

LOS ANGELES FIRE DEPARTMENT



MAY 15 2007

DOUGLAS L. BARRY
INTERIM FIRE CHIEF

May 8, 2007

BOARD OF FIRE COMMISSIONERS
FILE NO. 07-034

TO: Board of Fire Commissioners

FROM: Douglas L. Barry, Interim Fire Chief

SUBJECT: DISPATCH STAFFING AND SPECIAL DUTY ASSIGNMENTS ANALYSIS

FOR INFORMATION ONLY:	<input type="checkbox"/> Approved	<input type="checkbox"/> Approved w/Corrections	<input type="checkbox"/> Withdrawn
	<input type="checkbox"/> Denied	<input type="checkbox"/> Received & Filed	<input type="checkbox"/> Other

Recommendations: That the Board:

1. Support the Department's recommendations to maintain sworn members at Operations Control Dispatch and in the 18 special duty positions.
2. Authorize the Fire Chief to transmit the document to the Audits and Governmental Efficiency Committee.

Summary:

On April 24, 2006, the City Controller released the final report of the Review of the Los Angeles Fire Department Dispatch Staffing and Special Duty Assignments. Subsequent to a thorough review of the report, the City Controller requested the Los Angeles Fire Department (LAFD) submit an implementation plan for audit recommendations by May 24, 2006.

Accordingly, the LAFD conducted an audit analysis that produced dissimilar findings from the \$2.3 to \$3.8 million annual savings cited by converting 80 sworn positions to civilian personnel. In fact, the central recommendation, and largest cost savings projection, to replace 62 call-takers/dispatchers would most likely increase budgetary spending rather than generate the purported savings. Additionally, the feasibility of converting the remaining 18 identified special duty positions continues to be assessed with the proposed implementation of the Department's new Professional Standards Division.

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Enclosed for consideration, the Los Angeles Fire Department Dispatch Staffing and Special Duty Assignment Analysis illustrates the complete fiscal and operational impact of the City Controller's audit recommendations. Also enclosed, you will find the Los Angeles Fire Department Operations Control Dispatch (OCD) Overview. This document is included to offer a comprehensive look at OCD, its history, infrastructure, operational activities, and staffing.

Conclusion:

The people of Los Angeles and throughout the nation recognize the LAFD as a leader in public safety. As a result, the public's high expectations for emergency service are realized through the Department's highly trained professionals beginning with the essential first level of emergency care provided by LAFD sworn dispatch personnel.

Board report prepared by Battalion Chief Leonard Thompson, Planning Section Commander.

Attachments

LOS ANGELES FIRE DEPARTMENT

OPERATIONS CONTROL DISPATCH OVERVIEW

May 8, 2007

DOUGLAS L. BARRY
Interim Fire Chief

History: The Los Angeles City Fire Department is the largest municipal Fire Department on the West Coast. The Department employs nearly 3,500 men and women, with nearly 3,100 uniformed Firefighters/Paramedics, and more than three hundred civilian personnel. The Department provides fire prevention, fire suppression and emergency medical services (EMS) to the more than three and one-half million citizens who live within the sprawling 468 square miles of Los Angeles. Also included within the City limits are two major airports, a major shipping and receiving harbor, several large refineries, 750 high-rise buildings, numerous industrial complexes, and eleven major freeways with thirty-nine major freeway interchanges. One-third of the City is steep, mountainous terrain covered with highly flammable brush. High levels of fire service are provided to citizens through the Bureau of Emergency Services. This Bureau is divided into 3 Divisions, 16 Battalions and 103 Fire Stations.

Resources: The Los Angeles Fire Department's Communication Center known as Operations Control Division (OCD) serves as the vital "first link" between the citizens of the City of Los Angeles and emergency fire and medical service. Prior to modernization of the System in 1972, dispatch operations were conducted manually in three separate locations in the City.

After a comprehensive study, consolidation of three older dispatch sites into the new Center and implementation of the computer-assisted "Fire Command and Control System" gave us the present System. The System undergoes constant enhancement in order to adapt to changing conditions. The OCD dispatch staffing is comprised of uniformed officers and firefighters in the ranks of Assistant Chief, Battalion Chief, Captain, and Firefighter. The Division Commander, an Assistant Chief, heads the Division and reports directly to the Bureau Commander of Support Services. The Division commander works regular business hours.

The Dispatch Battalion Commanders report to the Division Commander, maintain platoon duty hours and are responsible for the operations of their assigned platoon. The Captains report to the Battalion Commander and are responsible for supervising the operation of the OCD firefighters (Resource Controller/Call-takers) and floor operations. The Captains maintain platoon duty hours. Firefighters serve as Resource Controller/Call-takers and maintain platoon duty hours. OCD is supported by Dispatch System Support Unit, Technical Control personnel, Information Technology Agency (ITA), etc.

Goals of OCD:

- Service to Public,
- Service to Field Units
- Maintain Coverage
- Maintain Status

Unique Workload Complexities: The Los Angeles City Fire Department has developed a number of unique tactics for the deployment of its many varied fire and EMS Resources in order to safely and successfully mitigate an emergency situation. Also, there are a number of particular challenges and issues that add serious complexities to the dispatching process and therefore workload. Accordingly, the OCD has developed specific staffing approaches and dispatching procedures to carry out its resource management and control responsibilities as part of the implementation of the special tactical deployment strategies. Below is a list and brief description of these unique dispatch deployments.

DEGRADED DISPATCH MODE: Degraded dispatch mode operations of the OCD involve a preplanned progressive reduction in the number and type of fire and EMS apparatus that are dispatched on incidents. Their purpose is two-fold: to ration the remaining fire and EMS Resources and to assist the OCD in maintaining careful control of Resources during localized or citywide emergencies. Degraded mode operations are instituted by the OCD Floor Captain with the approval of the OCD on-duty Battalion Chief, through CAD (computer aided dispatch) system. Each degraded mode level varies the number of units initially dispatched to an incident or eliminates single resource response of both fire and EMS apparatus.

