



**Observations & Comments
on the
Southern California Fire Storms
October - November 1993**

Prepared by the

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“Nature, in chaparral and coastal sage-scrub regions, is a lake of gasoline,” says Richard Minich, a fire researcher at the University of California—Riverside. “And you have to ask if it is proper to have people living in lakes of gasoline.”

“This is going to happen every year. We already know that. It’s just a matter of where, not when,” stated a senior staff member at the OCC in Riverside. “I guess that is why FIREScope works so well. We get plenty of practice.”

“The California Fire Storms Disaster further emphasizes the necessity for the fire and emergency services to be involved in all phases of community development,” said Chief Phil McGouldrick, IAFC president, “including land-use requirements, building codes and zoning requirements. Otherwise, these wild-land urban interface fire disasters will continue.”



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An Introduction to the Paper

After the fall 1993 Santa Ana winds fanned the fires across Southern California, it became obvious the International Association of Fire Chiefs *should* comment on our observations of the fire service response, and lessons learned, from this conflagration.

Fortunately, and due directly to the skill, tactics, strategies and emergency management of the Southern California fire service, loss of life was kept to only three civilians and injuries were kept to less than 200, while projections for insured property losses have climbed to between \$700 million and \$1 billion.

By issuing this report, the IAFC is stepping forward to support our members who have long issued warnings on this type of annually repeated disaster. The fire service has tried to keep this from happening, but to quote the classic response from the newest group of fire victims, "I never thought this would happen to me....things like this always happen to someone else." Wrong!

The IAFC directed its overall observations and comments towards four primary areas, including:

- Arson
- Community Planning Issues
- Incident Command & FIRESCOPE
- The Fire Service & Emergency Management

In order to prepare this report, the IAFC sent a three-member team to Southern California which arrived on Sunday, November 7, 1993. The team members included:

Chief Phil McGouldrick, President, IAFC
Chief Tom Siegfried, Vice-President, IAFC
Mr. Garry Briese, CAE, Executive Director, IAFC

During the visit, the IAFC Team visited the Malibu/Topanga fire, the Laguna Canyon fire, the Ortega fire, the fire base camp for the Malibu/Topanga fire, the Laguna Beach Fire Department, the Ryan Field air attack support base in Hemet, California and the Operations Command Center (OCC) in Riverside, California.

The cooperation of the California State Fire Marshal, Chief Ronny Coleman, is gratefully acknowledged in making arrangements for the visit. Special appreciation is also extended to Assistant Chief Ray Russell (CSFM) and Chief Rich Dewberry (Laguna Beach FD) for their assistance and cooperation.



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#1 There are no new major lessons from the October-November 1993 fires, except that the fires are getting bigger and more dangerous.

#2 All of the factors that contribute to the development and expansion of these fires have been known for many years....wood shake shingle roofs, combustible siding, single pane windows, narrow & inaccessible roads, poor water supply, lack of defensible space, unresponsive architectural design, etc.

This was pointed out in an editorial in the *Los Angeles Times* on Tuesday, November 9, 1993, when the paper noted the suggestions of the California State Fire Marshal's Office concerning dealing with fire before it happens. The CSFM has been increasingly aggressive in their fire prevention efforts for the wildland-urban interface problem.

#3 When the weather and Santa Ana wind conditions combine with the other community planning issues to start the engine of the urban-wildland fire storm, it is nearly impossible to stop. Entire stands of trees ignite as one. Fire moves faster than fire apparatus can travel on roads. Fire tornadoes twist out of the mass of fire. Superdry and superheated fuels, like pine and eucalyptus trees, spontaneously combust. An apocalypse is underway, and basically, all that can be done by the fire service is to fight a defensive battle in an attempt to direct and contain the fire and evacuate people from the fires predicted course.

Fires such as the Malibu/Topanga fire and the Laguna Canyon fire have been calculated to burn at rates of up to 22,500 BTU per foot per second. By comparison, 50 BTU is considered optimum for prescribed burns, 500 BTU is the outer limit for what man can control with proper equipment, 1000 BTU describes potential firestorm conditions. Thirty thousand BTU is the theoretical maximum for a forest fire. Fires like Malibu and Laguna can release the energy equivalent of a nuclear bomb exploding every few minutes.



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#4 The rapid and visible response of Governor Pete Wilson demonstrated a high level of personal commitment to the support of the fire and emergency service personnel. From his public statements, it seems apparent that he also was listening carefully to his technical advisors. For example, the Governor's televised comments were used by fire chiefs in Colorado and Virginia as an entre to their local political leaders to address the urban-wildland interface problems in their communities

#5 Due to the repeated scenarios over the years from which to learn from, the California fire service and associated local, state and federal fire and emergency organizations did an outstanding job and should be commended for excellence in emergency response. There is no where else in the United States that the job could have been done any better.

