



THE CITY OF SAN DIEGO  
**REPORT TO THE CITY COUNCIL**

DATE ISSUED: May 14, 2008 REPORT NO: 08-077  
ATTENTION: Council President and City Council  
Agenda of May 19, 2008  
SUBJECT: Fire-Rescue Business Process Reengineering Report  
REFERENCE: Fire-Rescue Business Process Reengineering Final Report

**REQUESTED ACTION:** Accept the recommendations of the Fire-Rescue Business Process Reengineering (BPR) Study.

**STAFF RECOMMENDATION:** Accept the recommendations of the Fire-Rescue BPR.

**BACKGROUND:** The Mayor has commenced Business Process Reengineering (BPR) efforts to improve efficiencies, reduce the cost of City government and to maximize the services offered to our residents. BPR focuses on optimizing the efficiency and effectiveness of operational processes and functional work groups. On July 31, 2006, the City Council adopted Ordinance O-19523, establishing a policy for the City of San Diego to reorganize the Departments of the City in order to improve the level of services to the citizens of the City and reduce the cost of providing such services.

This BPR focused on a review of the organization's management practices rather than the more typical process-oriented analysis of most BPRs. The following topics were selected for study:

1. Staffing Strategies
2. TeleStaff Staffing Program
3. Special Team and Specialty Station Assignments
4. Dispatch
5. Hiring Practices
6. Training Practices
7. Fact Finding Procedures

During the mid-term brief on this BPR, the Chief Operating Officer requested that a number of fundamental aspects of how firefighter positions were staffed also be examined to ensure that past management decisions continued to meet the tests of efficiency and effectiveness. Based upon this direction, the following study topics were added to the BPR:

- Use of four-person minimum crew staffing for fire engines/trucks
- Selection of 56-hour work schedule for firefighters
- Selection of 28-day Fair Labor Standards Act (FLSA) work cycle for firefighters
- Use of overtime (OT) in lieu of additional hiring to cover short-term firefighter vacancies
- Cross-training of all firefighters as Emergency Medical Technicians (EMT)

The fire agencies listed below were contacted to obtain survey/benchmark data on best practices during this BPR.

Austin	Las Vegas	Sacramento
Dallas	Miami-Dade	San Francisco
Long Beach	Oakland	San Jose
Los Angeles City	Orange County	Seattle
Los Angeles County	Phoenix	

Many of the key findings of this BPR, as well as survey/benchmark data developed, are summarized in this report. A listing of all BPR recommendations is provided as Attachment A while a detailed analysis of the department's staffing strategies is provided as Attachment B.

**STAFFING STRATEGIES**

Fire-Rescue's use of OT to provide for constant staffing of fire stations has been the subject of concern on the part of some who have taken note of the department's comparatively large OT budget and questioned whether the staffing strategies that result in the use of OT are the most efficient use of tax payer funds.

In response to these concerns, as directed by then Chief Operating Officer Ronne Froman, all aspects of the department's Operations staffing strategies were studied during this BPR. This included a review of applicable labor law regarding the payment of OT, firefighter work schedules, engine/truck company minimum staffing levels, the use of constant staffing to maintain minimum staffing, training of firefighters as EMTs, and a review of Calendar Year (CY) 2006 staffing data to determine leave usage and cost of hiring versus OT to fill vacancies.

**Fair Labor Standards Act (FLSA) – 28-Day Firefighter Work Cycle**

FLSA requires an employer to pay premium OT (1.5 times base rate of pay) for all OT worked beyond a normal work cycle. For most employees this work cycle is 40 hours per seven day week. However, Section 7k of the Act provides an exemption for firefighters allowing the establishment of a work cycle of up to 28 days and up to 53 hours per week. The 53 hour limit for firefighters means that at the end of the 28-day, or four-week cycle, they are paid premium OT for all "hours worked" beyond 212 (4 weeks x 53 hours per week).

**Recommendation/Conclusion: The department recommends retaining the 28-day firefighter work cycle. As shown in the following table, the 28-day cycle used by the department provides the least cost alternative of the cycles available because it allows for more time off to be factored in to the calculation. This helps reduce the number of hours eligible for premium pay to the minimum permissible under the law.**

FLSA Cycle Days	FLSA Max. Hours	SDFD Work Schedule Hours	OT Hours Owed
7	53	72	19
14	106	120	14
21	159	168	9
28	212	216	4

### **56-hour Firefighter Work Schedule**

SDFD firefighters work 24-hour shifts on a work schedule that averages 56 hours per week over the 28-day FLSA work cycle. The 56-hour work schedule is the most commonly used schedule of the agencies surveyed (8 of 14). The use of schedules with fewer hours worked would result in the need to hire additional personnel, at significant additional expense. The use of a work schedule with more hours than is commonly found in other cities could have the effect of putting the City of San Diego at a competitive disadvantage in recruiting and retaining firefighters.

***Recommendation/Conclusion:*** The department recommends retaining the 56-hour firefighter work schedule. Used in conjunction with the FLSA 7k exemption, the current 56-hour work schedule provides the most cost effective means of ensuring on-duty 24-hour staffing 365 days a year.

### **Four-Person Fire Engine/Truck Company Staffing**

Four-person staffing has been the standard for SDFD since its inception as a full-time paid organization. Four-person staffing is also the norm for large metropolitan fire departments nationwide (12 of 14 surveyed). Fire service studies have consistently shown that four-person staffing reduces fire loss and keeps fires small due to the more rapid application of extinguishing agent. Many of the principles that apply to the need for four-person staffing on fire emergencies can also be applied to operations at a critical medical emergency or one with multiple patients.

***Recommendation/Conclusion:*** The department recommends maintaining four-person minimum staffing of engine and truck companies. Four-person staffing is endorsed by leading fire service management, labor and policy advisory organizations as providing the greatest emergency response capability for communities while also providing for the safety of firefighters. It is the most prevalent staffing level in use by major urban fire agencies.

### **Constant Staffing**

The term “constant staffing” refers to the practice of providing a replacement for a firefighter whenever he/she will be absent for more than seven consecutive hours in a 24-hour work shift. Constant staffing is used by all 14 survey/benchmark agencies to ensure minimum staffing levels. Constant staffing can be achieved through the use of a staffing factor and/or OT. The staffing factor is applied to budgeted firefighter positions to result in the hiring of additional personnel to cover anticipated vacancies. Firefighters hired above the actual number of daily positions required are scheduled to work in relief of absent firefighters throughout the City.

***Recommendation/Conclusion:*** The department recommends continuation of constant staffing. The same rationale that gives rise to the use of four-person minimum staffing supports the use of constant staffing to maintain that minimum. In combination, these practices lead to more efficient and safe delivery of emergency services.

### **Staffing Strategy: Overtime vs. Hiring**

SDFD uses OT as the primary means to maintain minimum staffing levels in its Operations Division when short term constant staffing vacancies occur. The department defines “short

term” vacancies as those anticipated to last less than three months. The reason this staffing strategy was chosen is because it is more cost-effective to have existing employees work OT than it would be to hire or promote additional employees to provide coverage.

There are three primary factors that influence the total cost of each option: fringe rates applied to each; OT premium payout rate; and flexibility in utilization of replacement personnel. While the rates fluctuate over time, at the time this BPR study was conducted, the fringe costs associated with the hiring of an employee were an additional 73% of salary while the fringe costs for an existing employee working OT were an additional 9% of salary. Even with the increased salary costs of OT (1.5 times the base rate), the greatly reduced cost of fringe associated with OT makes the overall cost of OT much less than hiring an additional employee.

The rate at which OT hours worked are actually paid at the OT rate (1.5 times the base rate) also impacts the cost analysis of hiring vs. OT. Under the 28-day FLSA cycle used by SDFD, in CY2006, firefighters were paid premium OT only 78% of time they worked OT. This was due to firefighters’ use of leave that reduced the number of work hours counted toward the premium OT threshold. As a result, the department’s effective (actual) OT pay-out rate was reduced from 1.5 times the base pay rate to 1.39 times this rate.

Lastly, the use of OT allows the department to “staff as needed”. Vacancies fluctuate from day to day and seasonally. In CY2006, the constant vacancy full-time equivalent (FTE) fluctuated from a low of 60 FTE to a high of 143 FTE over the 13 accounting periods. By using OT, SDFD was able to use only the exact number of personnel needed to cover these vacancies with no extra personnel carried on payroll at added expense.

**Recommendation/Conclusion: The department recommends continuation of the use of OT to staff short-term vacancies in lieu of hiring additional personnel. In CY2006, this strategy saved the City \$3 million in personnel costs. These savings consisted of \$1.7 million in direct cost savings and the avoidance of \$1.3 million in costs that would have been incurred by overstaffing if additional employees had been hired to fill these vacancies, in lieu of using OT. Long-term savings in retirement costs, above those reflected here, are also realized as a result of OT staffing not being subject to retirement benefits associated with the hiring of additional personnel.**

**Cross-Training of Firefighters as Emergency Medical Technicians (EMT)**

As a condition of being permitted to operate its own Emergency Medical System (EMS), the City is contractually obligated by the County EMS Authority to maintain one EMT on each first-responder unit. Since 1980, all San Diego Fire-Rescue firefighters have been cross-trained to the level of EMT. Fire engines and trucks today operate with three firefighters cross-trained as EMTs and one cross-trained as a paramedic. Thirteen of the 14 fire agencies surveyed/benchmarked reported cross-training all firefighters as EMTs.