- **MAXIMUM RESOURCE COMMITMENT PLAN:** The LAFD Maximum Resource Commitment Plan has been established for the systematic, predetermined, orderly commitment of the Department's Resources to staging or base areas for abating a major emergency or multiple emergencies while maintaining an acceptable level of fire and EMS resources for the remainder of the City.
- **RIVER RESCUE TACTICAL PLAN:** The City periodically experiences flooding emergencies that involve rescues in channels and rivers. A River Rescue Tactical Plan has been developed that deploys apparatus and personnel on a predetermined timed basis to locations along the river. This deployment takes into considerations the maximum speed of flow and height of the water.
- **BRUSH FIRE AND INDEX PRE-DEPLOYMENT PLAN:** The City of Los Angeles experiences serious brush fires that many times threaten and/or burn residential properties. One third of the City is comprised of areas of brush that present severe access and water supply problems. There are three levels of Brush Burning Index (BBI) pre-deployment. Depending on the BBI, companies may be pre-deployed to augment the Resources in a hazardous area and/or the initial assignment may be increased with addition of strike teams, tactical task forces, additional helicopters or additional battalion and division chiefs.
- **FOREIGN LANGUAGE SPEAKING CUSTOMERS:** A significant Call-taker issue involves giving EMS instructions to non-English speaking callers. Other than English, Spanish is the predominate language in the City. The OCD floor staffing always includes Spanish-speaking Call-taker(s). In addition, the OCD utilizes the state 9-1-1 foreign language translation services as well as a private service to assist the citizen and the Call-taker.

- **DIGITIZED VOICE SYSTEM (DVS):** During the 2000-2001 fiscal year, Phase I and Phase II of the new Digitized Voice System (DVS) for dispatching was implemented. The overall goal of DVS is to decrease the time to dispatch an incident. DVS reduces the time the incidents are in the pending queue; this will allow the Resource Controller to concentrate on resource coverage, unit status, and other areas of responsibility. It is the intent of DVS that most incidents will receive a Digitized Voice Dispatch (DVD). The Resource Controllers are required to make a brief media broadcast following all DVD incidents. Phase I-Calls are routed to the Resource Controller then dispatch through DVS. In Phase II, when Call-takers route or pends incidents, the resources are dispatched prior to the incident arriving to Resource controller. Any resources that could not receive the announcement (in service but out of the fire station and available by radio) are dispatched by the Resource Controller.
- **MEDICAL PRIORITY DISPATCH SYSTEM (MPDS):** On January 18, 2001, OCD transitioned from a previous version of the MDPS to the National Academy of Emergency Medical Dispatch MPDS Version 11. It is the world's most widely used 9-1-1-type Pre-Arrival Instructions and Dispatch Life Support protocol system and has been credited with helping save thousands of lives. Version 11 represents the single most comprehensive upgrade in the history of the protocol. The MPDS is truly a worldwide protocol. MPDS is translated into 9 different international languages. The Academy has established several International Standards Committees, which are responsible for translating, evaluating, approving and adopting changes approved by the Council of Standards. MPDS Version 11 contains nearly 300 "Determinant Descriptors," which are designed to categorizing prioritize emergency situations based upon caller interrogation and the presence or likelihood of priority symptoms and threat to life. All dispatch members routinely evaluated, graded and reviewed on their Emergency Medical Dispatch skills using the MPDS. During fiscal year 2001/2002 the Fire Department has since upgraded to MPDS Version 11.1
- **DCN:** The Dispatch Communications Network (DCN) is used to access the Fire Stations through a program running on one of the workstation screens. Other parts of the Fire Station connections include a voice line to each Fire Station, the Redcom Switch (essentially a switchboard in a can, for the voice lines) and a data line to each Fire Station, which goes through the Print Subsystem (including the five bells on the end of dispatches).

Radio Frequencies: The Los Angeles Fire Department has 24 radio frequencies utilizing the 800 MHz bandwidth in a conventional analog format, 9 receiver and transmitter sites, and access to 14 Mutual Aid and aircraft radio frequencies. Over 1,800 mobile radios and 1,400 portable radios are used, along with over 550 apparatus Mobile Data Terminals.

Personnel: There are 75 Firefighter III Resource Controller/Call-takers with a minimum of four years experience, nine Floor Captains and three Platoon Battalion Chiefs assigned to the OCD. All Firefighters and Captains are trained as Resource Controller/Call-takers and all of who have field experience and are certified as Emergency Medical Technicians.

These personnel are equally divided into three platoons working 24-hour shifts. Two long-term vacancies were added to off set the increased time with the caller in giving medical pre-arrival instructions such as cardio-pulmonary resuscitation, mouth-to-mouth, infant delivery, etc. While on-duty, the 25-Resource Controllers and 3 captains are scheduled to be on the "dispatch floor" at various times during the 24-hour shift. The number of Resource Controller/Call-takers and Captains scheduled on the "dispatch floor" depend upon the historical workload for that time of the day. All communications are recorded, and the member's administrative captain and the Department's Quality Improvement Section routinely evaluate Resource Controller/Call-taker's performance.

Work Schedule: The dispatch staff in the OCD works an average 56-hour workweek. They work the same 24-hour platoon duty-rotating schedule worked by field operations personnel assigned to the fire stations. Each of the personnel is assigned to one of three shifts. Each of the shifts rotates its three-day work schedule as follows:

- Work 24 hours, off 24 hours
- Work 24 hours, off 24 hours
- Work 24 hours, off 96 hours

Daily Watch Schedule: While on-duty in the OCD, the firefighter personnel alternate between working on the floor and performing other tasks or utilizing personal time based on their assigned watch schedule for the shift. During on-duty shifts, each firefighter Resource Controller/Call-taker is assigned to an "Odd" or an "Even" watch schedule for purposes of floor staffing. This "Odd" and an "Even" split give the OCD the ability to expand or contract its work force on the dispatch floor. During spikes* in activity the off watch members are recalled to the floor as Call-takers. When the spike in activity has diminished, the off watch members can leave the dispatch floor at the discretion of the floor captain. Essentially the OCD is able to double the number of personnel on the dispatch floor to handle the overflow of activity in a moment's notice.

