



**Southern California Firestorm 2003**  
**Report for the Wildland Fire  
Lessons Learned Center**

*For:*  
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This report was prepared by two private consulting firms with the input of federal agency employees assisting the Wildland Fire Lessons Learned Center.



Mission-Centered Solutions, Inc., a small business enterprise located in the Denver metro area, provides training development and delivery services for government, military, and corporate clients. Our areas of training and expertise focus on disciplines that enhance crew or team resiliency and effectiveness, including leadership, error reduction and management, communication, and crew resource management. We also provide specific training and consulting to assist management of high-risk organizations to bring about and support targeted changes.

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Guidance Group provides strategic services to fire service organizations; and specializes in leadership, strategy and organizational improvement. The Guidance Group provides a unique blend of real world fire management experience as well as facilitative and consulting skills that may not be available within the client organization. The result is a practical, professional and experienced approach to fire service strategy, leadership and organizational needs including strategic planning; professional development; goal setting; collaborative problem solving; program evaluation; and support to field studies and field research.

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**The following is an excerpt from the entire report. It is suggested that the reader also view the Introduction to the report to put this section into context.**

# Issues for Organizational Leaders

This section describes the issues for organizational leaders.

## Communications Interoperability

Respondents indicated unanimously that resolving the communications interoperability problems between the municipal and county 800 MHz and state/federal VHF systems should be the number one priority of management. They indicated that this issue affected safety and operations more than any other. Respondents voiced frustration that progress has been so slow on projects like the LARTCS (Los Angeles Regional Tactical Communications System) and other alternative solutions. Respondents recognized the financial difficulties involved in developing an interoperable system. Some suggested an alternative that takes advantage of available technology to build cross-band repeaters and other solutions allowing the two systems to interface.

One respondent mentioned that Orange County in the greater Los Angeles area had initiated a technological solution to provide common interagency communications across systems (This is unverified by the LLC Information Collection Team). Other respondents also cited that the Inyo and Sequoia National Forests had implemented a solution to create an interface between their air operations frequencies and military air guard frequencies (Also unverified by the LLC team).

## Work-Rest Guidelines During Initial and Extended Attack

Another unanimous message delivered by respondents was that the current work-rest guidelines were not appropriate during initial and extended attack on high tempo incidents when values at risk outweigh the need disengage for crew rest. Respondents indicated that under normal conditions, the work- rest guidelines are appropriate and can be implemented. On these incidents, respondents at every level of the organization felt that they were forced to bend or violate policy in order to do the right thing in terms of balancing fatigue mitigation with legitimate operational needs. Most found the documentation process associated with the work-rest guidelines cumbersome and inflexible.

Respondents suggested an immediate re-examination of the guidelines to determine how agencies can empower incident commanders with more flexibility in applying work-rest guidelines and employ more streamlined process for documenting decisions.

## Integration of Local Pre-Incident Planning Information into Incident Command

Respondents from every agency and functional area recognized an unmistakable need to improve procedures for integrating local knowledge into incident operations. At nearly every fire firefigheters described situations in which detailed pre-incident planning information from the local jurisdiction was available but was not used by the incident organization, either because they did not ask for it or the local agency did not offer it. They also related a similar problem with integrating local commanders' and firefighters' knowledge into incident operations. At the tactical level, many firefighters stated they felt uncertain operating in smoke-obscured and confusing WUI areas.

In those cases where pre-incident planning and local knowledge was effectively integrated, leaders from all agencies indicated that it contributed to success and facilitated safer and more efficient operations.

Respondents indicated that they would like to see this issue addressed at the interagency level. They suggested possible solutions ranging from more formal sharing of pre-incident planning information at scheduled interagency meetings to creating Geographic Information System (GIS) databases and accessing local information via GPS receivers in emergency vehicles.

Respondents also suggested a more formal interagency arrangement to include interagency and local liaisons in incident command.

## **Training in ICS and Unified Command in all Emergency Responder Public Agencies**

Respondents expressed a strong theme that the Incident Command System (ICS) provided the critical foundation for trust between agencies and effective interagency cooperation. City and county respondents who had completed ICS training stated how valuable it was and cited how their knowledge of ICS affected command and control and their ability to interface with the larger incident organization.

Respondents indicated that they believe that the trend toward functioning in a unified command will increase with large fires and the involvement of wildland IMT in all-risk incidents. A majority wanted to see standardized ICS training adopted by any agencies involved in emergency response, including volunteer organizations and public utilities.

## **Preparing for Urban Conflagration in Policy and Training**

Respondents proposed that the National Wildfire Coordinating Group (NWCG) training curriculum should be updated to include more of the skills needed to operate effectively in large WUI incidents. Many respondents said they were not adequately prepared for incidents of this scale and scope. Leaders who were interviewed stated that the trend toward catastrophic interface fires or all-risk assignments demands a wider range of skills than the NWCG training curriculum currently develops. In listing required skills, they included the following:

- Recognize and predict extreme fire behavior potential in WUI and urban areas.
- Develop and implement more effective initial and extended attack strategies and tactics.
- Work more effectively with the public and cooperators.
- Deal with the political dimension.