**Recommendation/Conclusion: The department recommends that the current staffing configuration of one paramedic and three EMTs per engine/truck be maintained. While there is no mandate for the City to maintain the additional two crewmembers at the EMT level, or one at the paramedic level, this staffing configuration provides a higher level of**

**care to the community and is consistent with the level of care found in similar metropolitan fire departments.**

### **TELESTAFF STAFFING PROGRAM**

The TeleStaff staffing software program is the tool used by SDFD personnel responsible for scheduling the work shifts for 978 Operations Division (e.g., fire fighting, helicopter program) personnel. The program replaced a less capable custom software package and manual tracking system. TeleStaff has greatly improved the efficiency, accuracy and documentation of department staffing assignments related to the Operations Division. It has also increased access and convenience for department personnel as well as ensured the equitable allocation of OT assignments. The vast majority of fire departments using TeleStaff that were surveyed used the program in a similar manner to SDFD, with few major differences.

***Recommendation/Conclusion:*** **The department recommends expanding the use of TeleStaff to the scheduling of all department personnel. In addition, the purchase of the reporting module for the TeleStaff program would give staff the ability to automate many of the data gathering and reporting functions currently done manually. This will cost \$5,388, and can be absorbed in the current budget. As management of the TeleStaff system is an adjunct duty of firefighters assigned to the Airport Fire Station, no personnel reductions are possible as a result of this expenditure; however, this will result in more timely production of management reports and enable assigned personnel to devote more hours to required training and other administrative activities.**

### **SPECIALTY TEAM AND SPECIALY STATION ASSIGNMENTS**

SDFD provides the community with a wide variety of specialty services in addition its more commonly known core missions of fire suppression and emergency medical response. These services include response and mitigation resources for hazardous materials and explosive devices incidents, fire/arson investigation, large scale disaster response, tactical emergency medical support for SDFD SWAT, as well as specialized fire-rescue equipment maintenance. As compensation for their additional training and responsibilities, firefighters providing these specialized services receive special pays ranging from 2.5% to 10% of their base salary.

SDFD's use of "cross-staffed" and "cross-trained" firefighter personnel has proven to be a cost efficient method of providing these services without the need to hire additional specialized staff. Existing equipment is shared when an engine or truck company is utilized to staff the specialty response apparatus (e.g., HAZMAT). It is important to remain continually mindful that when an engine or truck is being utilized for cross-staffing purposes, that equipment is now unavailable for responders to use during the regular course of emergency response.

This is illustrated in the table on the following page which shows the impact of cross-staffing HAZMAT responses on Truck 44. A truck from another station must be dispatched to an emergency response whenever Truck 44 is being used for cross-staffing purposes, potentially resulting in a longer truck response time and delay in initiating truck activities at the scene of an emergency.

FY	Unit	Incident Count	Active Time (Hours)
2005	HAZMAT1	249	451.13
2005	HAZMAT 2	15	23.88
<b>2005</b>	<b>Total</b>	<b>264</b>	<b>475.01</b>
2006	HAZMAT1	324	489.25
2006	HAZMAT 2	25	37.64
<b>2006</b>	<b>Total</b>	<b>349</b>	<b>526.89</b>
2007	HAZMAT1	322	464.29
2007	HAZMAT 2	17	22.45
<b>2007</b>	<b>Total</b>	<b>339</b>	<b>486.74</b>

**Recommendation/Conclusion:** The department recommends that response readiness impacts be assessed as part of any decision to cross-staff emergency apparatus. In situations where the criticality of the mission and/or the response activity levels suggest the need to create stand-alone specialty units, a case should be made through the budgetary process to address these issues.

Explosive Device Team (EDT)

A review of the EDT program revealed that assigned personnel have found it increasingly difficult to meet the FBI's monthly 16-hour training requirement under the present training structure. Currently, funding is provided for eight hours of dedicated training per month per technician. The remaining eight hours of training must be performed while the technician is on-duty and cross-staffing a fire engine/truck at Fire Station 1. Due to workloads associated with their fire suppression positions, this on-duty training is inconsistent, ineffective and reduces the efficiency of the fire suppression units to which the technicians are assigned. Consequently, training often falls short of the FBI required 16 hours per month. This shortfall in training hours results in technicians not being able to maintain critical skills necessary to safely and effectively carry-out their high-risk duties.

**Recommendation/Conclusion:** The department recommends that an additional eight hours of dedicated training be provided to EDT technicians to meet FBI requirements. This will cost \$65,260 annually.

Light and Air Apparatus (LA-1)

The Light and Air apparatus (LA-1 and LA-40) are used to refill all department self-contained breathing apparatus (SCBA) used by firefighters. This refilling is done on a daily basis by personnel assigned to Fire Station 1. Refilled air bottles are then delivered to the seven battalion headquarters by the LA-1 operator for further distribution to the battalion's units by the battalion chief. In addition to this routine use, these Light and Air units can be brought directly to the scene of an emergency to provide this capability, as well as emergency lighting.

One Light and Air position per shift (LA-1) is staffed with a specially trained operator at the rank of Firefighter. The position is staffed for the first 12 hours (8 a.m. to 8 p.m.) of each 24-hour shift on an OT basis. The second 12 hours of the shift is cross-staffed with a Firefighter assigned to one of

the three emergency response units at Fire Station 1. The cost of this OT staffing model is \$163,665 annually.

The department is purchasing air compressors for installation at the seven battalion headquarters. Once these installations have been completed, personnel at the battalion headquarters will perform daily refilling of air bottles for all units assigned to the battalion. This will provide the opportunity to eliminate staffing of a dedicated Light and Air operator under the OT model discussed above.

**Recommendation/Conclusion: The department recommends that once the air compressor installations are completed, OT staffing of the Light and Air unit be discontinued. Staffing for emergency use of the Light and Air units to provide service at the scene of prolonged incidents would then be provided by personnel assigned to Fire Stations 1 and 40 on a cross-staffed basis, as is currently the case after 8 p.m. This recommendation will result in a maximum cost savings of \$163,665 in the first year (dependent upon date of project completion) and the full amount annually thereafter.**

## **DISPATCH**

SDFD operates two communications centers. The Fire Communications Center (FCC) is located in a stand-alone facility in Kearny Mesa and is staffed on a 24/7 basis by civilian Fire Dispatchers (33), Fire Dispatch Supervisors (4), and Emergency Resource Officers/Fire Captains (3). The FCC staff is responsible for Fire and Medical dispatching for the cities of San Diego, Poway and Chula Vista. The Lifeguard Communications Center (LCC) is co-located at Lifeguard Headquarters (Quivira Basin) and is staffed 24/7 by uniformed lifeguard personnel. The LCC is currently part of the Boating Safety Unit (BSU) and dispatchers spend only part of their day dispatching. The remaining shift is spent on patrol in Mission Bay or the ocean. During the night, however, there is one person continuously assigned to dispatch.

Four fire departments and one police department responded to the FCC dispatch survey. Respondents included the Austin, Oakland, Orange County and Seattle Fire Departments and the San Diego Police Department (SDPD). All of the respondents, with the exception of SDPD, were smaller in size (staffing numbers, calls received, incidents processed, etc). Two are staffed with only uniformed personnel. Two are staffed with uniformed supervisors/managers but civilian dispatchers. SDPD is 100% staffed by civilians. All of the fire department respondents handle similar command and control duties to San Diego Fire-Rescue's FCC. These include but are not limited to move-up of emergency units to provide coverage, formulation and dispatch of strike teams, weather monitoring and notifications to staff. Respondent's average call processing times ranged from 47 to 90 seconds (FCC's average is 65 seconds).

Lifeguard agencies were surveyed to determine their 24-hour dispatching practices. Only one agency had uniformed lifeguards handling 9-1-1 calls and dispatching 24-hours a day. The rest of the benchmark agencies had uniformed lifeguards during the day hours but had civilian dispatchers handle 9-1-1 calls and dispatching at night. One agency reported that they had uniformed lifeguards handling dispatching during the day but no dispatch after midnight.

**Recommendation/Conclusion: Although opportunities for combining functions, technology and/or positions between the FCC and LCC were discussed at length, and it was determined**

that unique operational considerations required that both centers be operated separately, the department recommends that these issues be revisited during the pending City-wide dispatch study to determine whether any integration opportunities that would improve operations exist.

### **HIRING PRACTICES**

SDFD continues to face considerable challenges in fielding a workforce that is both qualified to provide the services the community desires and appropriately reflects the diversity of our community. The local experience is consistent with what is occurring across the nation.

As the roles of the fire and lifeguard services have expanded, especially into the areas of emergency medical response, the requisite pre-employment training has increased. The smaller pool of prospective candidates who have the financial resources and access to training programs necessary to make them competitive for hire, impacts the diversity of the pool of qualified candidates. Those who do acquire the necessary credentials to make them a highly-desirable candidate are often able to choose from a number of departments interested in their services. To effectively compete for the limited pool of highly desirable and diverse candidates requires a commitment to recruitment and training.

***Recommendation/Conclusion:*** The department recommends continuation of its participation in the Public Safety High School at Lincoln High, continued funding of the existing Outreach and Recruitment position, continued participation in local career fairs and other public awareness opportunities, and further exploration of other cost-effective means to attract qualified candidates to a career with SDFD.

### **TRAINING**

Training of San Diego Fire-Rescue's 1,175 member workforce, with its numerous specialty requirements, has grown increasingly difficult through the years as a result of fiscal challenges. One impact of the budgetary constraints has been a limited ability to take full advantage of technological innovations that would facilitate the provision of training while also serving to keep emergency response units in their response districts, such as on-line training. Moreover, opportunities exist to partner more effectively on a regional basis to provide the training needed by all area fire service agencies.

