oncoming firefront to consume the fuel in its path hopefully before it reaches the burn area so that the direction and force of the oncoming convection and radiation heat sources can be minimized and the firefront perhaps even redirected.

To Jürgen it looked like “flames out of hell” racing from the east towards his basically fire-safe home above. According to him the firefighters should have known that there were homeowners above as he had his generators running. However, the firefighters that had backed their truck down the driveway saved his motorhome that was about to be overrun by the backfire flames as they blew towards the west across his ice plant slopes by using their firehose to douse the flames of nearby igniting vegetation. By that time the fire coming uphill was already leapfrogging across and burning the homes between Big Rock Drive (20503, 20505, 20507, 20509) and Little Rock Way (20404, 20402).and meeting the fire coming downhill. The Cords house saved itself because of the all-around good clearance and there was no need to roll out fire hoses around it.

A Ch. 5 News helicopter started to fly overhead about that time.

Soon after the firefighters had saved the Cords’ motorhome, the neighbor's house at **20402 Little Rock Way** started to burn when the downslope pointing wooden deck ignited. The fire crew attempted to save it but could not as the fire hoses were not long enough to reach the deck and the fire truck ran out of water (actually it is standard procedure to retain at least 150 gallon for lifesaving needs for firefighters so that the truck may not have been completely empty).

The large, black plastic drain pipe installed between both houses but much closer to 20400 Little Rock to drain sections of the plastic-covered uphill slide scar, started to burn furiously. It, along with firebrands swirling all around and also from the backfire moving into the easterly draw below the house could perhaps have

started the downhill deck on fire. The firefighters used breathing masks to protect themselves from the thick smoke and burning pipes and also ordered Helma into the motorhome so that she would not have to breathe the toxic smoke. From the inside she took a video of flying embers swirling all around.

By about 2000-2030, the Cords were force-evacuated from their home by their firefighter team as they apparently were ordered to pull out because of lack of water and were concerned about leaving the Cords alone. First, the Cords had to stand for about twenty minutes at Pinnacle Way waiting to be taken down the hill by strike team units who were leaving the area because they had no water. When Jürgen tried to “sneak back” to the house the firemen forcefully put them into their cab to keep an eye on them while waiting for a strike team unit that took them down the hill about 2100 and Jürgen asked to be dropped off at PCH. Jürgen was then sitting at the base of Big Rock Mesa at an open garage at PCH for about twenty minutes. Concerned about the house, he decided to walk back uphill to his friend at 20246 Roca Chica who had not evacuated and ask for a ride uphill. While the captain who had force-evacuated them, had promised to send a crew back up to watch the house and neighborhood during the night, Jürgen was not so sure about it. He managed to bypass police and fire chief patrol cars whose occupants looked him over but did not stop him as he walked past their cars as he was dressed in his German hunter’s gear, resembling a uniform. His friend drove him to the bottom of the slope below his house at Big Rock Drive where Jürgen crawled uphill through still smoldering ivy, arriving about 2130. He was happily surprised to find that the captain had kept his promise as a different firefighter crew was there, relaxing on his property, drinking the soft drinks he had left in one of the trash cans. Jürgen then took his jeep and picked up Helma at the base of Big Rock Drive about 2130 as almost all firetrucks had evacuated Big Rock Mesa by then and there was no police around. Jürgen and Helma then went around with their sprinkling cans and doused plants that would reignite. The firemen still at their house told them to conserve the water, to just put a little water on at the time and then return as needed.

Jürgen and Helma then went to 20415 Little Rock Way about midnight and saved it as the wooden trellis attached to the house had started to burn. As they were driving back to their house there were no more fire engines along upper Big Rock Drive and the “fire watch” crew they had left behind at their house also had left.

The next day they found branchlets and burned-out embers on their stone roof.

Jürgen, a German Master Mechanic, working at VW Santa Monica, was also well-prepared to pump water, if needed, from his trash cans with a water hose and shut-off nozzle attached to a sump pump operated by one of his small generators.

The Cords were also featured in U.S. and overseas news reports.

When Klaus visited Jürgen’s home in August 2019, he found the property as prepared for a wildfire as it was in 1993. Trash cans filled with water had again been placed around the house (Jürgen’s standard procedure during the fire season) with no flammable materials stored near or around the house. During a subsequent meeting with Jürgen at his home and reviewing fire tapes. Jürgen, now 82, provided further details and also followed it up through further phone conversation. Sadly, Helma had died rather unexpectedly of lung cancer in January 2019. Could it have been related to the toxic smoke from the large plastic drain pipe burning through much of the evening on the day of the 1993 Old Topanga Fire?



The Cords house after the fire clean-up with the Canary Island pine in the background.



A fire safe setback along the east side of the Cords home protected it from the backfire flames.



August 2019: A view of fire-safe rebuilt homes below at 20330, 20340, 20350 Big Rock Drive.

20402 Little Rock Way (James & Nancy Abrahams) 1900 (about)

The large black plastic drain pipe installed between the Abrahams and Cords houses to drain part of the Big Rock slide scarp above, burned furiously, sending columns of black smoke and a vortex of heat and flame to the house. It, along with firebrands swirling all around and also from the backfire moving into the easterly draw below the house could perhaps have started the downhill facing deck on fire. The fire crew attempted to save it but could. With Jürgen holding the firehose while the truck was pumping, the fire hose hook-up was still not long enough to reach the deck and the fire truck ran out of water (actually it is standard procedure to retain at least 100 gallon for lifesaving needs for firefighters so that the truck may not have been completely empty).

Since the garage was closed one firefighter joked if there was a Maserati or Bentley in there burning up.

The house burned out by 0130 or later, sending showers of firebrands onto the wood shingle roof house at 20380 Big Rock Drive (Mike Spaks). John Thomas was on the roof of the Spaks house from about 2200 to 0330, extinguishing firebrands with a shovel and dry rags (no water) as they landed on the roof, and saved the Spaks home.



The burning downslope deck (photo Jürgen Cords).

20404 Little Rock Way (Luscian & Gayton Harris) Ignited about 1800-1900.

A draw leads uphill from Big Rock Drive between 20402 and 20404 Little Rock Drive and fire from these slopes may also have been instrumental in igniting the houses.

20415 (20327) Little Rock Way (Widow Doris Janes)

After having secured their own home Jürgen and Helma walked about midnight up the driveway to Mrs. Janice's house where the wood lattice attached to the house had started to catch on fire. There was no water except in the buckets Mrs. Janice had left to feed the coyotes and Jürgen used it to douse the wood lattice while at the same time pulling it away from the house. Both then made sure that there was no other flammable material around the house that could catch on fire.

The next morning when the large railroad tie retaining wall was burning in front of the house, Jürgen had a fire truck come up to the house and put out the fire. The house was saved twice. However, the owners unfortunately rebuild with railroad ties which are now largely covered by vegetation, a future design-for-disaster.



20415 Little Rock Way. Replacing burned railroad ties with highly flammable railroad ties.

D. Piedra Chica Rd.

20246 Piedra Chica Road (Gerhard Ihde)

Gerhard did not evacuate and hid in his garage with two more neighbors living on the same street. There is a good turn-around in front of his house and there is also a good turn-around at the end of the road at 20247 Piedra Chica. There was a fire engine at the end of the road when the fire first went through.

As the fire burned on the ridge with flames that looked like they were several hundred feet high and then moved downhill, it was creating its own wind, circling like a typhoon or hurricane and showering the neighborhood with embers that came down like hail. His two neighbors who had been hiding with him in his garage went to their own homes to protect them.

The adjacent home at 20238 Piedra Chica had a pool and tile roof. When some of the landscape vegetation ignited around his house, Gerhard put out the fire with water from his neighbor's pool. He had a water pump (which caused problems) and therefore also used buckets to get water. 20269 Inland Lane, the house below him had a wood roof. Gerhard and his friends took a ladder and ripped the wood shingles off as they caught fire. He and his neighbors saved 20438 Piedra Chica and 20269 Inland Lane and their own homes.

Two to three hours after the fire had burned through but with the mountains still glowing, the firebrands had largely stopped. However, the neighbor's house had started to smoke as there was firewood stacked adjacent to the house which had finally caught on fire and got into the eaves. As he observed, unless a wood roof is involved, it may take several hours for firebrands to ignite firewood, decks and thick timbers and these homes could be readily saved if attended. To save his neighbor's house, he drove up Big Rock Drive looking for firemen. He found 4-5 fire trucks on upper Big Rock Drive with firefighters sleeping. He was mad and asked/told them to "get on the ball" as a neighbor's house had started to burn and others were endangered. One firefighter crew came down with their truck and saved the neighbor's house using the pool water and prevented the fire from spreading to other homes.

As observed by Gerhard, firebrands that had showered the area two to three hours earlier, ignited the following houses below and could have been readily saved if attended by homeowners or fire patrols:

A.) Three houses in front of him towards the ocean (20252, 20272 [wood roof?} Inland Lane; 20178 Rockport Way)

B.) Four to five homes below towards Big Rock Drive (20173 Rockport Lane; 20054, 20085, 20109 Big Rock Drive).

While there were fire trucks at Big Rock there were no fire trucks patrolling his area. If these houses would have been attended, they would not have burned. Because of mandatory evacuation these homes burned. The last house started to burn by about 2am. It had palm trees all around. Palm trees are a big problem. When you don't cut the stems clean, fire catches and they become torches.



Big Rock Map 6 - Big Rock Mesa SE. Homes shown in red largely ignited by firebrands late at night (12-1983 Photo K. Radtke).

E. Rockpoint Way

20762 Rockpoint Way (Morris)

Mr. Morris did not evacuate and stated that he saved his house by determination and sheer luck because of shifting winds as, according to his estimate, 3/4 of the house burned in his area. "The area was not save enough for fire trucks to venture down there."

Mr. Morris had water pressure until about 16:30 (4:30pm) and was watering things well. As documented further by him, the firefront moved through his area between 17:30-17:45 (5:30-5:45pm). Sunset was 16:59pm (4:59pm).

VIII. Appendices

Appendix 1 – Fire Hydrant and Road Width Map – La Costa

Appendix 2 – Wildland Fire Safety Panel Hearing – Homeowner Comments

Appendix 3 – Noted Fire Expert Urges City to Learn from Fire (Emphasize Education)

Appendix 4 – Basic Firestorm Safety Concepts

Appendix 5 – Incident Command System (ICS) and FIREScope

Appendix 6 – L. A. County Subdivision Codes pertaining to Wildland Fire Safety Appendix

Appendix 7 – Wildland Fire Safety Panel Discussion Highlights, June 1, 1994 (K.R.)