Dispatch Floor Staffing: The following sections describe the three types of positions on the Fire/EMS dispatch floor that are staffed on a 24-hour basis by one or more dispatch personnel---Call-takers, Resource Controller and Supervisors. Uniformed firefighters fill the positions of Call-taker and Resource Controller, Captains fill the positions of Supervisor on the floor and Battalion Chiefs fill the position of platoon commander. The functions performed by personnel assigned to those positions are outlined as follows.

Call-taker: The primary role of firefighters assigned on the dispatch floor as Call-takers is to answering calls received at OCD. This is done in the most expedient manner depending on the Department requirements, protocols and policies. In addition to answering calls each Call-taker supports each of the three Resource Controllers in the conduct of their functions as workload dictates.

In this role the Call-taker are normally referred to as a "Wing Person". They work to support the Resource Controllers either adjacent to their work console or will support other Resource Controllers on the dispatch floor. In this role the work very closely together to support the heavy workload involved in the dispatch of LAFD resources. There are three distinct dispatch/call taking teams on the floor that insure that the dispatching and resource management process is handled as effectively as possible.

Call-takers receive telephone calls; screen the calling party (original caller, police public services representatives or other agency representatives- California Highway Patrol, etc.) for incident information. Emergency 9-1-1 telephone calls are first received by the LAPD Primary Safety Answering Point by the LAPD Public Service Representatives (PSR). If the call is fire or EMS in nature then the call is routed to the fire department Fire/EMS Call-taker. Other sources of calls received by the OCD come from 1-800 fire department phone number still alarms from the fire stations, the telephone operators, and other agencies (CHP, L.A. County Fire Dispatch, etc.).

The Automatic Call Director (ACD) routes the call on a rotational bases among the available Call-takers. As the 9-1-1 emergency call is routed to a Call-taker, the address, telephone number and other pertinent information is automatically captured by the 9-1-1 system and displayed on the Call-taker's Positron screen.

Once the Call-taker obtains a correct incident address/location and it is entered on the CAD incident screen, it is sent ("pending") to the CAD, which depending on the Digitized Voice System CAD setting will automatically under:

- Human Voice Dispatch routes the pending incident to the appropriate Resource Controller for handling and dispatching with a human voice,
- DVS Phase I-routes the pending incident to the appropriate Resource Controller for handling and dispatching with a digitized voice dispatch
- DVS Phase II-simultaneously dispatches the assigned units if in a fire stations quarters and routes the pending incident to the appropriate Resource Controller.

The Call-taker has the option to bypass the DVS system and do a direct "pend" to the appropriate resource controller. If the emergency is medical in nature, the Call-taker initiates medical pre-arrival instructions (PAI) following established protocols and procedures. This involves BLS (Basic Life Support) instructions for incident types such as full arrests, choking, childbirth, shootings or stabbing, etc.

In addition, the Call-taker may add comments to the incident screen such as "reported people trapped", "the patient is in cardiac arrest", "CPR in progress", etc. The comments are then available to the Resource Controller for relay to the responding units via radio, fire station printout or mobile data computer on the apparatus. For more complex and long-term incidents particularly fire incidents, comments are added to the incident and/or to provide complete documentation of the incident from an OCD perspective.

Additional information may be added by other Call-takers and have the ability to "pend" the Resource Controller controlling the incident more Resources. OCD Call-takers may be temporally assigned to assist the Resource Controller by making notifications or taking care of other essential tasks that the Resource Controller may be too busy dispatching to handle. A large part of these tasks are outgoing calls which may include "call backs" to the originating party, such as alarm companies, other outside agencies, request for automatic aid and making the proper notifications as dictated by the nature of the incident.

The normal dispatch floor operation involves one or two Call-takers physically located next to a dispatch position in "wing" positions taking emergency 9-1-1 and 1-800 emergency calls and also assisting their Resource Controller as workload dictates. In this manner, the OCD personnel (Call-takers and Resource Controller) work very closely together as a team throughout their assigned time on the floor. Personnel in the wing positions assist the Resource Controller in monitoring incoming radio traffic for resources and other needs.

As workload dictates a Call-taker may discontinue answering telephone calls and assist the Resource Controller to dispatch units that are in quarters while the primary Resource Controller is dispatching the units on the radio. At the discretion of the Floor Captain, Call-takers may also be "reassigned duties" to become a Resource Controller handling a tactical radio channel with a specific major incident or group of incidents in progress such as brush fires, river rescues, and Metro rail tunnels incidents.

The Call-taker may temporarily relieve the adjacent Resource Controller and performs all functions as a Resource Controller for short periods of time. During significant incidents the Call-taker will discontinue answering calls and perform critical firefighter safety tasks, which include monitoring tactical and emergency traffic "Mayday" channels.

Future Duties of the Call-taker: Current and future trends within the call-taking process foresee the call-taker taking on a more active role with an incident commander, intelligence collection, required to do more with less staffing, and to still provide a high level of service to the field members, the public as well as other PSAPS. All this has to be done under the purview of expediency with an extreme high level of accuracy. Increases in staffing will always be tenuous depending internal and external factors such as political atmosphere, budget, management priorities, etc.

Therefore, technology has to bridge the unintentional consequences brought on by these factors and demands. This technology has to be first and foremost measured from the user's point of view then from the maintenance point of view. The ease of use and the accuracy of the information will determine the call-takers ability to be successful.