One of the greatest challenges of providing training to fire station personnel is the need to have them travel from their response districts to a central location to receive training. Expansion of the department's on-line training efforts would cut out-of-service time associated with this centralized training by almost 10,000 hours (from 16,632 to 6,320). While this is worthwhile goal, there would not be any savings to offset the additional cost of an on-line training program because under either training scenario the units are on-duty for the same number of hours. All that is changed under the on-line scenario is that the units will be in-service in their response districts and not taken out-of-service for training at a centralized location.

While many programs in surveyed departments mirror SDFD's, a couple of new ideas could increase efficiency and effectiveness. Oakland and Seattle both share training facilities with other agencies; Oakland Fire with Oakland Police and Alameda Fire and Seattle Fire with Seattle Public



Utilities. All departments use some form of on-line training and tracking system. Oakland Fire contracts with a private vendor to provide EMS, State and Federal mandated training.

**Recommendation/Conclusion: The department recommends the following:**

- **Continue to explore opportunities to regionalize its training efforts and develop grant and non-traditional funding sources to augment the City's investment.**
- **Develop cross-divisional (e.g., fire, lifeguard, prevention, administrative), cross-departmental (e.g., Police, Water), and regionalized (e.g., Poway, Chula Vista) training utilizing the economies of scale in both instructional material and facilities.**
- **Develop subject matter expert instructor cadres to develop Standard Operating Procedures and training programs to prevent duplicative work and better coordinate personnel on responses.**
- **Create core competencies for each position and training paths to develop these core competencies. This includes the use of career development guides and requirements for each position prior to promotion.**
- **Explore the feasibility of contracting with a private vendor to develop and provide most of the EMS and paramedic recertification hours, and to provide up to date state and federally mandated training in topic areas like HAZMAT first responder and Incident Command System training.**

**FACT FINDING PROCEDURES**

Fact Findings are conducted to establish facts surrounding reports of alleged employee misconduct. Because the initial report is an allegation, a Fact Finding is used to determine whether the report of misconduct is valid. If substantiated, the Fact Finding documents form the basis for any subsequent discipline, if warranted. Currently, inconsistencies within the process and timeline occur depending upon the type of Fact Finding (e.g., criminal, complexity), the experience of the investigative panel, which labor group represents the employee, and the number of interviews required to be conducted.

Notable findings from seven agencies surveyed are that Fact Findings are frequently conducted by sworn officers and/or Human Resources (HR) staff. Sworn officers conducting Fact Findings receive POST and/or internal affairs training supplemented by many years of investigative experience. An HR staff member chairs investigative panels. Fact Finding reports that do not result in discipline are retained in a sealed file accessible only to the fire chief.

The Fact Finding process in SDFD is compromised by several factors that often lead to less than optimal results. Chief among these is the lack of trained staff for which Fact Findings are a core duty and a lack of training for staff assigned Fact Finding as an adjunct duty. In addition, lack of time by assigned investigators who must concurrently handle all of their normally assigned responsibilities and the 56-hour Fire-Rescue work schedule makes it difficult to schedule interviews and complete fact findings in a timely manner.

**Recommendations/Conclusion: The department recommends that additional training be provided to all Fact Finding panel members and Human Resources staff tasked with coordinating Fact Findings. This training can be provided in partnership with the Labor Relations Office and City Attorneys' Office.**

**FISCAL CONSIDERATIONS:**

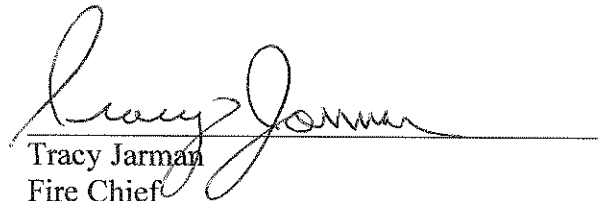
The following table summarizes the estimated net expenses in the FY08 and FY09 budgets. Due to the uncertain timing of implementation, the fiscal impacts have not been addressed in the FY2009 budget; however, these impacts will be addressed once implementation is completed.

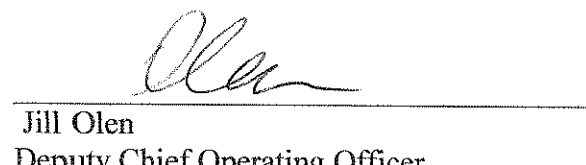
<b>Cost Impacts Expected</b>	<b>Impact</b>
<b>FY08</b> (to be absorbed in current budget)	
Purchase TeleStaff reporting module	\$5,388
Increase monthly bomb squad training from 8 to 16 hours to comply with FBI requirements – ongoing expense (March-June FY08)	\$21,753
<b>Sub Total FY08</b>	<b>\$27,141</b> (to be absorbed in current budget)
<b>FY09</b>	
Discontinue OT staffing of Light and Air Unit (maximum savings dependent compressor installation completion date)	(\$163,665)
Increase monthly bomb squad training from 8 to 16 hours to comply with FBI requirements – ongoing expense	\$65,260
<b>Sub Total FY09</b>	<b>(\$98,405)</b>

**PREVIOUS COUNCIL and/or COMMITTEE ACTION:** None

**COMMUNITY PARTICIPATION AND PUBLIC OUTREACH EFFORTS:** None

**KEY STAKEHOLDERS AND PROJECTED IMPACTS:** The work related impacts of this BPR have been appropriately covered through the Meet and Confer process with Local 145 and MEA. The resulting cost avoidance will benefit the City.

  
Tracy Jarman  
Fire Chief

  
Jill Olen  
Deputy Chief Operating Officer  
Public Safety/Homeland Security

**RECOMMENDATIONS SUMMARY and IMPLEMENTATION TIMELINE**

<b>BPR Topic Area</b>	<b>Tracking Designator</b>	<b>Recommendation</b>	<b>Responsible Division(s)</b>	<b>Implementation Time Frame</b>
<u>FLSA</u>	1	Continue applying a 28-day FLSA work cycle.	Fiscal	Ongoing
	2	Continue assigning mandatory holidays to reduce overtime on months with 10 scheduled work shifts.	Fiscal HR	Ongoing
<u>56-hour FF Work Schedule</u>	3	Continue use of the 56-hour firefighter work schedule.	Fiscal Operations	Ongoing
<u>Four-Person Staffing</u>	4	Continue use of four-person minimum staffing to provide adequate staffing for safe and efficient delivery of emergency services.	Operations	Ongoing
<u>Constant Staffing</u>	5	Continue use of constant staffing to ensure minimum staffing levels are maintained in the Operations Division.	Operations	Ongoing
<u>EMT Training of Firefighters</u>	6	Continue cross-training all firefighters as Emergency Medical Technicians.	Operations EMS/Training	Ongoing
<u>Staffing Strategies</u>	7	Continue the current staffing strategy of using overtime to cover short term vacancies.	Fiscal Operations	Ongoing
	8	Continue the current hiring and rank-order promotion processes to ensure efficient staffing.	Fiscal HR EMS/Training	Ongoing
	9	Establish a separate TeleStaff work code to indicate intentional long-staffing to allow for a more accurate accounting of unintentional long-staffing.	Fiscal Operations	Short Term (3-6 months)
	10	Establish a centralized data tracking system to facilitate monthly analysis of staffing.	Fiscal	Short Term (3- 6 months)
<u>TeleStaff</u>	11	Purchase the TeleStaff reporting module to give staff the ability to automate data gathering and reporting functions currently done manually. Cost: \$5,388.	Operations	Short Term (3- 6 months)

# Attachment A

BPR Topic Area	Tracking Designator	Recommendation	Responsible Division(s)	Implementation Time Frame
<u>TeleStaff</u>	12	Give each division scheduling authority and require all special assignments and project work to be scheduled and approved in TeleStaff.	All Divisions	Short Term (3- 6 months)
	13	Review/revise TeleStaff work codes and City job orders to better track the costs of all project, special assignment, constant staffing and grant work.	Fiscal Operations	Short Term (3- 6 months)
	14	Implement use of the TeleStaff "authorization" feature to increase the accuracy of crew rosters in stations with more than one crew.	Operations	Short Term (3- 6 months)
	15	Require the scheduling of all overtime by uniformed personnel be done in TeleStaff, and require the authorization of a supervisor.	All Divisions	Ongoing Long Term (12-24 months)
	16	Use TeleStaff to replace department form FD14 and City form CS1425A to eliminate duplication.	All Divisions	Long Term (12-24 months)
<u>Specialty Assignments/ Teams</u>	17	<u>Specialty Teams</u> Periodically evaluate specialty team (e.g., HAZMAT and EOD) workloads to determine if cross-staffing is the most appropriate approach or if a stand-alone unit is justified.	Special OPS Operations	Ongoing
	18	Develop performance measures for all teams.	Special OPS	Short Term (3-6 months)
	19	<u>Single Resource /Overhead Teams</u> Approve the Operations Manual Procedures for the Single Resource/Overhead Program.	Special OPS	Short Term (3- 6 months)
	20	Encourage the participation of new firefighters in the Single Resource Program as a career development measure once they have completed probation.	Operations Special OPS EMS/Training	Short Term (3- 6 months) Ongoing