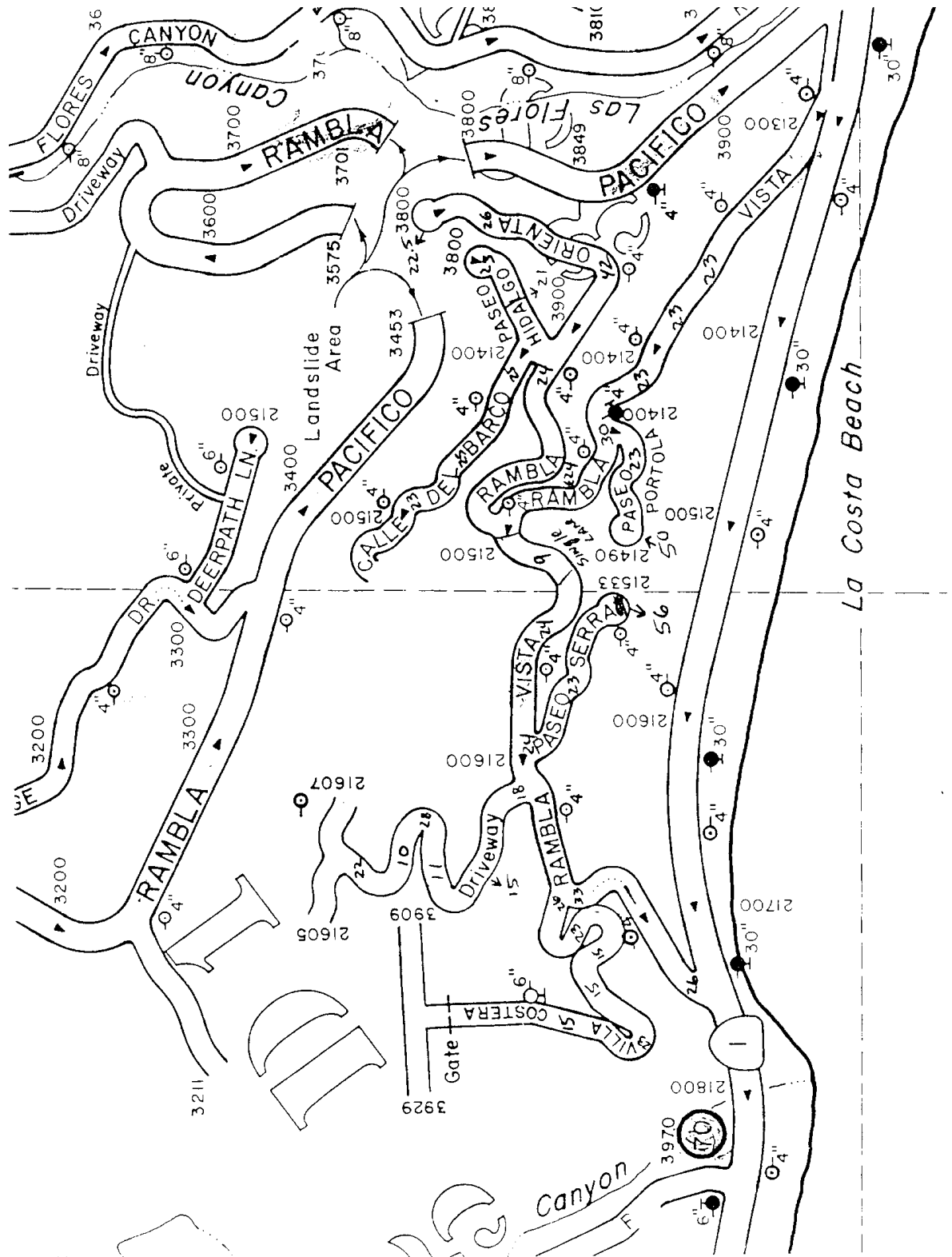
Appendix 8 – County’s Full Report Waters Down Fire Danger - August 25, 1994

Appendix 9 – Malibu Emergency Assessment Task Force, “Things Will Improve”

Appendix 10 – The Yarrows - Loving Caretakers... *Los Angeles Times*, Nov. 6, 1993

Appendix 11 – Abstracts of Homeowner Comments

Appendix 1 – Fire Hydrant and Road width Map – La Costa



Bulletin Board

Malibu Surfside News April 1994

ATION EVERY

WEDNESDAY,
27TH

ext?
Rebuilding

nard,
Director, City of Malibu

ie Brown's Sea Lion
5p.m.
until 7p.m.

(310) 456-5507

Y UPDATE

I political talents of
consultants we have
incil to:

er

ling fees

in rebuilding footage

being considered by the La
ie members were almost
) homes), to resolve building
in neighbors who will be
windows because of new

eckler, has been enlisting the
mmunity in assisting
o today will benefit all of
through.

The Wildfire Safety Panel heard from the community last Wednesday evening. Here are excerpts from some of the comments from Malibu citizens to the panel.

"Foresakened," "abandoned," "sold out," "politically expedient" are a few words and phrases in the letters to our committee. Whether justified or not, it is the public perception... that the county, state and federal government failed to act effectively and responsibly."

Burt Katz, fire survivor,
Operation Recovery Fire Committee

"The (water) lines are antiquated and in need of repair. Four inch pipes are okay for showers, but they don't put out wild fires."

Richard Sherman, Topanga resident,
Water Systems Designer and Builder,
Operation Recovery Water Committee

"No hose lines were laid, and I wondered if someone had given the order to lay a line."

"Apparatus was pulled out of La Costa and sent to Big Rock two hours before the houses started to burn."

"The less planning there is, the quicker the system breaks down. The guys in the yellow suits do whatever the guys in the white shirts tell them to do."

Tony Shafer, Active LA City Fire Captain,
Operation Recovery Fire Committee

"Not one water-drop on a neighborhood which accounted for a third of the houses destroyed in all of Southern California that day. Were we too far from the ocean?"

Richard Guttman, Rambla Vista fire survivor

"I was fighting the fire by myself. I had a very lonesome feeling..."

William Baldau, Las Flores Mesa fire survivor

"Homes in La Costa had inadequate water pressure on the best of days."

Gretchen Hays, fire survivor,
Operation Recovery Water Committee

"The fire hydrant in front of my house fell over when the fire department tried to hook up to it."

Chuck Buell, fire survivor,
Operation Recovery Water Committee

"We're not angry, but we are worried. There will be another fire. We're not prepared. We ask your help."

Cynthia Salisbury, Las Flores Mesa fire survivor

"I was uneducated. I was naive. And now I'm homeless."

Bibi Mays, fire survivor,
Operation Recovery Water Committee

"Everyone who stayed with their home, saved their home. Everyone who left their home, lost their home. We need fundamental changes that will allow homeowners to protect their homes."

Angela Wells, fire survivor,
Operation Recovery Fire Committee

"I'm having a terrible time getting permits and my home was only 15 years old, and I'd gone through Coastal."

Larry Finley, Topanga fire survivor

"Given the fire start, the fire path was one of the most predictable fires in the Santa Monica mountains in the last 30 years, and up to 75% of the fire losses could have been prevented through proper pre-planning inclusive of acknowledging road closures, limited ingress and egress, and working with the homeowners."

Klaus Radtke, Fire Expert

PAGE 20

MALIBU SURFSIDE NEWS

NOVEMBER 11 • 1993

Noted Fire Expert Urges City to Learn from Fire

■ Author of Los Angeles County Guide to Fire and Watershed Safety in Chaparral Areas Puts Heavy Emphasis on Education

One of the things that Klaus Radtke finds most striking about a walk around the burned areas of Upper Las Flores Canyon is that denuded areas expose the remains of chimneys from a fire in the early 1940s.

"Once again, nature has managed to repeat itself," noting that last week's blaze shared many attributes with the November 6, 1943 fire that also was started near Old Topanga Canyon—that time by downed power lines.

Sections of the current brush fire path also experienced wildfire in 1936 and 1942. A 1958 blaze went down the edge of Topanga.

Indeed, Radtke notes that 1958 experienced

three fires similar in some respects to the recent multiple blaze phenomenon—the Warner fire on Nov. 28, the Liberty conflagration on Dec. 2, and the Sherwood blaze on Dec. 28.

Those fires singed Malibu's western and eastern flanks much as Greenmeadow and the Old Topanga burns did. Prior to these, however, central Malibu had been hard hit by the Newton fire on Dec. 26, 1956.

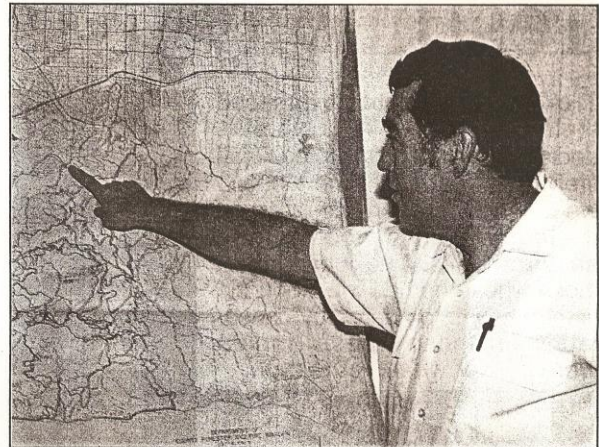
Radtke's facility with fire dates is not just idle curiosity. Acknowledged as an expert on chaparral habitat such as Malibu's, the retired Los Angeles County forester and wildland resource scientist wrote the handbook that Los Angeles County dis-

tributes to inform residents about urban/chaparral interface.

Radtke grows serious about the recent conditions that were ready for conflagration. "We had mature chaparral—some dating back to the 1930s—that was a prime ignition source."

When areas burn over regularly—such as in an environment when controlled burns are used—there is a higher live to dead fuel ratio and fires are easier to contain.

An adamant advocate of the C-215 "Super-Scooper" and mega-doses of water for fighting fires in developed areas, Radtke has locked horns with county fire executives who he sees as more concerned with protecting their turf



REPEATED MESSAGE—Noted fire ecologist Klaus Radtke has conducted seminars and workshops throughout the nation on how to interact with nature in an environment where fire is a dominant and immutable natural force. Radtke's research indicates that Malibu will face fire in one location or another every 7 to 10 years and there is no substitute for preparedness.

than their own firefighters and the people they are charged to protect.

EDUCATION

Radtke puts the primary emphasis on fire loss minimization on education and the responsibility for that on the individual.

He shrugs as he describes the number of homes in the Big Rock area evacuated with no water left out in buckets or trash cans for ember control.

He conducts seminars in which he urges people "to

water reserves—tanks of 500 to 1,000 gallons, the larger the better and preferably with a pump and/or gravity flow.

"There is no excuse to spend a million dollars on a home and not spend \$750 on a water tank."

Fire hose hookups and enough miscellaneous items for community volunteers or neighbors to save a home even if the owners evacuate are also on the list.

The logic of neighbors

can "be more of a danger than the chaparral." He says there should be no woody vegetation within ten feet of a house, what he calls the primary defensible space.

He says the City of Malibu has a unique opportunity to tighten up building codes and its fire code and to implement practices that will make a difference when Malibu is struck by fire again within the next decade.

"The changes are not

Appendix 4 - Basic Wildland-Urban Interface Fire Safety Concepts

(Re)building

1. A wood shingle roof has a higher probability of igniting from burning firebrands than native chaparral vegetation.
2. Even with 100 feet 'brush clearance,' a house with a wooden roof has a 20 times greater probability of burning than a house with a non-wood roof (think firebrands).
3. Even a small two-story structure on level ground can create enough radiant heat during its burnout period to ignite wood siding, etc., on homes within an approximately 60-foot radius.
4. While the burnout period for chaparral fuels in a wind-driven fire is generally less than 15 minutes, the burnout period for structural fuels (houses) may last hours. During this time period your home may be subjected not only to invisible radiation heat from a neighboring burning house (convection heat if it sits on a slope below) that raises surrounding vegetation and structural fuels to the ignition point, but also to visible firebrands that may invade your home unnoticed.

(Re)landscaping

5. For a point source of radiation such as a tree or bush, the heat intensity decreases with the square of the distance from the source. Therefore, a tree burning within 20 feet of a window transfers only one-fourth the heat to the house compared with a tree burning within 10 feet and only one-sixteenth of the heat compared with a tree within 5 feet.
6. For a line source of radiation, such as a hedge or row of trees, the heat intensity only decreases with the distance instead of the square of the distance and a house receives this heat from all points along the line. Thus the heat intensity received 20 feet from a burning hedge is still one-half that at 10 feet and one-fourth that at 5 feet.
7. Increasing the number of flammable landscape plants around a home and increasing the number of trees, or both, will make a home more prone to fire, despite legal brush clearance.
8. The term 'fire resistant' is a misnomer in relation to flammability of plants and gives the homeowner a false sense of security, as all plants will burn under the proper fire weather conditions. In fire ecology the term 'fire-resistant' denotes that a plant is adapted to fire such as having thick bark (e.g., mature Ponderosa Pine), or will readily resprout when burned from epicormic roots or shoots (e.g., Coast Live Oak), or will regenerate through prolific seeding (e.g., Cistus sp.) These species named can burn readily under the proper conditions if not maintained in a fire-safe manner.
9. Landscape fuels that burn adjacent to a house create enough conductive and radiant heat to ignite wood siding, wooden decks, trellises, and can break windows. Unprotected windows are often the 'Achilles heel' for fire entry even on a 'fire-safe' designed home.
10. A six-foot-tall mature, continuous chaparral fuel mass burning on steep slopes can create enough radiant and convective heat during its burnout period to ignite up-slope homes more than 100 feet away (in other words the flames and heat produced can reach across a 100-foot-wide fire safety zone (30- to 100-foot irrigated zone) to ignite flammable components on the house, especially if the house is unattended.

Fire Safety Concepts Related to Structures

(Major factors of home losses during the 1961 Bel Air/Brentwood Fire)

Home construction

1. 75% of buildings destroyed had wooden shingle roof.
2. 66% of dwellings which sustained any damage were first ignited on the roof.
3. 12% of dwellings destroyed had unprotected eaves as their point of entry.
4. 3% of dwellings destroyed had underflooring as their point of entry.
5. 1.5% of dwellings destroyed had windows as their point of entry.

Home Location

6. 70% of dwellings destroyed were located within 50 feet of chaparral.
7. 45% of dwellings destroyed had minimal or no slope setback.
8. 45% of all stilted or cantilevered homes were destroyed (mostly side slope).

