

**CITY OF SAN DIEGO
M E M O R A N D U M**

DATE: November 18, 2003
TO: Michael T. Uberuaga, City Manager via P. Lamont Ewell, Assistant City Manager
FROM: August F. Ghio, Assistant Fire Chief
SUBJECT: Firestorm 2003 After Action Initial Report

The following information is provided by San Diego Fire-Rescue Department (SDFD) as an initial After Action Report per Mayor Dick Murphy's request dated October 28, 2003. SDFD will be developing a more comprehensive report by January 2004.

1. What did we do right?

Communications and Support Functions

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 not to 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.

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 Duty 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 Staff members by 0300 hours on October 26, 2003.

Notifications 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 that at that time there were no structures burning in the city.

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 & Recreation, Water, Waste Water, San Diego Data Processing Corporation (SDDPC), Information Technology & Communications (IT&C), etc.

Eleven Damage 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.

Teaming with the 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.

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 Staff and City leaders throughout the operation. Central Stores were effective in delivering all radio batteries they had in stock to Fire Communications early in the incident.

Command and Control

There were no deaths or civilian injuries in the City of San Diego and mostly minor injuries to our firefighters. This was in 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.

All fire stations were notified at 0630 hours that personnel were to remain in station until further notice. This ensured a large pool of personnel to staff reserve apparatus and to standby and deploy in case the fire hit the city. At the same time the staffing desk was calling off-duty personnel to staff reserve apparatus that were anticipated to be repaired. At approximately 1000 hours a general recall of off-duty personnel was made utilizing the local media.

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.

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.

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 the 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.

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.

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.

Though the funding for Copter 1 ran out on October 22, 2003, the City Manager and Mayor approved a plan to return Copter 1 to San Diego, and the helicopter was officially requested at approximately 1235 hours on October 26th. 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 and redeployed to Tierrasanta and a San Diego Brush Strike Team was released from Camp Pendleton and redeployed on the Lakeside portion of the fire.

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.

Logistics, Supply and Equipment

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.

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.

Safety

The incident was managed in a safe manner despite not having sufficient personnel to provide Safety Officers on the fire ground. 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.

The wearing and use of personal protective equipment was followed by firefighters and 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.

Emergency Operations Center

The City Manager and the Office of Homeland Security Director called for the activation of the Emergency Operations Center (EOC) early in the incident. SDFD staffed up to two positions during the incident. The EOC was key to meeting communications and request needs of all City services during the incident.

Department Operations Center

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, reviewed and reprioritized objectives as necessary. Their experience 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.

Media Relations

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. Regular pre-briefings 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. 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.

2. What did we do wrong? What needs to be changed?

Communications

Security at Fire Communications was not enforced and identified early as an issue during the incident.

All members of SDFD Senior Staff should have been recalled earlier on October 26th, when conditions began to change and the fire was advancing on the city. The Department Operations Center should have been established earlier in the incident. It was 1000 hours before it became fully operational.

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.

Initial use of GIS mapping was not effective. EOC and DOC staff did not provide specific guidance on what actual needs were in relation 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.

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 and Development Services developed our own Assessment Team and program.

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.

Command and Control

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 performed 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 if they were available. There were also insufficient Division Supervisors (manages a geographic location) and Group Leaders (manage 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.

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 fire fighting 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.

Logistics, Supply, and Equipment

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.

There were not enough reserve apparatus to meet the requirements of this incident, nor were there sufficient reserve Battalion Chief vehicles. Battalion Chiefs were sent to the fire ground 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.

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.

Safety

Though there were no deaths or significant injuries to firefighters in the City of San Diego, there were not enough personnel to establish safety officers on the fire ground during the first two days of the incident. This was a critical safety issue and one that has to be addressed with staffing and training.

The Fire Communications Center security plan was not enforced. This needs to be addressed prior to any future large scale emergencies where the DOC is fully activated.

There are no Multi-Casualty vehicles 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.

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.

Respiratory problems, although generally minor for most involved, is an ongoing health risk for all personnel who had extended exposure to smoke.