# Attachment A

BPR Topic Area	Tracking Designator	Recommendation	Responsible Division(s)	Implementation Time Frame
<u>Specialty Assignments/Teams</u>	21	<p><u>Hazardous Materials Response Team (HAZMAT)</u></p> <p>Locate HAZMAT at Fire Station 45 when constructed in Mission Valley. This station was specifically designed as a hazardous materials specialty fire station. It is designed for a dedicated HAZMAT 1, truck, a cross staffed engine/HAZMAT 2, Battalion Chief, and ambulance.</p>	Special OPS Operations Logistics	Dependent on completion of fire station (TBD)
	22	<p><u>Explosive Ordnance Disposal (EOD) Program</u></p> <p>Increase authorized monthly training hours from 8 to 16; as required by the FBI training program. Cost: \$65,620</p>	Special OPS Fiscal	Short Term (3-6 months) Ongoing
	23	<p><u>Light &amp; Air 1</u></p> <p>Discontinue practice of staffing Light and Air (LA-1) on an overtime basis for 12 hours once all battalion air compressors have been installed. Max. annual savings of \$163,665 dependent upon compressor installation completion date.</p>	Operations Fiscal	Mid Term (6-12 months)
	24	<p><u>Specialty Stations</u></p> <p>Place specialty stations under authority of Operations to provide improved budget development/compliance, a reduction in waste and improvement in customer service.</p>	Operations	Short Term (3-6 months)
	25	<p>Review the use of the standardized tracking system (FACE T) in all specialty stations to enhance accountability, shorten equipment repair turnaround, increase specialty station personnel knowledge, enhance customer service and improve station morale.</p>	Operations Fiscal	Long Term (12-24 months)
	26	<p>Require specialty stations to file annual reports to accurately document repairs performed and inventories maintained to assist in budget preparation.</p>	Operations Fiscal	Long Term (12-24 months)

# Attachment A

BPR Topic Area	Tracking Designator	Recommendation	Responsible Division(s)	Implementation Time Frame
<u>Dispatch</u>		<p><u>Improve command and control at Fire Communications Center (FCC):</u></p> <ul style="list-style-type: none"> <li>○ Implement a new crew/captain phone line for resource related services.</li> <li>○ Focus Fire Dispatch Administrator (FDA) duties toward core organizational and administrative functions.</li> <li>○ Reduce hand-offs through consolidated command of all emergency functions.</li> <li>○ Gain efficiencies through strategic improvements to communication system.</li> </ul>	Communications	<p>Short Term (3-6 months)</p> <p>Mid Term (6-12 months)</p>
		<p><u>Identify opportunities to combine functions and/or positions:</u></p> <ul style="list-style-type: none"> <li>○ Discontinue simulcasting on Channels 7A &amp; 7B. Dispatch on 7A. 7B becomes admin channel for both Fire and Medical units. Transport and "at hospital" traffic on 7C.</li> <li>○ Fill vacant positions with lateral transfers from other agencies.</li> </ul>	<p>Communications</p> <p>Communications HR</p>	<p>Short Term (3-6 months)</p> <p>Long Term (12-24 months)</p>
		<p><u>Implement technology upgrades:</u></p> <ul style="list-style-type: none"> <li>○ Identify opportunities to automate the dispatch announcement function.</li> <li>○ Develop Request for Information (RFI) for new Incident Alerting System.</li> <li>○ Refer non-emergency calls to 311 (once operational).</li> <li>○ Implement a unique lifeguard alert tone.</li> <li>○ Perform all unit assignment and voice dispatch through dispatch radio.</li> <li>○ Program CAD Out of Service request (from MDC, IST req., and training delayed).</li> <li>○ Enhance MDC trouble shooting guide to include EMS issues and train Operations units to use it.</li> <li>○ Maintain 0800 hrs. zone information test at Fire Radio position.</li> </ul>	<p>Communications</p> <p>Communications</p> <p>Communications Communications Communications</p> <p>Communications</p> <p>Communications Communications</p>	<p>Long Term (12-24 months)</p> <p>Long Term (12-24 months)</p> <p>TBD</p> <p>Short Term (3-6 months)</p> <p>Mid Term (6-12 months)</p> <p>Mid Term (6-12 months)</p> <p>Immediate</p>

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BPR Topic Area	Tracking Designator	Recommendation	Responsible Division(s)	Implementation Time Frame
<u>Dispatch</u>	41	<p><u>Identify opportunities to increase revenues:</u></p> <ul style="list-style-type: none"> <li>○ Evaluate feasibility of establishing a program for dispatchers similar to Fire Technology 265 program through Miramar College.</li> </ul>	Communications EMS/Training	Short Term (3-6 months)
	42	<ul style="list-style-type: none"> <li>○ Use Fire Dispatch Administrators to explore contract dispatch opportunities</li> </ul>	Communications	Immediate Ongoing
	43	<ul style="list-style-type: none"> <li>○ Use Fire Dispatch Administrators to explore grant opportunities</li> </ul>	Communications	Immediate Ongoing
	44	<p><u>Lifeguard Dispatch</u></p> <ul style="list-style-type: none"> <li>○ Create a second agency in the existing FCC Computer Aided Dispatch system for use by Lifeguard Communications Center to help with notifications and documentation.</li> </ul>	Communications	Short Term (3-6 months)
	45	<ul style="list-style-type: none"> <li>○ Install Mobile Data Computers (MDC) in field units to receive incident information and mapping directions from CAD.</li> </ul>	Communications Logistics Lifeguards	Long Term (12-24 months)
	46	<ul style="list-style-type: none"> <li>○ Install CAD View software to allow Lifeguard staff to access dispatch incident information.</li> </ul>	Communications Lifeguards	Long Term (12-24 months)
	47	<ul style="list-style-type: none"> <li>○ Track all incidents through the Lifeguard Communications Center rather than on paper by the lifeguard at the individual area command level.</li> </ul>	Communications Lifeguards	Short Term (3-6 months)
	48	<ul style="list-style-type: none"> <li>○ Install ergonomic work stations for dispatchers.</li> </ul>	Communications Lifeguards	Long Term (12-24 months)
	49	<p><u>Background Processes</u></p> <ul style="list-style-type: none"> <li>○ Explore transfer of Human Resources aspect of background investigations to Personnel or Police Department Background Unit per HR BPR recommendation.</li> </ul>	HR Personnel	Long Term (12-24 months)
	50	<ul style="list-style-type: none"> <li>○ Include nationwide DMV and EMS reviews in Personnel Department background checks.</li> </ul>	HR Personnel	Mid Term (6-12 months)
	51	<p><u>Testing Process</u></p> <ul style="list-style-type: none"> <li>○ Conduct the Physical Abilities Test as part of the testing process.</li> </ul>	HR Personnel	Long Term (12-24 months)
	52	<ul style="list-style-type: none"> <li>○ Develop a method to transition existing EMS employees into Fire-Rescue.</li> </ul>	HR Personnel	Long Term (12-24 months)
	53	<ul style="list-style-type: none"> <li>○ More effectively advertise and identify components of the hiring process.</li> </ul>	HR Personnel	Long Term (12-24 months)

Attachment A

BPR Topic Area	Tracking Designator	Recommendation	Responsible Division(s)	Implementation Time Frame
<u>Hiring Practices</u>				
	54	<p><u>Retention</u></p> <ul style="list-style-type: none"> <li>Provide funding for the department's Employee Rewards and Recognition Programs.</li> </ul>	Fiscal HR	Mid Term (6-12 months)
<u>Training</u>				
	55	Develop cross-divisional, cross- departmental, and regionalized training; utilizing the economies of scale in both instructional materials and facilities.	EMS/Training	Ongoing
	56	Develop subject matter expert instructor cadres to develop Standard Operating Procedures (SOPs) and training programs to prevent duplicative work and better coordinate personnel on responses.	EMS/Training	Ongoing
	57	Develop and store training curriculum in a central location for dispersal to the whole department.	EMS/Training	Short Term (3-6 months)
	58	Create core competencies for each position and training paths to develop these core competencies. This includes the use of career development guides and requirements for each position prior to promotion.	EMS/Training Special OPS	Long Term (12-24 months)
	59	Explore opportunities to develop and provide most of the EMS and paramedic recertification hours, and up-to-date state and federally mandated training in topic areas like HazMat first responder and Incident Command System training, on-line.	EMS/Training	Long Term (12-24 months)
<u>Fact Findings</u>				
	60	Provide Fact Finding training for all prospective panel members, support, and HR staff.	HR EMS/Training	Ongoing



## Fire-Rescue Staffing Strategies

### A. Fair Labor Standards Act (FLSA) – 28-Day Firefighter Work Cycle

#### Background

The Fair Labor Standards Act (FLSA), establishing maximum work hours and overtime requirements, was initially enacted in 1938 but generally applied only to the private sector. In 1974, Congress amended the act to cover virtually all state and local government employees but lengthy legal challenges, mainly by the National League of Cities, delayed enactment until the mid-1980s.

In 1985 the Fire Chief analyzed the impacts of FLSA on department staffing and determined the costs for several different implementation options. The lowest cost scenario included:

- Establishing a 28-day FLSA work cycle
- Establishing fixed holidays with dedicated crews to rotate through the shifts to cover the holidays
- Hiring up to the existing budget
- Expanding the staffing factor to cover unscheduled absences such as for illness

On April 11, 1986, the actions recommended by the Fire Chief were implemented by the City Manager and appropriate provisions were included in the Memorandum of Understanding with Local 145 for the fiscal year beginning July 1, 1986.

#### FLSA Provisions

FLSA requires an employer to pay premium overtime (1.5 times base rate of pay) for all overtime worked beyond a normal work cycle. For most employees this work cycle is 40 hours per seven day week. However, Section 7k of the act provides an exemption for firefighters (and police officers) allowing the establishment of a cycle of up to 28 days and up to 53 hours per week. For all employees “hours worked” excludes time not actually at work such as vacation, sick leave, holidays or other compensated or unpaid leave.

The 53 hour limit for firefighters means that at the end of the 28-day, or four-week, cycle they are paid premium overtime for all “hours worked” beyond 212 (4 times 53). Again, hours worked excludes compensated time off (e.g., annual leave, sick leave, voluntary trades etc...), or unpaid leave. The normal work schedule for firefighters is nine 24 hour shifts per month which results in 216 hours during the 28-day period. One result of this is that if a firefighter just works a normal 216 hours there is a built-in four hour premium overtime (216 hours worked minus 212 hour max. allowed) for which they receive two additional hours of pay (four hours at half time).