9. The burning of homes along ridge tops was not random but was directly correlated with the intersection of main and tributary canyons.
10. Homes situated in steep canyons, at the top of canyons, draws, saddles, along narrow ridges, without adequate slope setback, etc., were especially vulnerable to fire.

Fire Exposure (Risk)

Wildland fire exposure or risk can be defined as the probability that a given home, subdivision or community will experience wildland fires within a given time period.

The degree of exposure (risk) an individual home, community or section of a community faces is a function of the fire history, (frequency & severity) in the surrounding vegetation or probability of fire within a certain vegetation type, increase in fire frequency brought on by encroachment of the community into flammable watershed areas and nearby human activity, and site-specific exposure factors such as the proximity to flammable vegetation, siting of structures, construction materials, construction style, etc. (see below).

Fire Hazard

Wildland fire hazard can be defined as the potential severity of a fire in a given area due to the availability of:

1. Natural vegetative fuels
Type and size of fuels, age, fuel continuity, fuel loading (amount of fuel), litter production (amount and type of litter produced by the plant during its seasonal growing cycle).
2. Landscaping/ornamental fuels
Type and size of fuels, age, fuel continuity, fuel loading (amount of fuel), litter production (amount and type of litter produced by the plant during its seasonal growing cycle), maintenance of flammable landscape vegetation (or lack thereof) to make it less flammable or 'nonflammable.'
3. Man-made structural fuels and their design/location
Size and type of flammable structural components such as wood roofs, wood decks, wood siding, exposed windows, wood window frames, open/non-enclosed eaves, non-protected exterior attic and under-floor vents (permitting fire entry into the interior of the structure), flammable fencing and railing, non-skirted under flooring of house or deck (unprotected from fire entry from underneath or the sides), flammable outdoor furniture, etc.
4. Topography (terrain)
Topography and the siting of a structure are very critical factors in fire exposure or risk. For example, fire can travel uphill 16 times faster than downhill. A fire spreading uphill resembles a fire pushed by a strong wind. Other factors being equal, a fire burning on level ground will spread twice as fast when it reaches 30% slopes. The rate of spread will again double as the slope reaches 55%. Heat energy release rates will be correspondingly faster and greater as indicated by greater flame length per foot of fire line.
5. The overall development pattern of the area
Location and siting of homes within mountain topography (side-slope homes, homes located along ridges with minimum setback, homes located in saddles or draws, etc., are at greatest risk and are often considered 'a design for disaster'). Construction of homes, exposure of construction materials, exposure distance to flammable vegetation and flammable structural fuels (such as closeness of homes to each other).
6. Typical fire weather conditions
Low humidity, high drying winds, and high temperature.

Dying in wildland fires

Old Topanga Fire Nov 2, 1993

On November 2, 1993, during the initial phases of the Old Topanga Fire (Malibu-Topanga Fire), another predictable but preventable design for disaster resulted in the incineration of two elderly mountain residents. They lived in a non-permitted temporary makeshift firetrap trailer home (almost all trailers in a wildland fire environment can be considered fire traps) without utilities such as water and electricity. The trailer home was accessible during the dry season by a narrow dirt road that led through the chaparral and across several small draws. The situation was known to fire personnel of close by Los Angeles County Fire Camp 8, other County Department personnel as well as nearby wildland residents some of whom had befriended the couple and assisted as needed and on whom they relied for assistance in possible emergencies. After the fire broke out the wife, working in Santa Monica, heard about it and rushed home in the afternoon through traffic, roadblocks and fire lines to evacuate her invalid husband. After evacuating her husband and driving back along the dirt road to safety, her pickup was overrun by fire close to the safety of stand-alone fire-safe homes at the end of the dirt road below Fire Camp 8. The most accessible home at the beginning of the dirt road was empty and locked because the residents were on vacation and another had just been sold. Fire supervisory personnel at Fire Camp 8 familiar with the situation had apparently been transferred prior to the fire and the new personnel may have not been aware of the situation or could not assist as Fire Camp 8 was still in disarray at this time as buildings and wood piles within the fire camp had also caught on fire.

In the area where the two fatalities occurred, the 1993 Old Topanga Fire had burned through an incomplete burnout within the 1985 Piuma Fire. The burnout was characterized by standing dead fuels characterized by a higher dead-to-live fuel ratio than would normally be found in 8-year-old chaparral regrowth. Additionally, because of further disturbance, the degraded woody chaparral had a high herbaceous flash fuel component.

The wind direction may have been an additional factor in denying the wife a safe escape as she was gunning her truck down the dirt road to reach her husband. Instead of blowing in a more southerly direction as could have been expected and which would have first blown the fire largely into Las Flores Canyon, the wind was blowing in a westerly direction and directed flames and firebrands first into Carbon Canyon, the canyon to the west of Las Flores Canyon.

Oakland Hills-Tunnel Fire October 20, 1991

The October 19, 1991 Oakland Hills-Tunnel Fire started as a small “brush fire” in the Berkeley Hills on Saturday and was thought to be extinguished by the local fire department when they retired for the weekend. However, the next morning, Sunday, October 20th, the weather changed with gusty winds picking up and, before 11:00 a.m., had quickly reignited the fire not properly extinguished in the pine needle litter below a pine tree.

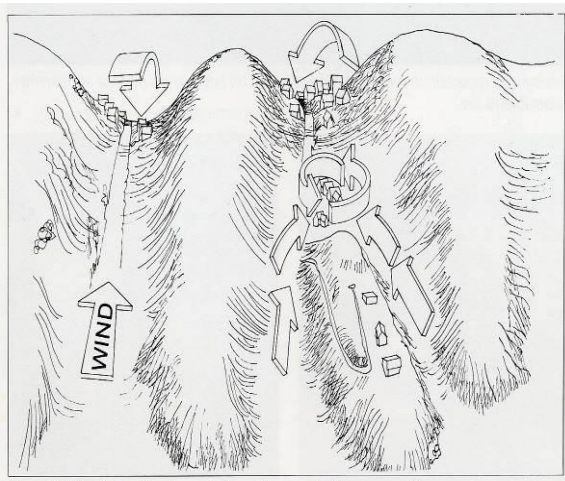
The wind quickly pushed spot fires onto adjacent slopes covered with flash fuels and then onto highly explosive pine and eucalyptus trees and onto homes. The first wooden home (an exposed corner home) caught fire almost instantly before firefighters could even respond. The first fire victim, a lady, was caught by total surprise and died as her house was quickly incinerated while she was desperately dialing for help.

In the interim, exploding trees in the neighborhood had crowned out, and the resulting firestorm flames, stretched by high winds, along with the rain of firebrands, engulfed street after street largely lined with wooden and wood roof homes. Since it was a Sunday morning many people were at home. As the large seemingly fire- safe Parkwood apartments complex became engulfed with flames, the single exit from it became clogged with cars and fleeing pedestrians. Piles of woodchips had been stored near the single exit here as they were being spread out within the landscaping. As the pedestrians were trying to flee, they were showered with blinding wood chip firebrands as well as wood chip debris.

Close by at Charing Cross Road, tragedy had already unfolded at an ingress-egress chokepoint. Here the paved side-slope-situated street narrowed from two lanes to about twelve feet in width as a wide draw/small canyon, vegetated largely with weedy grasses interspersed with native coyote brush, dissected the road at this point. Some cars of residents attempting to escape the fire had stalled out and jammed up along this narrow stretch of road. People then abandoned their cars with able-bodied persons fleeing along the road to safety past the chokepoint. Oakland Police Officer John Grubensky was directing the fleeing residents past the road chokepoint draw to safety until the convection and radiation heat coming largely from below rushed over him and engulfed his body. The last person to escape alive remembered that his pants legs were already on fire as he was encouraging her to run past him. He and five other civilians were found burned to death in this location and others were found nearby.



Charing Cross Road October 20, 1991 (right center near street light)



Post fire: Charing Cross draw with coyote brush resprouting.



1991 Tunnel Fire burn with Charing Cross draw on left and the burned Parkwood apartment complex in the “valley” on the right.



August 2019 – Pine trees are again dangerously covering the Parkwood Apartment complex “valley”



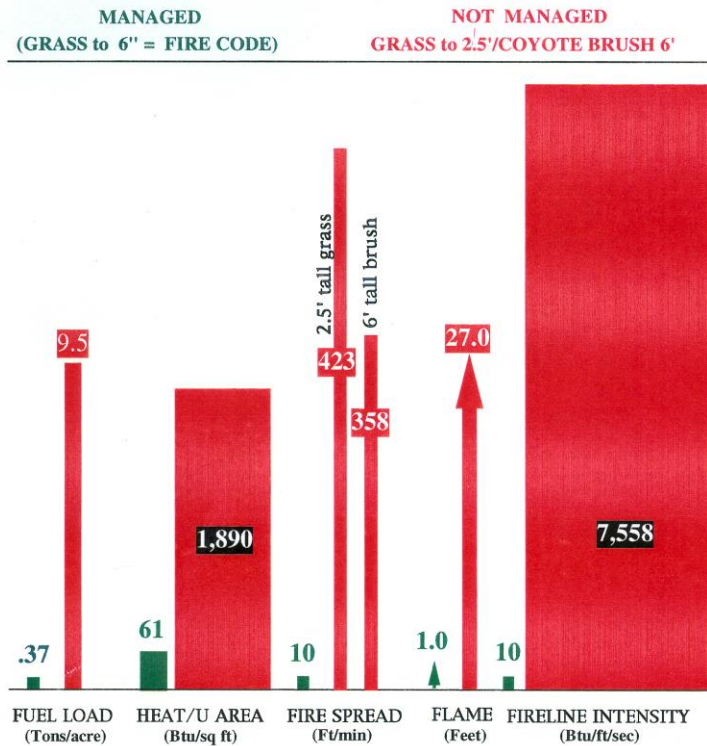
August 2019 – Yoshiko Radtke honoring the 1991 Charing Cross victims by keeping their memory alive.

Could this tragedy have been prevented or at least minimized through effective preplanning? Yes! It is well known that houses built side-slope in draws or on top of draws have a poor chance of survival in a wildfire because winds tend to channel the heat and flames through natural channels such as canyons and draws. There is really little escape when being caught in the open in such a heat funnel even before the flames actually arrive. The graph on the following page titled Charing Cross Draw dramatically points this out.

The draw was vegetated by a mixture of dead grasses and up to six-foot-tall coyote brush, a highly explosive fuel mixture. The graph indicates that such an explosive fuel mixture could produce 27-foot-long flames compared to one-foot-long flames for six-inch-tall grass, cleared as required by fire code along roads for a minimum of ten feet. The graph further dramatically indicates that the fireline heat intensity for the existing highly flammable vegetation is more than 700x greater (!) than if there would have been proper roadside clearance as required by fire code, such as reducing flammable fuels such as grass to no more than six inches in height (stubble height). However, along narrow side-slope roads and chokepoints such as the Charing Cross draw, common sense would dictate that the clearance distance be at least thirty feet (or even greater) down-slope such as is required for structures in wildland areas. But even before flames impinged on the people trying to escape along the Charing Cross draw, most had apparently already choked on the smoke and were dying from inhaling superheated air as the convection heat coming up-slope and radiation heat coming from all directions, as well as the flames that followed, would have been even much greater than modeled as indicated by the graph.

CHARING CROSS DRAW

DEFENSIBLE SPACE FUEL MANAGEMENT (ROADSIDE AND DRAW FUEL SETBACK)



Failure to perform effective yearly downslope roadside and draw fuel reduction for fire safety along a very narrow ingress/egress road perpetuated a highly flammable flashy fuel characterized by a very high rate of spread and high fireline intensity.

Appendix 5 – Incident Command System (ICS) and FIRESCOPE⁶

FIRESCOPE stands for **F**irefighting **R**esources of **S**outhern **C**alifornia **O**rganized for **P**otential **E**mergencies and was set up to develop the following two interrelated, yet independent, systems for managing wildland fire.

- Incident Command System (ICS)
- Multiagency Coordination System (MACS)

The impetus for the development of these systems was the disastrous and devastating 1970 fire season in Southern California. At the time, the sky was full of giant smoke columns, and fire apparatus were passing each other on their way to incidents, with some going north as others headed south. Individual Command Posts and fire camps were established by multiple agencies for the same incident. Response resource availabilities reached critically low levels. The number of fires burning at the same time taxed the organizational capability to protect lives, property, and the environment, especially where wilderness bordered urban communities, creating a dangerous wildland-urban interface. These fires over 13 days resulted in 16 deaths, 700+ destroyed structures, more than 500,000 acres burned, and over \$234 million in damage.

