

CITY OF SAN DIEGO FIRE-RESCUE DEPARTMENT



cedar fire 2003



after action report



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SAN DIEGO FIRE-RESCUE CEDAR FIRE 2003

AFTER ACTION REPORT

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Executive Summary



SAN DIEGO FIRE - RESCUE FIRE CHIEF JEFF BOWMAN



The Cedar Fire began in the Cleveland National Forest, Cedar Creek area southwest of Julian, California at approximately 1740 hours, October 25, 2003. The U.S. Forest Service established initial command of the Cedar Fire. As the fire moved into state responsibility area, the California Department of Forestry (CDF), Monte Vista Ranger Unit (MVU), assumed command as the Cedar Incident Commander (IC), and eventually transitioned the incident to CDF Incident Management Team #5 (IMT#5). This transition occurred on October 27, 2003 at 0700 hours. IMT#5 had overall responsibility for establishing objectives and supporting resources for this incident.

The San Diego Fire-Rescue Department's (SDFD) first involvement was (2) Type I mixed Strike Teams, consisting of (2) SDFD Battalion Chiefs, (4) SDFD Engines and (6) non-SDFD Engines to the San Diego Country Estates in Ramona at approximately 2335 hours on October 25, 2003. The fire consumed approximately 62,000 acres by 0300 hours on October 26th, and 116,000 acres by 1000 hours.



The SDFD Department Operations Center (DOC) was partially activated at approximately 0100 hours on October 26, 2003. The Cedar Fire entered the City of San Diego between 0700 and 0730 hours. A SDFD representative staffed the City of San Diego Emergency Operations Center (EOC) at approximately 0910 hours.

At approximately 0700 hours an immediate threat within the Scripps Ranch community was identified. Resource requests made to the Area Fire Coordinator at the Monte Vista Interagency Communications Center were redirected to the Cedar IC. Contact could not be made with the Cedar IC until well after the fire was established in the City of San Diego. The only resources to respond into the City of San Diego were from within



SDFD, Federal Fire Department and Miramar Marine Corps Fire Department. The Fire Communications Center (FCC) dispatched (6) Brush Rigs, (30) Engines, (5) Trucks, (6) Battalion Chiefs, and a Division Chief over the next five hours to the community of Scripps Ranch. The community of Tierrasanta initially received approximately (3) Brush Rigs, (15) Engines, (2) Trucks, (2) Crash Rigs, (3) Battalion Chiefs and a Deputy Chief. Prior to 0630 hours on October 26, 2003 SDFD had a total of (4) Brush Rigs, (11) Engines and (4) Battalion Chiefs committed to other Strike Teams out of the City of San Diego.

Structure losses began at approximately 0835 hours on October 26, 2003 in Scripps Ranch and continued throughout the day. The fire continued to spread south and west through the City of San Diego. The community of Tierrasanta became threatened as the fire spread through the Marine Corps Air Station, Miramar/Camp Elliot and Mission Trails Park (see graphics on pages 4 and 6).

When the SDFD Operations Section was established, the portion of the Cedar Fire within the City of San Diego was split into two Branches. Branch VI (North of SR-52 & East of I-15) and Branch V (South of SR-52 & East of I805/West of I15) dealt with the operational aspects of controlling/containing the fire. These Branches were assigned and unsupported by CDF. The SDFD Operations Section developed a Tactical Action Plan for designated Branches on October 26, 2003.



The SDFD Planning Section developed an SDFD Tactical Action Plan for October 27th and 28th and this plan was provided to CDF. Operational periods following October 28th

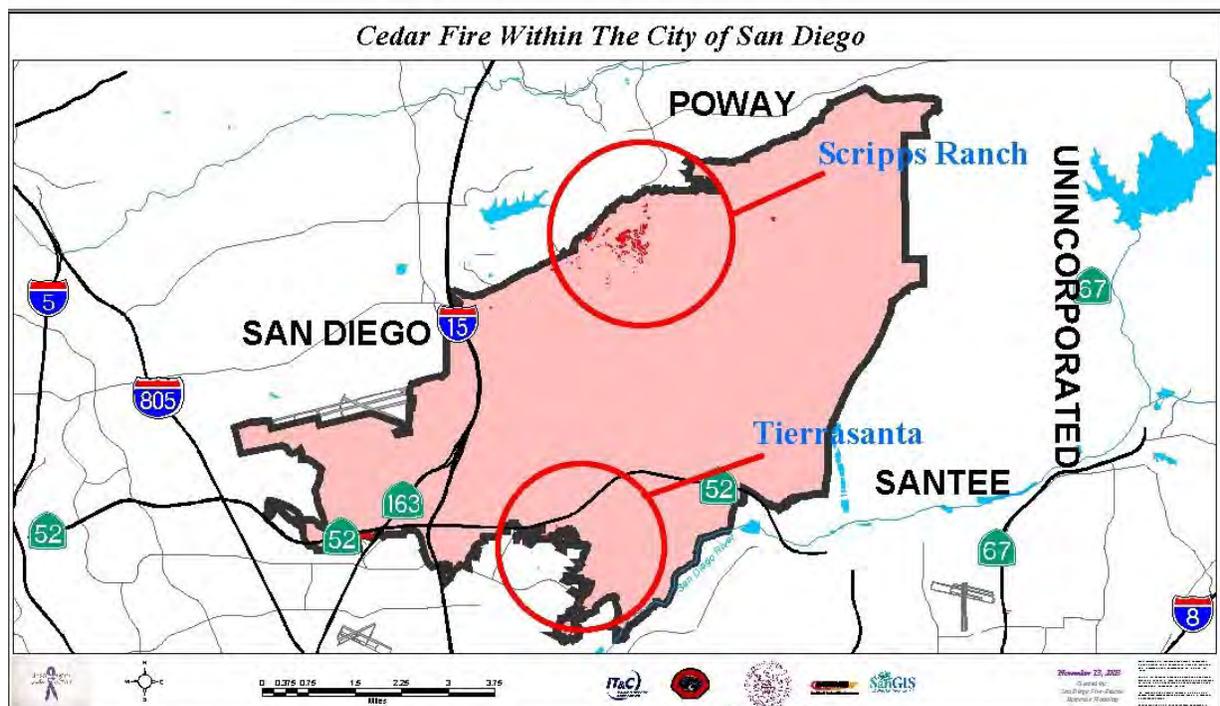
were addressed in the IMT Incident Action Plan (IAP). The SDFD Planning Section also expanded to include Situation, Resources and Documentation Units. The SDFD Planning Section was staffed through December 19th to address issues pertaining to documentation of resources for reimbursement.

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A SDFD Logistics Section was established on October 26th. Initial objectives of the section were to repair and staff reserve apparatus at the Repair Facility. To achieve these objectives, a Support Branch was partially established. This Branch included the Director of Support Services and additional personnel. As the incident progressed, the Logistics Section was expanded to include unit leaders assigned to Facilities, Ground Support, and Supply. An Ordering Manager was also designated in the Support Branch. Unit Leaders were also assigned to Food and Medical. This section operated primarily from the SDFD Repair facility at 3870 Kearny Villa Rd.

A gradual systematic release of suppression units and personnel began on October 27th. The need for emergency staffing ended on October 28th at 1500 hours. The Fire Chief declared containment of the Cedar Fire within the City of San Diego on October 28th. The total acreage burned within the City of San Diego was determined to be approximately 28,676. A large portion (17,888 acres) of this area is part of the Marine Corps Air Station, Miramar. The remaining 10,788 acres is the actual acres burned in City of San Diego jurisdiction.



The SDFD Documentation Unit was established on October 30th. Its primary function was the compilation of Cedar Fire related documents. This unit was initially co-located with the DOC at the Fire Communications Center. It was moved to SDFD Headquarters on November 3rd. The unit was responsible for gathering, organizing, filing and



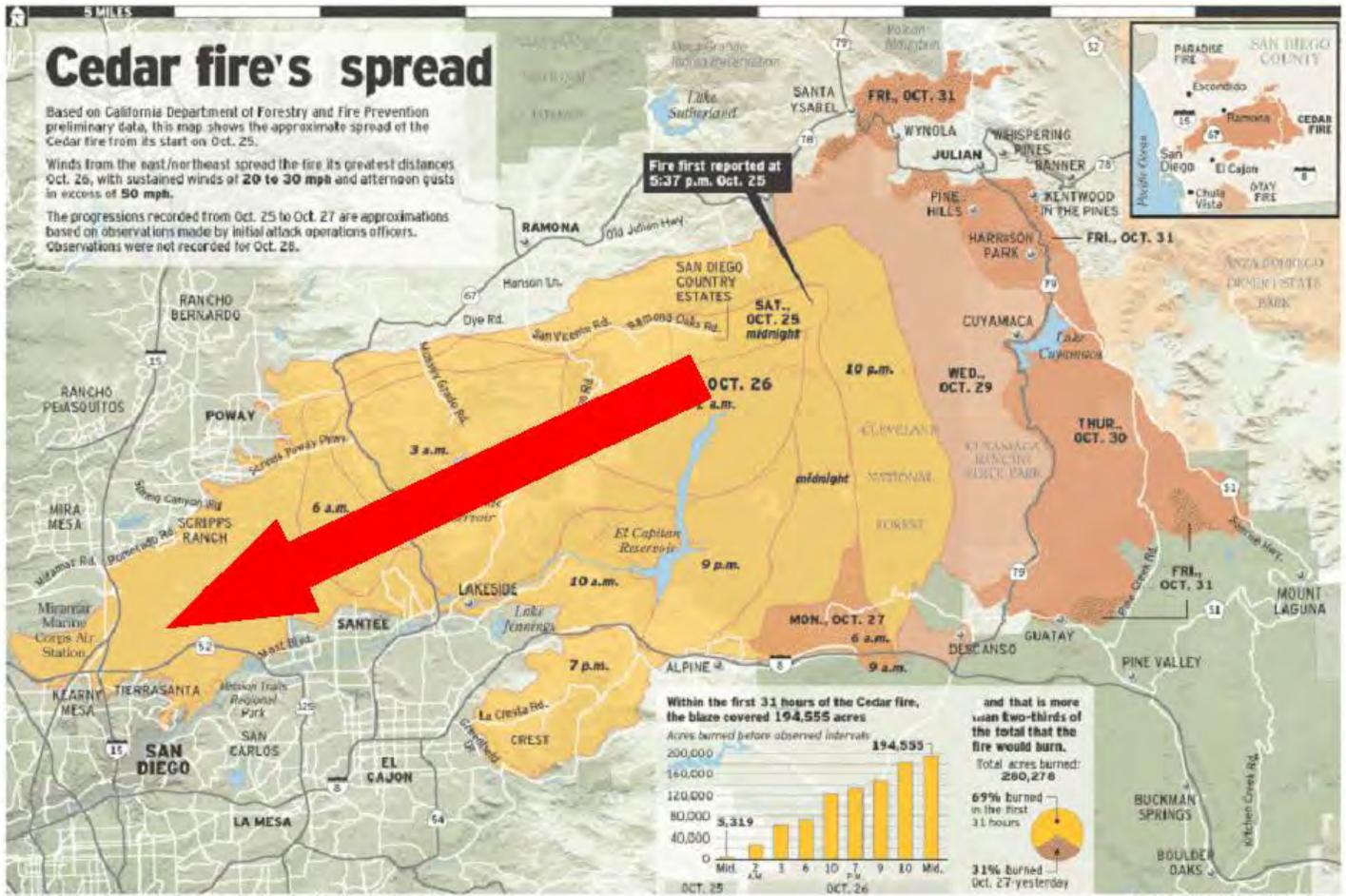
maintaining all the submitted SDFD documents related to the Cedar Fire. Some of these documents include: ICS 214s, ICS 211s, MACS 420s, and maps of the incident. All of these documents have been archived.

A Damage Assessment Team was established on October 30th. As of December 1, the dollar loss was estimated at \$204 million (Structure & Contents). The damage assessments included 335 structures destroyed and 71 structures damaged. The following table details the damage caused by the Cedar Fire in the City of San Diego:



Type	Destroyed	Damaged
Single Family Dwelling	311	40
Multi-Family Dwelling	10	30
Commercial Structures	3	1
Educational Structures	11	0
Vehicles	144	0
Watercrafts	7	0

A SDFD Finance/Administration Section was developed to establish reimbursement procedures for the Federal Emergency Management Agency (FEMA) and State of California Governor's Office of Emergency Services (OES). The steps toward reimbursement are underway. The OES (F-42's) portion of the reimbursement has already been filed for nearly 100 crews/apparatus. The remaining portion (FEMA claim) is being compiled with the other city departments for a complete reimbursement.



Introduction



The SDFD Cedar Fire Documentation Unit in the Special Operations Division completed the compilation of After-Action Issues. A total of 97 issues were received from the ranks of Firefighter to Assistant Fire Chief. The process began with the issuance of Bulletin #03-277 encouraging all personnel to submit issues. The bulletin also gave a format and process to submit issues. As issues were received they were reviewed and cataloged.