Of the options available, the 28-day cycle provides the least cost alternative because it allows for more time off to be factored in to the calculation which helps reduce the number of hours eligible for premium pay. The table that follows compares the number of hours eligible for premium overtime under 7, 14, 21 and 28 day cycles.

FLSA Cycle Days	FLSA Max. Work Hours Per Cycle	SDFD Work Schedule Hours Per Cycle	Overtime Hours Owed Per Cycle
7	53	72	19
14	106	120	14
21	159	168	9
28	212	216	4

### Conclusion

As was determined in 1985, the 28-day work cycle is the most cost effective option available under FLSA. Moreover, the implementation of mandatory holidays (the 13 City eight-hour holidays are combined to create four 24-hour holidays yearly with a fifth holiday accruing every three years) is key. This mandatory assignment of holidays coincides with the four times a year that an additional shift (10<sup>th</sup> shift) occurs in the 56-hour work schedule. This mandatory holiday assignment reduces the hours worked and serves to negate the overtime exposure for that 10<sup>th</sup> shift. Despite the efficiencies of the decisions made with respect to FLSA implementation, it is important to note that in FY 2007 the four hours paid at premium rate inherent in this schedule resulted in a \$600,000 expense that can only be decreased by employees taking time off during the 28-day work cycles.

### Recommendations

- Continue the practice of applying a 28-day FLSA work cycle.
- Continue the practice of assigning mandatory holidays to reduce overtime on months with 10 scheduled work shifts.

## **B. 56-hour Firefighter Work Schedule**

### Background

San Diego Fire-Rescue firefighters work 24-hour shifts on a work schedule that averages 56 hours per week over the 28-day FLSA work cycle. The 56-hour work week was mandated by State Law with Assembly Bill 1184, enacted in May of 1963. San Diego Fire-Rescue did not move to it until 1968, and this coincided with creation of the three-platoon system. The previous schedule and work week had been 67 hours, and two platoons. This resulted in differing days off for members of each crew, and the difference in staffing levels caused concern over crew continuity and performance. In addition to the financial considerations discussed below, the major advantage for the City in using the 56-hour work week, coupled with the FLSA 7k exemption is that crew composition is more static. That leads to increased efficiency in training as well as performance, which in turn results in improved firefighter and citizen safety.

Under the 56-hour schedule, work shifts begin and end at 8 a.m. Firefighters are assigned to one of three divisions that work in a pre-determined rotation to provide 24-hour on-duty coverage 365 days a year. This 56-hour schedule results in firefighters being scheduled to work 2912 hours in a year while City employees assigned to a more typical 40-hour schedule work 2080 hour per year. Of the additional 832 hours worked by 56-hour firefighters annually, only 52 hours (4 per 28-day

## Attachment B

cycle x 13 cycles) may be subject to overtime compensation of 1.5 times base salary due to the 7k exemption under the FLSA.

The shift schedule for May and June 2007 is illustrated in the tables on the next page. This schedule pattern repeats in perpetuity. The "T" indicates the beginning and end of 28-day FLSA work cycle. In each of these cycles, two divisions will be scheduled to work nine shifts and the third division will be scheduled to work a 10<sup>th</sup> shift. As discussed above in the section on FLSA, this 10<sup>th</sup> shift is scheduled as a mandatory holiday (the 13 City eight-hour holidays are combined to create four 24 hour holidays yearly with a fifth holiday accruing every three years) to eliminate the overtime associated with this 10th shift.

**May 2007 Firefighter Schedule (A = A Division; B = B Division; C = C Division)**

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		1 C	2 B	3 C	4 A	5 C
6 A	7 B	8 A	9 B	10 A	11 B	12 C
13 B	14 C	15 A	16 C	17 A	18 C	19 A
20 B	21 A	22 B	23 C	24 B	"T" "T"	25 C
26 B	27 C	28 A	29 C	30 A	31 B	

**June 2007 Firefighter Schedule (A = A Division; B = B Division; C = C Division)**

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
					1 A	2 B
3 A	4 B	5 C	6 B	7 C	8 A	9 C
10 A	11 C	12 A	13 B	14 A	15 B	16 C
17 B	18 C	19 B	20 C	21 A	"T" "T"	22 C
23 A	24 B	25 A	26 B	27 A	28 B	29 C
						30 B

### Benchmarks

At the time the 56-hour work week was adopted in conjunction with the 28-day firefighter work cycle under FLSA in 1985, 15 other agencies were contacted. Of the six California agencies contacted (L.A. City & County, Oakland, Sacramento, Long Beach and San Jose) all but Oakland had 56-hour weeks and Oakland had a 52 hour week. Of the nine other comparable non-California cities contacted, three had 56-hour work weeks while the others ranged from 42 hours to 52 hours. It was interesting to note that at the time Phoenix, Arizona actually went beyond the requirements of FLSA by paying firefighter overtime at premium rates for all overtime worked.

As part of this BPR, the fire jurisdictions listed below were contacted to determine their practices. All reported using 24-hour work schedules with 46-56 hour average work weeks. The most common schedule was 56 hours (8 of 14 respondents). Phoenix continues to be the only agency of the benchmark group that exceeds the requirements of FLSA by paying overtime at premium rates for all overtime worked.

Austin	Oakland
Dallas	Orange County
Long Beach	Phoenix
Los Angeles City	Sacramento
Los Angeles County	San Francisco

Las Vegas	San Jose
Miami-Dade	Seattle

### Conclusion

The 56-hour work schedule of 24-hour shifts employed by San Diego Fire-Rescue is the most commonly used schedule of the agencies surveyed. Used in conjunction with the 7k exemption under FLSA and the assignment of mandatory holidays, this schedule provides the most cost effective means of providing on-duty 24-hour staffing 365 days a year. The use of schedules with fewer hours worked would result in the need to hire additional personnel, at significant additional expense. The implementation of work schedule with more hours than is commonly found in other cities would be subject to meet and confer and would put San Diego at a competitive disadvantage in recruiting and retaining firefighters.

### Recommendations

- Continue the use of the 56-hour firefighter work schedule.

### **C. Four-Person Fire Engine/Truck Company Staffing**

#### Background

Four-person staffing has been the standard for San Diego Fire-Rescue since its inception as a full time paid organization. Fire service studies have consistently shown that four-person staffing reduces fire loss and keeps fires small due to the more rapid application of extinguishing agent. The efficiency of four-person staffing was graphically demonstrated through the Dallas (TX) Efficiency study completed in the mid-1960's and is supported by more recent research by the National Fire Protection Association, as discussed below.

Fire-Rescue's current four-person standard for staffing was formalized in 1979, by Fire Chief Earl Roberts. At that time, due to budget shortfalls, four of the City's engine companies were staffed with only three personnel, but all truck companies had at least five-person staffing, and in some cases six firefighters were assigned. Not willing to tolerate the risks associated with less than four-person staffing on all engines, Chief Roberts standardized staffing for all companies, engine or truck, with four personnel.

Many of the principles that apply to the need for four-person staffing on fire emergencies can also be applied to operations at a critical medical emergency or one with multiple patients. In the case of a single patient with a life threatening medical or trauma condition, the rapid, coordinated provision of care is essential to increase the likelihood of a positive outcome. When any aspect of critical care treatment is delayed due to insufficient staff to handle these tasks, patient care is compromised.

The same is true in multi-patient scenarios where the rapid triage, treatment and transport of all patients are essential to ensure the greatest chance for a positive outcome. These types of emergency incidents provide extreme challenges for a fully staffed crew and mitigation efforts can quickly become chaotic and ineffective if there are insufficient numbers of first responders present to address the needs.

Rationale for Four-Staffing

Four-person staffing of emergency response fire engines and trucks is based on the following:

- Operational Efficiency and Safety

Fire ground operations are inherently labor intensive and require rapid, coordinated efforts to quickly and safely mitigate the incident. At fire emergencies, the fourth crewmember allows for operational flexibility to provide more effective, efficient and safe interior fire attack and search operations. In jurisdictions where three-person staffing is employed, it is often the case that interior attack and search operations are compromised and/or delayed due to insufficient personnel to handle the myriad of tasks that must be completed in the early stages of a firefighting operation.

- National Fire Protection Association (NFPA) 1710 Guidelines

The NFPA is the premier fire service consensus policy development organization in the world. NFPA publishes many guides that direct fire service best practices. In its NFPA 1710 Guide titled: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, NFPA sets forth the following recommended best practices:

- Four-person minimum staffing as standard for engines and trucks
- Identifies an “effective fire force” for structure fires as 14 firefighters unless an aerial ladder device is deployed in which case 15 firefighters are recommended
- Minimum response time standards

- California Occupational Safety and Health Administration (Cal-OSHA) Two-In/Two-Out Rule

This legally binding statute was developed to reduce the incidence of serious injury and death among firefighters engaged in emergency operations in atmospheres that are deemed to be inherently dangerous to life and health (IDLH), such as an interior structure fire or hazardous materials incident. The Two-In/Two-Out Rule requires the following:

- Firefighters entering an IDLH must work in teams of at least two
- Prior to entry, a second team of at least two similarly trained and equipped firefighters must be staged outside the IDLH area in preparation to effect an immediate rescue of the firefighters who have entered the IDLH
- The only exception to this rule is authorized when firefighters have been provided information or made observations that lead them to believe there is a high probability of someone in the IDLH who is in need of rescue.

