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October's Fire: the Crucial Lessons

A CANDID ANALYSIS

By Klaus Radtke

September turned out to be cool and beautiful for those of us who like clean air and a summer sky full of clouds.

Then came October and with it the Santa Ana winds.

October can be termed the fire month, because during this century, three times more acreage has burned in the west Malibus during October than during September and about double the acreage burned compared to November.

And on Monday October 14, this trend was confirmed as the twin Decker and Piuma Fires ate their way to the beach and burned a total of 6,526 acres and 5,120 acres respectively.

Flashback

The Decker and Piuma Fires were different from previous fires not only because of their concentration on Malibu terrain.

In 1978, the Malibu community was in uproar about the way the Kanan/Dume fire was fought (or not fought) and the way the community was left unprotected from the fire

with heavy losses of homes even within close proximity to fire stations.

Within the County Fire Department some chiefs called it the worst day in the history of the Malibu fire services, while firemen, choked with emotion, voiced their frustration about having to follow orders and sit along roadsides in their vehicles awaiting instructions while they watched houses burning to the ground. Residents demanded an outside investigation of the department's handling of the fire, but this was never done.

In 1979 the county's Chief Administrative Officer, in an administrative audit of the County Fire Department, recommended the phasing out through attrition of all fire chiefs in non-firefighting positions, and the replacement of such positions, where needed, with more qualified civilians.

Some of the monies saved were to go to brushfire-related research, which was to be made a priority of the department. This phasing out would have affected over 20% of the chiefs and most of their support staff, would have reduced some present chiefs in rank, and would have greatly reduced the promotional opportunities of virtually everyone for many years to come.

While former CAO Harry Hufford attempted to implement the audit for several years, the fire services proved to be politically stronger. Instead of implementation of the audit, wildfire-related research was eliminated, and attempts were made to alter existing

research to comply with the politics of the moment. Insiders generally agreed that factual research would be difficult to carry out in a para-military organization where image is an important factor.

1982: Valley-to-the-Beach

In 1982 the Dayton Fire roared from Chatsworth to the Malibu shoreline, burning 42,000 acres in the process. The community again was at odds with public officials over the way this fire was fought, the way roads were closed off apparently indiscriminately, and about the alleged mishandling of homeowners, who were trying frantically to reach and protect their homes. The disaster of 1978 and the apparent inability of the fire services to protect their homes was still fresh in the minds of many homeowners.

Strong community protest and community involvement in the decision-making process of road closures greatly influenced the handling of the October 1985 fires.

Highway patrol officers, generally, were more courteous and less authoritative than before. An effort was made to keep the Pacific Coast Highway open to residents except for canyon areas involved in fires. Highway Patrol officers even relaxed enough after a day or two on the road blocks to, occasionally, become involved in homeowner concerns or listen to the baseball games.

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The Malibu Fires

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As far as fire fighting was concerned, a greater effort was made to protect homes, with less emphasis placed on fire spread and containment. After the fire, fire officials stressed to the news media that just a few homes were lost considering the large acreage burned, due to their emphasis on home protection and because lessons had been learned from (the mistakes of) previous fires.

The news media, in covering the fires, built up the firefighting personnel to almost hero or superhuman proportions. This led to the public's perception that the fire was excellently fought (if fighting is the proper word for describing an event in which nature is in control). A factual fire evaluation is therefore hard to make, but only if this is done can we give praise where it is needed, learn from mistakes, and improve the next time around.

Initial Evaluation

The Pioma, (and also to a large extent the Decker fire) burned in young age classes of vegetation varying from about three years at the western boundary of the Pioma Fire in Corral Canyon, to about 15 years at the eastern boundary in Carbon Canyon. The Decker Fire burned primarily in seven-year-old age classes, but also took out much of the remaining stands of old-age vegetation dating back to the 1950s, and even the 30s.

As is evident when travelling through the fire area, the fires were primarily black ash fires with only some white hot spots, indicating that from the ecological viewpoint, they were light to only moderate intensity fires.