After reviewing, each issue was categorized for ease of compiling similar issues. The categories that were developed are as follows:

- ◆ Command Staff/ Incident Management
- ◆ Safety
- ◆ Public Information
- ◆ Staffing and Recall
- ◆ Department Operations Center
- ◆ Operations
- ◆ Logistics
- ◆ Apparatus and Equipment
- ◆ Communications
- ◆ Fire Communications Center
- ◆ Plans
- ◆ Damage Assessment
- ◆ EMS
- ◆ Finance

These categories were used to organize and summarize the After-Action issues, lessons learned and identify common themes. Every effort was made to address and include in this report all of the issues submitted.

Summary of Findings



COMMAND STAFF AND INCIDENT MANAGEMENT

In general, all agencies were very supportive of the Incident Command System and its functions. Yet the Cedar Fire presented incredible challenges to the California Department of Forestry as the Cedar Incident Commander. The situation was developing too fast for the Incident Commander to keep up. In the early hours, given the fast-moving and chaotic circumstances, collaborative and unified tactical action on the part of Branch Directors, Division Supervisors, Strike Team Leaders and Company Officers was effective. The Cedar Fire Incident Commander, however, did not unify and centralize command until the late afternoon on October 26th. Therefore, the SDFD began development of its own centralized command and control at the Department Operations Center (DOC) located at the Fire Communications Center.

The Command Staff of the Cedar Fire for the San Diego Fire-Rescue Department included the Fire Chief, Assistant Chiefs, Duty Deputy Chief, Director of Support Services and a Public Information Officer. There was no identified SDFD Safety Officer on the SDFD Command Staff on Sunday October 26th. A SDFD Battalion Chief was sent to the CDF Cedar Fire Command Post to join the Cedar Fire Unified Command at approximately 0830 hours. SDFD representation in the City Emergency Operations Center (EOC) also proved to be a vital communications link for the SDFD Command Staff to other city departments. The Initial Command Staff objectives were as follows:



- ◆ Maintain services within the City of San Diego
- ◆ Protection of City infrastructure
- ◆ Backfill of fire stations vacated by strike team assignments
- ◆ Direct off-going personnel to remain in station, callback of all off-duty personnel
- ◆ Request a variance for Level 1 medical-aid responses
- ◆ Establish communications with the Cedar IC
- ◆ Inform City leadership
- ◆ Keep the public informed



In order to meet these objectives a SDFD Incident Command System General Staff was developed. The General Staff included Section Chiefs from Operations, Planning and Logistics and Finance.

What Worked Well

1. There were no deaths or civilian injuries in the city of San Diego, and mostly minor injuries to our firefighters. This was in large part attributed to the initiative of our field command personnel and the individual firefighters in their effort to protect lives and property in a safe manner throughout the incident. Fire personnel took appropriate independent action where possible to minimize structure loss.
2. Logistics plans were developed and implemented very early in the fire to ensure water, food, fuel, and transportation needs for delivering personnel to the fire line, and to meet the needs of all support personnel associated with the incident. This effort was maintained and improved throughout the incident. A Spike Camp (supply and logistics camp) was established by closing Kearny Villa Road between Aero Drive and Balboa. Additional Spike Camps were established at Jerabek Park in Scripps Ranch and on Santo Road in Tierrasanta. This allowed the effective staging and deployment of resources throughout the fire.
3. SDPD provided effective liaisons to the Branch Directors on the fire line. This aided in effective communications, strategic decisions and efficient evacuations during the incident. SDPD also provided their helicopter, ABLE, as an aerial observation unit.
4. Incident Command guidelines were established and followed. The fire was divided into two Branches and several Divisions, which assisted in containment and a manageable span of control for Branch Directors. The objective of containing the fire north of Highway 52, south of Pomerado Rd. and east of I-805 was achieved to a reasonable degree considering our limited resources.





5. In the early hours of the fire, approximately 0700 hours on October 26th, the Miramar MCAS Fire Department was instrumental in assisting City units by identifying the oncoming fire and clearly communicating, face to face, with one of our Strike Team Leaders. This allowed the pre-positioning of three Strike Teams prior to the fire hitting Scripps Ranch. Fire companies on the line in both Scripps Ranch and Tierrasanta were augmented with additional personnel, beyond the normal complement of four persons, early during the day on October 26th. Additionally a request for forty strike teams (200 fire engine companies) was made early in the incident though none were available. A review of the Scripps Ranch fire plan was reviewed during the early phase of this emergency.



6. The San Diego Medical Services Enterprise (SDMSE) partnership was effective in adapting to the loss of SDFD First Responder Paramedic engine companies for two full days of the fire. SDMSE accomplished this by altering Level 1 dispatch guidelines and compensating by increasing from 29 to 36 Advance Life Support ambulances and staffing two paramedics on every ambulance. SDMSE also diverted 22 Basic Life Support Ambulances from contracted SDMSE work to cover the City 911 and fire needs.
7. Though the funding for Copter 1 ran out on October 21, 2003, the City Manager and Mayor approved a plan to return Copter 1 to San Diego. The command staff in San Bernardino was notified of the request and supported the release and return of Copter 1. The asset returned at 1130 hours on October 27th. Additionally, a San Diego Structure Strike Team was requested for release, and returned to the Cedar Fire from San Bernardino at 0400 hours on October 26th. It was redeployed to



Tierrasanta, and a San Diego Brush Strike Team was released from Camp Pendleton and redeployed on the Lakeside portion of the fire.

8. A conservative estimate of housing units saved includes 672 in Tierrasanta and 950 in Scripps Ranch. The estimated value of total units saved is \$515 million.

Command Staff Issues:

1. The strength, presence and effectiveness of Command Staff was difficult to obtain due to the rapidly progressing situation. The standard processes of developing a command structure were not quick enough to keep pace with the incident. Plans became obsolete before the command structure could be established to implement strategic objectives and gain control. This chaotic situation repeated itself several times over the course of many hours until adequate command level personnel were in place.
2. There were insufficient fire officers to fill all requests for Incident Command requirements of a fire of this magnitude. Branch Directors and Strike Team Leaders had to perform as command, communications, safety, plans, logistics and documentation officers at their command post early in the incident. To properly manage their commands, these personnel would have required additional staff aides, had they been available. There were also insufficient Division Supervisors (manages a geographic location) and Group Leaders (manages a group which performs tasks) available for the incident. Some Strike Team Leaders had up to a 17 to 1 span of control, which far exceeds a safe level.
3. The lack of support from an overwhelmed CDF Cedar IC was attributed to the lack of resources in San Diego County. The CDF Cedar IC was unable to establish functional Operations, Planning and Logistics Sections for 36 hours. Therefore, the SDFD was forced to take independent action outside of the CDF Cedar Incident Command structure for Operations, Planning and Logistics. The degree to which the SDFD was able to join in a true Unified Command is in question. The lack of support led to a marginal acceptance of the SDFD's role as a contributing member





of Unified Command. The effectiveness of the officer sent to act as a member of Unified Command was greatly diminished by this lack of support.

4. Once coordination was established with the Cedar IC, SDFD Command Staff had difficulty understanding the documentation processes of a large Incident Command System. The lack of training and experience hampered the SDFD's ability to seamlessly transition into the Cedar Fire Incident Command structure. These difficulties created a ripple effect throughout the SDFD.
5. The early closing of the City's EOC made inter-departmental coordination difficult. After the fire was controlled, there were many city-wide issues which needed resolution, such as: tree hazards, civilian re-entry, demolition permit issuance, evacuation center support, development of a recovery plan, and the implementation of a Local Assistance Center.
6. Structure triage needs to be improved from a training level. Fire fighting resources were sometimes utilized in attempts to save structures which may be viable during normal conditions, but that were not salvageable during this incident due to the limited number of resources. Those resources could have been better deployed on viable structures. More aggressive use of back-firing operations could have been deployed in an attempt to save more structures.



Command Staff Lessons Learned

1. The strength, presence and effectiveness of Command can be reinforced with early recognition of incident potential. When a high potential incident is recognized, SDFD management must be proactive in establishing a complete Command structure to begin establishing incident objectives. A lack of recognition leads to a reactive process with reduced command and control. Earlier notification of Senior Management, earlier staffing of the DOC, and a properly equipped DOC would improve command and control.
2. Funding must be made available for staffing and resources to sustain around the clock operations for a minimum of 72 hours, understanding that support through local mutual aid or the California Fire Assistance Agreement, formerly known as the Master Mutual Aid Agreement, may not be available. The establishment of Community Emergency Response Teams (CERT) would have provided communities with the ability to “self-help” during large-scale incidents such as the Cedar Fire.



3. Personnel with Incident Management Team experience proved to be invaluable. A plan to fund, develop and train an adequate number of incident management personnel must be established to better handle future large-scale incidents. This is especially important of personnel assuming Command & General Staff ICS positions. Lifeguard personnel should be trained to assist in the EOC and DOC.
4. The proper staffing, training, equipping and operation of the City EOC and provision of a liaison to the County EOC and Cedar Incident Command



would reduce the difficulties in coordination of non-first responder resources and assist with regional coordination.

Command Staff Recommendations

1. Fund, develop and train NWCG (National Wildfire Coordinating Group) qualified personnel to:
 - Function at the Command and General Staff, Unified Command and City EOC positions. This includes:
 - Incident Commanders
 - × Safety Officers
 - × Information Officers
 - × Liaison Officers
 - Operations Section Chiefs
 - Planning Section Chiefs
 - Logistics Section Chiefs
 - Finance/Administration Section Chiefs
 - Assist in the DOC and EOC
2. Fund the staffing and resource needs for an extended attack incident.
3. Develop a CERT program for citizen assistance during incidents with limited resources.
4. Fund, develop, and equip the DOC.





SAFETY

There was no designated SDFD Incident Safety Officer on October 26th or 27th. This vacant ICS position was attributed to the lack of personnel and equipment available to fill this role. All Training and Education Division Captains were assigned other duties during this time. Due to the lack of a dedicated Safety Officer, Branch Directors and Division Supervisors assumed the role and responsibility of the Safety Officer position.

The Training and Safety Division has not been able to keep up with the needs of the SDFD. The all-risk capability of the SDFD is severely reduced by a continuous lack of funding. During the Cedar Fire, personnel using chainsaws in a manner in which they were neither trained nor equipped demonstrated this.



FIRESCOPE describes the Safety Officer's responsibilities as the development and recommendation of measures for assuring personnel safety. Additionally, the Safety Officer must anticipate and assess hazardous and unsafe situations.

Normally, only one Incident Safety Officer would be designated; however, due to the lack of support from the Cedar IC, SDFD assigned Safety Officers late in the fire.

The safety issues that were identified were effective in reducing the degree of injury to SDFD personnel as reflected in the lack of any severe injuries. However, many personnel were observed in high risk/low benefit situations. The "adapt and overcome" persona of fire fighters appeared to have influenced appropriate risk vs. benefit analysis.

The following safety objectives were identified and implemented for each SDFD Branch:

- ◆ Establish and maintain LCES (Lookouts, Communications, Escape Routes and Safety Zones)
- ◆ All electrical hazards were to be considered "live"
- ◆ Company officers were directed to maintain accountability of subordinates
- ◆ Excess personnel were placed into crews to maintain accountability
- ◆ Apply appropriate risk analysis (risk vs. gain)



Safety Issues

1. There are no Multi-Casualty units in the SDFD system. Had more than 30 patients presented at one time, we would have had difficulty in handling the patient volume. In a major incident such as the Cedar fire, it is possible to have a significant number of civilian and firefighter injuries that will need the appropriate Multi-Casualty apparatus.
2. Personnel bused to the fire to assist with suppression and structure protection were not documented when assigned to apparatus on the fire ground. Future incidents should insure personnel accountability both at the staging area, which did occur for bus loading, and at the fire scene when assigned to a crew/apparatus. Division Supervisors and Group Leaders need to be observant of this issue.
3. Respiratory problems, although generally minor for most involved, is an ongoing health risk for all personnel who had extended exposure to smoke.
4. There were insufficient personnel to staff dedicated Safety Officer positions. The training staff, which are the designated Safety Officers for SDFD, were either placing apparatus into service, functioning as suppression officers and/or support officers rather than filling the Safety Officer position. Therefore, these vital positions were not filled on a dedicated basis until October 28th.
5. The lack of trained Safety Officers placed the responsibility of development of safety briefings on individual officers who may not have been familiar with the elements of the Incident Action Plan (IAP).
6. Firefighters were observed riding on apparatus in unsafe positions. First hand accounts state that as many as 8-12 personnel were on one apparatus.





7. Initial understaffing placed an undue amount of fatigue on personnel. Many personnel reported working in excess of 36 hours on the fire line, while rested personnel were assigned to staging.
8. Hot shields were issued to every fire fighter employed by SDFD; however, very few were observed being worn.
9. Span of control was not maintained due to the lack of overhead personnel. This reduced the ability to maintain proper personnel accountability.
10. The lack of appropriate safety equipment and training led to injuries.
11. Fire conditions reduced the ability to safely navigate fire apparatus. The use of open cab fire apparatus during extreme fire conditions created an unsafe situation for crewmembers.