Future technology will have to view from the automatic mode (CAD) and from the manual mode of operation. Can this technology be used at the backup center? Ease of use is defined as: The call-taker must have the technology, Can be easily operated under stressful situation, Not complicated-having to remember complicated steps, Increases efficiency, Speeds up their tasks, Does not require additional mice, keyboards or stacking additional monitors, Stay within the same console top configuration, Integrate as much as the new technology as possible

Operational Environment: The operational environment on the new OCD floor will require new technology to overcome the current operational culture. This includes:

- Communication between consoles
- Flexibility of console reconfiguration
- Longevity of equipment
- Future expansion

Resource Controller: The Resource Controllers on the OCD dispatch floor are firefighters who are in direct contact with the field resources. Duties include resource allocation, prompting the incident commander during an incident, resource coverage, etc. This position requires a high degree of multi-tasking skills. A considerable amount of interaction with the call-takers is required which include delegating tasks to when requests from field units are received and assistance in incident management.

With the implementation of the Quick Launch program the workload for EMS calls has increased dramatically. The increasing number of incidents dispatched, complexity of the algorithms, number resources assigned to incidents and increase in incident involvement the position of resource controller is rapidly approaching the possibility of creating more dispatch positions and the reallocation of geographic areas and resources.

Resource Controller: There are three dispatch positions staffed 24-hour a day for dispatching of fire department resources in a given geographic area and for given types of incidents. Those dispatch positions are: Areas of responsibility by Battalion:

- Metropolitan area **Fire** dispatch-Battalions - 1, 2, 3, 4, 5, 6, 7, 9, 11, 13, and 18.
- Metropolitan area **EMS** dispatch-Battalions - 1, 2, 3, 4, 5, 6, 7, 9, 11, 13 and 18.
- San Fernando Valley area Fire & EMS dispatch-Battalions - 10, 12, 14, 15, and 17.

The CAD system routes the incident from the Call-taker to the appropriate dispatch position and automatically logs the information into the CAD history file. Once the Call-taker obtains a correct incident address/location and it is entered on the CAD incident screen, it is sent ("pending") to the CAD, which depending on the Digitized Voice System (DVS) setting CAD will automatically under 1) Human Voice Dispatch route the pending incident to the appropriate Resource Controller for handling and dispatching with a human voice, 2) DVS Phase I-routes the pending incident to the appropriate Resource Controller for handling and dispatching with a digitized voice dispatch, 3) DVS Phase II-simultaneously dispatches the assigned units if in a fire stations quarters and routes the pending incident to the appropriate Resource Controller.

When the incident is "pending" to the appropriate dispatch position, the CAD terminal sounds an audible "beep". This indicates to the Resource Controller that an incident is awaiting dispatch. When ready, the Resource Controller requests ("get") the incident. The computer prioritizes incidents in the order of importance, i.e. structure fires over rubbish fires.

An incident screen then appears on the dispatcher's CAD screen. The screen includes CAD recommended resources according to incident type, location, Resource availability and mileage to the incident. The Resource Controller may then modify the dispatch for the incident as considered appropriate. The Resource Controller has the option of human voice dispatch or Digitized Voice Dispatch to initiate dispatch process ("DIS") for the incident.

During a human voice dispatch, the CAD system then performs the following functions:

- Assigns a tactical channel, if applicable (for structure fires, etc)
- "Locks-up" the necessary fire station telephone lines
- Opens station audio systems
- Turns on fire station night lights
- Rings the fire station audio alarm(s)
- Prints out a dispatch hard copy in the fire station
- Sends the information to the Mobil Data Terminal on the apparatus

The Resource Controller then makes the verbal dispatch via the station loud speakers and/or a radio channel for those units that are "on the radio" (in service but out of the fire station and available by radio).

During a Digitized Voice Dispatch, the CAD system then performs the following functions:

- Assigns a tactical channel, if applicable (for structure fires, etc)
- "Locks-up" the necessary fire station telephone lines
- Opens station audio systems
- Turns on fire station night lights
- Digitized Voice Dispatch will announce:
- Unit Alerts ("Engine," etc.)
- Incident type (may include "non-emergency", if supplied by LAFD)
- List of Units/Groups responding
- Address
- "Cross of" (Cross Street)
- Assigns a tactical channel, if applicable (for structure fires, etc)
- "Read Comments" If high priority comments (" *** " comment) are added to the incident
- "OCD Clear."
- Rings the fire station audio alarm(s)
- Prints out a dispatch hard copy in the fire station
- Sends the information to the Mobil Data Terminal on the apparatus

The Resource Controller then makes the verbal broadcast over a predefined radio channel for those units that are "on the radio" (in service but out of the fire station and available by radio). Once the dispatch is made, the in-station units that have been dispatched electronically confirm receipt of the dispatch by pressing the "answer back button" in the fire station. Each unit responding then updates its status indicating that it is responding by pressing the appropriate button on their Mobile Data Terminal. The Resource Controller continually monitors the actions of the responding units to ensure the units are en-route to the incident, maintains radio discipline, and handles any additional request for resources or information to OCD.

Future-Resource Controller: Future duties of the resource controller will continue to increase as the field continues to reallocate duties and responsibilities of field operations to the dispatch center. This will create a diverse set of enhancements both to the detriment due to increase complexity of incidents but also provides a high level of firefighter safety. Future technology will be required to be integrated within CAD to automate as much as possible so that aggressive decision processes can be accomplished. The new OCD will require a new generation of floor communications to allow the call-taker to update the resource controller from distant console locations, Automatic Vehicle Location, and the possibility of regional dispatching. Fallback technology will have to be created to address single point of failures.