Looking from the Coast Highway towards Malibu Canyon, one can see the incomplete burning of the chaparral vegetation. It looks like someone took a knife and carved out the chaparral while leaving a few slices here and there on the mountains. Such incomplete and spotty burns are typical in young age classes of woody (hard) chaparral vegetation, which depends on high winds and steep slopes for a complete burnout.

Much higher winds are needed to support the forward spread of fires in such vegetation compared to old age vegetation. This may explain the absence of large-scale fire storms* as witnessed in previous fires.

Much of the three and seven-year-old vegetation that burned was not pure woody chaparral, but rather coastal sage, grassland, mustard, and degraded woody chaparral consisting of a high percentage of dead, short-lived, woody postfire perennials such as deerweed, woody species, and coastal sage components. Such vegetation can be viewed on hillsides on your left side as you drive up Encinal Canyon Road from the Coast Highway.

Pepperdine

This lack of high intensity burn and the slow movement of the fire along the flanks* after the fast initial spread towards the ocean is part of the reason why so few homes burned.

Other reasons are that residents are much more fire-conscious, and do more to protect their homes. Many homes that burned in previous fires have been rebuilt and are more firesafe, and fire services have placed greater emphasis on home protection.

The Pepperdine University complex with its tile roofs and stucco siding, is an example of common sense fire-safe building construction in fire-prone areas, but the insistence on sit-down views* and ridgetop building sites without any slope setbacks temporarily endangered some dormitories as the flames licked up steep slopes.

So acreage burned is not an accurate yardstick of property damage or property effectively protected. In many areas with wooden shingle homes without setbacks along narrow and windy roads overlooking



SMOKE ABOVE MALIBU CANYON—Western flank of the 5,000 acre Pioma Fire on Tuesday morning, October 15.

KLAUS RADTKE

steep slopes, the potential for a fire disaster is extremely high.

Such fire disaster sites are found in Topanga Canyon, (Fernwood) and are also concentrated in Los Angeles City. That is not to say that areas like El Nido, and even homes built today are not isolated areas of potential fire disasters. As long as we decline to live with nature, but instead force our viewpoint* upon it, disaster would seem to be inevitable.

The forward spread of fires to the ocean Monday, October 14 burned most of the acreage on the first day of the fires. Thereafter, a widening of the Pioma fire on both the east and west flanks added but little acreage Tuesday and Wednesday.

This fire could have been readily contained by Tuesday morning on the west flank in Winter Canyon (and would not have reached Corral Canyon) and also on the east flank in Carbon Canyon.

Since temperatures drop quickly at nightfall, and the winds normally die down (unless we have an extreme Santa Ana condition) at night, this is the best time to attack the hot spots of a fire, primarily with ground crews, and put the fire out. This is done often with backfiring,* firing out, or the establishment of fire lines.*

In the Night

Nighttime fire-fighting requires excellent organization and fire chiefs familiar with the area, or lacking this, fire captains who know the areas well and are allowed to take charge.

Unfortunately, there are very few experienced "brush chiefs," in the fire department, as the emphasis over the years was on structural fire fighting philosophy, which results in the constant transfer of subordinate chiefs. The additional problem, as mentioned in the County Fire Department's 1979 audit, is the transfer, based on seniority, of backbone fire personnel below chief ranks (firefighter to captain). This may be acceptable for structural city fire fighting, but goes

contrary to effective fire fighting and fire management in brush areas.

Many of the brush captains and brush chiefs who have retired over the last 15 years grew up and lived in mountain communities, often had a forestry background, and also knew their terrain well. As they retired, their experience went with them and left a void which largely, has not been filled.

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True mutual aid, (or the philosophy of fire departments assisting each other in wildland fire conflagrations) is attempting to fill this void with a concentration of manpower and equipment. However, this does not substitute for familiarity with local terrain, especially during nighttime, or with expertise in wildland fire fighting techniques.