Emergency Operations Center

The EOC was not activated to full capability. This caused congestion at Fire Communications. City policy and decision makers would normally staff the EOC during an incident of this magnitude. It would allow a more effective SDFD DOC and Fire Communications implementation. There was insufficient staff to relieve the primary EOC officer during the first 24 hours of operation. Additional trained staff is necessary prior to the next major incident.

Department Operations Center

The SDFD DOC should have been set up and activated by 0700 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.

Media Relations

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 fire ground. Now that Copter I is back, this may be possible.

3. What changes do we need to make in the City's fire codes?

Construction standards and regulations need to be reviewed and enhanced. Non-combustible roofs, boxed under eaves, double-pane windows, and possibly fire shutters may provide improved protection to property during urban interface fires.

One-hour rated construction for exterior walls should be considered in urban interface areas as well as the prohibition of combustible construction such as gazebos, play equipment, decks, and patio covers in close proximity to homes. Also, research should be conducted to identify a more restrictive vent screen system to prevent embers from blowing into residential attics.

Reduce fuel/fire load in open spaces by requiring a minimum 100-foot brush clearance to provide defensible space behind property lines and provide City/department staff to manage and enforce the Brush Management Program.

Since the entire county of San Diego has similar urban interface issues, the items identified above should be discussed as county-wide issues and changes.

There should be an increased focus on fire prevention education to include how to prepare for evacuations, and how to improve home fire safety in urban interface areas to minimize combustible landscape.

4. Do we need any changes in our force composition?

Yes. There is insufficient staff in all divisions of SDFD. Training, Fire Prevention, Operations, Special Operations, Information Systems, Community Education and Lifeguard Services all are dramatically understaffed to provide a quality level of service let alone provide effective staff positions for significant incident management. There are currently four clerical positions that have not been filled due to City budget constraints. The lack of sufficient trained staff, both uniformed and non-uniformed inhibits the department's ability to fill all Incident Command positions required during moderate to significant incidents in the field, the EOC and the DOC.

There are only two personnel assigned to the department Brush Management Program. This program should be significantly enhanced to enforce brush clearance regulations which would improve life and property preservation during firestorms and normal urban interface fires.

During Firestorm 2003 approximately 500 SDFD personnel were committed to the fire line, staff and support positions. Staff officers worked 16 to 34 hours consecutively, without relief as there were no available backup personnel. There were insufficient numbers of trained Safety Officers to fill critical positions required on the fire lines. A review is being conducted as part of the department's Strategic Planning and Fire Accreditation efforts to identify how many additional staff positions are required to be effective in our normal internal and external service provisions in addition to our need for improved Incident Command staff requirements. Initial estimates indicate a need for at least 21 new uniformed and non-uniformed support staff positions.

Firefighter Paramedics should be added to all truck companies. When significant incidents draw down our First Responder engine companies, paramedic truck companies would continue to provide essential Advanced Life Support service to our communities.

SDFD is currently participating in the Fire Accreditation process which includes risk assessment/standards of coverage review. This 18-month process will assist greatly in identifying how many more fire stations, fire engines, truck companies, medical units and field personnel are required to provide an improved level of service to our communities. Initial estimates have identified the need for at least 11 new engine companies, three truck companies and two additional battalions to bring the department to 1979 levels of service based on population growth. Staffing shortages pose a critical deficiency in our operational ability to provide effective training and in our command and control of medium to large scale incidents.

Funding an aggressive Community Emergency Response Team (CERT) program that would train and equip local communities to assist during significant disasters would improve overall community preparedness in all risk scenarios.

5. Do we need any additional equipment?

Yes. There was a significant safety issue with sending firefighters into firestorm conditions in open cab fire apparatus. All front line and reserve apparatus should have enclosed cabs for firefighter safety. This should include a regularly funded apparatus replacement program to ensure dependable front line and reserve emergency response apparatus to all hazards and risks associated with our communities.