Safety Lessons Learned

1. The Cedar Fire required dedicated Safety Officers from the outset. The Department should ensure that properly trained and equipped Duty Safety Officers are immediately deployed. The Incident Safety Officer must participate in all planning meetings to ensure the implementation of a Safety Plan in the Incident Action Plan (IAP). This briefing must be reviewed with all units prior to a work assignment.
2. Personnel who assume or are assigned to this position should receive in-depth training and be qualified prior to deploying. Funding for properly trained Safety Officers should receive a high priority.
3. Company Officers and Fire Engineers must be diligent in the enforcement of established safety procedures. Personnel should not be permitted to ride on an apparatus in a manner that is outside the scope of established policies.
4. The initial understaffing of the incident increased fatigue and injuries. Work/rest ratios must be considered in the development of operational plans.
5. A large span of control ratio reduces accountability, thereby reducing safety. Funding must be budgeted to provide sufficient numbers of personnel and provide them with the skills and abilities to maintain a safe span of control.
6. All personnel must be aware of the risk involved in driving and operating open cab fire apparatus during extreme fire conditions. Funding must be provided to replace all open cab fire apparatus with enclosed cab models.
7. Personnel must evaluate the decision to utilize non-emergency and inappropriate vehicles at incidents. Consistent underfunding has resulted in forcing SDFD into this decision process.



Safety Recommendations

1. Fund, develop and train NWCG (National Wildfire Coordinating Group) qualified personnel to perform the role of Incident Safety Officer.
2. A review of safety procedures should be conducted to address fighting fires in the wildland/urban interface.
3. Fund and develop staffing to ensure the timely implementation of an Incident Safety Officer.
4. All personnel must be trained in the following areas:
 - Risk/benefit analyses
 - Fatigue
 - Personal Protective Equipment
 - Span of Control
5. Open cab apparatus should be removed from service. The implementation of an ongoing apparatus replacement program would improve the SDFD's safe response capability.





PUBLIC INFORMATION

From a regional perspective, all involved agencies did not work effectively together to ensure media releases were consistent. The SDFD Public Information Officer (PIO) reported to the DOC Command at approximately 0800 hours on October 26th when it was determined that the Cedar Fire would cause structural damage within the City of San Diego, and there was a need to dispense crucial information to the public. The PIOs established the following objectives:

- ◆ Provide public information upon request
- ◆ Provide on-going Public Safety Announcements (PSA)
- ◆ Facilitate and schedule news conferences
- ◆ Provide dignitary assistance
- ◆ Develop political and message point assistance
- ◆ Develop and provide community group presentations



What Worked Well

1. Media relations were well-managed and coordinated through a combined effort of the Mayor, City Manager and SDFD staff. There was limited duplication of effort and with few exceptions, the message was clear, consistent and on point. The Mayor conducted regular pre-briefings that were held throughout the incident to insure accuracy of information prior to press conferences. Speaking points were clearly identified and roles outlined. Care was taken to have all stakeholders (City leaders, county leaders, SDPD, County Sheriffs, etc.) invited to key briefings and press conferences.
2. Good media relations and timely press conferences were effective in getting critical information out to the public; e.g., to reduce water utilization to maintain an adequate supply of water in our key reservoir.



Public Information Issues

1. Better utilization of media news reports to monitor the fire activity is needed. During significant incidents it would be beneficial to have an agreement with media helicopters to feed in their video to the EOC and DOC so live intelligence is available on the fireground. Now that Copter I is back, this may be possible.
2. Demands from the local, national, and international media for information and interviews were overwhelming for two PIO to handle. The lack of trained staff made it difficult to maintain around-the-clock staffing of the SDFD media desk. Moreover, based on the volume of public presentation requests, the current PIO staffing level is insufficient.
3. SDFD PIOs were tasked with contacting the American Red Cross to establish an evacuation center for Scripps Ranch residents. The PIOs worked with the American Red Cross to establish the first evacuation center at Mira Mesa High School. This precluded them from performing PIO responsibilities.
4. Initially there were no wildland/urban interface subject matter experts available to assist with media interviews.
5. Due to the lack of PIO staff, the PIOs were unable to continually support the Fire Chief, senior management, or the City. Consequently, the Planning Section was continuously tasked with preparing speaking points for the Fire Chief during the first three days of the incident.
6. PIOs were called upon to act as personal assistants for dignitaries by providing, services such as procuring office space, office supplies, meals, coffee, and needs which arose during the course of this incident. This precluded them from performing their PIO responsibilities.
7. The Fire Communications Center was established as the site for all city news conferences. This created a number of difficulties. It impacted the DOC function, raised security issues, the constant foot traffic in and out of the facility allowed smoke from the fire to enter the building, and at times,





non-essential personnel were entering the dispatch floor interfering with the dispatchers and their duties. It should be recognized that the decision to make the FCC the news conference location was not made by SDFD.

8. The media advised that competing news conferences between City and County officials hindered the ability of the media to provide the public with consistent, vital information.

Public Information Lessons Learned

1. Funding needs to be identified for additional full-time staff for the PIO office. Moreover, additional uniformed personnel need to be trained and placed on a recall list in order to staff a media desk and provide field support 24 hours a day when large scale incidents occur. The recent hiring of a Supervising PIO should help to identify and alleviate future difficulties.
2. Early and full activation of the DOC and EOC will reduce personnel from being assigned tasks outside their area of responsibility, such as PIOs assisting in the setup of an evacuation center or supporting dignitaries' needs.



3. For incidents that are multi-jurisdictional, a Joint Information Center (JIC) should coordinate all media activities. The current San Diego media plan



was never implemented during the Cedar Fire. Agencies that would participate in a JIC should meet regularly to pre-plan for incidents such as the Cedar Fire. Additionally, this process would assist in the education for media relations personnel who work for the elected officials.

- Location of JIC needs to be identified.

Public Information Recommendations

1. Fund additional staffing and training for the PIO. This staffing would include:
 - Support staff
 - Uniformed personnel
2. Recall PIOs early in incidents
3. Train DOC participants in the media plan. Utilize a Joint Information Center (JIC) in a location deemed appropriate, not at the FCC.
4. Assist in developing a countywide media workshop/drill during Summer/2004 to ensure readiness.
5. Develop a policy to utilize recently retired command staff officers to act as PIO/fire department subject matter experts.



STAFFING AND RECALL

The Department recall of employees at 0930 hours on October 26th severely impacted management's strategic plans. To expedite the recall process, SDFD senior management elected to use the media (radio and television) to call back fire fighters instead of using standard recall procedures.

The SDFD Repair Facility was established as a staging area for call back personnel to check in. Since the SDFD has never dealt with an incident of this magnitude, a plan was not in place to manage the large numbers of recalled firefighters. This severely impacted the ability to adequately account for and assign the staged firefighters. The Command Staff set the following objectives for staffing and recall:

- ◆ Staff all available apparatus
- ◆ Provide relief for fire line personnel
- ◆ Utilize personnel for incident management positions (Logistics, Planning, etc.)

Staffing and Recall Issues

1. The non-standard recall of personnel created accountability issues which were difficult to control. The use of the media for recall created difficulties in managing the large amounts of people (SDFD and non-SDFD personnel) arriving at Station 28. A planned process for tracking personnel is not in place. This lack of planning caused confusion and lack of accountability in forming crews. In addition, numerous volunteer firefighters responded to the location as a result of the media announcement. Lack of equipment, inability to validate training levels, and lack of organizational management process created further challenges to SDFD staff.
2. The lack of staffing affected the SDFD response to the Cedar Fire. The understaffing was addressed at 0630 hours on October 26th when all personnel were directed to remain in station. They were released at 0800 hours on October 26th only to be recalled at 0930 hours via the media.





3. The decision not to override Department policy on October 25th at 2300 hrs and backfill the (4) fire stations that had been vacated by strike teams has been questioned. When personnel began to arrive for their normal duty-day they found no regular/frontline apparatus readily available. By this time, the fire was into the city and threatening Scripps Ranch.
4. The plan for incorporating relief personnel into the incident was ineffective. Company Officers reported personnel "jumping-on" their rigs in attempts to get to the fire. The accountability and documentation for these relief personnel created an unsafe situation.
5. Recalled personnel had no access to fire station facilities.

Staffing and Recall Lessons Learned

1. The standard recall procedures of using telephones and Telestaff should be used to recall personnel. Although the media technique is effective in "getting the word out," it creates confusion when several hundred firefighters arrive at one time. If personnel had been held in station at 0800 hours, it would have reduced the number of firefighters needed for recall.
2. When recalling personnel to a central location, coordination must occur between the Planning Section and the Logistics Section. This coordination is important for the effective documentation, implementation, control and support of arriving personnel.
3. The current policy for recall of Fire Department personnel should be reviewed and updated. Management should be thoroughly familiar with this policy and have the flexibility to make adjustments as required by the circumstances at hand. A decision was made not to recall firefighters to fill the (4) vacant stations from 1130 hours on October 25th to 0800 hours on October 26th. This decision was based on the improbability of getting firefighters to return to stations at that hour and placing fully equipped apparatus in those stations. The effort to fill these stations would best be achieved by locating apparatus in the vacant stations for the oncoming crews. The extreme fire behavior of the Cedar Fire was not fully understood when this decision was made.



4. Personnel with special skills and abilities such as logistics, plans, wildfire behavior, Urban Search & Rescue, swift water rescue, etc., should be pre-identified and prepared to serve on overhead teams.

Staffing and Recall Recommendations

1. Review recall procedures and revise as necessary. Copies of these procedures should be located at the DOC and other appropriate locations.
2. Fund, develop and train NWCG qualified Status/Check-in Recorders. These personnel should be utilized for the checking-in of arriving resources and personnel.
3. Create process to allow recalled personnel access to facilities.
4. Change policy on emergency staffing during "Red Flag" alerts, and when to backfill for out of city strike team deployments.





DEPARTMENT OPERATIONS CENTER

The function of the DOC is to provide incident support prior to, during and/or following the response phase of a major emergency or incident. However, there was no clear activation of the DOC, and the transition of the incident from the FCC to the DOC proved to be difficult. The DOC had staffing as early as 0100 hours on October 26th. The FCC was still dispatching single engines, with separate incident numbers, to grass fires in the Scripps Ranch area late into the morning of October 26th. This lack of coordination between the FCC and the DOC led to many issues regarding the tracking and deployment of resources for the Cedar fire.

The DOC was functioning independently of the CDF Cedar Fire Command structure. This proved to be effective, saving many homes in the City of San Diego. The effective use of the DOC was hampered by its lack of physical amenities and resources. The objectives for the DOC included:

- ◆ Develop incident coordination with the Cedar Fire IMT
- ◆ Provide support to SDFD units in the absence of Cedar Fire IMT support
- ◆ Maintain acceptable levels of Fire/EMS delivery within the City of San Diego

What Worked Well

1. Eleven Damaged Assessment Teams were organized to ensure an accurate and timely documentation of all damaged and destroyed property. This will assist our citizens in a more rapid recovery process with the Federal Emergency Management Agency, insurance companies and contractors.
2. Teaming with City's GIS software provider, ESRI, IT&C and GIS staff assisted in meeting the mapping request needs throughout the fire and through the recovery phase associated with damage assessment.
3. Damage Assessment teams were quickly established under the guidance of an experienced Incident Command System officer and with the support of the Development Services Department. Dispatch personnel worked tirelessly in meeting the needs of the field operations, the citizens, Senior Management and city leaders throughout the operation. Central Stores was effective in delivering all radio batteries they had in stock to Fire Communications early in the incident.



4. Though the SDFD Department Operations Center (DOC) was too small for the magnitude of the incident, it did serve to support the management, operations, plans, logistics, and documents needs of the incident.
 - It was key that SDFD had some personnel who were experienced and nationally-carded in various incident command functions. This experience was gained during large scale incident deployment out of county, and to other states as part of the mutual aid network. These personnel organized and ensured that the Operations, Plans and Logistics Sections established objectives, provided briefings to the Management Team, and reviewed and reprioritized objectives as necessary. Their experience also is credited with providing the proper organization and management of the necessary post-incident documentation. Unfortunately, due to lack of training funds, many staff members have little or no formal incident management certification.



DOC Issues:

1. The SDFD DOC should have been set up and activated by 0600 hours the morning of the fire. This would have facilitated an improved management and communications system for the incident. Although this did not affect the outcome of the fire, it would have limited the duplication of effort experienced between 0800 and 0930 hours on October 26th and established a more efficient information and request flow earlier in the process. A dedicated DOC should be established and outfitted.
2. The Department Operations Center was not fully functional. Utilizing the Fire Communication Center facility as a Department Operations Center was not realistic. The lack of space and equipment during the initial hours of the Cedar Fire required personnel to move into offices, thus displacing FCC staff. Additionally, the utilization of the BLS communications center as part of the DOC impacted the BLS dispatcher's ability to provide medical coverage in the City.