As part of the after-action review, the U.S. Forest Service, with their partner response agencies in Southern California, examined the incident management efforts. They discovered the following issues:

- At the incident or field level, there was confusion derived from different terminology, organizational structure, and operating procedures between the various response agencies.
- Above the incident or field level at the agency or coordination level, the mechanisms to coordinate and handle competing resource demands and to establish consistent resource priorities was inadequate.

Based on the devastating fire season of 1970 and these findings, Congress allocated \$900,000 to the U.S. Forest Service to develop a system to improve the capabilities of wildland fire response agencies to effectively coordinate multi-agency, multi-jurisdictional response. Specifically, they were to “make a quantum jump in the capabilities of Southern California wildland fire protection agencies to effectively coordinate interagency action and to allocate suppression resources in dynamic, multiple fire situations” (FIRESCOPE Program Charter, 1973). The Congressional funding was used to establish a Research, Development, and Application (RD&A) program at the Riverside Fire Laboratory in Riverside, CA, which eventually became known as FIRESCOPE.

It should be noted that at the beginning of this work, despite the recognition that there were incident or field level shortfalls in organization and terminology, there was no mention of the need to develop an on-the-ground incident management system like ICS. Most of the efforts were focused on the multiagency coordination challenges above the incident or field level. It wasn’t until 1972 when FIRESCOPE was formed, that this need was recognized and the concept of ICS was first discussed.

When the FIRESCOPE Program Charter was formally approved in 1973, there were seven partner agencies: The FIRESCOPE partner agencies included:

- California Division of Forestry (CDF)
- Governor’s Office of Emergency Services (OES)
- Los Angeles County Fire Department
- Los Angeles City Fire Department
- Ventura County Fire Department
- Santa Barbara County
- U.S. Forest Service California Region

The FIRESCOPE partner agencies agreed to four fundamental principles upon which all FIRESCOPE products would be based. The principles included:

- Commonality and uniformity between responding agencies will improve response performance.
- Timely, accurate, and complete information is paramount for effective crisis management.
- Incident management procedures that are designed to integrate and support a regional coordination system will improve crisis management performance.
- Modern technologies can be effectively integrated into the Fire Service to improve response performance.

⁶ As summarized by EMSI (Emergency Management Services International, Inc.)

The FIREScope Program was subdivided into three parts:

- ✓ Command Systems Policy and Operations
 1. Policy
 2. Command Operations
 3. Tactical Field Control Operations
- ✓ Command System Development
- ✓ System Implementation

Part 1, Command Systems Policy and Operations, was intended to identify “authorities and resolution of interagency constraints associated with the implementation of a Multi-agency Command and Control System and the definition of functional requirements for its operational use” (Aerospace Corporation, *Command and Control System Study Final, Report*, 1973). Part 1 was further broken down into three sub-parts.

- ✓ Part 1A, *Policy*, was intended to “establish a coordination concept that can be fitted to the legal, procedural, and political requirements and constraints of all agencies.”
- ✓ Part 1B, *Command Operations*, was intended to “specify system performance requirements for resource status monitoring, situation assessment, logistics, communications, decision criteria, and other operational needs.”
- ✓ Part 1C, *Tactical Field Control Operations*, was intended to “develop uniform procedures, terminology, and training standards.”

(Mission Research Corporation and System Development Corporation, *A conceptual definition of a wildland fire management regional coordination system*, 1974)

MACS was an outcome of Part 1A and Part 1B while ICS was an outcome of Part 1C.

Along with developing ICS and MACS, the FIREScope program focused on developing six supporting technologies that included:

- ✓ Meteorological Network
- ✓ Automated Data Processing
- ✓ Training
- ✓ Communications
- ✓ Coordination Systems
- ✓ Incident Intelligence

ICS ORIGINS IN LARGE FIRE ORGANIZATION

While significant improvements were needed in wildland fire management following the 1970 fire season, the FIREScope Task Force did not start from scratch, leveraging what they could from the previous wildland fire management system Large Fire Organization (LFO). LFO had been developed after World War II by returning veterans who applied their military command and control experience to wildland fire management. While LFO bore some resemblance to military command and control, it was specifically adapted to wildland fire management and bears no direct linkage.

As an incident management system, LFO was capable of expanding to incorporate multiple agencies, but its downfall was it lacked a strong central coordinating mechanism. This was one of the shortcomings exposed during the 1970 fire season.

The basic LFO organizational structure consisted of a Fire Boss who supervised a Line Boss and a Plans Chief. The Fire Boss was the modern day Incident Commander, while the Line Boss and Plans Chief were the modern day Operations Section Chief and Planning Section Chief, respectively. While several areas of LFO proved inadequate to the complex incident management demands of the 1970 fire season, other components worked well and were retained in the new system development. One of those components was the Plans function of LFO, with several similarities between the modern day ICS Planning Section and LFO Plans. Under LFO Plans, much of the modern day Situation Unit functions were performed by the Intelligence Officer and the Maps – Records Officer. Similarly, modern day Resources Unit functions were performed by the Status – Check-in Officer. While the Maps – Records Officer position has gone away and the function has been absorbed into the Situation Unit and Documentation Unit, the Status – Check-in Officer lives on as the Status Check-in Recorder in the Resources Unit.

ICS IS BORN

The initial development of ICS was born out of the FIREScope Program's Part 1C, Tactical Field Control Operations. It should be noted that the system was not always called ICS; it was originally called Field Command Operations System. The original design intent was to "field a system which would provide uniform terminology, procedures, and incident organization structure required to ensure effective coordinated action when two or more agencies are involved in a combined effort" (U.S. Forest Service, *FIREScope a record of significant decisions*, 1981).

FIREScope members involved in the original research and development for ICS came from varied back- grounds and brought diverse experiences to the development process. Including wildland fire response and experience with LFO, the group had experience with systems engineering, business management, public safety administration, and military service. Throughout their individual careers, the group members had been in- fluenced by various business management practices and principles. In many cases they subconsciously incorporated these concepts into the system development. Included in this is Peter Drucker's famous concept of Management by Objectives. Other management concepts, such as Span of Control, were considered and included as well. Due to the diverse backgrounds of the group, it is hard to point to any one experience or model that influenced the development of the system. In the end, the system became an amalgamation of several different experiences, theories, and models, as well as considerable compromise.

While the group worked to develop the principle level components of the system, a parallel effort focused on the details related to policies, procedures, and integration of facilities and equipment necessary to operate the system. This provided the basis for a comprehensive organizational structure that incorporated the functional requirements for managing the system. The outlined requirements specified that the organization be able to provide resource status monitoring, situation assessment, logistics, communications, lines of decision making, and the ability to meet operational needs. Based on these requirements, the system created five key functions that had not existed before: situation assessment, status keeping, resource utilization, logistics management, and housekeeping (e.g., feeding personnel and maintaining incident facilities). These functions were incorporated into the original system organization chart.

By 1974 the functional framework for the modern day ICS organization had been developed. Like the ICS organization chart today, it consisted of Command, Planning, Logistics, and Finance, all with sub-units with specific functional responsibilities. The one change is Operations. In 1974, the modern day Operations Section was still called the Suppression and Rescue Section, paying homage to the system's origins in firefighting, though this would soon change.

There are several interesting observations to be made about the 1974 organization chart:

- "Officer" is a specific term for those who are directly delegated areas of responsibility that specifically reside with or are specifically vested in the Incident Commander. Once clear direction is provided, the IC delegates the accomplishment of these tasks to Officers on the Command Staff. The original Command Staff notes that in addition to Information, Liaison, and Safety, there is acknowledgement that other Command Staff positions might be required ("others as required"). As the incident management environment has grown more complex and ICS has been applied ever increasingly in all-risk, all-hazard situations, additional Command Staff positions have been introduced as needed, including Intelligence, Security, and Legal to name a few. From the beginning the system had this inherent flexibility, but Command Staff functions are still inherent functions of Command.
- As noted above, the Suppression and Rescue Section was changed to the Operations Section to reflect the all-risk, all-hazard applicability of ICS. Other evolutions in the Operations Section included changing Ground Operations Branches simply to Branches and introducing the concept of functional organization at the Division level with Groups to organize tactical operations around functions in addition to geographic areas.
- The Planning Section was always considered a critical component of the system, and development of the Planning Section was largely informed by LFO. The original Planning Section was designed to address a wide range of issues. Over time, the original Planning Section was simplified for wildland fire use, with specific emphasis on fire behavior mapping, and information processing. Despite the original intent, the simplified organization is now how most people think of the Planning Section. When developing the ICS Planning Section, FIREScope members considered the Situation function to be the most important part

of the whole system. While not considered part of the traditional wildland fire ICS Planning Section, the Environmental Analysis Unit has grown to be an invaluable part of oil and hazardous materials responses. Simply called the Environmental Unit, this function is a staple in the modern day all-risk, all-hazard ICS Planning Section.

- The Logistics Section has seen a few changes. The original Documentation Unit was moved to the Planning Section and the Base Unit was renamed the Facilities Unit. The Air Support Unit was moved to the Air Operations Branch in the Operations Section. The Communication Unit and Food Unit were added and all of these units were reorganized under the Services and Support Branches.

- In the Finance Section, the Injury Compensation Unit and Claims Unit have been combined to be the Comp/Claims Unit. The Obligation Unit was replaced with a Procurement Unit as well, and the Cost Analysis Unit was moved from the Planning Section and renamed Cost Unit.

From the original ICS organization as developed in 1974 to the ICS organization we have today, we see a few, but not many, changes to that basic concept. These concepts have stood the test of time and countless responses.

In March of 1974, the first publication on the system titled the Field Command Operations System Conceptual Design Description was released. Concurrent with this release was the publication of a corresponding Operations Manual that detailed each of the positions in the system and the generic operating procedures. Shortly after publication of these documents, the name of the system was changed from Field Command Operations System to the Incident Command System in June of 1974. Members of the development Task Force opted for the name change because they preferred to put the emphasis on the Incident rather than the System.

ICS Shift to All-Risk, All-Hazard

While the intent in 1974 was for ICS to be used to manage all wildland fire field activities for the fire service, the design intent of the system almost immediately evolved into an all-risk, all-hazard system. Early in the development process, participants recognized that the system they were designing needed to be simple enough for the “common man,” work within each department’s day-to-day response structure, and be effective for a wide range of incidents, simple to complex. It did not make sense to have different systems for different types of incidents. A member of the development Task Force noted that they “had to build a system that worked for a dumpster fire, a high-rise fire, a flood, or a major haz-mat incident” (Robert Irwin, quote from Barbera and Stambler, *Engineering the Incident Command and Multiagency Coordination Systems*, 2011).

By 1976, the focus began to unofficially shift into development of an all-risk, all-hazard system that could be used to manage an incident of any nature. During this time period, some of the fire-specific references were removed from the system, including the Suppression and Rescue Section, and replaced with more generic references, such as Operations Section. With the shift in focus, the official FIREScope charter was modified to acknowledge the all-hazard transition. This is a significant fact that is lost on many incident response and emergency management personnel: ICS has been an all-risk, all-hazard system since its original development.

MULTIAGENCY COORDINATION SYSTEM (MACS) DEVELOPMENT

While ICS was developed to solve the incident-level management challenges, MACS was developed to address the off-site coordination issues above the incident level. Designed in conjunction with ICS to be an independent yet interrelated system, MACS is an equally critical component of successful incident management.

In 1974, shortly after the release of the Field Command Operations System Conceptual Design Description, a document titled the Conceptual Definition of a Wildland Fire Management Regional Coordination System was published. The document articulated the functions of MACS and the conceptual design of the Operations Coordination Center (OCC), the pre-cursor the wildland fire Multiagency Coordination (MAC) Group. The first OCC was established in 1974, “at the Riverside County Communications Center and manned that first year primarily by Task Force members” (U.S. Forest Service, *FIREScope a record of significant decisions*, 1982). The original OCC experiment demonstrated continued difficulties in obtaining timely and accurate information about the incident and resource status. In 1975, a more permanent OCC was established in a vacant Los Angeles County fire station in El Monte, California. Based on the initial experiments and a major design study, more detailed functional specifications, personnel, and facility considerations for MACS and OCCs were published in 1977.