- Four-person staffing of engines and trucks is endorsed by the International Association of Fire Chiefs (fire service management) and International Association of Firefighters (labor) as the appropriate staffing level for career fire departments

Benchmarks

The fire jurisdictions listed below were contacted to determine their practices. Twelve out of 14 of these agencies reporting using four-person staffing. All metro agencies, with the exception of LA County (three-person minimum) and Austin (varies), use four-person staffing. Some jurisdictions staff engine/truck companies with five to six.

Austin	Oakland
Dallas	Orange County
Long Beach	Phoenix
Los Angeles City	Sacramento
Los Angeles County	San Francisco
Las Vegas	San Jose
Miami-Dade	Seattle

Conclusion

Four-person minimum staffing is the norm for virtually all major metropolitan fire agencies in the United States. This level of staffing provides for rapid, coordinated mitigation efforts at fire, rescue and emergency medical incidents. This minimum staffing level is endorsed by leading fire service management, labor and policy advisory organizations as one that provides the greatest emergency response capability for communities while also providing for the safety of firefighters.

Recommendations

- Continue the use of four-person minimum staffing to provide adequate staffing for safe and efficient delivery of emergency services.

**D. Constant Staffing**

Background

The term “constant staffing” refers to the practice of providing a replacement firefighter whenever a firefighter assigned to the Operations Division assignment (e.g., fire stations, helicopter, etc...) will be absent for more than seven consecutive hours in a 24-hour work shift. This practice ensures that the minimum staffing levels discussed in the preceding section are provided whenever it can be reasonably anticipated that a short-term vacancy (e.g., vacations, training, etc...) will occur. The same case made for the use of four-person minimum staffing can be applied to the use of constant staffing to ensure those minimums are maintained. In the end, the use of both ensures a more efficient and safe delivery of emergency services by firefighters.

Constant staffing can be achieved through the use of a staffing factor and/or overtime. The staffing factor is applied to budgeted firefighter positions and results in the hiring of additional personnel to cover anticipated vacations. Firefighters hired above the actual number of daily

positions required are not posted to a permanent fire station assignment. Instead, they work in relief of absent firefighters throughout the City. These unassigned firefighters are referred to as “reliefs” in San Diego Fire-Rescue and are also known as “rovers” in the terminology of some other fire service agencies such as the Phoenix Fire Department.

Constant staffing can also be achieved through the use of overtime that is paid to firefighters to work more than their required number of shifts. Firefighters are permitted to volunteer to work an overtime assignment whenever they are not working their normally scheduled shifts. The tracking of vacancies and allocation of overtime assignments is done through the use of a staffing program called TeleStaff, which is in wide-spread use in the fire service. Through this program, which is accessible through the City computer network, the internet and by phone, firefighters may schedule time-off and also volunteer for overtime assignments.

Rules programmed into TeleStaff control the type and amount of time-off that can be taken and also allocate the overtime opportunities in an equitable manner. This allocation is based on comparison of the total number of overtime hours employees volunteering have been assigned in the last 60 days. The employee with the fewest number of hours is given an overtime assignment before an employee with a greater number of hours.

San Diego Fire-Rescue’s use of overtime to provide for constant staffing has been the subject of much concern on the part of some who have taken note of the department’s comparatively large overtime budget. In addition, concerning to some is the number of firefighters whose annual earnings are in excess of \$100,000 due to a combination of base salary, special pays, emergency deployments and constant staffing overtime. Many have rightfully questioned whether this is, in fact, the most efficient use of tax payer funds.

A thorough analysis of the options used to ensure constant staffing is a key component of this BPR study. This analysis is provided in Section V of this report under the heading of Staffing Strategies. In short, the reader will find that the key factors to determining whether it is most cost-effective and efficient to hire additional firefighters versus hiring to minimum level and paying existing firefighters to work overtime are the fringe benefit rates applied to each option, the percentage of overtime worked that is paid at the overtime rate, and the flexibility in utilization of personnel. In the final analysis, a strong case is made for the continued use of overtime.

Benchmarks

The fire jurisdictions listed below were contacted to determine their practices. All of these agencies reporting using constant staffing to ensure minimum staffing in their daily emergency response operations.

- |                    |               |
|--------------------|---------------|
| Austin             | Oakland       |
| Dallas             | Orange County |
| Long Beach         | Phoenix       |
| Los Angeles City   | Sacramento    |
| Los Angeles County | San Francisco |
| Las Vegas          | San Jose      |
| Miami-Dade         | Seattle       |

Conclusion

Constant staffing is used by all benchmark agencies to ensure minimum staffing levels and is a best practice of all metropolitan agencies. The same rationale that gives rise to the use of four-person minimum staffing validates the use of constant staffing to maintain that minimum. In combination, these practices lead to more efficient and safe delivery of emergency services.

Recommendations

- Continue the practice of constant staffing to ensure minimum staffing levels in the Operations Division.

**E. Cross-Training of Firefighters as Emergency Medical Technicians (EMT)**

Background

Since 1979, all San Diego Fire-Rescue firefighters have been required to cross-train to the level of Emergency Medical Technician (EMT). Prior to 1979, medical first response and transportation was provided at the EMT level by the Police Department. During this time, fire departments across the nation began initiating EMT as the norm in providing medical first response. At the same time, several fire departments across the nation were initiating Advance Life Support functions in the development of firefighter paramedics.

Per California Code of Regulations, Title 22, the County of San Diego is responsible for public health which includes pre-hospital emergency care. By contract, the County of San Diego allows the City to provide paramedic level care. As part of this responsibility, the City is contractually required to maintain a first responder (firefighters) system at a minimum level of EMT.

Between 1979 and 1981 the Police Department provided EMS system was phased out as the Fire Department transitioned into EMT first responders and transportation functions were transferred to private-contracted paramedic ambulances. Beginning in 1981, the City of San Diego's pre-hospital system has consisted of fire companies staffed with four EMT's and a transportation provider staffed with two paramedics on every ambulance. In 1991, in geographically "hard to serve areas", the basic first responder system was enhanced by upgrading one of the four EMT crewmembers to the paramedic level.

In 1996 the City assembled a "blue ribbon committee" to review and recommend changes to the City's pre-hospital care system. This recommendation included upgrading fire company first responders to the level of paramedic. With this change, the staffing of the ambulances was changed to one EMT and one paramedic. By contract with the County, the City's first responders (fire engines and trucks) must include one EMT with one paramedic.

Fire companies today operate with three firefighters cross-trained as EMT's and one firefighter cross-trained as a paramedic. The City is contractually required to maintain one EMT; however the fire service norm for medical training is to the EMT level. While there is no mandate for the City to maintain the additional two crewmembers at the EMT level, or one at the paramedic level, there are benefits to maintaining this level of service:



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- It is an expectation for the entire team (Captain, Engineer, and Firefighter) to be able to perform at this minimum level of care. Frequent complex emergencies, such as CPR victims require several Basic Life Support (BLS) skills to be managed simultaneously.
- A significant percentage of patients treated are of an acuity that benefit from the level of care that is provided by a combination of EMTs. The management of these patients requires several skills to be performed together. The company functions as a team to provide this care.
- Care at the EMT level is not directed solely to the patient, but to bystanders and family members as well. For instance, a trained EMT (frequently the company officer) assumes the role for information and patient/incident history gathering. Other staff may be assessing for other victims.
- Multi-casualty incidents or multiple victim scenes are a daily occurrence throughout the City. Care to victims is not delivered by one individual on a company. Having all company members at the EMT level expedites care in multiple patient events.
- The potential for larger scale (disaster) events is ever present. In the event of a disaster, the system can be flexible enough to place enough trained caregivers into action immediately.

In addition to Basic Life Support, the department endorsed an EMT “Defibrillator” program allowing training for firefighter-EMTs to carry semi-automated defibrillators for use on CPR victims. San Diego Fire-Rescue continues to carry and utilize this equipment. Today, in the rare case where the company’s firefighter paramedic is not present at a medical incident, the company can continue (as EMTs) to utilize the defibrillator on a CPR victim.

The role of fire departments across the United States is changing. Departments are expected to provide an “all risk” approach to mitigation of emergencies from fire to natural disaster to terrorism. As the bulk of the requests for help from our citizens and visitors are for medically related emergencies, it is clear the provision of this service has become a key expectation of the community.

### Benchmarks

The fire jurisdictions listed below were contacted to determine their practices. All of these agencies, with the exception of Dallas, reported cross-training all firefighters as Emergency Medical Technicians.

Austin	Oakland
Dallas	Orange County
Long Beach	Phoenix
Los Angeles City	Sacramento
Los Angeles County	San Francisco
Las Vegas	San Jose
Miami-Dade	Seattle

Conclusion

In noting that there is no single rationale as to why firefighters have become expected to deliver service at the level of Emergency Medical Technician, it should be recognized that there are significant advantages with Basic Life Support versus First Aid in that a higher level of service is provided to the citizen. For this reason, it is the level of care found in similar metropolitan fire departments.

Recommendations

- Continue the practice of cross-training all firefighters as Emergency Medical Technicians.
- Continue the current staffing configuration of one paramedic and three EMTs per engine/truck.

**F. Filling of Short Term Vacancies by Overtime vs. Hiring of Additional Personnel**

Executive Summary

Fire-Rescue's use of overtime to provide for constant staffing has been the subject of much concern on the part of some who have taken note of the department's comparatively large overtime budget. In addition, concerning to some is the number of firefighters whose annual earnings are in excess of \$100,000 due to a combination of base salary, special pays, emergency deployments and constant staffing overtime. Many have rightfully questioned whether this is the most efficient use of tax payer funds.