3. The function of the DOC was unclear to some SDFD managers. The DOC Operational plan needs to be developed and provided to personnel which may be called to serve in the DOC. The DOC plan requires on-going training to reinforce the roles and responsibilities and proper activation of the DOC
4. SDFD has not conducted a DOC tabletop exercise or provided any comprehensive DOC training for several years. This lack of training created confusion for personnel who were assigned to the DOC. Briefings and work cycles were not initially created and when established, staff was not committed to them.

DOC Lessons Learned:

1. Funding needs to be provided to build and equip a dedicated DOC. The current facility lacks space, updated equipment, phones, section chief kits and general office supplies needed to function properly.
2. Annual funding and maintenance of the DOC must occur in order for this facility to function effectively during emergencies.
3. A comprehensive DOC training program needs to be funded and implemented. SDFD needs to begin a staffing plan that identifies the DOC positions, specific personnel to fill those positions, and begin the training process.

DOC Recommendations

1. Funding must be provided and maintained for a dedicated and well-equipped DOC.
2. Fund, develop and train an adequate amount of personnel to fill the roles of a functional DOC. The persons should be NWCG qualified in Command and General staff positions.



OPERATIONS

The Director of Operations reported to the Assistant Chief of Operations in Command of SDFD at the DOC. Once the position and progress of the fire were determined, the Director of Operations strongly urged the CDF Cedar Fire Operations Section to divide the City of San Diego into two Branches. These branches were initially identified as North and South. It should be noted that San Diego was the first area of the Cedar Fire to be geographically divided to facilitate command and control. These branches would later be known as V and VI. Establishing Branches gave the Director of Operations an acceptable span of control. The Director of Operations immediately began developing the following objectives:

- ◆ Determine the position and progress of the fire
- ◆ Dispatch two units to survey and report back the conditions in their districts
- ◆ Dispatch resources to the area of Scripps Ranch and report back
- ◆ Deploy field observers
- ◆ Deploy SDPD's helicopter, ABLE, initially with a SDFD Division Chief for aerial reconnaissance, followed by a firefighter Field Observer for the remainder of October 26th.

As the Cedar Fire escalated, the SDFD Operations Section developed the following long-range multiple operational period objectives:

- ◆ Provide for the safety of all civilians
- ◆ Provide for the safety and well being of all emergency responders
- ◆ Protect city infrastructure
- ◆ Absorb the Command Structure of the Sycamore IC into Branch VI.
- ◆ Establish Divisions/Branches.
- ◆ Identify evacuation areas
- ◆ Keep the fire south of Pomerado Road, east of Interstate 15 and north of State Route 52
- ◆ Attack incipient fires in newly involved structures



Operations Section Issues:

1. The decision to establish Pomerado Road as a containment objective followed sound Wildland firefighting strategy. Without a containment objective, the fire may have been allowed to spread uncontrolled. The implementation of this objective has come



- under scrutiny. If possible, prior to reassignment of companies, the Division Supervisors and Strike Team Leaders should be informed of the strategic plan before reassigning units. The direction for all companies to reposition was questioned by Strike Team Leaders and Company Officers, which were effectively saving homes in their divisions. This decision created a perception that the Branch Director and Division Supervisors were not aware of the number of homes which could be saved south of Pomerado Road. However, the Branch Director and Division Supervisors were aware of the potential loss to homes south of Pomerado Road; and, given the extreme fire behavior and weather pattern the Cedar Fire had no clear containment lines. The potential for greater damage in the communities of Scripps Ranch, Mira Mesa, Kearny Mesa, Clairemont, University City and the Golden Triangle was accepted by all incident managers. This threat combined with the limited resources forced Branch Directors and Division Supervisors to establish a containment objective of Pomerado Rd. in order to protect the remainder of the city. It was the intent of the Branch Director to reassign companies to divisions south of Pomerado Road once the fire was contained.
2. Several companies reported difficulties adapting to the different management styles of Division Supervisors. Many officers reported they were more effective when allowed to make their own tactical (and occasional strategic) decisions with guidance from their Strike Team Leader or Division Supervisor. Units that were reassigned between divisions had a greater awareness of this issue.



Some Division Supervisors were forced to balance their management style between officers who were reluctant to engage without specific direction and those who engaged too aggressively without regard for the overall strategic plan.

3. Issues with span of control and unit accountability have been raised at several levels in the Cedar Fire Command structure. Theoretical span of control ratios are one supervisor for every three to seven subordinates/units. These ratios can be adjusted depending on the leader's ability to manage more or less subordinates. A complicated and dangerous task may require a lower ratio while a less complicated, low risk task may allow a higher ratio. Some span of control ratios were reported to be as high as 1:17.
4. Strike Teams were dismantled to achieve tactical objectives. This process is not discouraged to meet the needs of an escalating incident. However, Strike Team Leaders need to maintain unit accountability to re-assemble their Strike Team. The reconfigured strike teams created a great deal of confusion.
5. A common, scrutinized tactic was the use of a 4" supply line. While this may be the appropriate decision for "routine" structure fires, it created many issues during the Cedar Fire which include the following:
 - Reduced mobility
 - Reduced water system pressure
 - Blocked streets
 - Difficult to pick-up





Operations Section Lessons Learned

1. All units need to be completely briefed on the strategic goals to effectively implement tactical operations. Clear and concise communication from the supervisor and a complete understanding from the subordinate are necessary for effective implementation of tactical operations. The development and training of standard operating procedures for fighting urban wildland/urban interface fires would reduce the need for this briefing during fast moving fires. Thorough training in these procedures would allow for more independent, yet coordinated, action among company officers.

Independent action is empowered and focused effort that furthers the accomplishment of the leader's intent. Freelancing is unguided effort that is possibly counterproductive or even dangerous.

All SDFD firefighters understand that at no time should they unilaterally ignore orders or independently reassign themselves when effective command and control is in place. However, during the Cedar Fire many companies were responding to multiple and emerging fires. Command, control and communications were ineffective on the early morning of Oct. 26th. The values at risk were so great that disengagement was not an option and independent action was required to save lives and property.



As command, control and communications are established, all personnel must understand the importance of reducing their independent actions and direct their efforts to the objectives set by the incident managers, regardless of their own perceptions of the incident. This

process of transitioning from independent action, otherwise known as Initial Attack, to Extended Attack is difficult during emergencies. This transition is made easier with extensive training and experience.

2. It is the supervisor's responsibility to maintain an acceptable span of control. When the ratio reaches a level beyond a supervisor's ability, the



supervisor must delegate his responsibility to a subordinate and establish a new "link" in the Chain of Command. For example, assigning engine companies to a truck company designated as Roof Division.

When a Strike Team Leader assumes a role of Division Supervisor, a replacement leader must be identified. This should temporarily be a Company Officer on an engine from the strike team. Company Officers should be comfortable filling this role temporarily until a replacement leader has been assigned. Strike Team Leader training should be provided to all Captains.

3. The reconfiguring of strike teams in the field creates confusion among Incident Managers, Division Supervisors, Strike Team Leaders and Company Officers. This confusion reduces the ability to maintain accountability for units throughout the incident organization. Within FIREScope, the Planning Section based upon the recommendations from Operations should be responsible for the creation and/or reconfiguring of strike teams, task forces etc.



4. Company officers approached the Cedar Fire with standard tactics for other wildland/urban interface fires. Most Company Officers quickly found that the use of standard tactics were ineffective for fighting the Cedar Fire. The use of a "Bump & Run" style attack was deemed most appropriate. However, the SDFD has not developed a training program to address "Bump & Run" tactics; therefore, many Company Officers were developing their own versions of this tactic. A key component of "Bump and Run" tactics is the return to overhaul those structures which were "Bumped." Without the return, structures thought saved will eventually burn down. Company Officers should attempt to maintain a log of structures "Bumped." This log would provide key information at the Operational Period "turnover."
5. Many companies used a 2½" supply line to meet objectives. When using 2½" supply line, a shut-off butt can be placed at the intake to increase mobility. This reduces the need to return to the hydrant if escape is



necessary. This proved to provide more tactical options. Also, many companies used their smooth bore tips on their master streams. This reduced the demand for water in the water system but still maintained an effective firefighting stream. A suggestion was received to develop Salvage Teams with excess personnel. This tactical operation could prove to be an excellent use of resources on future incidents. Also, the use of Class A foam was reported as invaluable. Currently only one type of apparatus (Pierce Dash) can efficiently apply Class A foam. Companies with this type of apparatus indicated a greater efficiency in their tactical operations. While the Saulsbury's have this foam capability, it is only available through the 100' matteydale (pre-connected 1 3/4" attack line). Additionally, many Saulsbury companies carry Class B foam in the foam tank. In the instances where companies have sufficient time to deploy foam, it has proven to be very effective.

The use of gel products were reviewed for their effectiveness. These products have a much longer "hold" time, and would allow the pre-treatment of several structures. These products should be added to the inventory of all SDFD engines.

Operations Section Recommendations

1. All personnel should be trained in the following NWCG courses:
 - Wildland Fire Behavior (S-190 & S-290)
 - Incident Command (I-100 & I-200)
 - Fire Operations in the Urban Interface (S-215)
2. Captains should be trained in the following NWCG courses:
 - Intermediate Incident Command System (I-300)
 - StrikeTeam Leader Engine (S-334)
 - Basic Air Operations (S-270)
 - Division/Group Supervisor (S-339)
3. Captains should be NWCG qualified in the following positions:
 - Staging Area Manager
 - Strike Team Leader Engine (trainee)
4. Battalion Chiefs should be trained to the following NWCG courses:
 - Advanced ICS (I-400)
 - Command & General Staff (S-420)
 - Operations Section Chief (S-430)



5. Battalion Chiefs should be NWCG qualified in the following positions:
 - Strike Team Leader/Engine
 - Division Group Supervisor
 - Agency Representative
6. Apparatus inventories should be reviewed and updated as needed for fighting wildland/urban interface fires.
7. Fund and develop complete Strike Team Leader kits for all Battalion Chiefs; spare kits should also be maintained at each battalion headquarters.
8. Fund and develop Strike Team Engine kits for all apparatus.





LOGISTICS

The Director of Support Services (Deputy 3) responded to the FCC, at approximately 2300 hrs on October 25th. Deputy 3's first objective was to prepare movement of apparatus to insure that oncoming personnel had apparatus in the station upon their arrival for duty on October 26th. Deputy 3 also coordinated with Battalion 1 to insure personnel would be available where strike team assignments created personnel vacancies. Deputy 3 also coordinated with EMS to place appropriate equipment on backfilled apparatus. As more strike teams were being requested, Deputy 3 consulted the Assistant Chief of Operations. Deputy 3 also notified the Duty Deputy Chief of the events and recommended that he report to the FCC.

By 0100 hours on October 26th, Deputy 3 recognized the need for additional apparatus and equipment. Additional personnel and mechanics were recalled to support the effort. Deputy 3 was directed to prepare all available fire apparatus for service. As the fire entered the City of San Diego, a Logistics Section was developed and expanded to meet the needs of the incident. While many functions of the Logistics Section were occurring, a formal ICS structure had not been established. A formal ICS structure was implemented on October 28th. A Deputy Logistics Section Chief (DLSC) was established to relieve the workload of Deputy 3. The DLSC identified a Support Branch Director to oversee the Facilities and Ground Support Units, while the Supply Unit (which normally reports to the Support Branch Director), and Food and Medical Unit Leaders reported directly to the DLSC.

Logistics established the following objectives:

- ◆ Insure placement of apparatus in stations vacated by strike teams
- ◆ Recall mechanics and Support Services personnel
- ◆ Provide a road mechanic and logistic representative to each branch
- ◆ Provide food and drinks to personnel
- ◆ Provide additional equipment and supplies as needed
- ◆ Transportation for incident personnel

What Worked Well

1. A plan was established and implemented between 2300 hours on October 25th and 0600 hours on October 26th, to outfit and staff available reserve fire engines. Plans were developed to bring in mechanics and supervisors



to quickly repair several fire engines that were at the Repair Facility for previously scheduled repairs and service. This plan was implemented at approximately 0530 hours. This was essential to the rapid deployment of additional firefighters and equipment during the early stages of the fire.

2. Of the 14 reserve fire engines in the SDFD fleet, 12 were placed in service. Additionally, a fire engine recently sold to the city of Tijuana B.C. was put in service as well as our two training fire engines. This effort helped tremendously in getting as much fire protection as possible to the Scripps Ranch and Tierrasanta communities.
3. The incident was managed in a safe manner despite not having sufficient personnel to provide Safety Officers on the fireground. The welfare of the citizens was the highest priority. There were no deaths or significant injuries to fire personnel or civilians in the City of San Diego.
4. The wearing and use of personal protective equipment in most cases was followed by firefighters and when worn contributed to the safety of fire personnel. Emergency Medical Rehab stations were established at each Fire Branch for the immediate treatment of both citizens and emergency service personnel.