Floor Captains-Supervisor: The Floor Captain supervises the personnel assigned on the floor as Call-takers and Resource Controller and monitors their needs. Floor Captain Tasks must have a focus ranging from the detail to the global view of floor operations. The Floor Captain position should be viewed as both administrative and emergency. Administrative activities include daily non-emergency field operations, staffing requirements of the dispatch center and communication center staff projects. Emergency activities include resource coverage, move-ups, notifications, command and control decisions. The global picture of the dispatch floor operations, dispatch floor and field operations, perspective is obtained from standpoint of location of the Floor Captain's console, visual and audio observations and from the information displayed on the monitors and querying of CAD.

During emergency operations gathering information intelligence from the incident in question, calls received and determining the global impact requires rapid aggressive decision-making. As with other positions on the dispatch floor field operations are continuing to be off loaded to the dispatch floor. Therefore, the Floor Captain has to have the tools, software and hardware, constantly available to priorities and accomplish these necessary tasks.

The tools that the Floor Captain has at their disposal include from paper to large wall maps to electronic displays. **The Floor Captain also performs the following functions:**

- Handles problem calls or complaints from civilians
- Daily reconfigures the coverage of the entire city based on the needs of the department and deploys available field resources by "moving-up" units both emergency and non-emergency.
- Monitors the deployment of available resources in the entire City

- Insures that staff notifications are made during major incidents on a timely basis
- Handles many administrative tasks that must be accomplished to supervise and support the daily operation of OCD.
- Develops and distributes special information such as fumigation, special notices, information notices, and asbestos abatement to field companies via the Teletype.
- Continues ongoing training with Resource Controller/Call-takers
- Record keeping
- Tape review
- Updates the On Call rosters-weekly and field chiefs roster-daily
- Monitors and evaluates Resource Controller/Call-taker performance.
- Future-Floor Captain

The Floor Captain's duties and responsibilities will continue to increase. As the dispatch floor staffing and emergency tasks continue to increase technology will be required to simplify the process. The New OCD will continue to have at least one if not two Floor Captains on duty at a time. Rationalization will add a new layer of complexity to dynamics of the supervising one of the largest communication centers. Multiple console configurations will be required to handles expanded incidents.

Platoon Battalion Chief: Each shift is assigned a battalion chief that is responsible for the overall operations of their assigned platoons. They report to the assistant chief who is ultimately responsible for overall OCD operations of the communication center. Three captains assigned to each shift report to the battalion chief. Some of the shift battalion chief's duties include:

- Coordinates and supervises the OCD during the on-duty shift.
- Makes strategic level decisions regarding dispatch operations during major emergencies
- Notifies senior LAFD staff and City officials during major incidents
- Updates command staff regarding major or unusual incidents
- Communicates with command level officers of other area fire departments during major emergencies that require mutual operations
- Processes staff work from senior staff.

Future-Battalion Chief: The role of the Battalion Chief will require additional demands producing an increase in the complexity of the Platoon BC's duties. Expanded incidents will create additional tasks to be performed; more notifications and a higher level of decision-making will be required. As with all the other positions on the dispatch floor information or intelligence has to be readily available and easily processed. Greater involvement with the incident commander and command staff will create critical incident time challenges. A "one-stop" notification process will continue to be developed to reduce the time required notify appropriate staff without creating additional telephone calls. "Flexing" incident assignments based on incident activity will have to be developed. Other technologies will have to be address to allow the OCD BC to concentrate on actual emergency activates and decision making processes

LOS ANGELES FIRE DEPARTMENT

**DISPATCH STAFFING AND SPECIAL DUTY ASSIGNMENTS
ANALYSIS**

May 8, 2007

DOUGLAS L. BARRY
Interim Fire Chief

DISPATCH STAFFING AND SPECIAL DUTY ASSIGNMENTS ANALYSIS

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Executive Summary

The primary objective of the City Controller's April 24, 2006, Review of the Los Angeles Fire Department Dispatch Staffing and Special Duty Assignments was to **"identify opportunities within LAFD where sworn firefighters currently performing non-firefighting activities can be redeployed to again provide essential first response services to the residents of the City of Los Angeles."**

In reviewing opportunities to re-deploy 80 sworn firefighter positions identified in the audit, 18 special duty positions continue to be assessed to potentially staff, as well as offset the projected costs associated with implementing the newly proposed Professional Standards Division. Additionally, the central recommendation to convert 62 sworn dispatcher positions requires reassessment when considering the following supplemental factors.

- ◆ **Sworn and Civilian Dispatcher Salary Comparison:** LAFD validated salary structures reflect **\$141,169** for sworn firefighter vs. **\$91,931** for civilian counterparts. Average savings of proposed conversion reduced to **\$620,000** from **\$2.3** to **\$3.8 million** anticipated by auditor.
- ◆ **Number of Call-taker/Dispatchers:** LAFD staffing calculations significantly increase the minimum hiring requirements from **84** to **120** and from **106** to **151** to replace the current 62 sworn firefighter positions; at a projected cost of **\$2** to **\$5 million** per year
- ◆ **Attrition Rates:** LAPD dispatcher training attrition rate at **42.5%** to **48%** for the past **19** years. Post training attrition rate is averaging **4** employees per month and expected to increase by **50%** to **75%**.
- ◆ **Personnel Training Time and Costs:** Civilian dispatchers, by comparison to sworn dispatchers, require an additional **27-weeks** of training at a cost of **\$27,000** more per employee.
- ◆ **Staffing Relief Factor:** Proposed conversion requires approximately **2** civilian dispatchers for every **1** sworn employee based on recommended conversion model presented in the audit.
- ◆ **Supervision/Command and Control Capabilities:** Highly trained sworn dispatchers critical to the delivery and maintenance of emergency services
- ◆ **Impact on Los Angeles Citizens:** Impact on Federal, State, City and Fire Department's intermediate and long-range public safety goals requires a more qualitative assessment.