As will be discussed in this section, the staffing strategies used by the department are, in fact, the most cost effective of the options available. In Calendar Year 2006, the most recent data set available for this study, these staffing strategies saved the City \$3 million in personnel costs. These savings consisted of \$1.7 million in direct cost savings and the avoidance of \$1.3 million in costs that would have been incurred by overstaffing if additional employees had been hired to fill these vacancies, in lieu of using overtime.

The methods used by San Diego Fire-Rescue to meet its constant staffing needs have been under continual development and review since 1985, when the provisions of the Fair Labor Standards Act (FLSA) were fully implemented in the department. Moreover, for at least the last ten years, the department has been under considerable pressure to minimize costs while also maximizing service levels. This has caused the department to critically review staffing levels, and closely monitor the effectiveness of its staffing strategies.

San Diego Fire-Rescue has chosen to use overtime to maintain staffing levels when short term constant staffing vacancies occur. The department considers "short term" vacancies to be those that are anticipated to last less than three months. For vacancies that are anticipated to last longer than three months, the department evaluates those on a case-by-case basis with the intent of promoting/hiring personnel to fill those vacancies to provide for crew consistency.

For San Diego Fire-Rescue, personnel working overtime costs less than it would to hire or promote personnel to cover vacancies in constant staffed positions. The primary reason for this is the cost of fringe benefits for a hired position versus the fringe costs for someone working

overtime. For a hired position the fringe costs are an additional 73% of salary, while the fringe costs for overtime are only an additional 9% of salary. Even with the increased salary costs of overtime (1.5 times the base rate), the greatly reduced cost of fringe for overtime makes the overall cost of overtime much cheaper than hiring an additional employee.

Moreover, the use of overtime allows the department to “staff as needed”. Vacancies fluctuate from day to day and seasonally. In Calendar Year 2006, the constant vacancy full-time equivalent (FTE) fluctuated from a low of 60 FTE to a high of 143 FTE over the 13 accounting periods. By using overtime, San Diego Fire-Rescue is able to use only the exact number of personnel needed to cover these vacancies with no extra personnel carried on payroll.

Had the alternative of hiring been used, not only would the base costs be higher, but the department would run the risk of hiring more people than needed or “long staffing” as it is commonly referred to in the department. These additional personnel would be full time permanent employees. As the fluctuations in staffing needs occurred, there would be periods of time when these employees would not be needed, but would be on-duty and being paid. They would be assigned to ride as extra personnel on fire apparatus, and would be carried as “long-staffed”. So not only would they cost more because they were “hired”, they would add additional unnecessary expense when they are long-staffed.

In late 2003, under the leadership of Fire Chief Jeff Bowman, the department made a major change in its promotion and hiring process to make it more efficient, and reduce the costs of constant staffing. Fire Chief Bowman implemented what is commonly referred to as the “Butts-in-Seats” policy. This policy holds that promotions are made only for positions that are currently open and that no staffing factor of additional promotions would be made to cover anticipated vacations. In addition, no promotions would be made in anticipation of openings occurring. Under this approach, promotions would be made as the openings were identified rather than waiting to have enough openings to justify the cost of an interview panel, as had been past practice. This change was made possible by the implementation of a rank-order or next-in-line promotion process in which candidates are ranked during the testing process and promotions made on the basis of their ranking, as openings occur.

To manage this staffing policy, staff meets on a monthly basis to review the staffing needs of the department and determine the number of promotions that must be made in that month. When openings are identified in this meeting, the approval process is begun to have the promotions occur as soon as possible. Promotions now occur on as needed basis and as quickly as possible. This has streamlined the promotion process, and reduced the amount of overtime needed to backfill openings while the promotions were processed. This process has been very successful in allowing the department to reduce the number of positions that were long-staffed, and the amount of mandatory overtime required to ensure staffing.

As a result of this frequent monitoring and adjustment to staffing levels, in Calendar Year 2006, the average long-staff occurrence was 0.66 FTE, and the average mandatory overtime was 2.21 FTE. This is in contrast to an average vacancy FTE of 98.

San Diego Fire-Rescue considers its staffing strategy of using overtime to staff short term vacancies to be both effective and cost efficient. As previously noted, this strategy saved the City \$3 million in personnel costs in Calendar Year 2006. These savings consisted of \$1.7 million in direct cost savings and the avoidance of \$1.3 million in costs that would have been incurred by

overstaffing if additional employees had been hired to fill these vacancies, in lieu of using overtime.

**Staffing Strategy: Overtime vs. Hiring**

Background

Staffing strategies are the methods used to maintain the staffing levels a fire agency has identified to meet their minimum operational requirements on a daily basis. These strategies are influenced by operational need, available budget, labor costs and the political environment. Typically, the strategies are developed over time in response to all these factors. Unless there are major changes in these factors, only subtle or minor changes are made to the preferred strategies as they are primarily driven by the operational needs of the fire agency.

San Diego Fire-Rescue has determined that constant staffing and four-person companies are the acceptable minimum Operations staffing for this agency. This was discussed in detail earlier in this BPR report. The issue in question here is whether maintaining constant staffing with overtime is the most cost effective of the strategies available.

The staffing strategy in place for San Diego Fire-Rescue is the use of overtime to fill short term constant staffing vacancies. In Operations, when personnel take time off, or will be away from their work assignment for more than seven hours, another employee is brought in to fill in for them. The term used for this is “backfill”. The purpose of backfilling is to maintain the minimum staffing levels established by the department.

The term used for the method of covering constant staffing in the fire service varies from one region to the next. One term that has been mentioned by the independent Budget Analyst (IBA) is the “rover” concept. The term “rover”, as used by the City of Phoenix Fire Department where the IBA became familiar with this term, refers to the use of extra hired positions to cover constant staffing vacancies.

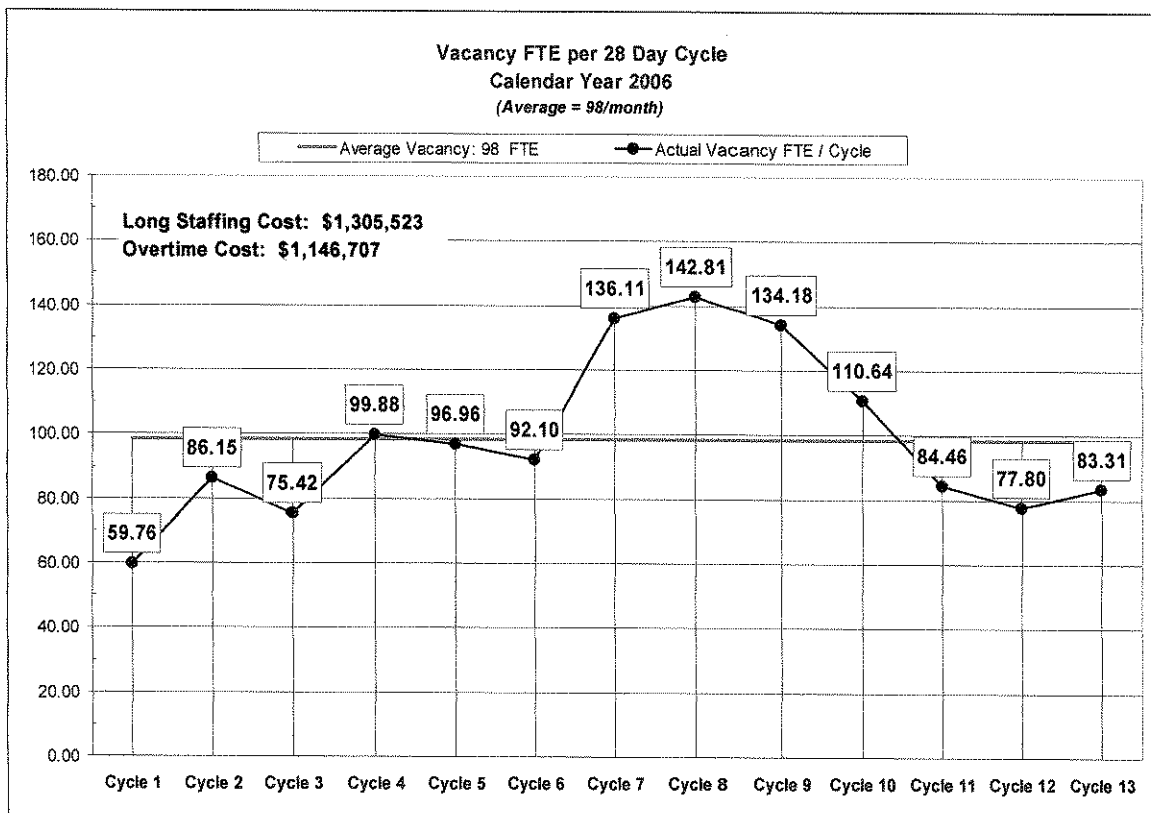
Agencies employing the rover concept have developed a vacancy factor for the number of budgeted positions they have, and then use this factor to determine the number of additional personnel needed to fill the constant staffing vacancies. They will then hire, or promote, the number of personnel needed to fill those vacancies. These personnel are referred to as rovers because they work wherever a vacancy occurs. As personnel take time off or are deployed to other assignments, the rovers work in their place. This practice will be referred to as “Rover-by-Hire” for purposes of discussion in this report.

For San Diego Fire-Rescue, the primary factor that determines which staffing strategy (hiring versus overtime) will be used is the cost of personnel under the available options. The department has determined that the most efficient and cost effective method to maintain minimum staffing levels with properly qualified and trained personnel is to fill vacancies by overtime.

Another key factor in the use of overtime to backfill for constant staffing is the flexibility to fill vacancies only on an as needed basis. With the 56-hour shift schedule of firefighters, there are three divisions, each shift working 24-hour shifts, with only one division working at a time. While one division is working, two divisions are off. All off-duty personnel are able to work overtime if they wish. This creates a readily available pool of personnel to use on an as needed basis to

backfill for the constant staffing vacancies and to supplement the daily workforce in the event of a major emergency event.