Logistics Section Issues

1. SDFD Storeroom did not have sufficient supplies of web gear, fire shelters and other basic equipment and supplies to support an incident of this magnitude. Supplies ran out early in the incident. Requests for supplies had to be made to local businesses that were closed on Sunday. Some supplies were acquired but not enough to meet the need. The purchasing process needs to be improved by providing credit cards at various supply centers.
2. There were not enough reserve apparatus to meet the requirement of this incident, nor were there sufficient reserve Battalion Chief vehicles. Battalion Chiefs were sent to the fireground in old sedans that could not carry all the supplies needed to support their commands. Additionally, there are only two support vehicles in our fleet that could shuttle equipment. This caused a critical slowdown in equipment and supply acquisition and delivery.



3. The use of the department's Urban Search & Rescue (US&R) Logistics Unit could have improved the support of this incident, if we had sufficient personnel for the fire lines. Also, an improved Spike Camp with better facilities to rehab fire personnel could have been established using the US&R equipment cache.
4. Food for firefighters was identified as a significant issue. The SDFD has not been placed in the situation of a "multi-operational period" incident. The Logistics Section attempted to address the feeding of firefighters for the Cedar Fire as it does with any other long duration incident. Some of the more common concerns were:
 - Not enough food
 - Sanitation of feeding areas
 - Food health risks
 - No plan to continue feeding beyond the initial attack
 - Food distribution was not coordinated



5. Transportation of firefighters was chaotic and overcrowded. Many firefighters reported riding back and forth in buses. The lack of coordination between the Operation Section, Planning Section and Logistics Section created problems with the efficient transportation of firefighters.
6. Staging areas were poorly supported. Staging areas are normally established to support the Operations Section with a resource pool. The staging areas for this fire were also setup to operate as Camps. Camp support was established as a reaction to the amount of units present. This reaction placed Camp Manager personnel in a position of attempting



to build a suitable camp without the proper support from the Facilities Unit Leader or LSC. Some personnel verbally abused Camp Managers regarding the lack of support for incident personnel.

Logistics Section Lessons Learned

1. The development of a Logistics Section must occur early in the incident. The trigger for establishing a complete Logistics Section would normally occur when the incident is determined to have multiple operational periods. A complete Logistics Section would have six functional units. These are:

- Food Unit
- Medical Unit
- Communications Unit
- Ground Support Unit
- Supply Unit
- Facilities Unit



2. A proactive response in developing these units with the activation of the DOC would have helped to mitigate many of the Logistics Section issues.
3. The development of logistics plans must be incorporated into a Logistics Section Chief's kit within the DOC. This kit would include all Logistics Section forms and a list of established contracts/contacts for providing support during a large scale incident.
4. The SDFD Command Staff should pre-establish approved guidelines for purchase of incident resources/supplies. This pre-approved process would streamline the establishment of functional units. Credit cards should be issued to every Battalion Chief. This would ensure the support of field units when the Logistics Section is unable to meet the demands of the incident.
5. Training must be funded and provided to ensure adequate personnel are available to fulfill the Logistics positions above the manager level. Currently, the Urban Search & Rescue Program has a minimum amount of trained and qualified persons to fulfill these roles. During the Cedar Fire many of these personnel were assigned to firefighting field units.



6. Personnel with specialized logistic skills should be reassigned from Operations to Logistics when large-scale incidents occur.
7. Operations personnel must be prepared to function with minimal support for the first 24 hours of an incident. This self-support is important to allow the Logistics Section to establish itself during the Initial Attack phase of an incident.

Logistics Section Recommendations

1. Fund, develop and train adequate personnel to function at all Logistics Section Unit Leader levels.
2. Fund the development of Logistics Section Chief Kits to be stored at the DOC.
3. Purchase a sufficient supply of webgear, fire shelters, and other basic equipment and supplies to support an incident of this magnitude.
4. Develop logistical plans and organization charts for storage at the DOC. The Logistics Section Chief should be located in the DOC to coordinate incident needs with the Planning, Operations and Finance Section Chiefs. The functional units of the Logistics Section could be located in the vicinity of the Repair Facility.
5. All firefighters should prepare themselves for minimal logistical support for the first 24 hours of an incident (Initial Attack). Strike Team bags and required support items should be provided for all personnel. This includes:
 - PPE
 - Water
 - Food
 - Uniforms
6. All Battalion and Deputy Chiefs should be issued a credit card for necessary first responder support.



APPARATUS AND EQUIPMENT

The SDFD mobilized every apparatus (directly or indirectly) in its fleet to support the control of the Cedar Fire. Apparatus and equipment needed in response to the Cedar Fire fell far short of what was required for an incident of this type and as identified in the Beeler Fire Report (see attached). Historically, the Department has been unable to receive funding for an on-going Fleet/Equipment Replacement Program. This resulted in insufficient resources for this incident.

Apparatus and Equipment Issues

1. While the number of reserve apparatus was up to authorized numbers, it was perceived there was the lack of reserve apparatus. The status of reserve apparatus led to a rushed but successful attempt to place apparatus in-service. Many of these engines were in disrepair or were no longer designated for service (training engines and an engine sold to Tijuana). The SDFD currently has several levels of reserve apparatus as follows:
 - Ready-Reserve
 - Stripped Reserve with hose
 - Stripped Reserve
 - Training Reserve
2. The stripped reserve engines were not equipped for firefighting. The process for placing an engine in service was too long and complicated. Equipment was not centrally located and accessible. There was not sufficient shelf stock of firefighting equipment to fully outfit all reserve apparatus.
3. Open cab apparatus expose personnel to dangerous conditions. While attempts have been made to mitigate this issue (policies and apparatus purchase), the Cedar Fire demonstrated to a greater extent the need for closed-cab apparatus.
4. Wildland and support apparatus still lack ember separators. Ember separators prevent burning material from entering the apparatus engine air intakes and igniting the air cleaner, causing the vehicle to stall, the air cleaner (and apparatus) to catch fire or be otherwise incapacitated. Air cleaner installations should also be modified on wildland apparatus to



allow rapid access to the air cleaner in the event a fire does develop. Triple Combination Pumpers (TCP) should be included.

5. Personal Protective Equipment (PPE) was inadequate and unavailable. Some personnel felt the PPE designed for Wildland firefighting was inadequate in the wildland/urban interface. A need for PPE support was identified at the staging areas/camps. Replacement PPE should be easily accessible during an incident while companies are in staging or camps.



6. A lack of basic firefighting equipment created challenges for several companies. Many companies felt they were in need of "Allied" equipment during the Cedar Fire. Some companies lost, damaged, abandoned or bartered their equipment. Some companies felt they were ill-equipped at the start of the fire. Specifically, standard apparatus inventories include only:
 - (2) 2½" shut-off butts
 - (1) 2½" Fog Nozzle
 - (1) Spare 1¾" nozzle and shut-off butt.
 - Limited spare 1¾" hose
7. The use of sedan staff vehicles as command vehicles had limited capability. These sedans lack the capacity to carry the necessary equipment for command level officers. Nor do they have the passenger space to effectively move personnel around an incident.



Apparatus and Equipment Lessons Learned

1. The lack of reserve apparatus was an issue identified prior to the Cedar Fire. For an improved response to another fire of the magnitude of the Cedar Fire, the reserve apparatus fleet would have to be reviewed and upgraded. A suggestion was received to establish a Los Angeles Fire Department style of Task Force configuration at some stations. This configuration includes: (1) four-person engine; (1) four-person truck; and (1) one-person engine. The extra engine is a fully equipped frontline engine.



2. Reserve apparatus should be placed in stations where they can be maintained and ready for service. All reserve apparatus should be fully equipped and ready for service.
3. The dangers of open-cab apparatus have been well documented. The SDFD should continue to replace all open-cab apparatus.
4. A retrofit program has been established to mitigate the potentially dangerous situation created by apparatus without Ember Separators. Apparatus still lacking ember separators are scheduled for removal from service. Additionally, all frontline type I engines are equipped with an ember separator. Ember separators have been a requirement in all apparatus specifications since 1985.
5. PPE in the wildland/urban interface has been a concern for firefighters prior to the Cedar Fire. Current policy requires the changing of PPE to meet the encountered hazards. The company officer always has the discretion of increasing the PPE for any incident. A well-established Logistics Section should be able to support the PPE needs of personnel during an incident.



6. Several recommendations were received regarding equipment inventory changes to apparatus. Most recommendations suggested the addition of wildland equipment on engines and structural equipment on Brush Apparatus. These suggestions were primarily directed toward hose, nozzles and fittings.
7. Future staff vehicle purchases should be of an SUV type. This process would expand the SDFD's capability long into the future. These SUVs could be placed into reserve status as utility or command vehicles. During large magnitude incidents, the Ground Support Unit should be able to acquire additional SUVs and pick-ups as needed to support the incident.



8. There is no substitute for a type I or III engine for water application. However, the procurement of apparatus with water application ability should be reviewed to determine their effectiveness for future incorporation into the SDFD's fleet. Ideas for received for apparatus types included:
 - Utility rigs with a crew cab, small tank and pump (type 5, 6, or 7 engines)
 - Quint apparatus (truck companies with water application ability)
9. The SDFD continues to rate among the lowest cost per capita in the nation. It is critical that additional funding is secured to meet the needs for ongoing apparatus/equipment replacement program. Historically, SDFD management has requested that an annual apparatus and equipment replacement program be instituted, and in most cases this request has not been funded. Additionally, to meet the current and future needs of Support Services, appropriate staffing levels must be fully funded. In addition, the SDFD repair facility has reached its capacity and plans for facility expansion should be developed and fully funded.



Apparatus and Equipment Recommendations

1. A thorough review of the SDFDs engine fleet should be performed to address the following issues:
 - Amount of reserve engines to support the SDFD
 - Location of reserve engines
 - Equipment inventory on reserve and frontline engines for safe firefighting operations
 - Inventory to equip stripped reserve engines
 - Reserve engine communications package same as frontline engine
 - Safe operating features
 - Closed cabs
 - Ember separators
 - Emergency lighting
2. A review of storeroom inventory should be performed to ensure proper levels to emergency equip firefighters at an incident.
3. Through attrition, all staff sedans should be replaced with command SUVs.
4. A review of the SDFD's water application capabilities should be performed to determine the need for additional apparatus.
5. Funding should be determined to:
 - Meet the ongoing apparatus/equipment replacement program.
 - Appropriate staffing levels of the Repair Facility.
 - Plan and develop Repair Facility expansion.



COMMUNICATIONS

In FIREScope, the Communications Unit falls under the direction of the Logistics Section Chief. The SDFD has never experienced an incident large enough to utilize a Communications Unit to the degree necessitated by the Cedar Fire. If a Communications Unit had been established, several of the communication equipment issues could have been avoided. The Communications Unit is generally responsible for the following:

- ◆ Develop plans for the effective use of incident communications equipment
- ◆ Assign and coordinate the use of radio frequencies and /or channels in accordance with Federal Communications Commission regulations
- ◆ Install, test and maintain incident communications equipment
- ◆ Supervision of the Incident Communications Center
- ◆ Distribution of communications equipment to incident personnel
- ◆ Maintenance and repair of communications equipment

Communications during the Cedar Fire were conducted on two separate Command Talk Groups; one for each Branch. These channels are exclusive to Zone 3. Only agencies which are part of the Regional Communications System (RCS) would be able to effectively communicate with Branches V and VI. Interagency radio interoperability was not an issue due to the fact that no outside resources were committed to the City of San Diego; however, we certainly would have experienced problems had that not been the case.

What Worked Well

1. A conference call with all Zone Chiefs in the county of San Diego on Saturday, October 25, 2003 at 1400 hours was effective in a joint decision to not fill any additional out-of-county strike team requests. This ensured full staffing of San Diego Fire-Rescue Department (SDFD) fire stations and prevented any further draw down of other county fire resources.



Communications Issues

1. Due to the significant numbers of agencies, City leaders, state leaders, reporters, etc., at Fire Communications, staff personnel could not effectively use their offices or efficiently perform their duties. Noise was an issue on the Fire Dispatch floor and the Basic Life Support Dispatch Center. This should have been controlled better but the facility was too small for the swell in occupant load during the incident, and it was not designed for this purpose.
2. Initial use of GIS mapping was not effective. EOC and DOC staff did not provide specific guidance on what actual needs were going to be in relationship to mapping. SDFD did not have the adequate depth of IT personnel with expertise in setting up networks, equipment and databases to support the incident.
3. SDFD did not have a plan or the basic supplies to establish, activate and run a Damage Assessment Center. This is usually the responsibility of the entity in charge of the overall incident, CDF in this case. However, to expedite the recovery effort for the City of San Diego, SDFD developed our own Assessment Team and program.
4. One or two dispatchers should have been assigned to the Operations Section in the DOC to track unit deployment once the units were assigned to the Branches. The CAD information was not updated during the incident beyond the initial dispatch. This created issues later for the Documentation Section which was responsible for tracking unit and personnel deployment.
5. A Communications Unit was not established to handle the various communications issues. This created a workload issue for FCC personnel, thereby creating an overload on the entire system.
6. The SDFD is not adequately equipped with radios or batteries to support the amount of resources it had operating in the field. The shortage of compatible radios creates problems throughout the Incident Command Structure. Proper incident management is based on effective communication. Without effective communication, incident control is based upon independent action.