#6 This was the largest mobilization of fire and emergency personnel and apparatus in the twenty-plus year history of the FIRESCOPE program.

There is no where else in the United States (or for that matter the entire world) that could have assembled such a significant fire fighting force in such a short time. Especially when you realize that the fire fighting force is trained, organized, equipped, supplied, commanded, and operates in a standard effective manner.

#7 The fact that the numbers of injuries to fire fighters and civilians and the very low number of civilian deaths (3), speaks to the correctness of the overall fire operation command decisions...Life safety was the correct priority.

#8 Arson remains the significant ignition source. About 85% of the fires in Southern California in Oct-Nov 1993 are believed to be arson.

Society must get serious about the crime of arson and put resources into combating the arson problem. The recent discussions about the merger of the ATF with another federal law enforcement agency raises serious concerns about the potential reduction in the level of support that the fire service receives from the ATF for arson investigations.



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#9 In the case of the Malibu/Topanga Canyon fires, the arson resulted in homicide since three people died.

#10 Senior staff at the Operations Command Center in Riverside reported that, for the first time in the history of FIRESCOPE, that they were working on contingencies to request fire apparatus and fire fighters from outside the State of California.

(Note: The USFS has utilized out-of-state resources on numerous California fires, but this was the first time that OES found it necessary to consider doing the same thing.)

#11 The use of Class-A Foam for firefighting in the wildland-urban interface must be more widespread due to the success in combating these fires.

#12 FIRESCOPE should be the emergency management system that can be used as the model for all other states to follow in developing their own disaster response operations. Each state must have such a plan.

This is not to say that FIRESCOPE should just be duplicated in every state. The challenges and resources vary greatly from state-to-state. However, each state fire chiefs association should take FIRESCOPE and modify it to meet the challenges faced by their state's emergency services. For example, the Missouri Fire Chiefs' Association has taken FIRESCOPE, modified it, and put an initial statewide mutual aid plan into effect.

#13 Programs like FIRESCOPE should expand their concept to include the dispatch of the "closest available fire apparatus meeting the need" and include out-of-state apparatus and personnel in the initial planning of the emergency response

It would seem logical to bring fire apparatus and personnel from southern Nevada and western Arizona into Southern California, rather than bring them from much further away in Northern California



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#14 An efficient and operating command and control center must be recognized as, perhaps the essential element, to the success of any field operations that exceed the resources of the local jurisdiction.

The OCC in Riverside is the keystone to making the FIRESCOPE system work and deserves much further study as another excellent model. Three agencies (California Department of Forestry, California Office of Emergency Services and the United States Forest Service) share this coordination center in an apparently unique arrangement. The annual operating budget is about \$1 million, and is shared by all three organizations.

#15 One of the biggest challenges seems to be just "getting the right stuff there at the right time to do the job."

#16 The fire operations at Malibu/Topanga were equivalent to a major military combat campaign.

#17 A public relations problem developed when the relationship between the military and the fire service was called into question through the media. Many questions have been raised as to why non-fire fighting military resources, such as personnel and helicopters, were not deployed during these fires.

It is difficult for non-fire personnel to understand the very technical aspects of fire fighting in the urban-wildland interface. It is impossible to put personnel who have not been trained in either the tactics nor in the management of urban-wildland interface fires into a well functioning system like FIRESCOPE. To do so would invite disaster.

Wildland fire fighting has one of the highest incidences of fatality and injury of any job in the nation. In 1990, 22 people died, out of about 10,000 active wildland fire fighters.

#18 There may be a role for the military in the support and logistics aspects of operations such as these in Southern California. However, only certain military units have the capabilities and equipment necessary to support these operations. The ability to rapidly deploy in just a few hours is essential.



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The military has such things as command, communications and control vehicles, field kitchens, portable showers, etc. If there is a recognized need, and a desire on both the military and non-military sides, then a way could be found to utilize specific military resources and expertise in the situations like this.

However, any military involvement must come with a full commitment in the continual training of the military in the civilian methods and operations of disaster response.

#19 Due to government guidelines or regulations, the C-130 air tanker resources of the California Air National Guard cannot be utilized until all private contractor resources are fully depleted. This requires at least a twenty-four hour activation period for the California ANG aircraft.

A system must be found that allows rapid activation of these vital firefighting aircraft without waiting twenty-four hours. The public does not understand constraints such as this when, for instance, the Laguna Canyon fire was basically over in less than eight hours while the aircraft sat on the ground.

#20 Logistics is a major function.....ranging from re-fueling nearly 1,000 pieces of fire apparatus, vehicle repair, feeding nearly 7000 fire fighters with mobile kitchens, telephone banks, airport pick-up and return of personnel, etc.