Interesting Side Story

An interesting side story captured by Dr. Joseph Barbera and Ms. Kimberly Stambler as part of their article “Engineering the Incident Command System and Multiagency Coordinating System,” perfectly captures the design intent of MACS. The contrast between the management of multiagency coordination in MACS versus command authority of ICS was never more apparent than during the 1980 fire season. As recalled by Robert Irwin, “Vice President Mondale came out and he was very impressed with things, and the rudimentary OCC that was part of a fire warehouse at the CDF [California Department of Forestry] Headquarters. But it was the way it worked and he was really impressed with that. When he got back, we had 5 Army Colonels come to see what Mondale saw. They said, ‘Oh this is really marvelous but who is in charge’ and they could not believe that it was the process that was running the whole thing, not any particular person with command authority. It was the process and series of forms. Each of those guys got me in a corner and said, ‘Ok, now who is really in charge?’” Robert Irwin joined the U.S. Forest Service in 1947. Trained as a wildland firefighter with a degree in Forestry, he progressed through the agency. In 1975, he was assigned as FIREScope Program Manager and continued with the program until its charter concluded in 1982.

ORIGINAL ICS IMPLEMENTATION

By 1975 the conceptual definition and organizational structure of ICS was relatively well defined. The system had been examined through a rigorous exercise conducted at the California Specialized Training Institute at Camp San Luis Obispo in late 1974 and shortly thereafter, the Los Angeles City Fire Department began to test parts of the system as a means of validation. It is known that elements of ICS were used in 1976 on the Occidental Tower high-rise fire in Los Angeles, demonstrating that even from the beginning, ICS applicability was greater than simply wildland fire incidents.

In April 1976, the first ICS implementation proposal was developed and when the FIREScope charter was renewed in 1977, the focus for the next five years became implementing the system components. Part of the implementation proposal focused on exercising and evaluating the relationship between ICS and MACS. The original implementation plan recommended evaluating the systems in a designated geographic area. The limited geographic area for field testing, designated the “Core Area,” included the Angeles National Forest, parts of Los Angeles City and County, northwestern Ventura County, and a portion of the Los Padres National Forest. The implementation plan for the MACS also included developing more robust operational procedures for MACS and subsequently training personnel in those procedures.

In 1978 the Pacoima fire on the Angeles National Forest became the first large incident to officially be managed using ICS and MACS. To accommodate the influx on responders not familiar with the new system, just-in-time training was set up to educate them on ICS. While ICS demonstrated effectiveness, according to Chuck Mills the system was not initially as successful as anticipated for the following reasons:

- ✓ Appropriate training on the system had not been conducted.
- ✓ Agencies had not integrated the new system into their daily response operations procedures.
- ✓ Some agencies were trying to operate in both the old and new system.

Due in large part to these reasons, after a few days of experimenting with ICS, management of the Pacoima Fire shifted back to using the old LFO system.

But the continued use of ICS became inevitable and, in 1978, Los Angeles City Fire Department adopted ICS service-wide for all responses. By 1980, CDF, Cal OES, and the State Board of Fire Services endorsed and adopted ICS. By 1981 use of ICS was common in Southern California by major fire agencies and its usage for non-fire incidents was growing.

The FIREScope Program fell victim to federal budget tightening and experienced significant cuts in funding in 1982; development on many of the initiatives was suspended, including ICS and MACS. While the U.S. Forest Service final report on FIREScope estimated that development of ICS was nearly 90% complete, MACS was estimated at only 40% complete.

NATIONWIDE ICS ADOPTION (1980s)

At the same time that ICS was being rolled out in Southern California, the National Wildfire Coordinating Group (NWCG) realized that they were conducting parallel efforts regarding wildfire incident management, as they continued to operate under LFO. The NWCG performed an analysis of FIREScope ICS for possible national application, the results of which led to the development of the National Interagency Incident

Management System (NIIMS), which closely resembled the FIREScope ICS and MACS systems, and called for nationwide implementation of ICS. With the NWCG calling for nationwide implementation of ICS, ICS training and qualifications standards became part of the NWCG Red Card position qualification system. This measure addressed an earlier criticism of FIREScope ICS, since the program components of FIREScope lacked a qualification and certification system.

By 1983, FEMA began including ICS in the curriculum at the National Fire Academy. As use of ICS by the fire service gradually extended across the US, even non-fire agencies were investigating ICS and working to incorporate it into their response procedures. For example, in 1984 the San Bernardino County Sheriff's Department (SBCSD) conducted a project to make ICS applicable to the diverse emergencies confronted by law enforcement. The SBCSD persuaded the California Police Standards and Training Commission (POST) to sponsor training in the law enforcement version of ICS and it was first conducted in 1986.

The Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), commonly known as SARA Title III, required "methods and procedures to be followed by facility owners and operators and local emergency and medical personnel to respond to any release of" hazardous materials (U.S. Code, Title 42). To meet this requirement, many communities began to adopt ICS.

In 1986 FEMA recognized the FIREScope Program as an exemplary practice in emergency management. In 1989 FEMA began development of the National Urban Search and Rescue (US&R) System; ICS was incorporated into the structure and functional processes of the USAR Task Forces and the USAR Incident Support Team that integrates the Task Forces with the local response during emergencies. During the 1990s FEMA began deploying Wildland Type I Incident Management Teams to large complex incidents including Hurricane Andrew and Hurricane Iniki in 1992. During Hurricane Iniki the ICS Planning Process was used for the first time to manage the federal response to support the State of Hawaii. ICS expansion within the fire service discipline was further encouraged when National Fire Protection Association standard 1500 was revised in 1992, requiring all fire departments to establish procedures for the use of ICS.

While the 1982 FIREScope budget cuts did not seem to impact the national implementation of ICS, the same is not true for MACS. With only 40% of MACS developed when the funding stopped, MACS concepts did not proliferate or evolve with the same success. MACS concepts were not originally adopted by NWCG or any similar organization. Implementation of MACS was initially limited to California and it was not as widely implemented and applied outside of California until recently with the release of NIMS. Development of MACS elements and processes have not evolved at the same rate as those in ICS.

Using ICS

Many people ask what was the first non-fire incident to be managed using ICS. Unfortunately that piece of trivia has been lost to history, but with early adoption by Los Angeles City Fire Department for all response, one can easily imagine that ICS must have been used on a search and rescue, flood, or hazardous materials incident in the late 1970s. Additionally, with ICS proliferating throughout Southern California, it is likely that early on there was a law enforcement incident that was managed using ICS.

U.S. COAST GUARD ICS ADOPTION

One of the first national organizations to adopt ICS outside of the wildland fire community was the U.S. Coast Guard. At the same time ICS was spreading through structural and wildland fire response communities in the 1990s, the U.S. Coast Guard struggled with managing multi-agency response operations. Following the Exxon Valdez oil spill in March 1989, the Coast Guard began to look at how to better integrate its efforts into overall state and local government. If one looked at the after-action report from the Valdez incident, he or she could find many of the same issues that surfaced during the fires in the 1970s.

Coast Guard personnel realized that, although managing wildland fires was pretty far removed from typical Coast Guard mission areas, the process used had many similarities to the response challenges the Coast Guard often faced. For example:

- There were multiple agencies involved
- They needed coordinated operational planning and tactical response management
- They had to manage the status and activities of hundreds to thousands of resources from all over the country
- They had to manage information in a coordinated way

- They needed a consistent, repeatable system

Several senior officers in the Coast Guard's marine safety program recognized the need to learn about ICS and attended training available through the wildland fire community. In the early 1990s Coast Guard members started a grassroots effort to use ICS, and the seed was planted. Like an incoming tide, ICS use within the Coast Guard throughout the 1990s touched every corner of the service. In 1991 Coast Guard Marine Safety Office (MSO) Puget Sound used ICS to manage a collision case involving a fishing vessel and a container vessel. Over the next year, additional incidents at MSO Puget Sound were managed with ICS. Shortly thereafter, MSO Detroit used ICS for a major pollution response exercise between the U.S. and Canada on the Detroit and St. Clair river system in Michigan.

Throughout the Coast Guard, responders recognized the value of the system in bringing order to chaos right from the outset of an incident. It soon became a matter of routine at some Coast Guard units, even for small-scale responses.

As time went on, ICS use increased within the Coast Guard, and leadership created a cadre of ICS instructors within the National Strike Force to teach ICS-200 and ICS-300 courses throughout the U.S. Moreover, Coast Guard Training Center Yorktown began to offer ICS courses. In 1996 a Commandant instruction directed ICS use for oil and hazardous materials response and, in 1998, another instruction required ICS use for all-hazards response.

As the Coast Guard adopted ICS, select Coast Guard members pursued ICS qualifications based on the NWCG positions qualification standards. Coast Guard ICS adoption and implementation took off in the early 2000s with a robust training program. In 2006 current EMSI President Ron Cantin became the first Type 1 Incident Commander in the Coast Guard.

In addition to innovative all-risk, all-hazard ICS training, several new tools were developed through the Coast Guard ICS program, such as the ICS Planning P and the U.S. Coast Guard Incident Management Handbook, both of which are used extensively in all-risk, all-hazard ICS training and response today. During the 2005 hurricane season, one of the few bright spots in the federal response was the Coast Guard's ability to manage the response and bring order out of chaos, and the investment in ICS training and implementation was critical in this regard.

HOMELAND SECURITY PRESIDENTIAL DIRECTIVE-5 AND NIMS (9/11)

The September 11th terrorist attacks highlighted the need for a national approach to incident management. In response to observations and lessons learned from September 11th, President Bush issued HSPD-5, directing the development of a single, national incident management system. After careful review of existing command and control and incident management systems, ICS and MACS became cornerstones of the National Incident Management System (NIMS) command and management in 2004. After years of successful application as not only useful tools for managing wildland fires but all-risk, all-hazard incidents, these two systems became the national standard. National implementation of NIMS, including ICS and MACS, officially began in 2005 with federal emergency preparedness grant funding tied to various NIMS implementation metrics.

NIMS implementation continues today. Since 2004 there have been challenges in the national implementation of NIMS, to include ICS and MACS implementation. Many of these challenges are similar to those experienced in the late 1970s and 1980s during the national implementation of ICS in the wildland fire community. The same challenges noted by Chuck Mills in 1978 have appeared in NIMS implementation today. But at the end of the day, the design intent of the systems, ICS and MACS, have withstood the test of time and is still applicable.

INTERNATIONAL ADOPTION

ICS has proven not only useful for managing U.S. based incidents, but it has been implemented and adapted for use outside of the U.S. as well.

Australia

In the 1980s the Australasian Inter-Service Incident Management System (AIIMS) was first developed in Australia as a derivative of the U.S. developed NIMS and based largely on ICS. Designed to be "a management system for any emergency" (The Australasian Inter-service Incident Management System, Third Edition, April 2004), AIIMS was first implemented in the early 1990s. While it has been principally used by fire and land management agencies, there has been increasing recognition of the benefits of a coordinated public safety approach to incident management involving all of the emergency service providers. This has been reflected in

legislation, government policy, and disaster/emergency management planning arrangements established within and between public safety organizations.

While quite similar to ICS, there is one major difference: the term “Command” has been replaced with “Control.” In Australia, ICS is referred to as a “Control System” and the “Incident Command” function is called “Incident Control.” Regardless of these semantic differences, AIIMS is largely based on and compatible with ICS. During heavy wildland fire seasons, the U.S. and Australia have historically exchanged Incident Management Teams, further demonstrating the similarities between the systems.

U.S. Department of State

In 1986, following the international response to the devastating Mexico City earthquake, where response operations were not as effective and efficient as desired, the U.S. Department of State began to look at using ICS to support future international response operations. After slight modifications in the operating procedures and organization structure, ICS became the incident management system for coordinating U.S. relief efforts internationally.

ICS Canada

ICS was first implemented in Canada on a large scale by the Province of British Columbia in the mid-1990s. In 2002 the Canadian Interagency Forest Fire Centre (CIFFC) introduced the CIFFC ICS Canadian Version doctrine along with a complete set of training materials to the wildland fire community across Canada as part of its mandate to its provincial, territorial, and federal members. A number of non-wildland fire organizations also soon adopted this model and, over the ensuing years, adoption of ICS increased significantly.

In 2009 CIFFC was preparing to update the Canadian wildland fire ICS curriculum. At that time the Alberta Emergency Management Agency (AEMA) was also reviewing their need to provide a single all-hazard command and control system that would meet their long-term provincial emergency management needs. Concurrently, CIFFC was sponsored through Parks Canada to apply for a New Initiatives Fund contribution agreement to provide a complete ICS training program for all Ground Search and Rescue within Canada. The collaboration of these initiatives into one effort formed the basis for ICS Canada and today ICS Canada has a number of member agencies.