7. Too much non-essential radio traffic reduced the effectiveness of radio communications in the field. Several officers reported "giving-up" on radio communication because of the volume of radio traffic.
8. The equipment on SDFD Mobile Communications Unit (Com 1) is beyond obsolescence, and there is a lack of personnel qualified to operate it.

Communications Lessons Learned

1. The Communications Unit should have been established, and by doing so, it would have alleviated the workload in the FCC and maintained control/inventory of portable radios and a cache of batteries (rechargeable and alkaline) for incident personnel.
2. Training must occur to reinforce proper tactical channel usage. This training should include the reinforcement of familiarity with the multiple radio configurations (Motorola XTS-5000, Motorola Saber, Motorola Astro, Bendix-King GPH, Bendix-King EPH, Bendix-King LPH, Motorola C7, Motorola C9, Kenwood and Phoenix).
3. Suggestions for improving radio communications include: purchase of additional portable radios, collection and survey of older style Bendix/King (LPH/EPH) portable radios, and equip all apparatus with a complete radio package.



4. All personnel must be aware of the strength of their portable radio batteries. Often when batteries are weak, the radio will receive but not transmit. There are several options for addressing the portable radio battery issues which include: placing the radio in a charger whenever possible, purchase a clamshell for each portable radio, and acquire more rechargeable batteries.
5. The funding, staffing and replacement of the Com 1 vehicle should be a high priority.



Communications Recommendations

1. Fund, develop and train personnel to function as NWCG qualified Communications Unit Leaders.
2. Incorporate radio usage drills into the regular In-Service Training objectives.
3. Fund the purchase of portable radio accessories, which include:
 - Clamshells
 - Spare batteries
 - Radio chest harnesses capable of carrying (2) portable radios.



FIRE COMMUNICATIONS CENTER

The FCC was the primary focal point for information management. The FCC staff was overwhelmed early in the incident. The design of the FCC is not conducive for large incident management; nor is it a gathering point for non-essential personnel or dignitaries. Additionally, space has been lost with the need to meet the growing demands of operating a communications center for a major metropolitan city.

What Worked Well

1. Fire Dispatch recognized the potential threat to the city of Poway and east county in the late evening on Saturday, October 25, 2003, and notified the Deputy Fire Chief and then the Assistant Fire Chief of Operations. Communications with Poway Fire and Heartland Dispatch were established at 2400 hours. This communication of fire conditions in east county drove the decision to staff the SDFD Communication Center with three Senior Management members by 0300 hours on October 26, 2003.



2. Notifications that the fire was burning in Ramona were made to the Fire Chief and second Assistant Fire Chief at 0500 hours on October 26th. Notifications were also attempted to the City Manager and other City leaders with messages left on their answering machines and/or pagers that there was a fire in the county but no direct threat to the city at that



time. At approximately 0730 hours the City Manager called in to Fire Communications and was briefed and the Mayor was notified of the incident but at that time there were no structures burning in the city.

3. Effective communications and a strong cooperative effort was experienced throughout the incident with all city departments, via the Emergency Operations Center, including but not limited to the Police Department, Park & Recreations, Water, Waste Water, San Diego Data Processing Corporation (SDDPC), Information Technology & Communications (IT&C), etc.



FCC Issues

1. Field personnel feel they no longer receive the same level of support from FCC; specifically, the lack of a Captain. Some personnel have indicated a noticeable difference in the FCC capabilities since the removal of the Captain.
2. The lack of telephones created problems, especially when dignitaries were present.
3. A lack of ICS trained personnel created extraordinary workload for FCC personnel.
4. There was no effective security plan in place at the FCC.



5. The manual entry of unit identifiers into the Computer Aided Dispatch (CAD) seemed to create some confusion during the incident. Resource tracking was difficult to provide.
6. As the City of San Diego continues to grow, FCC staffing levels, special requirements, and equipment needs must be considered in order to be effective during large scale incidents. A stable, consistent funding source needs to be identified to build, staff, and equip a larger FCC in the future.



FCC Lessons Learned

1. A training plan should be developed to educate field personnel on the functions and capabilities of the FCC. Currently, uniform presence exists as the Senior Management has responsibilities for functions in the FCC. Additionally, Firefighters/Captains are recalled on an immediate need basis.
2. The expanded functions of the FCC require the accessibility of more telephones. All the phones located in the FCC were not utilized.
3. The FCC must coordinate with the DOC for the establishment of an expanded dispatch to accommodate the needs of the incident. This expanded dispatch would work directly with incident management personnel. This close coordination would reduce the confusion and



dispatching of resources into the incident without notifying incident managers.

4. A functioning Logistics Section could handle security at the FCC. The Facilities Unit Leader is responsible for security at all incident facilities. In the past, SDPD has been requested to provide security and access to the facility.
5. The lack of pre-designated unit identifiers created a delay in the assigning of resources in CAD. Phantom units should be created in CAD; they should remain off-duty until they are needed and staffed. As personnel report for duty at a staging location the Check-in Status Recorder should communicate personnel availability to a staffing person at the FCC. The staffing person at the FCC would then utilize a phantom unit to track each crew which was properly checked-in.
6. Funding should be allocated to build and staff a FCC that will meet the department needs.





Fire Communications Center Recommendations

1. Inform field personnel of the capabilities and functions of the newly organized FCC.
2. Establish a telephone plan in the DOC manual to ensure full usage of telephone resources at the FCC.
3. Fund and develop training for FCC and DOC personnel to ensure the smooth transition and coordination of a large scale incident. NWCG training should be obtained for personnel working in the Expanded Dispatch of the DOC. This training includes:
 - Basic Incident Command System
 - Expanded Dispatch Recorder
 - Expanded Dispatch Support Dispatcher
 - Expanded Dispatch Supervisor
4. Develop FCC security plans; include these plans in the DOC Operations manual.
5. Develop plans for the rapid assigning of unit identifiers to improve resource/personnel tracking at the FCC
6. Fund the development of a Fire Communications Center to meet the needs of the City of San Diego.



PLANS

A Planning Section was established and a Tactical Action Plan developed for the operational periods of October 27th and 28th. A FIRESCOPE Planning Section has 4 units; they are:

- ◆ Resources Unit
- ◆ Situation Unit
- ◆ Documentation Unit
- ◆ Demobilization Unit

The SDFD Planning Section established all units except for the Demobilization Unit. The utilization of a Demobilization Unit would have mitigated many of the post incident documentation issues. An effective demobilization process captures all necessary incident documentation prior to units being released from the incident.

The Planning Section Chief sets the following objectives:

- ◆ Collect, process, and organize all incident information
- ◆ Maintain status of all resources assigned to the incident
- ◆ Maintain up-to-date incident documentation
- ◆ Complete required incident paperwork normally assigned to other ICS positions

Planning Section Issues

1. A communication breakdown from Field Observers resulted in the lack of information for the incident managers.
2. Difficulty in tracking resources was mostly attributed to two factors: multiple computer-aided dispatch incidents all related to the Cedar Fire, and the reconfiguring of Strike Teams/Task Forces by Operations personnel.
3. Personnel were unfamiliar with the planning/documentation process required of a large incident.
4. The DOC was poorly equipped and had insufficient space to handle the needs of a functional Planning Section.



5. Too few personnel with Planning Section skills created a delay in establishing a fully functioning Planning Section. Many of these personnel were assigned to the fire for the first two days.
6. A lack of a support for the Demobilization Unit led to many issues regarding the appropriate documentation of incident resources. Although a Demobilization plan was developed on October 28th, no units were sent through. Instead, units were rushed back into service. This "skirting" of the process required "backtracking" the documentation process. This backtracking may result in incomplete reimbursement claims.
7. After the fire, the Documentation Unit was tasked with assembling a post incident documentation package. Unfortunately, very few of the necessary documents were completed. Consequently, the Documentation Unit was then forced to "recreate the incident" for post-incident reporting and reimbursement.





Planning Section Lessons Learned

1. The decision to establish Field Observers was well intended. However, the Field Observers were placed in this position based on their availability, not on their knowledge or skills to perform this function. The Field Observers became involved in the strategy and tactics of the incident instead of maintaining communications with their supervisor (Situation Unit Leader, Planning Section Chief or the Incident Commander). All personnel are responsible for understanding their role in the ICS organization. Most confusion about roles and responsibilities can be clarified in the Field Operations Guide. Training must occur in all positions of FIRESCOPE.
2. All Units/Leaders/Supervisors/Branch Directors must maintain resource accountability. This accountability must be reported "up the chain" to maintain proper accountability of all personnel/resources. The proper FIRESCOPE forms need to be made available to any person responsible for resource tracking. The use of these forms is vital to the function of the Resources Unit.
3. Training of all officers in the appropriate documentation of incident activities is necessary for the efficient function of a Planning Section. This documentation should be made available to all personnel.
4. Funding should to be provided in order to ensure the DOC is adequately equipped for a functioning Planning Section. This includes additional telephones, high speed copiers, and high speed plotter printers for map production, dedicated work space and computers with network access.
5. The funding and development of trained Planning Section personnel must be established to effectively handle another large incident.
6. Communication at the Command and General Staff level must be maintained to ensure the accomplishment of all incident objectives. The Demobilization Process, although mundane in its appearance, is a crucial component of incident management.
7. The lack of ICS skills in all levels of the SDFD led to extraordinary workload for the Documentation Unit. Training must occur to increase SDFD personnel's ability to accurately complete necessary incident



documentation. Hundreds of hours were put into resource tracking, Unit Log (ICS214) deciphering and reimbursement form completion. These responsibilities normally occur at different positions of FIRESCOPE.

Planning Section Recommendations

1. Fund, develop and train personnel to functional NWCG qualified levels. These positions should include:
 - Unit Leaders
 - Field Observers
 - Display Processors
 - Check-in/Status Recorders

2. Train all personnel to the I-200, Basic Incident Command System level.



3. Fund the development of a Planning Section Chiefs kit to be stored at the DOC.

4. Fund the procurement of necessary Planning Section equipment to be stored at the DOC. This equipment includes:
 - Additional telephones
 - High speed copiers
 - High speed plotter printers
 - Computers with network access

5. Incorporate and utilize a Demobilization Plan for all state or federal reimbursable incidents.



DAMAGE ASSESSMENT

The establishment of Damage Assessment Teams began with the need for information regarding damaged and destroyed homes. Prior to the Cedar Fire, the SDFD had never identified the need for Damage Assessment Teams. The Damage Assessment Teams were comprised of personnel from the Fire Prevention Bureau, Development Services, Planning & Emergency Response, and Information Technology and Communications. The objectives of the Damage Assessment Team were initially unclear. After several meetings regarding objectives, function and chain-of-command, the Damage Assessment Team began to effectively meet the following objectives:

- ◆ Develop a process for capturing all necessary information
- ◆ Train team members on the process
- ◆ Provide for safety of team members
- ◆ Coordinate activities with the Situation Unit
- ◆ Validate documentation
- ◆ Document damage and produce final report



Damage Assessment Issues

1. The lack of a Damage Assessment process, structure, and equipment created many challenges with the establishment of the Damage Assessment Teams. This created a delay getting teams in the field and providing management staff and elected officials with damage assessment information.
2. Team members had no experience in conducting damage assessments.

Damage Assessment Lessons Learned

1. A procedure for the development of Damage Assessment Teams should be well defined. This guideline should be maintained within the DOC. This would eliminate the need to re-create the process at the next large-scale incident. A supply and equipment cache should be located at the DOC for rapid deployment of these Damage Assessment Teams.



Damage Assessment Recommendations

1. Fund, develop and train a formalized Damage Assessment Team. The team should comprise the following personnel:
 - Building Inspectors
 - Structural Engineers
 - Fire Inspectors
 - MAST Personnel
2. Metro Arson Strike Team (MAST) members should be included on Damage Assessment Teams based on their skills, training and experience relative to damage assessment.



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EMS

San Diego Medical Services Enterprise (SDMSE) played an integral role in system response and support for both fire and EMS. Senior Management from SDMSE responded to the communications center in the early morning hours of October 26th. SDMSE immediately began to call back personnel to staff all available ambulances, communications positions, supply room, and fleet services. All rolling stock was equipped and staffed with qualified personnel. Support personnel from Store 42A, as well as mechanics from SDMSE's Fleet Services Division, setup medical and vehicle logistics. Personnel also staffed Medical Support operations at three rehab areas along the fire front.

SDMSE maintained service levels above the stated City contractual goals during the Cedar Fire. EMS delivery was maintained by assigning a third person to each ALS unit in order to compensate for the loss of countywide first responder services. SDMSE communication personnel shifted BLS communication operations to the ALS communications positions to facilitate DOC functions and turn over BLS ambulance operations to one central command and control operation for the duration of the incident.