The aerial support troops, helicopters as well as fixed-wing planes, are called upon to supplement the large but largely inexperienced (in wildland fire fighting) ground forces who are then forced to retreat to protect homes whether the fire intensity is high or

low. This was brought out in television coverage which showed homeowners effectively protecting their homes in areas of low to moderate fuel loading, and with good brush clearance and with incredulous reporters repeatedly asking why they insist on staying.

This is the wrong philosophy.

The citizens (homeowners) have the right to stay and protect their property, and should actually be encouraged to be a partner in civil defense emergencies.

Public agencies must not see fire protection as their exclusive prerogative (past history has shown that this can have disastrous results during emergencies) but should assist in training the public in protecting their property and should encourage, not hinder, the formation of volunteer neighborhood fire services.

Analysis of initial fire spread is an important factor in evaluating if a fire could have been contained at the start. The disturbing news here is that independent initial reports paint the picture of a slow initial fire spread of the Decker Fire, perhaps even the Pioma Fire. Further research by an independent agency needs to look at these reports. If this is true, perhaps at least one of the two large fires could have been contained with the right equipment before it became so large.

Scooper

One such piece of fire equipment is the Superscooper or the CL-215, a water-scooping aircraft that can carry over 1,400 gallons of water—three times the load of the convention helicopter and can scoop up water in flight from lakes or from the ocean.

This airplane is used in many Mediterranean regions of the world and is a cost-effective fire fighting tool, especially in coastal California regions with its concentration of high property values.

Unfortunately, the fire services have fought this aircraft for 15 years from being deployed in

California, although the aircraft was strongly supported by mountain residents who helped put proposition R on a 1980 Los Angeles City ballot. Proposition R specified the purchase of two such aircraft to be paid through property assessments in mountain fire districts. The ballot measure received a majority of votes—but not the required two-thirds majority, partly because of strong opposition by local fire departments.

How does the Los Angeles County Fire Commission, a nonregulatory but advisory body to the Los Angeles County Fire Department and the Board of Supervisors, feel about this?

“Public agencies must not see fire protection as their exclusive prerogative, but should assist in training the public in protecting their property.”

In my August 29 testimony to the fire commission I pointed out the need for this plane in light of recent wildland/urban fires. In voting 4:1 to recommend the plane as an efficient fire-fighting tool in California, some fire commissioners were quite frank in their assessment of present fire-fighting capabilities.

For example, it was pointed out that the water-scooping airplanes performed wonderfully in saving homes and containing the 1979 Laurel Canyon Fire.

Unlike the helicopters, and fixed-wing World War II aircraft, the Superscoopers are specifically designed for fire fighting and related activities.

One fire commissioner pointed out that helicopters are effective in containing most small fires, but, along with the fixed-wing aircraft, are largely ineffective during wildland fire conflagrations until the winds die down.

An initial survey of homeowner/resident associations in areas affected or potentially affected by the recent fires shows that in the last few months the following associations strongly endorsed or re-endorsed the deployment of the Superscooper for aerial fire fighting in their communities:

Malibu Township Council, Corral Canyon

Homeowner Association, Las Flores Canyon Homeowner Association, and Pacific Palisades Residents Association. This includes the two largest associations in the Malibu/Pacific Palisades area. To this list we should add the homeowner-association-supported National Foundation for Environmental Safety. The lists will surely grow as more associations are presented with the performance and cost-effectiveness data of all aerial fire fighting equipment and again will voice their opinion.

Cutting the Tape

Fortunately, due to strong criticism by wildland residents, fire fighting air tankers operated by the California National Guard will now be activated immediately upon the governor's request without the time-consuming clearance from federal agencies which at times has taken up to 24 hours. Stationed at Van Nuys airport or at Riverside, the airplanes can be outfitted within hours with fire fighting equipment. This is a step in the right direction and should be combined with the use of the CL-215 which can respond immediately.

Costs

Because of the huge amount of manpower and equipment involved, wildland fire fighting costs can be astronomical and can seriously undermine the budget of a community.