Appendix 6 - Los Angeles County Subdivision Codes Pertaining to Wildland Fire Safety

(Preliminary Review: Codes at the time of the November 2, 1993 Old Topanga Fire)

Chapter 21.24 prescribes access for all subdivisions

- *The County requirements for access in fire hazardous watershed areas is less stringent than the State recommendations despite the fact that fire hazard in the Santa Monica Mountains is as great or even greater than most of the State responsibility areas to which the State codes apply.
- *The political process of many Counties may prevent Strategic Wildland Fire Safety Planning outright, or may seek to reduce the amount or extent of the planning recommendations.
- *Strategic Wildland Access Planning is often circumvented through incremental development of individual lots that do not fall under the Subdivision codes. Incremental lot development may greatly exceed development of lots within subdivisions.

21.24.010

B. In determining the adequacy of a route of access, the advisory agency shall consider the potential for blockage of the route by flood, fire, or landslides and the effect of such blockage on the safe evacuation of future users and occupants of the division, and on the deployment of fire equipment or other services under emergency conditions.

21.24.020 Restricted residential access. If a street or street system is restricted to a single route of access to a highway shown on the Highway Plan, except for a limited secondary highway, which is maintained and open to public travel, whether at the point of intersection with the highway or at some point distant from the highway, the street or street system shall serve no more than

2. 75 dwelling units where the restriction is designed to be permanent and the street or street system traverses a wildland area which is subject to hazard from brush or forest fire.

B. If the roadway paving on that portion of the street or street system forming the restriction is less than 36 feet in width and is not to be widened to 36 feet or more as a part of the development of the division of land, the permitted number of dwellings shall be reduced by 25 percent if the pavement is less than 28 feet or more in width, and by 50 percent if the pavement is less than 28 feet in width. In no event shall the pavement width be less than 20 feet.

21.24.030 Wildland access. Notwithstanding the provisions of Sections 21.24.020 and 21.24.190, the advisory agency may disapprove a design of a subdivision of land which utilizes a cul-de-sac or branching street system or other single-access street or street system as the sole or principal means of access to lots within the division, where the forester and fire warden advises:

A. That the street or street system will traverse a wildland area which is subject to extreme hazard from brush or forest fires;

B. That the lack of a second route of access would unduly hinder public evacuation and the deployment of fire-fighting and other emergency equipment in the event of a brush or forest fire.

21.24.040 Modification to access and frontage requirements. The advisory agency may modify the requirements of Sections 21.24.010, 21.24.020, 21.24.190, and 21.24.290 where it finds that topographic conditions, title limitations, or the pattern of ownership of the state of development of parcels in the immediate vicinity of a division of land make the strict application of the provisions of these sections impossible or impractical and that the public health, safety, and welfare will not be adversely affected.

21.24.190. Cul-de-sacs Length Restrictions. A. Cul-de-sacs shall be not more than:

1. 500 feet in length - serving industrial and commercial uses;
2. 700 feet in length - serving residential uses with density of more than four dwelling units per net acre;
3. 1,000 feet in length - serving residential uses with density of four or less dwelling units per net acre.

21.24.220 Fire-fighting access easements. In areas where, in the opinion of the Forester and Fire Warden, there will be fire hazard to the watershed or any other properties, unobstructed fire protection access easements, not less than 15 feet wide, shall be dedicated from the public highway to the boundary of the division of land.

Appendix 7 - Wildfire Safety Panel Mtg. June 1, 1994 -Discussion Highlights

The Wildfire Safety Panel recommendations are for new construction only or replacements that require permits.

Vegetation Management Plan

What are the components of the vegetation management plan? Develop definite guidelines using the County's *Homeowner's Guide* book and concepts (Radtke's *Homeowner's Guide*...).

Siting of Homes

We need suggested standards for siting of homes. Developer spokespeople opposed any further restrictions citing private property rights to build where they want regardless of new safety criteria or concerns.

Special Interest v. Public Safety

Inverse condemnation—No. Do not expect the general public to take over the burden of public safety.

Ingress/Egress/Disclosure

John Klein: The Board of Supervisors has a duty to disclose. It has a duty to let the public know about deficiencies pertaining to ingress/egress.

Proposed Federal legislation pertaining to public disclosure will require letting the public know about deficiencies in a definite manner without sugar coating. If public knows the full extent they may want to correct the situation.

Eric Young (County Counsel): If we do so, we must provide solutions.

Discussion: Disclosure is a twofold issue. An educational program is necessary to mitigate hazardous situations.

John Klein: As responsible citizens and public servants we cannot withhold information. If we do not disclose, we may be liable. The public has a right to make informed decisions.

Rod Ornee (Dept. of Public Works): Let County Counsel bless access requirements before adoption by panel as there may be moneys required to follow through on recommendations as well as exposure and liability as people may sue. They (the County) do not want to create a liability issue. The subdivision ordinance already specifically says what access requirements are. Thus the subdivision ordinance may need to be changed.

Dean Efstathiou (Dept. of Public Works, Asst. Dep. Director, Waterworks & Sewer Maint. Division): Seconded Rod Ornee's concerns and pointed out that many access studies have been made by Regional Planning and a thick file of these exist. (He used both hands to indicate a file at least a foot thick.) He thus gave the impression that the issue is a can of worms and nothing more can be learned.

County Fire Chief Freeman: Fire Panel must be able (should be able) to make recommendations irrespective of liability concerns, etc.

This was generally overruled or not acted upon.

Exterior Siding

Wood allowed over 1-hr. fire resistive materials in Fire Zone 4 or buffer zones. Subcommittee was split about it and may want to issue a minority opinion/report on this or other issues.

Auxiliary Water (Pressure v. drafting type hydrants such as pools)

Las Flores Mesa had only 20,000 gallons in its (public) tank but about 400,000 gallons of water (private sources such as pools, tanks, etc.) that was not used.

Pools are auxiliary water supplies. Nothing requires that a pool be full.

The major comments made in public hearings were that water supply systems ran out. That is why an auxiliary water supply system is needed.

NEWS

County's Full Report Waters Down Fire Danger

By Fred Feer

Sometimes less is better than more. A case in point is the recently released full text of the Los Angeles County Wildfire Safety Panel which, at 15 pages plus 50+ pages of annexes, is four times the length of the Summary reviewed July 14, yet manages to obscure some key points.

But, first, let's deal with what the report says. The main body of the report conveys the background to the organizing of the effort...the Laguna, Costa Mesa and Topanga-Malibu fires of October and November, 1993 that some of you may recall. With apparently whole communities burning up, the leading lights on the Board of Supervisors concluded that a comprehensive look at the questions: why did these terrible, huge fires happen and how can we prevent them happening again?

Thus 18 men were chosen as members. They represented LA County, California and Federal professional firefighters, public safety and forestry people, plus civilian representatives of industry and civic organizations. In addition, 32 others served as resource persons for the Panel. They were mostly fire fighters with a few legal and other technical experts. Altogether an impressive group. They were impaneled on November 9, 1993 and their report is dated June 17, 1994.

Committees, Annexes

The panel organized itself into four sub-committees, each of which generated its own recommendations. The four major Annexes to the report comprise the substance of the report.

I will not try to summarize the recommendations of the Building and Fire Code subcommittee. They are significant and technical. If you are contemplating new construction or any substantial modification work, you certainly should consult the

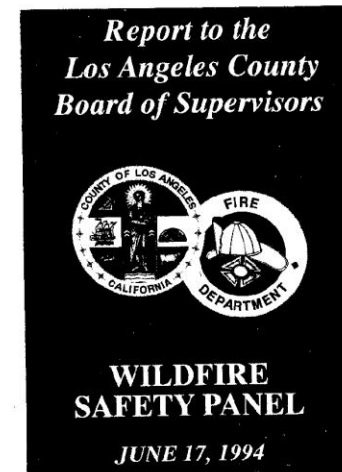
full text before proceeding. Even if all the recommendations do not become Code, there is much to recommend adopting them on your own.

Prospective buyers, Realtors and residents would benefit from reading the Water subcommittee report which urges that the public become aware of and take an active part in improving the availability of water for fire fighting in vulnerable areas. Like so much else in the area of public utilities, complacency and inertia have left many areas with inadequate service. The Water Subcommittee report and recommendations provide a guide for public action.

Two subcommittees dealt with vegetation policy and brush clearance and together account for over half the annexes. In the Summary these two were prominently displayed. In the full report their message is muted by the style in which the recommendations of the report are presented. Rather than being organized by subcommittee the recommendations are presented as changes to existing policies and programs or as actions to be taken by the Board of Supervisors and others. This undoubtedly makes sense for the County's purposes, but it does not help citizens grasp the implications of the Panel's report for them.

Klaus Radtke, former member of the LA Fire Department and a Topanga resident, served as an expert resource person to the Panel. He wrote a letter to the Co-Chairmen of the Panel dated June 8, 1994 taking exception to some of the Panel's conclusions and recommendations. Essentially, he said, the Panel had focused on technical details at the expense of a wider focus which would have better shown the threat to the public.

Two specific instances. One building code recommendation is the requirement



for double-paned windows in high fire risk areas. But double-paned windows may fog up and have to be replaced even if only exposed to high heat. Thus insurance claims (and costs) may rise even though actual fire damage may be reduced. Similarly, using overly simple computer models of fire under-estimates the danger of radiant heat. A burning home may be able to ignite other homes as far away as 100 feet even if brush and vegetation have been controlled in accordance with recommended codes.

His general point, reinforced to me in an interview, is that the problem is the development allowed in high fire danger areas itself. This goes well beyond details of construction to such things as analysis of fire history to prevent development in certain areas within 100 feet of other houses.

Stand and Fight

The county and fire department have recognized that public education to fire

risks and coping is important. The fire fighters and Sheriff's Dept. have resigned themselves to people wanting to stay to defend their homes, so now the approach is to teach them how to survive and expose them to technology with which to defend themselves.

Hence, the Malibu Preparedness Fair of 13 August, and the upcoming Topanga Disaster Preparedness Fair on September 24. We now see fire department personnel cooperating with vendors of portable generators, high capacity water pumps, foam generators, fire retardants, etc., etc.

Indeed, there were items demonstrated in Malibu that will be demonstrated in September here in Topanga that every resident ought to see. There are pieces of gear it would be sensible to have as added insurance--and some of them are affordable as well. The fires of last fall and the heat of this August and a rash of arson brush fires around the state ought to be enough to send the prudent Topangan to the fair in a thoughtful frame of mind.

In conclusion, Klaus Radtke's general point is worth recalling. The technical recommendations of the County's Panel are worthy and sensible. But, they do not address the problem from the resident's point of view. What residents need is environmental and survival education. Fire is a normal occurrence in our neighborhood. Given fuel load and wind direction and speed, fire behavior is largely predictable. We residents need to know how to look at our homes and surroundings from the fire's point of view.

Readers interested in obtaining a copy of the full Wildfire Safety Panel report should send \$6.00 to: LACFD, c/o Financial Division, 1320 N. Eastern Blvd, L.A., CA 90063.

Appendix 9 - Malibu Emergency Task Force "Things Will Improve"

County Reviews Communications, Road Closures, Says Things Will Improve...

By Colin Penno

Messenger, January 26, 1984

The last serious brush fire in the Santa Monica Mountains took place on a scorching hot Saturday back in October 1982.

The October 9 Dayton Canyon/Paradise Cove blaze cut a trail of destruction clear across the Santa Monicas, leaving a 54,000 acre wasteland stretching from Canoga Park to the Pacific north of Malibu.

The fire also left an angry and vocal public charging authorities with a number of serious blunders in command and control—especially poor communications—which resulted in CHP and Sheriff-manned roadblocks in the wrong places at the wrong times.

In response, 4th District Supervisor Deane Dana proposed the creation of a county level task force to study the complaints. The Malibu Emergency Assessment Task Force was given the green light by the L.A. County Board of Supervisors October 19, 1982. In it, all county agencies involved in handling emergencies were instructed to report back by December of that year.

But government moves exceedingly slow, and the 38-page report arrived, by request, at the *Messenger* last week.

Reading it, one can easily see why. The report, conducted by County Chief Administrative Officer Harry Hufford's department, was tentatively completed by the early fall of '83; but according to some bureaucracy-watchers, was received with displeasure by the county because it did not paint the county's emergency machinery in good light.

L.A. County Fire Chief Clyde Bragdon Jr., for example, found the initial report "offensive," because it implied criticism of his department.