While acknowledging the well-intended efforts of the Controller to enhance public safety, the *Los Angeles Fire Department Dispatch Staffing and Special Duty Assignments Analysis* provides a broader perspective relative to the feasibility and operational impact of the recommendations to re-deploy sworn personnel.

Sworn and Civilian Salary Dispatcher Comparison

To calculate the cost of civilianizing 62 call-taker/dispatcher positions, the following salary, retirement and benefit data for OCD's Firefighter III dispatchers and related salary, retirement and benefit data for civilian PSR's within the LAPD was gathered.

- ◆ During 2005, the actual salary, bonuses and overtime paid by LAFD for its Firefighter III call-taker/dispatchers averaged \$117,381 per firefighter¹ before adding benefits.
- ◆ After adding 15.69 percent for retirement² and \$8,964 for other benefits,³ the average annual cost of a Firefighter III dispatcher is \$146,169 per year.
- ◆ During 2005, the actual average PSR II and PSR III salaries, including bonuses, within LAPD are \$69,827 per PSR.⁴
- ◆ After adding 18.96 percent for retirement⁵ and \$7,452 for other benefits,⁶ the average annual cost for an equivalent dispatcher is \$91,931 per year.

Projected Savings of 84 Civilians for 62 Firefighter Positions

Sworn versus Civilian	Annual Wages Including Retirement and Other Benefits	# of Positions	Total Cost
LAFD Sworn	\$146,169	62	\$9,062,478
Civilians (84)	\$91,931	84	\$7,722,204
Savings			\$1,340,274

Projected Cost of 106 Civilians for 62 Firefighter Positions

Sworn versus Civilian	Annual Wages Including Retirement and Other Benefits	# of Positions	Total Cost
LAFD Sworn	\$146,169	62	\$9,062,478
Civilians (84)	\$91,931	106	\$9,744,686
Cost			\$682,208

¹ Los Angeles Fire Department Budgeted Summary at 2005.

² City's share of Fire and Police Retirement System costs at 2005.

³ CAO's estimated cost of firefighter benefits paid by the City.

⁴ Los Angeles Police Department Budget Section Wages and Count Document at 2005.

⁵ City's share of LACERS' retirement costs at 2005.

⁶ CAO's estimated costs of non-sworn civil service benefits.

Number of Call-takers/Dispatchers

As stated in the audit, ***“According to the National Emergency Number Association (NENA), the optimal number of call takers needed to respond to emergency calls cannot be determined by a standardized mathematical formula. The best shift staffing and number of call takers needed can only be determined with a time and task study within each dispatch center. Consequently, we did not determine whether the LAFD’s current 24-hour platoon duty with 25 dispatchers (plus supervisors and command staff) available within each platoon comprises the optimal or most efficient configuration of staffing and shift type to accomplish LAFD’s performance goals.”***

Despite this acknowledgement, audit findings theoretically reduced current LAFD dispatch staffing levels, converting the hours worked by a firefighter during a 24 hour platoon duty schedule to the average hours spent dispatching during that same time period, inferring a less than optimal staffing or configuration, and compared that reduced number to determine civilian employee replacements using Los Angeles Police Department (LAPD) Public Service Representatives (PSR’s) as the conversion model.

Without completing the staff study they deemed necessary, Sjoberg-Evanshenk simply applied a “queuing theory” advocated by NENA to determine the minimum dispatchers/call-takers needed.

Therefore, the projected cost savings (\$2.3 to \$3.8 million) associated with sworn staffing levels and civilian conversion is fundamentally unreliable, which is further acknowledged by the auditor’s statement, ***“...data covers far too short a time period to draw absolute conclusions.”*** For those reasons, a comparison of the actual cost to convert civilian personnel equal to that of the current LAFD staffing levels is represented in the following table:

Dispatch Center Staffing Cost Comparison

Sworn Vs. Civilian	Personnel Costs	Work Schedule Hrs/Wk	*Work Schedule Ratio	Equivalent Personnel	**Staff Relief Factor	Minimum Required Staffing	***Total cost
Sworn	\$146,169	56	N/A	62	1.23	76	\$11.1 million
Civilian	\$91,931	40	1.4	87	2.019	176	\$16.1 million
Proposed Conversion Expenditure							\$5 million

- * Work Schedule Ratio is the factor utilized to determine the equivalent number of personnel needed working a 40-hour per week schedule compared to a 56 hour per week schedule (56 hours divided by 40 hours = 1.4).
- ** Staff Relief Factor is a mathematical formula that determines the number of people it takes to staff a fixed position for 24 hours per day, seven days a week. Time-off relief is needed for employee compensated time off, such as holidays, vacations, sick leave and injuries (LAFD Staff Relief Factor = 1.23 vs. LAPD PSR Staff Relief Factor = 2.019).
- *** Cost does not include Training and/or Attrition Rates.

Attrition Rates

Historically, the attrition rate for uniformed LAFD personnel is approximately **3%** Department wide, including firefighters assigned to OCD. For comparison, the attrition rate for firefighters in OCD dispatch training averages approximately **18%**, while the attrition rate for LAPD civilian PSR trainees assigned to the Communications Division, have consistently averaged approximately **42.5%** over the last 19 years. Currently, probationary PSR attrition rates are even higher, which are averaging about **48%**. The 2006, year to date, attrition rate for non-probationary PSR's is **3.83 employees per month** and is expected to increase by **50 to 75%** due to an inordinate amount of employees projected to leave for various reasons.

Using the lowest LAPD attrition rate of **42.5%**, factored into the audit staffing calculations, the original minimum hiring needs change original from 84 to 119 and from 106 to 151 civilian dispatchers. It is important to remember, these figures are predicated on the audits theoretical reduction in dispatch staffing from current LAFD levels. When the same **42.5%** attrition rate is applied to the Minimum Required Staffing as calculated in the Dispatch Center Staffing Cost Comparison (page 2), the minimum number of estimated civilian dispatchers required are 251, at a total cost to the City of **\$23 million** for the first year alone (176 dispatchers required x 42.5% rate of attrition = 75 additional trainees required + 176 = 251 total civilian dispatchers. 251 x \$91,931 = \$23,576,681 annually.