One of the most intriguing things that came out of the firestorm from a medical perspective was the use of First Watch. This web based Bio-Surveillance program assisted personnel in predicting where respiratory illness might be more prevalent. Noting the satellite images of the smoke pattern and correlating this with the calls the department was receiving for respiratory complaints, staff was able to predict where in the city the most likely place the next call was going to occur. This saved several unnecessary move-ups and ultimately gave the citizens of San Diego faster service. Although this system cannot be used to predict calls on a day-to-day basis, it can, however, aid in times of unusual circumstances and conditions as it did in this case.

EMS Issues

1. There was a lack of appropriate DOC space, which severely impacted the SDMSE's ability to maintain BLS communications.
2. There was a lack of space at Store 42A for influx of palletized shipments of medical supplies and vehicles which created difficulties in the accounting, receiving and distribution of medical supplies.



3. There was a lack of gurneys for all rolling stock.
4. There were issues related to County of San Diego Annex D protocols. These issues were related to communications with the County EOC, resource control and availability.

EMS Lessons Learned

1. Although BLS operations were disrupted during this incident, if this had been a medical instead of a fire incident, disruption of the BLS communications center might have been troublesome. A need for an actual DOC area is needed.
2. The need for additional space for the influx of medical supplies and vehicle stocking was needed. Although critical to the success of callback response and deployment, having all personnel respond to the area of the storeroom and communications center created logistical issues for flow. The department should look for a larger area to support delivery, storage, and traffic flow.
3. A budget needs to be identified to outfit all rolling stock with a gurney, and provide adequate levels of backup equipment as well.
4. Fund the purchase of back-up equipment for all rolling stock.





EMS Recommendations

1. Fund and develop a DOC which does not disrupt the daily function of EMS dispatching. Specifically, BLS dispatching should not be displaced or impacted by the function of the DOC.
2. Develop Logistics Section's plan to include a functional Supply Unit that does not disrupt the daily function of the storerooms.
3. There is a need for a County Medical Operations Center. A working group is studying the areas of concern raised from the County's Annex D plan.
4. Design and develop a central operations center for the coordination of ambulances resources.
5. Participate in the working group to develop a County Medical Operations Center.



FINANCE

On Sunday, October 26th, the Director of Fiscal Services responded to the DOC. He monitored operations and was available to address fiscal-related questions. The emphasis on the first day was more on acquiring needed resources rather than the cost incurred or the documentation of those costs. Very little cost information was actually available as well.

On October 27th, there was no Fiscal Services representation at the DOC. The Senior Management Analyst working out of the headquarters office responded to many questions regarding accounting procedures and job order numbers. After the emergency was over, the Senior Management Analyst also coordinated preparation of State and Federal reimbursement claims related to the fire. The initial objective for the Finance Section included assisting the Director of Support Services with procurement issues such as getting emergency meal deliveries to firefighters on the front lines and investigating potential emergency lodging arrangements for firefighters in the immediate vicinity of the Fire Communications Center.





Finance Issues

1. There was no work area at the DOC assigned for the Fiscal Services position.
2. There were no pre-established job orders to capture costs associated with the incident.
3. In the middle of a large incident such as the Cedar Fire, the most important need is to quickly acquire and distribute emergency resources to front line personnel. In this instance, the situation was aggravated by the fact that the most intense period of firefighting for City of San Diego firefighters occurred on Sunday when most commercial sources of supply were closed and new supply arrangements were difficult to make.

Finance Lessons Learned

1. In the future it would be desirable to have advance, emergency open purchase order arrangements established with vendors that carry emergency supplies. This would allow the sources of needed supplies to be known ahead of time and establish procedures for obtaining supplies outside of normal business hours. While it is probably not possible to anticipate all potential supply needs, based on experience gained in fighting the Cedar Fire, there are a number of high priority items which can be identified.
2. Establish Job order numbers to capture labor costs. This would facilitate subsequent reimbursement documentation.
3. A resource directory including key contacts should be developed, distributed to Senior Management, and maintained at the DOC.

Finance Recommendations

1. Fund, develop and train an NWCG qualified Finance/Administration Section Chief.
2. Fund and develop a Finance/Administration Section Chief's kit to be stored at the DOC.



3. The DOC plan should identify Finance and Logistics Section Chiefs. These section chiefs should work together to establish procedures with the Purchasing Division to facilitate supply purchases during emergencies.
4. Established purchasing procedures, contacts and resource directories should be maintained in the Finance Chief's Section kit at the DOC.
5. An EOC activation always should identify Finance and Logistics Section Chief positions.



AIR OPERATIONS

Copter One's contract in San Diego was due to expire on October 22, 2003 at midnight. At expiration the helicopter would be returning to Idaho by October 24th. Two factors warranted an effort to have Copter One assigned to an incident by the end of the contract. These factors were the escalating Roblar Fire burning on Camp Pendelton and the anticipated extreme fire weather forecast for the San Diego area. A regional assignment would have effectively extended the contract and kept the helicopter in the San Diego region. A request for Copter One to the Roblar Fire in Camp Pendelton was never received by the SDFD.



A second effort was made to keep Copter One available for the anticipated extreme fire weather. During the evening hours of October 22nd, the Regional Helicopter Program Manager was in contact with personnel from CDF. An agreement was approved to have Copter One placed on a CWN (call-when-needed) emergency contract to CDF. The placement of Copter One on this contract gives ownership of the aircraft to CDF. The details of personnel assignments and costs were agreed upon and Copter One was assigned to the Ramona Air Attack Base. Copter One was assigned to the Old Fire in San Bernardino county at approximately 1000 hours on October 25th. Copter One remained on this assignment until its release at 0930 hours on October 27th.

Upon Copter One's return to San Diego, it was assigned to the Paradise Fire in Valley Center. Copter One, along with Copter 538 and a National Guard Blackhawk, worked to protect structures at this incident. Copter One was released back to Montgomery Field on the evening of October 27th and was available for all responses.

On October 28th, the U.S. Navy helicopters (Copters 10, 12, 16, 20) arrived at Montgomery Field. This day was spent inspecting, training, preparing and developing response criteria for the Navy helicopters for operations within the City of San Diego. The utilization of Navy helicopters was approved by the Cedar IC for use only under the direction of City of San Diego, and they were not to be used as part of the air resources for the Cedar Fire IMT Air Operations Branch Director (AOBD). If the Cedar Fire IMT AOBD requested Copter One, a replacement command and control helicopter would need to be identified for the Navy helicopters. Copter One remained available at Montgomery Field in anticipation of a request to respond to the Cedar Fire. Visual flight



conditions deteriorated and the Air Operations Branch activities of both the Cedar and Paradise Fires were discontinued.

PIO issues resulted during training of Naval helicopters. The lack of public information regarding training resulted in numerous calls to headquarters about the fire's path, action and return.

On October 29th, Simon T., a citizen, volunteered a helicopter (Copter 7UM) to perform as command and control helicopter for the Navy helicopters. Copter 7UM was then included in the training and response criteria established for the Navy helicopters. The City of San Diego had a fleet of 6 helicopters (Copter One, 7UM, 10, 12, 16, 20) available at Montgomery Field. At 1345 hours, Copter One crewmembers monitored emergency radio traffic regarding the injuries to multiple firefighters and the subsequent death of a firefighter in the Wynola area of the Cedar Fire. The Regional Helicopter Program Manager made contact with the Monte Vista Interagency Communication Center (MVICC) to advise them of Copter One's availability with (2) paramedics. The MVICC acknowledged the availability of Copter One and indicated there was not a need. The fleet of helicopters was effectively utilized in Division S (Scripps Ranch) the remainder of the afternoon.

On October 30th, the helicopter fleet continued its training and preparation for anticipated requests for air support. This was the final day of operations for Copter 7UM and the Navy helicopters.

From October 22nd through October 31st, no personnel from the Cedar or Paradise Fires Air Operations Branches made any attempt to contact the Regional Helicopter Program Manager or the SDFD FCC to determine the status of Copter One. However, the Regional Helicopter Program Manager did inform them of Copter One's availability. Additionally, Copter One was not included on the Cedar Fire Incident Medical Plan (ICS-206).



Objectives established for the Air Operations Section included:

- Keep Copter One in San Diego for the duration of the anticipated extreme fire weather.
- Acquire additional air resources (U.S. Navy and Simon T.) to support Air Operations within the City of San Diego
- Train acquired air resources to perform under the direction of qualified supervisors
- Respond to new and current fires as requested



Air Operations Issues

1. A lack of funding forces Copter One into constant negotiation with non-participating Regional Helicopter Program agencies for responses, thereby reducing its availability and effectiveness.
2. The development of Copter One as a regional helicopter resource is still in the design/implementation process. While in this process, the acceptance of Copter One as a viable air resource must overcome some resistance.
3. The required use of contracted firefighting aircraft for CDF/USFS fires delayed and restricted the use of U.S. Navy helicopters for the Cedar Fire.



Air Operations Lessons Learned

1. Funding should be identified for Copter One. This funding should be established and maintained to develop standard response criteria for all fire and rescue operations in San Diego County.
2. All air resource providers need to work collectively to provide the best air support for the citizens of San Diego County. As Copter One's development is finalized, the acceptance and understanding of its capability will be widely accepted. Copter One will provide a fire-rescue service augmenting the capability of other air resources in San Diego County and providing services not currently available with other providers.



3. The development of agreements with all regional aviation resources, including military, should be considered. These agreements would ensure a timely and effective deployment of air resources in large scale incidents.

Air Operations Recommendations

1. Fund Copter One and develop standard response criteria for City of San Diego portion of the Regional Fire-Rescue helicopter program.
2. Continue participation in the various helicopter working groups and committees.
3. Develop and review the capabilities of local military air resources. Incorporate appropriately into local response plans (thru Firescope).
4. Develop and implement a plan to establish a fleet of three fire-rescue helicopters under a regional program.

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Timeline of Events



Timeline

This timeline is a compilation of several sources. These includes, but is not limited to, unofficial radio and telephone transcripts, narratives, Unit Logs, and the CDF/USFS Cedar Fire Report and draft Post Incident Analyses Summary. Radio transmissions were among several different channels.

10/25/03, Saturday

- 1100 Copter 1, under CDF contract, responds to the "Old Fire" in San Bernardino
- 1200 The Regional Helicopter Program Manager responds to the "Old Fire" as the Air Operations Branch Director
- 1736 Aircraft "cutoff", air resources will not respond due to impending nightfall.
- 1737 Cedar Fire reported to the Monte Vista Emergency Communications Center, the fire is located in the Cleveland National Forest Cedar Creek area, east of Ramona and 25 miles east of the City of San Diego. Difficult access creates to great of risk to for firefighters to begin attack.

CNF responds: (1) Division Chief, (1) Battalion Chief, (9) engines, (1) handcrew and (2) water tenders.

CDF Responds: (2) Battalion Chiefs, (5) engines, (2) handcrews, and (1) dozer.
- 2004 Cedar IC advised of forecasted weather pattern, 25-35 mph east winds with possible gusts to 50 mph.
- 2215 Monte Vista broadcasts, on County Red, advising all base stations that the Cedar Fire is expected to be a large fire. Hold off-going personnel. Fire is visible from Valley Center to Alpine. Zone 3 acknowledged.
- 2244 Evacuations ordered for Ramona.
- 2300 Deputy 3 arrives at the FCC.
- 2307 Monte Vista broadcasts, on County Red, a warning of the potential threat to Ramona. All other agencies in zone 3 were notified.



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- 2318 CDF BC reports 60-80 acre area ignition with 75-100 foot flames. He was looking east from the Ramona Country Estates.
 - 2329 Monte Vista requests a type I strike team for the Cedar Fire. XSD 6438A (B107) is dispatched to Ramona Country Estates.
 - 2356 The CDF and USFS enter into a Unified Command. The fire is estimated at 5,300 acres.

10/26/03, Sunday

- 0014 Monte Vista requests additional type 1 strike team for the Cedar Fire. Strike Team type I (B33) is dispatched to Ramona Country Estates.
- 0017 The San Diego Fire-Rescue Duty Deputy Chief was briefed.
- 0157 Poway Duty Chief is advised of a warning from Monte Vista. The fire is expected to be a threat to Poway in 4-8 hours.
- 0200 Daylight Savings begins.
- 0200 Post incident analyses estimates the fire at 28,395 acres.
- 0229 Grass fire response to the Highland Valley area, responding units advise a "header" visible from station 33 in the Ramona/Escondido area.
- 0300 Post fire analyses estimates the Cedar Fire acreage at approximately 62,000. At this time the spread of the Cedar Fire was not fully understood by the incident commanders.
- 0300 Assistant Chief 1 arrives at the DOC and assumes DOC Manager responsibilities.
- 0309 A report from the San Diego Sheriff's Office to Monte Vista indicated (4) people trapped in the Wildcat Canyon area. The fire spread is approximately 4.4 miles in 44 minutes.
- 0309 Deputy 5 at scene of the Highland Valley grass fire.
- 0328 Assistant Chief 1 and Deputy 5 discuss the backfilling of stations.