For example, the extension of the Piuma Fire on its eastern flank to a third day through daytime backfiring and firing-out (which burned just a few acres of young chaparral under the prevalent onshore winds, but produced huge clouds of smoke) may have cost many hundreds of thousands of dollars. The same can be said for the western flank of the Piuma Fire, as the fire, according to fire officials, could have been readily contained very early Tuesday morning (or, perhaps even during the night).

What about containment of the Decker or Piuma Fire in its initial stages?

This could have perhaps saved several millions of dollars.

For example, the delivery of fire retardants* to the fire line runs from \$1.00 to \$1.50 per gallon. And most of us witnessed on TV the tremendous amount of fire retardant delivered to the fire front even as the fire was dying on the Corral Canyon western flank of the Piuma Fire. Overtime bonus costs for over one thousand fire fighters are also very high. And those familiar with the wildland fire fighting system know the boost in morale to

the fire fighter when wildland fires break out.

Recommendations

1. The Los Angeles County Fire Chief, as the incident commander of the fires, should have a field trip critique and evaluation with his chiefs and other top support personnel in which the following questions should be addressed:

What did we do right, what did we do wrong and how can we improve? This should be followed up by a written document mapping the fire spread on a fifteen minute interval from the time the fires started 'til they hit the Pacific Coast Highway, as well as pinpointing the movement and dispatch of all equipment for these time intervals.

Thereafter, the time interval could be reduced to 1/2-to-1 hour for the remainder of the fire. (This is done on a regular basis by other professional fire fighting agencies for major fire configurations and is easier now, as all the dispatch tapes are still available, the logentries are finished, and memories are still fresh.)

An appendix should also show the total fire suppression costs per 12 hour period (or major phases of the fires) for all agencies involved, whether local, state, or federal, as well as the postfire costs such as repair of downed power lines etc. and estimated costs for emergency rehabilitation by all agencies involved. Such a document should be presented to the Board of Supervisors, and should also be made available to the public for their evaluation.

2. Fire prevention through public education which recognizes the homeowner and wildland resident as the most important resource in reducing wildfire losses must be expanded.

More effective, timely and factual information on the part of public agencies (including the Los Angeles County Fire Department) must be provided.

Effective legislation such as the banning of wood shingle roofs in fireprone communities throughout the southwest, and more effective building and zoning ordinances, must be enacted—despite pressures to the contrary from special interest groups.

3. Newfire technology, such as the CL-215 water scooping airplane, new foam fire retardants, and light-track vehicles that are more effective and safe for urban/wildland areas than the present heavy tractor equipment, must be quickly evaluated and em-

ployed to face future fires more safely and cost-effectively.

To this, we should add a re-emphasis on the training of fire-fighting personnel specialized in wildland fires and familiar with their districts and the expansion of an effective, prescribed-burn program with professionals outside of the fire services assisting in effective long range vegetation management.

4. The need to build only basically firesafe-designed homes in areas where they can be protected from fires must be emphasized. Homeowners must also assume more responsibility for properly clearing flammable vegetation from around their homes, and for complying with brush clearance ordinances unless steep terrain and slope instability make this impractical.

5. Fire hazard assessment maps should also be prepared (as is done in fireprone areas in many parts of the world).

Public agencies should then assist communities identified as highly vulnerable to wildfire conflagrations in order to reduce the risk to life and property.

For example: Topanga is such a community where the residents, local community leaders, and public agencies have the responsibility to initiate a cooperative, integrated approach to public safety in order to mitigate the to-be-expected wildfire disasters. ■

*Glossary

Fire Storm: A phenomenon which may occur during brushfires when high temperatures, strong winds, and high-flammable fuel sources cause fire to create its own winds. Characterized by rapid forward spread. Extremely hazardous.

Back Firing: An indirect method of fire attack in which the fuel between the control line and the main fire is intentionally burned to control rapidly spreading fire.

Fire Line/Control Line: An inclusive term for all constructed or natural barriers used to contain a fire.