Applying the same formula to calculate the costs for sworn dispatchers, the minimum number of personnel needed is 90 with an annual cost to the City of **\$13.1 million** (76 dispatchers required x 18% rate of attrition = 14 additional trainees required + 76 = 90 total sworn dispatchers. 90 x \$146,169 = \$13,155,210). Contrary to the audits anticipation of a large savings (\$2.3 to \$3.8 million), this represents a cost to the City of **\$9.9 million** to train civilian dispatchers.

Additional factors to consider, which are negatively affected by high civilian attrition rates are the increased costs associated with overtime staffing and training, as well as and most importantly, the potential impact on public safety due to an inordinate ratio of inexperienced personnel cycling through the occupation. The high attrition rates for civilian dispatchers are seemingly not just isolated to Los Angeles. Recently, several newspaper articles published have chronicled the same problems being experienced by other municipalities. Further exacerbating the issue are trends that exist surrounding civilian staffing and the ability to find appropriate coverage for all available work shifts.

The attrition rate among civilian LAPD PSR trainees is presently averaging 48%, which is consistent with nationwide reports from various sources listing the average attrition rate at approximately 45%. Although there is no tangible reason why the attrition rate among civilian dispatchers remains so consistently high, the thoughts range from the high demand of the job and related stress coupled with limited promotional opportunities to a lack of personal fulfillment.

In a correspondence to the Fire Chief dated August 16, 2006, the Controller's response to the facts presented on civilian attrition rates was, ***"Comparative civilian attrition rates are hard to quantify within LAPD's Public Service Representatives since changes in salaries and working conditions over the past five years have been significant. These recent changes will affect attrition, making comparisons unreliable."***

As stated previously, attrition rates for LAPD PSR trainees have averaged 42.5% over the last nineteen years and are currently averaging 48% despite salary incentives and improved working conditions. According to audit figures, the current annual salary for a LAPD PSR is \$67,156 (including benefits – LAFD calculations \$91,931), a moderate standard of living by any measure. The difficult thing to "quantify", at this point, is how much more of a salary increase is needed to reduce civilian attrition to a rate comparable with their sworn counterparts.

Personnel Training Time and Costs

When addressing the personnel training time and costs associated with converting sworn dispatch personnel to civilian employees, Sjoberg-Evanshenk surmised, ***"When LAFD's current dispatcher training costs (Drill Tower and dispatcher training) are compared to a one-year civilian call taker training program, the civilian training costs should be less."***

The premise of this statement was thoroughly examined to provide conclusive information to be considered when determining the implications of the audit recommendation to convert sworn dispatch personnel to civilian employees.

1. **Civilian Dispatcher/Call-taker Training Time and Costs:** According to the LAPD Training Division the time required to have a PSR complete all aspects of dispatcher training and to be qualified to operate as a Radio Traffic Operator (RTO), Emergency Board Operator (EBO) and other critical fixed post/positions (dispatcher and stand unassisted) requires **45 weeks**, at a total cost of **\$76,467** per trainee.
2. **Sworn Dispatcher/Call taker Training Time and Costs:** The time involved to train an LAFD Dispatcher encompasses nine-weeks of classroom training, followed by on-the-job training for **20 platoon duty shifts** before operating unassisted, at a total cost of **\$49,833** per trainee.

In a straight comparison, factoring dispatch training only, the training time and cost differentials between sworn and civilian dispatcher/call-takers shows it takes 27 weeks longer to train a civilian dispatcher at a cost of **\$26,634** more than that of a sworn dispatcher. However, since the auditor added the cost of a firefighter's drill tower training to the total cost of training a sworn dispatcher they must also, then, incorporate all cost factors including civilian attrition rates, which is more than double that of sworn dispatchers across the board. This aspect was not addressed in the audit but is addressed as a concern, impacting training costs, by the City Controller on page 2 of the August 16, 2006 correspondence to the Fire Chief.

Further, a fire department candidate, when hired, is trained to provide fire suppression and emergency medical service to the citizens of Los Angeles. A firefighter must serve at least four years in this capacity to meet the minimum qualifications necessary to be considered for the position of LAFD dispatcher. After meeting all of the qualifications, a firefighter is given specialized dispatch training where he/she effectively becomes and functions as a dispatcher at OCD for a minimum job assignment of three years.

In the event a firefighter candidate is unsuccessful during training to become a dispatcher, the financial loss to the City would be the cost of dispatch training only since the initial firefighter training investment is not lost and still benefits the City, as the member would return to his/her firefighting duties or another position within the Department. Conversely, in the same situation, when a civilian employee is unsuccessful during training, the fiscal impact to the City would be \$76,467. It is then reasonable to apply only the specific dispatch training costs coupled with the training attrition rates to achieve the most accurate cost comparison between civilian and sworn dispatch personnel.

In keeping with the issue of cost efficiency, the fire department's low attrition rate, among other factors, make sworn personnel the most beneficial dispatchers for the City of Los Angeles. The position of an LAFD dispatcher/call-taker is one of the many diverse career opportunities available to a firefighter. No matter what capacity a firefighter is functioning in they are always first serving the mission of the LAFD.

Staffing Relief Factor (SRF)

A SRF is derived through a comprehensive formula that mathematically determines the required personnel to staff a fixed position 24 hours a day, 7 days a week. Items that are considered in the calculation of SRF are: holidays, vacations, sick leave, injuries, work breaks, and various other factors that impact the overall equations of staffing. When determining staffing, the audit referenced the NENA to calculate SRF, which cites 1.7 as the industry standard. This figure was not confirmed in any NENA data reviewed.