Respondents also said that doctrine for strategy and tactics in the WUI should be revised to incorporate the lessons learned on large WUI fires in the last few years. These respondents stated that this shift in doctrine should be incorporated in upcoming updates to training curriculums.

Respondents suggested that updated training curriculums should be coordinated with wildland training available to city and county firefighters. Although respondents had concerns with the lack of standardization of wildland training offered through the Office of Emergency Services, they believed overall that the training offered was very beneficial for structural departments who commit resources to WUI fires.

## **MIRPS and ROSS Responsiveness Supporting Large Magnitude Incidents**

Respondents voiced frustration at what they perceived as unnecessary and unacceptable delays in resource ordering. Nearly all respondents who commented on this issue indicated that these delays resulted, in part, from a large volume of orders having to be manually exchanged between the California-specific Multi-Agency Incident Resource Processing System (MIRPS) and the national Resource Ordering Status System (ROSS). Respondents strongly suggested adopting a single effective system for managing resource ordering and status tracking. They also recommended that improvements be made to ROSS to make it more efficient.

Critical delays occurred because key resources such as IMTs had to wait for their order to be processed and have their *O number* issued before being allowed to initiate movement. Every incident commander interviewed asked the question, “How can we allow people to get on the road and start planning and let the *O numbers* catch up to us?” These ICs suggested that answering that question would cut as much as 36 hours from the time between a Type 1 IMT being ordered and assuming command.

## **Exercising Individual Initiative During Initial and Extended Attack**

A large majority of respondents commented on the need for firefighters to be able to exercise initiative and take independent action in a way that meets leader’s intent and furthers the accomplishment of incident objectives.

Because of the vast scale of several of the southern California incidents, units found themselves in initial attack mode (or conducting independent action in extended attack) for unusually long periods before agencies could establish effective command and control. The dynamic nature and size of some incidents created periods where effective central control was lost or just not possible.

Respondents from all levels of incident organization cited numerous examples when success was achieved (or at least failure averted) when leaders exercised initiative and took action. Often leaders took the actions they did because they believed that their chosen course of action best supported their supervisor’s objectives. Consequently, they believed that it was important for senior leaders to empower subordinates to take the initiative by making their intent clear, providing guidance, and delegating authority for action as appropriate.

Respondents reinforced that a firefighter should never, in any circumstances, unilaterally ignore orders or independently reassign themselves when effective command and control is in place. However, those interviewed wanted to see the ICS remain flexible enough to allow for safe, effective action in the absence of communications or established

command and control. They wanted to see wildland and structural firefighting culture, doctrine, and training support this concept.

## **Air Resources in the Initial Attack and Independent Action Role**

Respondents who had participated in both ground and aviation operations indicated that independent air operations were very successful in saving residential structures and neighborhoods. “Independent” air operations refer to those conducted autonomously during the initial and extended attack periods, but with the full knowledge and collaboration of the incident commander. In some areas, air resources were not permitted to operate in this fashion, and pilots and managers expressed frustration that they felt they could have been effective if they had been enabled to contribute.

In air attack management training, aviation managers learn the acronym SEE (Safe, Effective and Efficient.) In the opinion of those interviewed, initial attack air operations employing both helicopters and air tankers on these fires were safe, efficient, and effective when they were:

- the result of collaboration between aviation managers, the IC and incident operations
- coordinated by a fully qualified Air Tactical Group Supervisor
- fully coordinated with the dispatch function
- conducted within a fire traffic area established per policy and procedure
- a product of organized teamwork conducted within a clear command structure – essentially an autonomous air attack group authorized by the IC
- conducted under the same guidelines as an initial attack fire
- suspended, and the operation re-grouped if any element of the SEE concept was violated

These operations enabled aviation resources, that otherwise would have sat idle, to engage the fire. Respondents would like to see air operations policy and procedure mature to include autonomous tactical action when coordinated with, and approved by, the incident command organization. They would also like to see aviation officers and dispatch centers work together to conduct pre-incident planning to establish contingencies for large catastrophic incidents such as these fires.

## **Adjusting Air Operations Cycles to Maximize Air-Ground Coordinated Attacks**

Respondents on one incident reported that they conducted highly effective coordinated attack using air and ground resources by adjusting air operations cycles so that aircraft were flying at first light. Coordinated attacks during early and mid-morning hours facilitated perimeter control by taking advantage of relatively moderate fire behavior early in the burning period.

Many respondents expressed frustration over the typical operational cycle, when aircraft come on station during late morning, just as the fire is becoming active. These respondents would like their agencies to explore options for enabling aviation supervisors to adjust planning and operational cycles, allowing ground and air resources to begin operations concurrently in order to gain ground on a fire while conditions are optimal.