With the year's end fast approaching, Hufford and the agencies involved got together for a classic "soft shoe shuffle" in which the report was allegedly "watered down" via "status reports and reviews" of the report.

In a November 15, 1983 summary of reports turned in by the Sheriff's Department, the Fire Department, and others, the county's CAO observed that "Some issues remain that will require ongoing efforts by the public agencies and residents of the area before they are completely resolved in this disaster-prone area."

Hufford also observed that in an ongoing dialogue between the L.A. County Communications Department and the Federal Communications Commission, "A discussion of the need for public service agencies to communicate with each other on a special emergency frequency" is considered to be a "high priority."

Our public servants certainly earn their salaries.

The summary also stood behind the Fire Department's continuing responsibility to "request limited and/or full road closures when a fire or serious emergency occurs."

A continuing need exists, to "continue the policy of allowing people into an area when safe, in order to protect their property."

The department played down the idea that outside crews called in to fight major fires may be subject to disorientation—even though residents observe this happening regularly. The Fire Department did note that "The Call Fire Fighter Program in Topanga has provided local citizens who can be used during

an emergency."

Now that's good thinking.

"Direct telephone lines between Sheriff and Fire dispatching have been installed," although "Emergency Services Agencies are not able to communicate by radio with each other."

The Fire Department goes on to note that "The FCC has not approved the allocation of the required frequencies within the radio program to permit public safety agencies to communicate with each other."

This must come as a surprise to Joe Public, who can pick up his phone and, via satellite, talk directly with just about anyone 8000 miles away across the Atlantic.

In an obtuse memo from the County's Telecommunications Engineering and Maintenance branch, bureaucrats lament the difficulties inherent in radio links in the Santa Monicas, but note in their final sentence that "Alternate means, such as buying time on commercial broadcast stations be persued."

Again, advanced thinking.

With regard to the Sheriff's Department, the report notes that deputies in the field "Will update roadblock information more frequently," and discuss problems with the Fire Department "More often during emergencies."

A September 16 Sheriff's Department memo notes that "A general understanding of the (access) problem exists, but far less consensus as to the solution. Because of communications and command problems," the memo explains that "The Highway Patrol indicate it difficult (sic) to change their method of operation."

During the October 9 debacle, CHP officers refused ingress to Topanga from Pacific Coast Highway, and would not, as suggested, call in for updated information via radio, although the fire was miles away.

Meanwhile, traffic was pouring unimpeded into Topanga from the Valley.

And in response to a frantic call from the Topanga Town Council, a CHP dispatcher in Malibu said "You mean there are two roads through Topanga?"

In comparison to our neighbors in the metropolis, most Santa Monica Mountains' dwellers are intelligent, independent types who both value their freedom and appreciate the risks involved in the urban chaparral interface.

Freedom of movement is a most cherished tenet of this democratic society. If that freedom is to be temporarily denied citizens during fire and other emergencies, then it should be carried out in a much better fashion.

In summary, the *Messenger* feels that the long awaited Emergency Assessment Task Force Report does not bode well for intelligent action by the authorities during coming emergencies—at least, not for some time.

If anything, it emphasizes the unimaginative, flat-footed, and entrenched thinking inherent in local government.

The public deserves better service, (or better public servants) that this. ■

Copies of the Malibu Emergency Assessment Task Force Report may be obtained by writing Peter Ireland at Supervisor Dana's Malibu field office, 2335 Civic Center Way, Malibu, CA 90265.

Appendix 10 - The Yarrows "Loving Caretakers..... *Los Angeles Times* Nov. 6, 1993

BOB POOL and JESSE KATZ *TIMES* STAFF WRITERS

November 6, 1993 *Los Angeles Times*

Loving Caretakers of a Canyon Leave an Epitaph Written in the Ashes : Victims: Amy and Donn Yarrow gave up a lot of comforts to live on their remote ranch. In the end, it appears, they had no escape.

They were the genuine article, Amy and Donn Yarrow. True mountaineers who loved the outdoors more than most people will ever understand.

Where others in the rugged Malibu canyons built fancy homes overlooking the spectacular ocean panorama, the Yarrows spent half a century in several modest trailers discreetly hidden among the trees and chaparral near the top of Carbon Canyon.

The elderly couple refused to string unsightly power poles across their 80-acre ranch, instead drawing electricity from car batteries charged by solar panels on a sunny knoll.

They shared the trickle of water from their well with wildlife, scattering drinking troughs around their land for the deer, coyotes and occasional mountain lions that roam the Santa Monica Mountains.

Instead of slashing a paved driveway across their beloved homestead, they traveled in and out on a zig-zagging, 7-foot-wide dirt trail that was almost invisible beneath the canyon's dense canopy of brush.

And it was on that trail that Amy and Donn Yarrow died about 3 p.m. Tuesday when a wind-whipped firestorm swept down from Saddle Peak and apparently incinerated them as they ran for their lives.

Officials had not formally identified the bodies Friday afternoon. But in Carbon Canyon, where neighbors look out after each other, people knew.

When she learned that Santa Ana winds were pushing the flames their way, Amy Yarrow, 67, had rushed home from her job at a Santa Monica manufacturing plant to help get her husband out. Donn Yarrow, his hip broken from a recent fall, rarely drove.

Amy Yarrow was apparently at the wheel of the couple's battered four-wheel-drive [Toyota](#) pickup when the fireball hit. Her husband, friends speculated, probably got out to move something off the trail and was next to the passenger side door when he died.

That's where a sheriff's helicopter pilot found them at dusk Thursday. Authorities airlifted their charred bodies out Friday morning. The trail was too steep and too narrow for coroner's investigators and sheriff's homicide detectives to drive.

"I've never known anybody like them," said Shawn Rhodes, who rushed to the end of Mansie Lane as soon as he heard that fire victims had been found. "If anybody could survive, it's Amy and Donn."

It was the 33-year-old Rhodes who each year brought a small bulldozer onto the mountain to repair washouts and landslides on the trail. Amy Yarrow would follow behind the bulldozer, making certain that it did not cut too deeply into the hillside or damage the foliage.

By the time Rhodes arrived Friday in his 1960 GMC four-wheel-drive truck, the authorities were gone. So he plunged down the trail toward the Yarrow's ranch, edging along 100-foot drop-offs and dodging blackened rocks that had tumbled off nearby cliffs. Near a stream where Amy Yarrow had carefully marked the trail with small rocks, a burned tree blocked the way.

Around a bend, he found the charred shell of their Toyota. The Yarrows had made it only 100 yards from their home when they died.

"Oh, my god. Poor Amy. Poor Donn," cried Rhodes. "They didn't deserve this. I'd like to kill the guy who started this fire. This is not fair."

The Yarrows' trailers were gone--reduced to unrecognizable scraps of molten aluminum and twisted metal. The remnants of a book collection formed a heap of white ash in the back of a burned-out van. A lifetime's collection of tools lay in one pile, the tool box still warm to the touch.

Donn Yarrow had been a professor of philosophy at one time, said a neighbor, a lawyer who works in Century City and asked that his name not be used. Other friends described him as a voracious reader who spent his days on the mountain with books.

Some days, he accompanied his wife to her job in Santa Monica, where she worked part-time assembling gauges and was helping write a factory instruction manual. He would wait outside in their camper truck.

But on Tuesday, when an arsonist's spark ignited the hills above Malibu, he had stayed home. When his wife saw smoke billowing above the coastline that morning, she raced out the plant's door.

"She dropped everything. She knew instantly what it was. She was running as fast as she could to save her husband," said her employer and friend for three decades, Harold Hutchinson.

Before coming to work at the plant, Yarrow had spent more than 30 years as a window clerk and mail sorter in Santa Monica post offices. During stormy weather, she sometimes camped in the parking lot in her truck to avoid being stranded in the canyon.

Friends said the independent-minded Amy Yarrow was a sail-plane enthusiast who enjoyed the freedom of gliding silently with nothing more than a breeze keeping her aloft. Earlier this year, they said, she drove her husband on a cross-country trip to Vermont.

But back on the mountainside, Shawn Rhodes pulled one of Amy Yarrow's cookie tins from the debris and carried it to the scorched truck. From inside the cab, he retrieved a few small bones from beneath the springs of the seat that investigators had overlooked.

"This may seem weird, but I want to give them a decent burial," Rhodes said. "Amy and Donn deserve it."

Appendix 11 – Abstracts of Homeowner Comments

Abstracts of Homeowner Comments: Lessons from the Ashes. What we saw, what we learned! Will we remember?

- *Fire truck after fire truck went up Rambla Pacifico from PCH towards the slide and then turned around and sat at PCH (utterly no effective radio communication or preplanning).
- *The homeowner's house was nestled among trees with a large pool for firefighting. Owner saved his home.
- *He (Ed Hill) built a fire-safe home, knowing that it would be in the center of the next firestorm. He saved the home.
- *The home burned in a design-for-disaster location and was invisible from the road. As a 100-foot-wall of flames was heading down the canyon, fire crew cut the hoses from the truck and retreated for their lives.
- *Chris was safely in his underground fire vault with a fire-safe home above-ground when the firestorm moved over him at about 1630. The burnout period lasted about 14 minutes, and he was well-prepared with a generator, a 2" fire hose and a pool.
- *By 2200 adjacent homes were burning. Could have been saved if fire trucks would have come in after the fire front.
- *The wooden bridge at Las Flores Canyon caught on fire as the fire front passed and prevented safe access to PCH.
- *At about 2230 Fire Camp 8 was in total chaos. Apparently the fire command structure had broken down and the fire trucks could not communicate. They did not know where to go and what to do.
- *A wooden trellis attached to a house caught on fire. Neighbor put it out, saved house with 5-gallon buckets of water.
- *The heavy brush on the steep slopes below was instrumental in starting to ignite the house.
- *Days before the fire, he had soaked vegetation and his wooden home (wood balconies) because of the fire at the Ventura County line. As flames descended over the ridge, he evacuated but returned about 45 minutes later, driving past the Sheriff's roadblock and through hell to return and save the house (hose water never failed, also had trash cans filled with water).
- *Every year fire clearance was performed to the property line in preparation of a wildfire. A fireball (flames) came from above the water tank and its surrounding pines and carried the whole length of the courtyard (stretching up to 100 feet). 10-12 minutes after the fireball had forced them to seek refuge inside the house, they emerged to fight the spot fires. The fire pool pump was still running. Eaves, cars, the tool shed, as well as trees, were on fire.
- *The trees ignited around the house as well as the house itself as the fire front moved through.
- *As the fire front went through, most houses did not ignite but because of heat and firebrands, they started smoldering and finally igniting.
- *The morning of the fire, the gardener came by, saw the fire's smoke, turned on the automatic landscape watering system (cycles on all stations) and probably also the roof sprinkler. Some of the 4x4's supporting the wooden porch burned and the porch partially collapsed against the stucco siding of the house. The house was saved unattended.
- *The firemen stopped the first assault of the fire (first fire front). About two hours later the second fire front with a fireball (it felt like a flamethrower), incinerated a home which was directly in its path, also engulfing his house. Firebrands were bombarding the house with the lower envelope of the fireball leaving a black scorch mark on the wood siding along the upper east wall of the house. Most of the leaves were burned off the Blue Gum eucalyptus trees and the trees were on fire. Firemen helped Daniel remove flammable materials such as wood away from the house and extinguish spot fires. Fireball had ignited the meditation pillow on the southwest upper deck, and fire had also burned through the wooden deck and had cracked two of the adjacent single-pane picture windows. The firemen left in the four fire trucks about an hour later towards Fire Camp 8. With the house saved, Daniel was up until 0400 on fire patrol, extinguishing spot fires here and there.
- *The large uphill neighboring house burned as well as pine trees and eucalyptus trees surrounding it.
- *The wooden deck of the adjacent house that had a pool ignited. The owners had evacuated a truckload of valuables and could not return. Firemen tried to cut the wooden deck off with a chainsaw but were not successful. The house burned.
- *The all-stucco house would have been the easiest to save if the owner had been home, as he could have stomped out or pissed out the fire. While its wood fence and outdoor furniture did not burn, one of the two small wood balconies caught fire, burning for 10-15 minutes before starting to slowly ignite the house.
- *He consulted with K. Radtke before the fire and had installed roll-down shutters on his windows just before the fire, as both were concerned that the neighbor's pines and eucalyptus may catch his house on fire. Good downhill clearance but many railroad ties. House survived.
- *After the fireball rolled over, he could see Castlewood on fire. The houses surrounded by eucalyptus trees, etc., were on fire. At about 1530 (3:30 p.m.), water was cut off. There was suddenly absolutely no water.
- *He drove down Hume Road before he realized that flames had already come down and crossed about 1/4 mile uproad from Las Flores Canyon Road.
- *At Las Flores Canyon about 4-5 red fire trucks (apparently a strike team) were foaming houses on both sides of the road. One was foaming the Carden School.
- *One house burned near his house after the fire front had moved through because burning embers fell on the wooden deck. The house could have been saved with a garden hose.
- *Jack's steps and patios were made of railroad ties soaked with creosote. Since the ties kept igniting, they had to extinguish their own fire and could not save other homes.
- *In the evening they tried to find out where fires were still coming from in the neighborhood and found that all of the propane tanks of burned homes were still turned on. For example, someone had a swimming pool and the water heater was engulfed in 10-foot flames. They turned off about 6-8 tanks. Many of the houses would have been simple to save. They had big swimming pools and hot tubs.
- *An all-wood 2-3 story house with dried-out wood siding ignited on Hume Road as the fire front passed. The upper floor was slightly cantilevered slope-side over the lower floor (up to about four feet).
- *The smoke got so thick that the fire pump stopped running. He jumped in his pool but it was hard to breathe because the pool was in a low spot with the fire directly above it, melting his snorkel.
- *When he tried to use the fire pump again, the hoses had melted. He then got buckets and saved his house three times (it re-ignited several times). At night he saw houses burning one by one until 0400.