To address civilian time off, Sjoberg utilized LAPD's current SRF of 2.019 to formulate the following conclusion ***"...we calculate that LAFD would need from 84 to 106 civilian call takers to replace the annual emergency call coverage currently provided by OCD's 62 firefighter call takers using only the LAPD's relief factor ratio."***

While analyzing this data, it was not clearly defined how the auditor determined 62 sworn positions would be the optimal number for civilian replacement. This is a very significant factor considering the foundation and expressed benefits of the conversion, both operational and financial, are predicated on this number. Additionally, the comparative SRF between sworn LAFD personnel (1.23) and civilian LAPD PSR's (2.019) indicates it takes roughly twice the number of civilian dispatchers/call-takers to perform the same workload as sworn firefighters, which makes it difficult to extrapolate or present the proposed conversion as efficient and effective.

The scope of the audit was limited to staffing only; not considering the operational activities or readiness of the LAFD as acknowledged by Sjoberg-Evenshenk in their Executive Summary. Without assessing the operational components of the LAFD dispatch operations, the recommendation to convert 62 sworn positions to civilians appears to be more subjective rather than substantiated from factual data. Therefore, without measuring the operational efficiency and full performance of a sworn dispatcher, the application of the SRF is of limited value in this application.

Supervision/ Command and Control Capabilities

A detailed review of LAFD dispatcher responsibilities reveals a workforce who function interchangeably in either position of dispatcher/call-taker or resource controller, providing OCD with unlimited flexibility to address the public safety needs of the City. Virtually every emergency incident, while categorized as either fire or medical-related, for general statistical purposes, usually requires employing a combination of both fire and medical resources to effectively mitigate, which is always anticipated and coordinated by both sworn dispatch and front-line personnel in the course handling emergency incidents.

Situational Awareness is a critical element of supervision. It is the ability to oversee the total needs and influences impacting a fire station district, area or region. Sworn call-takers/dispatchers are vital to supervisors for maintaining this awareness, their higher level of skill, experience, and understanding of the supervisor's responsibilities as well as the complexities of emergency incidents allow them to work and function more independent of direct supervision.

Limiting the number of qualified command and control personnel will impact the ability of the LAFD to adequately keep pace with expanding emergencies and increased call loads. Our current system of using uniformed staff on a twenty-four hour work schedule maintains an operational advantage by providing an immediate expandable workforce during spontaneous events, unanticipated peaks in emergency activity, internal disasters, and equipment failure. This advantage is relied on routinely to provide the highest level of service to City residents that might otherwise be diminished with a lesser-trained civilian workforce. Moreover, LAFD dispatchers currently implement the City's Emergency Operations Center and LAFD Department Operations Center in response to, or when pre-planning for, an incident. They are uniquely qualified for this mission given their Incident Command System training, situational awareness and resource control experience.

While the audit does not recommend changes within the supervisory structure of OCD, there is more to understand about supervising calls from the call-taker/dispatcher perspective. In this instance, supervision comes from the ability to manage an incident, anticipate the needs of the on-scene command staff, monitor radio frequencies for emergencies, or unexpected changes at the emergency field incident. This real time analysis and the experienced call-taker/dispatcher's ability to respond to emergency incidents is a critical component of the sworn members of OCD.

Impact on Los Angeles Citizens

The impetus for converting 62 LAFD dispatcher/call-takers to civilian employees is based on the City Controller's assessment as stated in her correspondence to the Mayor dated April 24, 2006, stating: ***"These positions could be converted efficiently and effectively to non-sworn civilians without sacrificing the LAFD's high standards of service. Not only will this result in annual savings of \$2.3 to \$3.8 million it will enable the redeployment of highly qualified sworn personnel to fire stations across our City."***

The City Controller clearly recognizes the value of sworn personnel and embodies the sentiment felt by all the residents of Los Angeles when speaking to the skills, qualifications and level of care delivered by members of the LAFD. The dispatcher/call-takers assigned to OCD are routinely called upon to utilize their firefighting skills, knowledge and abilities to positively affect the outcome of fire and medical emergencies.

Undoubtedly, when City residents experience an emergency situation there is a belief and high expectation that when they call the Fire Department the person answering the phone is a firefighter and/or paramedic; highly trained and qualified to handle their emergency. As such, LAFD dispatchers provide City residents with vital pre-arrival life saving instructions preceding the response of emergency resources while routinely making critical decisions on resource and equipment allocation.

Furthermore, on September 6, 2006, the City of Santa Monica and the Los Angeles Fire Department executed the EMS/Fire Dispatch Services Agreement in a step toward achieving regional interoperability communications to establish a seamless and unified approach for enhanced public safety consistent with Homeland Security guidelines.

Vital to the development and success of this agreement, the new LAFD Regional Dispatch Center, currently under construction, is a state of the art facility designed to function as a regional communication and serves as a model for all fire service municipalities in the country. This facility represents the future of public safety utilizing highly trained personnel to coordinate the City's Emergency Operations, LAFD/LAPD Department Operations and the State Emergency Preparedness System. The potential impact of the proposed conversion on Federal, State, City and the Department's intermediate and long-range interoperability communications and Homeland Security goals requires a more qualitative assessment to ensure existing plans and allocated funds are not compromised.

Conclusion

The Los Angeles Fire Department Dispatch Staffing and Special Duty Assignments Analysis includes essential factors requiring further consideration and offers alternative findings to the recommendations supporting the conversion of sworn dispatchers to civilian personnel. While the utilization of civilian call-takers/dispatchers to deliver emergency services has proven successful for some municipalities, the advanced training, qualifications and experience of sworn dispatchers remains the "highest and best" use of LAFD personnel to meet the challenges, growing complexities and expectations facing the Los Angeles Fire Department.