A regional Fire-Rescue helicopter program is essential with an appropriate size fleet to support the safety of firefighters and protect the community. A county-wide study is being performed to identify the needs of this program. Copter I will remain in service until a permanent solution is identified and funded.

A gap in the SDFD apparatus inventory is the lack of multi-casualty apparatus. We were fortunate that there were few injuries to fire personnel and no injuries to civilians as it would have been difficult to adequately respond if there were more than 30 patients at one time during the incident without these vehicles.

Reserve emergency response apparatus need to be increased from 14 to 16. All reserve fire engines should be completely outfitted to include radio equipment. This would greatly reduce the time to place apparatus in service once crews are called back to duty. Individual personal pagers should be considered for all personnel to enhance our ability to call back personnel during large scale incidents.

All firefighters should be issued field web gear and fire shelters. Many firefighters during Firestorm 2003 were sent to the fire line with no canteens or fire shelters. This is a significant safety issue that has to be addressed immediately. Additionally, station access for call back situations needs to be addressed so crews can get their equipment or staff the apparatus inside without delay.

Sufficient quantities of radios, radio batteries and chargers/conditioners should be purchased. New batteries require 10 hours of charge time which was not possible during the fire. There were insufficient 800 MHz bank radio charges to meet the need of a prolonged incident. A cache of radios should be available should resources via mutual aid respond into the city without compatible communications. Sufficient VHF programmable portable radios are required for all apparatus, command staff personnel and spares to accommodate out of county strike teams.

Consider the funding and purchase of fire protective foam applications systems that could be used to pre-treat structures when there is advance warning of an impending disaster. This could also be used by homeowners via the CERT program if they have sufficient warning time before the fire presents itself (this was not the case in the Cedar Fire, no time to pre-treat). Additionally, an alert system should be funded that would allow timely information and evacuation notification to affected residents throughout the City.

Fire Ground Commanders and battalion chiefs need to be provided with appropriate vehicles such as Chevy Tahoes and/or Suburbans. During the fire many officers were sent into the field with small sedans which could not carry the support equipment, stores, food or water necessary to support their commands or divisions. All officers should be issued sport utility vehicles (SUVs) with four wheel drive. Additionally, technology should be pursued that will allow vehicle and personnel accountability tracking on the incident scene.

The Department DOC needs to be outfitted with the proper tools to perform necessary functions required of medium to large scale incidents. This includes computers, plotters, Mobile Data Computers (also for the entire fleet and key staff positions). Without these tools it is difficult to properly support the needs of field operations during significant events. Additionally, a dedicated DOC should be developed. The Fire Communications Center was reduced in size prior to construction and is approximately 2000 square feet too small to properly support the positions and traffic required during large scale incidents. Training staff to effectively manage and support DOC and EOC operations should be a funded and high priority.

Although not an equipment item, training needs to be addressed in this report. Funding and personnel need to be available to ensure the development, implementation and maintenance of a strong training program designed to produce solid firefighter, effective incident commanders, efficient leaders and knowledgeable support personnel. The program should include an increase in training personnel, out of city travel and training and the ability to bring in professionals in specific subject matter to improve at all levels of the organization.

6. Do we need to make any changes in our mutual aid system?

Yes. The SDFD is working with the Phoenix Fire Department in developing a concept for Automatic Aid which would allow the staffing of fire stations during a catastrophic emergency. Also, several cities surrounding the City of San Diego enjoyed the support of SDFD during the firestorm. All cities, fire districts and unincorporated areas should work toward proper staffing levels to ensure adequate support of mutual aid needs during significant emergencies in the county of San Diego.

SDFD is pursuing agreements with military resources in our local area such as the Navy and Marines. The use of the Navy H-3 helicopters for firefighting in the City of San Diego is an example of improved mutual aid that is outside the state and federal system, but necessary during catastrophic disasters locally.

However, it should be noted that given the existing staffing levels of the entire county of San Diego, mutual aid did work as it was designed.

August F. Ghio
Assistant Fire Chief

cc: Jeff Bowman, Fire Chief
Tracy Jarman, Assistant Fire Chief