#21 The many women and minorities involved in all phases of the operation and management of the Southern California fires speaks to the progress that women and minorities have made in the fire service in recent years

#22 The use of computers in the fire base camp is increasing for many different functions including E-Mail, preparation of action plans, demobilization plans, equipment inventory, etc.

The US Forest Service is testing a new computer system for these operations called "Incinet"

#23 Batteries for portable radios remains a significant challenge



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#24 The training of every key member of the FIRESCOPE team is essential to the success of the operation.

A specific need for more training was identified for Strike Team Leaders to assist them in understanding the concepts of strategic relocation due to changing priorities versus their specific tactical situation. ("Why do I need to leave this battle and pull back to another location?"because the overall situation has changed, even though you may not see it)

#25 One of the keys to establishing a successful early command is to identify a better way to check-in to allow command to know who and what is on-the-scene.....would bar-codes or credit cards with magnetic stripes work for this?

#26 Small, portable generators, such as the EX1000 Honda, were working everywhere at the Malibu/Topanga fire base camp.

#27 Even though FIRESCOPE is twenty-plus years old, there were still many things at the Malibu/Topanga fire base camp that appeared to be rather makeshift. Items like hand-lettered signs for the major command functions, a hodgepodge mixture of vehicles, tents and trailers, etc.

Not that the fire base camp didn't work, because it certainly did. But, it was obvious that some efficiency was lost when personnel were forced to spend time constructing and making things that could be better handled with thought and preplanning before the incident.

Since the "incident command" function is essential to the success of field operations, more financial resources may need to be directed toward the support and enhancement of these command functions.

#28 Accurate record keeping was obviously a high priority, as was the integration of the record keeping with the financial system for payment.



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#29 The national insurance industry is showing signs that should concern both citizens and politicians. For example, the California Fair Plan is faced with losses of over \$100 million from these wildfires, and has been forced to call upon its 280 insurance company members to replenish its depleted reserves. This is the first time in the Plan's 25-year history that this has had to have been done.

Due to their experiences with the Oakland fire and the Loma Prieta earthquake, the insurance industry played a much earlier and more highly visible role in the recovery from these disasters.

#30 According to an article on November 9, 1993 in the *LA Times*, the fires are expected to produce insured losses approaching \$1 billion. That doesn't count the losses to public property or the multi-million dollar costs of fighting the fires.

#31 The first person responsible for the fire prevention and preparation of their home is the home-owner or resident themselves. This includes such things as the use of fire resistant or non-combustible roofing materials, dual-paned windows, brush cut-backs, fire resistant vegetation and indoor residential fire sprinklers. These preventive measures must be part of the authorization for rebuilding in these fire storm prone areas.

These individuals must receive better guidance (through mandated ordinances) and better public education to instill a sense of personal responsibility in urban-wildland interface residents for their own fire prevention safety.

Due to budget cutbacks, the public education activities of many fire departments have been reduced to dangerously low levels. A priority must be maintained for public fire prevention and safety education which focuses heavily on mitigation measures.

#32 It is easy to see how concepts like the Integrated Emergency Management System are crucial to successful management of a disaster like this one.

- Managing all four phases of disaster (preparedness, mitigation, response and recovery) as embodied in IEMS, is essential. California no longer asks IF wildland-urban fires will occur.



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but rather **WHEN** and **WHERE**. Integrated preparedness, planning and mitigation can help prepare all affected agencies, departments and citizens for the next occurrence, while recovery efforts after the disaster are crucial to the economic, social and psychological rejuvenation of the affected communities.

- The amount and diversity of responding agencies, departments, personnel and equipment is astounding. Simply watching the television news can supply viewers with an idea of just how many different people were involved. A vital part of commanding this operation was a graceful coordination of all of these different agencies. The Integrated Emergency Management System is a proven and useful tool for managing this type of major incident.

- The visibility of California's elected officials shows that the integration of related parties and agencies was truly all-encompassing. In an ideal disaster management and IEMS situation, elected and administrative government officials, at all levels, will be as integral a part of the overall disaster plan as the fire agencies.

- The efforts of **FIRESCOPE** and the Incident Command System are a big part of **IEMS**, and have demonstrated their success under pressure. Using all of these concepts together, in all phases of emergency and disaster management, is saving lives and property, not only in California, but across the country.

#33 As the nation's primary first responder to all natural and man-made disasters, the fire service must seek and maintain a high visibility leadership role in the local, state and national emergency management system. **FIRESCOPE** is the nation's best example of how this can be accomplished.

#34 The International Association of Fire Chiefs, representing the nation's senior fire and emergency service managers, must take an active leadership role in the expansion of the **FIRESCOPE** concept.

FEMA and the **USFA** must be willing to assist in the development of these state mutual aid plans as well as in the development of a National Fire-Rescue Response Plan, which includes interstate fire-rescue and emergency services mutual aid.