*In 1970 they had fire trucks everywhere. This time all trucks were from out of the area and took off because they did not know the area. Plenty of level, safe places to park and quickly return to the area after the firestorm.

*When Jay returned the fire had gotten into the house. All picture windows (single pane) except for the small leaded glass windows facing the south slope had broken despite his overall good down-slope clearance of about 150-200 feet. Two windows had fallen to the slope below. The carpet, a sofa and all decks had caught on fire. Fortunately they were made of thick 3" wood and burned slowly. A staircase made of 2" wood had already burned down. Firebrands had burned through the bottom of the wooden deck door into the house and had cracked a window. The plastic drain pipe along the east side of the house had caught fire and the fire followed it right into the house. He was left with one garbage can and two toilets full of water, and all the liquids in his refrigerator as well as beer and wine. He was afraid to use hard liquor for extinguishing the fires because he was fearful of their high alcohol content. Diet Pepsi turned out to be a good fire extinguisher (carbonation?). He used wet towels to carry the water around. He put out all deck and the interior house fires except the deck on the north side which kept re-igniting because the railroad ties kept re-igniting. He fought the fires for 8-10 hours. Railroad ties are like birthday candles. They keep re-igniting after being extinguished.

*He got home in time, evacuated his family, and got the fire pump running but lost water pressure about two hours before the fire hit. The many fire engines lined up on Rambla Pacifico bumper to bumper provided a feeling of security. However, about ten minutes before the fire front hit, there was an announcement on the trucks' loudspeakers and then the trucks were suddenly gone. They never stopped by his place to help. He did not see them again for 48 hours.

*He believes that his efforts are the only reason why the two houses are still there. If he would not have been there, the fire department would have pulled out. The news crew being there filming also helped.

*About 0700-0800 next morning Rodger extinguished the igniting railroad ties at 21920 Lamplighter with a garden hose as most of the water pressure had returned (Las Virgenes gravity flow?). Rodger's own railroad ties also kept reigniting.

*If Rambla Pacifico would not have been closed by the slide (near PCH), fire trucks would have been there and about 90% of the homes could have been saved. "Castlewood could have been an easy save if Rambla Pacifico would have been open."

*It is a bad idea to have railroad ties or telephone poles for hillside stabilization or retaining walls on slopes as these kept burning and endangering the house. A retaining wall made up of telephone poles caught on fire ... and kept reigniting. Wooden walls around the house were replaced with concrete "Loeffel" stone retaining walls.

*Since the deck around the house kept re-igniting, the fire crew cut holes into the deck to get underneath. Three times they thought that the deck fire had been extinguished and started to leave, and three times they backed their truck down the driveway again as the deck kept reigniting.

*New stuccoed house with tile roof, pool and large concrete driveway above Fire Camp 8. No landscaping yet. Survived.

*Firemen were worn out. There were just too many fires. Firemen from different jurisdictions could not get together and could not get organized fast enough.

*The fire came uphill and went into the air vents with the kitchen sustaining extensive damage. The house was only saved because there were so many firemen after the initial crew got injured.

*Bill's tape shows the big fire trucks running west, then east on PCH. Apparently they were not communicating with each other as to needs and were under different jurisdictions.

*Stucco, red tile roof, French doors, wooden fascias, wood decks. The wooden deck started to ignite, then the wood fascias around the windows burned, and finally the house.

*The firefighters from Redbluff (CDF?) were magnificent. They "had balls" and knew what they were doing in contrast to other firemen that ran and hid. No firemen knew the area.

*House had a large pool as well as a pool pump but was surrounded by many trees. Owners evacuated quickly. CDF tried to save it but could not. Too dangerous, too many trees.

*House, with wooden deck overlooking a steep draw about three hundred feet long (chimney effect) with little brush clearance. One of the first houses to ignite as fire front went through.

*When Neil went to Fire Camp 8 to get help, people were asleep and he woke them up.

*The woman firefighter told her to get out of her dress and put on jeans and boots if she wanted to help save her long wooden house (that was almost indefensible from fire).

*The wood around windows and wood columns of the deck were on fire. It looked as if someone had decorated the house with Christmas lights. The house burned later to the ground. She thought that the house should not have burned if there was someone there to stop a fireman.

*The smoke was so thick that it was hard to see. People (all newscasters like ants out of an ant hill) were turning back. They never did anything to help but were just in the way doing their news.

*The cars were momentarily engulfed by fire and she watched the paint peel off the newscaster's truck. She was never afraid because the firemen were there too, telling her everything was OK.

*Two-story house, wood siding, wood decks, Class A Cal shake-type cement roof. Many eucalyptus and pines. If the Laguna (CDF) firefighters with their brush fighting knowledge that saved his house would not have been there, the disaster would have been much greater.

*Bill Walters, the foreman of the CDF crew truck, yelled orders, was very sharp, knowledgeable, did not panic (composed and cool under fire). Had four fire blankets. When the fire was about to overrun them he ordered that Gil be given one blanket.

*Neil replaced his burned railroad ties with decorative stones that do not need concrete foundations or need to be backfilled with concrete. Not that much more expensive than railroad tie walls.

*The people along Hume Rd. are crazy because of their many eucalyptus trees.

*The 3.5 acres of bare land south of his house had not been cleared prior to the fire. The owner said that he was legal because the Fire Department had given him an extension.

*The L. A. County Fire Incident Investigation Team came a few months after the fire, investigating the burning of the Montebello large rig and told Bernie that the assisting agencies are simply not trained to fight these wildfires.

*The big fire rigs parked up and down along PCH were just there for show but are worthless in rugged mountainous terrain.

*Two helicopter drops were made on the all-exterior-wood house but it could not be saved. The big trellis on the downhill side covered with Bougainvillea first ignited with a big bang.

*Her house burned around 1900. It perhaps caught on fire from the wooden decks, or the fire may have entered the crawl space below the house where there is an opening (door) to service the heating equipment, vents, etc.

*Two-story stucco house with tile roof. Has extensive down-slope ground cover greenbelt which is constantly watered. Owner was at home and saved house.

*A side-slope home off Rambla Pacifico uphill of the Monro's without setback. It had a Class A roof and stucco siding but still burned unattended.

*One-story stuccoed Spanish style tile main house, pool, and excellent all around greenbelt but wood deck. Large three-story house without setback below on Rambla Pacifico that burned was the major cause of this unattended house igniting, probably as the deck caught on fire.

*Two-story stucco house with tile roof. Extensive down-slope groundcover greenbelt constantly watered. Was at home and saved house.

*One-story concrete block house, red tile roof, boxed eaves. Eucalyptus near burned garage. Large fire-safe hunker-down driveway. 150-200 feet clearance. House unattended but did not burn.

*Fire trucks got pool water from neighbor's house and extinguished the fire on the wooden deck, saving the house.

*The studio caught fire about six times during the night along the north end. Firefighters helped Bank to put out the fire with pool water as it penetrated the one-foot-wide wooden fascia board at the end of the roof along the backside of the house where the slope almost meets the building. From there the fire went into the interior crawl space where the electrical wires were located. The railroad ties also were a problem and burned for days.

*Bank told the firemen to go over and save the adjacent stucco house (21455 Calle Del Barco) with his pool water. Tired, they nevertheless went over and saved it.

*Many houses caught fire late at night and there was no reason for it. Bank had water and there were fire engines. He saw at least four houses with only small flames around them for some time before they caught fire. They did not have to burn.

*They were on their roofs but ran out of water as it got dark from smoke and the embers started flying. They did not see the houses burning yet but trees were on fire.

*The palms and pines at the corner near the York house then started to ignite.

*Walking back to his house about 1830, it had not yet burned but the adjacent house was on fire. He grabbed a garden hose when two fire engines came by. He begged the first one for help. The second fire engine (apparently with the Captain/team leader) agreed, and the first engine rolled out the hoses and saved Tony's house.

*Kurt & brother instrumental in saving seven homes, including Kurt's own (1-1/2-story side-slope w/o setback, wooden deck). Firehose hooked to fire hydrant in front of Kurt's house. At least 16-18 homes out of 48 did not burn until hours after the fire front had passed and could have been easily saved, as water pressure returned within 1 hour of the fire front passing. Firefighters were not willing to come up Rambla Vista.

*Fire trucks were lined up wall-to-wall on PCH. Some were hosing down the houses.

*At about 1930-2000 hours, fire chiefs in suburban trucks drove around checking out the situation and damage. They still could have saved homes. About 2030-2100 when the worst of the fire was over, Kurt finally convinced the firemen and one fire truck came up. Firemen helped them knock out spot fires.

*2-story. Composition roof. Wood siding. Eucalyptus trees caught house and also neighboring house on fire.

*Palm trees on fire. Newspapers on the ground on fire. Firemen told him that there was no water and nothing could be done.

*House was burning on the roof... Underpinnings of the down-slope homes were burning... The McNeilly's house was now more engulfed. The down-slope wooden deck was on fire and fell off as one piece... A fire rain forest.

*Stuccoed building was surrounded by a wooden fence about 15 feet long. Wooden fence caught fire. Flames somehow got into the wall of the stucco building. It burned.

*Many houses that burned later were ignited by firebrands.

*No prelaning—water system poor. Rambla Pacifico was closed. All these houses burned. Even prior to the fire, Calle Del Barco homes often did not have enough water to take showers. The County Fire Dept. should have made plans for water shuttles, etc. With one mile of hose and one water shuttle, the whole area could have been covered.

*Large tree adjacent to their property, overhanging their house, caught on fire and ignited the house.

*Wood siding. Asphalt shingle roof. Water hydrant across street. Did not burn.

*There was water. Initially saved by neighbor with hose, later by Fire Dept.

*Fire Dept. refused to come uphill. Would not even use the pool. He kicked over the fences which initially saved his home. It got so hot that first the paint on the wooden garage door of the neighboring house would bubble up, then the garage door would smoke, then it would ignite. Stayed throughout the fire storm, even going into the pool.

*1-story yellow stucco. Asphalt shingle roof. Open wood porch/garage. Wooden deck. Neighbor saved house with pool pump and water from neighbor's pool.

*House was ignited by radiant heat from the adjacent 3-story wooden house.

*Small railroad-tie-wall on the slope a few feet behind the house caught fire, was flickering for hours before finally catching the side of the house and the roof on fire.

*Gated subdivision. No houses burned. Good firebreak with much of the area to the south and east level and disked every year. 8-10 day-laborers from the labor exchange helping homeowners protect their homes with chain saws and hoses.

*Many fire engines were pulling out of Big Rock about 2115-2130. When the Fire Department ran out of water they pulled out..

*Homeowner then went around the immediate neighborhood, checking that all windows of homes had been closed, also making sure that no sparks and firebrands were still smoldering.

*When a wooden deck started to burn around 2300, sending showers of firebrands onto a wood shingle roof house hundreds of feet away, friend saved it, spending more than four hours on the roof extinguishing firebrands with a shovel and dry rags.

* A command system but no plan. There is a universal problem with FIREScope. They have to work towards effective deployment or it is a waste.