Fire Retardant: Various chemical formulas which when mixed with water and dropped by air retard the spread of fires. Often more effective than water alone.

Flanks: The sides of an advancing fire.

Sitdown View: The view to be enjoyed from within a house without having to stand up. Achieved by building a home at brink of slope which may render structure vulnerable to brushfires which race rapidly uphill.

I would like to thank the personnel from both private and public agencies who assisted me with this initial assessment of the fires. Much more work needs to be done to complete this task.

Klaus Radtke, Ph.D. is one of the nation's leading experts on fire management and control.

A former Senior Deputy Forester with L.A. County's Forestry Division, he is a founding member of the public interest group the National Foundation for Environmental Safety.

President of GEO SAFETY INC., a private consulting and management firm, he lives in Pacific Palisades.

Arson Watch: The Inside Story

Topanga Arson Watch leader Allen Emerson reflects upon three tense days and nights during the fires of October. . .

Up early Monday morning October 14, gusts of 40-50 mph, started early to see who to call, lining things up because I had an eerie feeling something would pop, hoped it wouldn't of course. 10:15 am a call from Sergeant Olmstead, Malibu Sheriff's saying had I heard about fire in Piuma just off Las Virgenes so I rushed into the radio room and fired up the scanner. At 11:15 am another fire reported at Malibu Creek State Park. . . had two units out by 11 am. . . was able to get Car Doc (Shelby Dzilsky) to assist at 11:30, and Skye Olsen who were a great help and manned our station til 9:30 pm straight through.

Our thoughts were two-fold:

1) To get as many patrols out as possible to maintain a high degree of visibility and to have eyes around the Canyon;

2) To follow the progress of the fires which were immediately adjacent to our area.

Wind was from north-east but had it been from the west or had it changed to westerly

more than likely the flames would have advanced through Tuna, over Saddle Peak and into Fernwood. Most of Topanga to east of fire would probably have disintegrated. Fortunately for us—and unfortunately for Malibu residents—the wind held its pattern.

As you know brush fires can grow so intense as to create fire storms, their own havoc, and winds often do change direction in the course of a day, so the threat to Topanga was very real and was there from Monday to Wednesday. If the winds had changed, Topanga would have borne the brunt of this fire, so our concern was to watch the fire, and also to put some visibility out there so that the crazies, as I call them, knew that we were watching them.

There is a list of personnel following this article with total man hours rather than time per person, because I feel that whether you worked 20 hours, or half an hour during those four days, it is the commitment to your community, to the land, and to your neighbors, that counts.

Scary

We were frantic up here, it was scary. I depended on people to be my eyes and ears, we knew there was somebody out there because the pattern was there: the Piuma fire started at 10:25, the Malibu Creek fire at

11:14, the Decker fire at 12:01, and then we had fires in Simi Valley to the north of us, and then at the far north end of the Valley at the 118 freeway, it seems as if a person was making a circle.

There were small set fires in Box Canyon, Bell Canyon, Agoura, in Calabasas. Was it copycat fires, or one person running amuck? We don't know, but it made my skin crawl to think about it, and we were very concerned.

Our people did a hell of a job, we had people out cruising at 10:30 at night although we would usually shut down at nightfall but the winds were up and I said no, not tonight, stay out there, we're going to keep going. Chuck Stone up on Saddle Peak played look out all night, he was out 'til 5 am.

Our people did a fantastic job, I just don't know how to say it.

When you think of it we all have to make a living, and yet on that first day 22 Topanga people came home from their jobs, or dropped what they were doing wherever they were, and they were out there being the eyes of the community, looking out for the families and the kids and the land and the old people and the animals, and this is really fantastic.

Tuesday

Tuesday, we had even more people, I started at 6:30 am and went straight through for 14 hours.

Chuck Stone was out again all through that night, and we had people patrolling 'til 11 pm, it was an incredible effort.

And without the help of these people I don't know what may have happened. I've been told by Jan Moore that we've gotten a lot