## **WFSA on Large Multi-Jurisdiction and WUI incidents**

Senior leaders expressed concern that the current Wildland Fire Situation Analysis (WFSA) process is not adequate to address large WUI incidents—particularly when fires burn across multiple jurisdictions and when numerous agencies are functioning in unified command. In its current form, the WFSA cannot effectively support strategy formation when fires take on the aspects of non-wildfire incidents on the scale of a natural disaster. As one respondent put it, “What is the allowable final fire area of an urban conflagration?”

Respondents said that, on these large fires, they felt increasingly uncomfortable trying to work within the WFSA. Circumstances often forced them to revise the WFSA on a daily basis. “How do you prepare a WFSA for a fire that is going to cover several hundred thousand acres in and around one of the most densely populated wildland-urban interface zones in the country?”, said one Type 1 IC.

Respondents reported that in some cases the WFSA was obsolete one hour after preparation. Respondents also complained that, as the fire spread into across jurisdictional boundaries, the WFSA became increasingly irrelevant and biased the IMT’s priorities because the WFSA represented the viewpoint only of the land management agency preparing it. Consequently, by many respondents’ assessment, the WFSA became an inappropriate tool for determining strategy in a multi-jurisdictional, unified command environment.

Respondents also reported serious concerns about a growing trend in which agencies view the WFSA as a budgetary tool rather than as a decision-support tool. Many pointed out that the intent of the WFSA had been expanded last year to include this goal: to develop suppression strategies to minimize costs without compromising safety. In their opinion, this addition made the WFSA into a document that holds IMTs accountable for costs. Respondents reported feeling that they were inappropriately pressured to account for costs in a situation in which it was not possible to account for the many factors and complexities involved in these large, fast-moving interface fires.

Respondents would like their agencies to examine the effectiveness of the WFSA process for similar circumstances and modify or replace the tool to produce an effective situation analysis tool for fires like these.

## **Fuels Reduction Limitations**

Many respondents indicated that lessons learned regarding hazardous fuels abatement are very straightforward. Fuels treatments and brush abatement programs were highly effective. Respondents reported that communicating this message to the public and encouraging implementation of such programs (both by agencies and communities) presents a challenge.

Respondents indicate success stories may provide effective models. Many held up the Mountain Area Safety Taskforce (MAST) as a model for interagency pre-incident planning. They also reported that fuels treatments and prescribed burning significantly minimized fire activity in areas where agencies had completed projects. They said it was evident that jurisdictions with effective and enforceable 100' clearance limits and effective building codes suffered far less property damage.

WUI communities are still expressing concern that environmental compliance prevents critical fuels projects from moving forward. Tree mortality and fuel buildup in forested areas are still of major concern. One district ranger said, "We have a disaster of biblical proportions still waiting." Respondents said they want their agencies to take advantage of the opportunity presented by the fires to communicate the success stories and to educate and influence public and local governments to do as much as possible to protect communities and natural resources from fire.

## Impacts of Mutual Aid Agreements

Respondents reported that the mutual aid and the mobilization system caused many to be on assignment elsewhere while large incidents were in progress on their home units. As incidents started, cooperators were dispatched to assist, causing many resources from many jurisdictions to be gone when large fires started in their own districts. Firefighters as well as incident commanders were affected, and the result was that resources with valuable local knowledge were fighting fires on someone else's home unit while someone else was fighting fire back on theirs.

This inefficiency prompted many respondents to question whether mutual aid agreements or the mobilization system ought to have a provision to keep resources at their home units during severe fire conditions or to reassign resources back to their home unit when the situation requires.

## The Southern California Fire Environment

*There is no such thing as "fire season" in Southern California.*  
- Battalion Chief

Respondents, from nearly all agencies and at all organizational levels, expressed the belief that in southern California agencies have passed the point where a seasonal organization is practical. *Fire season* in Southern California runs nearly 365 days per year. The media quoted one fire official saying, "We're trying to run a twelve-month operation on an eight-month budget." In the current operating environment, agencies need to staff their resources through a full year to be effective. This expansion would require significant additional resources and with it, a different planning and preparedness mindset.

Respondents noted that normally 97% of the land consumed by wildfires in San Diego County burns outside the designated fire season. To accomplish critical fuel reduction goals, agencies must be able to conduct prescribed burning outside the designated fire season. Seasonal staffing patterns make this extremely difficult. These patterns also contribute to the critical resource shortages that the agencies experienced during these fires.

During this series of incidents, agencies experienced engine staffing shortages as well as a critical shortage of strike team leaders and other line overhead. These shortages required fireline leaders to dramatically expand their supervisory span of control during high intensity operations, an set preconditions for undesirable, unsafe, and ineffective operations.

Respondents would like to see agencies explore options such as permanent part-time positions to extend the availability of seasonal firefighting resources in southern California.