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- 0403 SOP2 reports, from Hwy 67 and Lake Jennings, a 7 mile wide fire front with 40 foot flame lengths.
- 0418 The Repair Facility firefighter is instructed to start equipping a reserve rig from the shop.
- 0437 Strike Team type III, XSD 6435C (B7), is reassigned from the "Roblar Fire" to Heartland for the Cedar Fire.
- 0453 Battalion 3 is requested to move the reserve engine from station 16 to station 3.
- 0500 The Cedar Fire enters the City of Poway jurisdiction.
- 0503 The San Diego Fire-Rescue Operations Deputy Chief reports the fire west of Hwy 67 at Johnson Lake Rd. and is moving fast.
- 0601 Resident in Tierrasanta calls the SDFD FCC concerned about soot and ash falling.
- 0615 Heartland Fire Communications reports losing houses in Lakeside
- 0627 Resident in Tierrasanta reports glowing embers falling.
- 0635 Division 2 contacts Deputy 5 at the DOC.
- 0644 A call is made to Monte Vista regarding aircraft availability.
- 0651 Several calls from Scripps Ranch residents regarding the need to evacuate.
- 0653 Miramar Fire Department calls into FCC advising they are responding to a fire on East Miramar.
- 0658 Caller on Garden Rd. (Poway) reports fire coming over hill.
- 0659 Miramar requests a type III strike team and a water tender. Strike Team type III (B105) is dispatched at 0709.
- 0705 E52 advises fire has jumped Hwy 67 at Scripps Poway Parkway.



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- 0710 Assistant 1 requests Deputy 4 to respond to the DOC
- 0712 E52 at the end of Sycamore Canyon, 30 home threatened, requesting a type 1 strike team to Hwy 67 and Rio Maria Rd.
- 0716 E52 reports 40 foot flame lengths.
- 0716 Poway units directing each other to Deerhill then to Rio Maria.
- 0717 Miramar Training Chief assumes Sycamore Command
- 0721 E52 reports a fully involved ranch house at Gooden Ranch
- 0723 Sycamore Command asks if there is any aircraft available.
- 0724 San Diego advises Sycamore Command they are checking on aircraft.
- 0724 Sycamore Command reports no structures threatened at this time. Fire is heading towards Scripps Poway Parkway. Later reports fire is heading through Sycamore canyon, turning south for Santee.
- 0729 Sycamore Command notifies strike team-command post will be at the forest service facility off Pomerado Rd.
- 0730 E107 & E44 respond to a smoke check on Spruce Grove (Scripps Ranch). RP advises fire is northeast (further up Pomerado Rd.) from this location.
- 0731 Poway Division 1 reports the fire has burned through Sycamore Canyon and is now in the Sycamore Test Site.
- 0734 BR62 advises Sycamore Command, fire is at R24 burning south, recommends structure protection for Tierrasanta.
- 0741 Strike Team type I, B207, dispatched to Pomerado Rd. and I15.
- 0750 Division 2 in SDPD ABLE performing aerial reconnaissance.
- 0800 BR24 with 37/C crew surveys district and reports back 60-80 foot high flames, 1-2 mile front. The fire appears to be moving at 20-30 mph. There were many fire devils and spotting 100yards ahead of the fire. The fire is burning towards Scripps Ranch, Poway and I15. This report was never



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- relayed to Deputy 5 in the DOC nor could it be located in any of the phone or radio tapes.
- 0800 PIO arrives at the DOC.
- 0800 B Division released from duty.
- 0805 Strike Team type I, B207, diverted to Pomerado Rd. and Semillion.
- 0808 Rio Maria Command (Poway) requesting type 1 and 3 strike teams. Fire is moving north on the west side of SR67.
- 0809 Strike Team type I, B2, dispatched to Scripps Ranch.
- 0813 Monte Vista calls the FCC, regarding strike teams for Scripps Ranch, they state they are out of resources and can send nothing.
- 0813 Caller at 12502 Swan Cyn Pl. (Scripps Ranch eastern Pomerado Rd.) reports flames visible to the south.
- 0814 B105 reports no active fire in Beeler canyon at this time. Sycamore Command reports fire will be in Scripps Ranch in 20-30 minutes. Sycamore Operations reports fire front approximately ¼ mile.
- 0818 Sycamore Operations advises Sycamore Command per Poway Division 1, structures threatened in Sycamore Canyon.
- 0820 Caller at 9915 Rue Chantemar reports fire behind house. Over the next five minutes several calls to the SDFD FCC reporting essentially the same information.
- 0820 Deputy 4 arrives at the DOC.
- 0821 Call is placed to Monte Vista requesting 10 immediate-need type 1 strike teams; Monte Vista advises they will be from out-of-county.
- 0822 BR152 reports they are alone on 6-10 homes, he expects to lose 60% of them.
- 0825 Fire reported at Rue Biarritz.
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- 0827 Sycamore Operations advises fire has jumped fire break. Wind has shifted; fire is heading more for Scripps Ranch. Sycamore Command comments, "I think we're in trouble unless we get aircraft."
- 0830 Sycamore Operations requests (2) type 3 strike teams
- 0830 Deputy 6 arrives at the DOC, B4 sent by Deputy 5 to represent SDFD in Unified Command
- 0830 Assistant Chief 2 arrives at the DOC and assists in DOC Management responsibilities.
- 0831 Police Dept. Support (PDS) reports fire 10' from homes on Rue Finistere.
- 0832 Sycamore Operations advises Sycamore Command, fire in the structures, Rue Vincennes.
- 0836 B207 reports his units are engaged in structure protection on the east side of Avenida Magnifica.
- 0837 Strike Team type I, B205, dispatched to Scripps Ranch.
- 0841 B105 calls in from Scripps Ranch, states he "expects to get hit hard soon."
- 0842 B105 reports they have lost homes on Rue Biarritz. Making a stand on Rue Chantemar and Chantemar Pl.
- 0845 Sycamore Command requesting a SDFD Chief for Unified Command, advises structures are being lost. San Diego responds they are sending as many units as possible.
- 0845 Poway reports fire is about to hit Raptor Rd. area.
- 0848 PDS advises several roof fires on Rue Finistere.
- 0852 CHP advises fire north of SR52 west of Mast Blvd.
- 0854 Sycamore Operations requests aircraft status.
- 0857 Division 2 reports, from ABLE, fire has reached Miramar Rd. and I15

SAN DIEGO FIRE RESCUE FIRE CHIEF JEFF BOWMAN



- 0858 Rio Maria Command advises fire has jumped Hwy67 and is heading west.
- 0859 Assistant Chief briefs the City Manager. He advises him of losing structures and there are no air assets available. They also discuss the status of Copter 1.
- 0900 E39 sent to survey SR52.
- 0901 San Diego advises Sycamore Operations, no aircraft available.
- 0905 Division 2 advises fire has jumped I15 at Kearny Villa Rd moving southwest. Division 2 requests 20 type 1 strike teams to Scripps Ranch.
- 0907 Division 2 reports fireline is approximately 5 miles long butting into Scripps Ranch.
- 0910 Deputy 4 arrives at the City EOC.
- 0912 Report of houses burning on 12366 Sycamore Ridge.
- 0914 Sycamore Operations requests 2 type 1 strike teams.
- 0917 SDPD advises their units are pulling-out of Rue Chantemar
- 0920 Division 2 advises highest priority is Scripps Ranch north of Pomerado Rd. We also need resources on SR52 for Tierrasanta.
- 0921 San Diego advises Sycamore Operations, no units available.
- 0922 E39 reports fire is approximately 1 mile north of SR52 and Mast Blvd heading southwest.
- 0923 Report from Scout 1, fire has jumped Kearny Villa and I15
- 0926 Rio Maria Command reports fire has jumped Hwy67 heading into Poway. The fire has also jumped Scripps Poway Parkway heading south.
- 0928 E39 advises a large fire front approaching, requesting a type 1 strike team to SR52.



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- 0933 SOP3 reports fire is south of Miramar Rd. on the base. B6 advises fire south of Pomerado Rd. at the 15/163 split.
 - 0943 Caller reports fire near De Portola Middle School (Tierrasanta).
 - 0945 B4 arrives at Cedar ICP in Ramona.
 - 0950 Dispatch Manager has a discussion about Code N page regarding a general callback.
 - 0952 Sheriff's Office reports buildings burning in Camp Elliott.
 - 1000 Media request for all off-duty San Diego firefighters to report to station 28.
 - 1000 Post incident analyses estimates the Cedar Fire at 116,373 acres.
 - 1020 ABLE reports fire is 1 mile from SR52 and Santo Rd. E39 at Santo and SR52.
 - 1034 A report of 5-8 mile fire front headed south toward SR52.
 - 1050 Structures on Lorie Av starting to burn (Scripps Ranch).
 - 1051 Fire reported in Mission Trails Park south of SR52.
 - 1058 CHP reports fire west of I-15 at Clairemont Mesa Blvd.
 - 1100 SDFD Situation Unit established at the DOC.
 - 1109 Flames visible from in Mission Trails park from Jackson Dr. and Mission Gorge Rd.
 - 1110 Caller reports fire at SR163 and Kearny Villa Rd.
 - 1121 Reports of fire jumping SR52 near Mast Blvd. Deputy 6 reports orders the evacuation of Tierrasanta.
 - 1124 Field Observer 1 reports fully involved structures on Caminito Calor and Caminito Suelto (Scripps Ranch).
 - 1154 E34 reports fire cresting over the ridge at 11,000 block of Portabello Dr. (Tierrasanta).



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- 1158 BLS22 reports structures threatened at Kearny Mesa Rd. and Magnetron.
 - 1212 Report of Structure Fire at 9404 Chesapeake Dr.
 - 1230 Air Tactical Group Supervisor (Air Attack) flew western edge of fire and reported conditions are too windy and smoky for air drops at this time.
 - 1240 Branch 6 reports the following divisions assigned- A, B, C, D, AA
 - 1241 Branch 6 reports to Plans, Div AA is holding the fire south of Spring Canyon, east of Pomerado Rd., with multiple homes burning, fire approaching from the south, requesting 20 strike teams.
 - 1258 Branch 6 requests 20 strike teams to Scripps Ranch.
 - 1301 Fire is at 10,000-11,000 block of Pomerado Rd. and Ave. Magnifica.
 - 1317 Report of fire at Clairemont Mesa Blvd and I805.
 - 1337 Branch 6 advises multiple structure fires in Spring Canyon area, heaviest area of fire concentration-La Colina, Magnifica, Pomerado Rd.
 - 1351 Fire is making a run in the area of Connel and Wildlife (Scripps Ranch).
 - 1421 Small plane crash on SR163 behind Station 28.
 - 1900 Post incident analyses estimates the Cedar Fire at 128,631 acres
 - 2400 Post incident analyses estimates the Cedar Fire at 153,448 acres

10/27/03, Monday

- 0125 Strike Team type I, XSD 6437A, B5, released from "Grand Prix" fire in San Bernardino and reassigned to San Diego for the Cedar Fire.
- 0930 Copter 1 and the Regional Helicopter Program Manager released from the "Old Fire."
- 2200 Post incident analyses estimates the Cedar Fire at 193,646 acres.



10/28/03, Tuesday

Fire Chief declares containment of the Cedar Fire within the jurisdiction of the City of San Diego

10/29/03, Wednesday

1200 The Local Assistance Center functioning in the Scripps Ranch community.

2200 DOC deactivated.



Conclusion

The Cedar Fire has been determined to be the most destructive fire in California history. While the Cedar Fire had a devastating effect to life and property, this significant countywide disaster did provide a valuable learning experience, which cannot be replicated in the classroom. The SDFD had an opportunity to exercise its ability and capacity beyond what any drill or exercise setting could present. There were countless lessons learned at all levels of SDFD.

The Cedar Fire validated that the SDFD is under-funded, under-staffed and inadequately trained to respond effectively to complex incidents for extended operational periods. SDFD senior management has historically documented that continued budget reductions, deferred apparatus purchases and maintenance, and lack of staffing to keep up with community growth would have serious implications in its ability to respond to emergencies.

SDFD senior management will review the issues and recommendations contained in this report. Issues that require action will be prioritized and integrated into the senior management and strategic plan initiative process for resolution.

Despite the lack of apparatus, equipment, and staffing, members of the San Diego Fire-Rescue Department rose to the occasion. They provided support, via the State and Local Mutual Aid System from East County to San Bernardino during this memorable period in California's fire history. SDFD personnel, both uniformed and non-uniformed, from support personnel to line fire fighters, all gave their best effort in protecting life and property and providing services to the community during the Cedar Fire

The SDFD is committed to take the lessons learned from the Cedar Fire and apply them to improving all risk planning, preparedness, and response and recovery efforts. Though many of SDFD personnel may never again see a local disaster of this magnitude, we will never stop preparing for and improving our levels of service to the community we serve. SDFD will do the best it can within existing resources to accomplish this. SDFD will also continue to request additional funding and resources that are needed to protect our citizens and our personnel.