This “as-needed” availability is a key factor due to the fluctuation of constant staffing vacancies throughout the year. In Calendar Year 2006, the constant staffing vacancy FTE’s for each 28-day accounting cycle fluctuated from 60 FTE to 143 FTE throughout the year (see Figure 1 below). Utilizing personnel on overtime to fill vacancies offers the greatest flexibility in meeting the fluctuating number of vacancies throughout the year.



**Figure 1: Vacancy FTE by 28 day cycle for Calendar Year 2006**

The risk associated with hiring additional personnel to cover the constant staffing vacancies is having extra personnel during periods of low vacancies. This is referred to as “long-staffing”. As Figure 1 above illustrates, unless only enough employees to cover the lowest anticipated number of vacancies occurring over the year were hired or promoted, there would be periods of the year where hired personnel would be long-staffed.

The additional cost of having employees at work that did not need to be there would have been \$1.3 million in Calendar Year 2006. This amount would have been in addition to the \$1.7 million added cost associated with covering these vacancies by hire rather than through the use of overtime. In other words, covering these vacancies by hiring versus overtime would have cost the City a total of \$3 million more.

The efficiency of the department’s staffing strategy and “butts-in-seats” policy (i.e., hiring and promoting only the actual number of employees physically needed to fill all positions) can be seen in the rate of long-staffing throughout the year (see Figure 2 below). This is especially telling when you compare the fluctuations in the vacancy FTE against the long-staff FTE. The average

long-staffing FTE fluctuates from only 0.11 FTE to 1.6 FTE per 28-day cycle, while the vacancy FTE fluctuates from 60 FTE to 143 FTE per 28-day cycle.

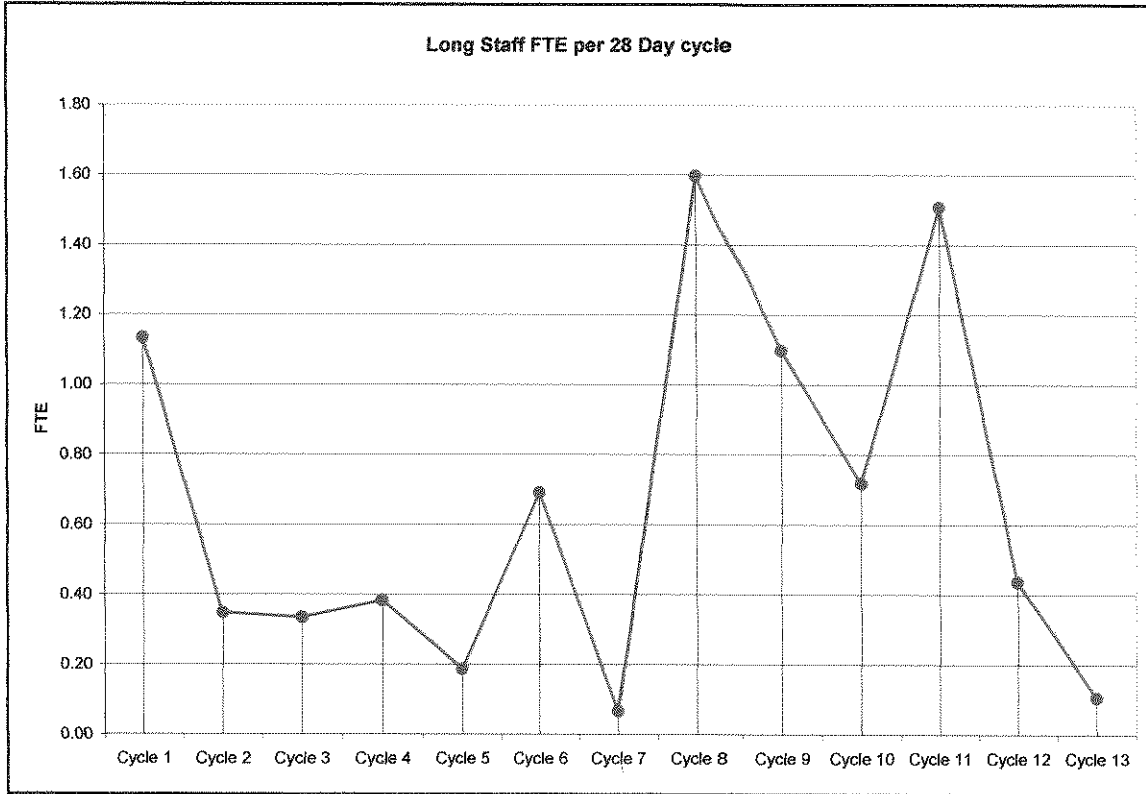


Figure 2: Long Staff FTE per 28 Day Cycle

While the department continues to monitor and refine its staffing practices to minimize long-staffing, as the data illustrates, this situation still occurs from time to time. The inability to completely eliminate long-staffing results from the difficulty in accurately predicting when certain type of vacancies (e.g., military deployments, injury leaves) will end. If an employee prematurely returns from a leave for which a hiring or promotion has been made, this will result in a long-staff situation. In addition, long-staffing is sometimes intentionally done for training purposes (e.g., paramedic certification) and these intentional occurrences are counted in the long-staff totals. Consequently, the actual long-staff FTE resulting from unintended consequences of staffing decisions is lower than the figures represented here.

In summary, the current staffing strategy, promotion process, and hiring processes have been fine-tuned to accommodate this fluctuation in constant staffing vacancies. This combined with personnel on overtime costing less has driven the decision by San Diego Fire-Rescue to adopt the staffing strategy of using overtime to fill constant staffing vacancies, which could be referred to as “Rover-by-Overtime”. In Calendar Year 2006, the staffing strategies in place resulted in a \$3 million savings.

Cost Analysis (Hiring versus Overtime)

In this section costs associated with the different staffing strategies that could be used to fill the constant staffing vacancies are analyzed. These strategies are hiring, premium overtime and actual

overtime costs. For each of these we identify the base salary, the cost of fringe benefits and total cost of the position for one entire budget year.

The “Hiring” strategy (Rover-by-Hire) would be to establish a vacancy factor, determine the number of positions to hire or promote, and put personnel in those positions to backfill the anticipated constant staffing vacancies. These personnel would become full time permanent employees with a complete benefits package. As permanent employees, they would assigned to a division and be available to fill vacancies each shift. Once hired, they would be employed each day regardless of whether any vacancies were available for them to fill. If there were no vacancies, they would ride extra on a fire apparatus and would be carried as “long-staffed.”

The “Overtime” strategies (Rover-by-Overtime) are both the same except for the assumption of the cost of that strategy. The “Premium Overtime” strategy assumes all overtime worked for this strategy is earned as premium overtime. This is used to further highlight the difference between the two primary strategies, “Rover-by-Hire” vs. “Rover-by-Overtime”. The overtime strategies use San Diego Fire-Rescue personnel working overtime to backfill the constant staffing vacancies

The “Premium Overtime” Strategy (Rover-by-Premium-Overtime):

As stated earlier, the “premium overtime” strategy assumes 100% of all overtime hours worked are paid as premium overtime. The pay rate for premium overtime is 1.5 times the base pay rate. Of the agencies benchmarked, only the Phoenix Fire Department uses this strategy. For San Diego Fire-Rescue, this strategy illustrates a hypothetical only to represent a “worst case” for the overtime strategy since application of the Fair Labor Standards Act 7k exemption has resulted in a historical overtime payout rate of significantly less than 100% (see below).

The “Actual Overtime” Strategy (Rover-by-Actual-Overtime):

The “actual overtime” strategy uses the actual pay rates for overtime. This is done because of the impact of the Fair Labor Standards Act 7K exemption for firefighters. As previously discussed in this report, under the 7k exemption, employers are permitted to select a work cycle ranging from 7-28 days. Under the 28-day cycle used by San Diego Fire-Rescue, personnel are typically paid premium overtime only 78% of time they work overtime. This reduces the effective (actual) overtime rate from 1.5 times the base pay rate to 1.39 times the base pay rate

Position Costs

This identifies the costs associated with each classified position in the Operations Division. In this section, costs are identified for each position associated with the different hiring strategies. For each hiring strategy the salary, fringe and total costs for the position are identified.

Cost per Position for Different Strategies

Rover by Hiring

The table below contains the salary, fringe and total cost for each rank in the Operations Division that is subject to constant staffing. The salary is the base salary for that position and does not include specialty or incentive pays. The fringe costs for each position are those budgeted for that position at the rate given to San Diego Fire-Rescue by the Financial Management Department.

**Attachment B**

The fringe costs given here are comprised of retirement, retirement offset, workers compensation, flexible benefits, risk management administration fee, long-term disability, unemployment insurance, Medicare, retiree health, pension liability, unused sick leave, uniform allowance, and training amortization. The fringe costs are not controlled by the department, but are part of the compensation and benefits negotiated by the City and San Diego Firefighters Local 145. The total hiring cost is the sum of the base salary and fringe costs and represents the budget cost of that position for a budget year.

Rank	Hiring Cost		
	Salary	Fringe	Total
Battalion Chief	\$95,394	\$69,093	\$164,487
Captain	\$81,951	\$59,199	\$141,150
Engineer	\$70,879	\$50,851	\$121,730
Firefighter	\$60,082	\$44,289	\$104,371

Premium Overtime Cost

The following table contains the same cost components for each position. The cost of each position is what it would cost to staff that position for an entire year by an employee working overtime and 100% of the overtime worked being paid at the premium rate of 1.5 times the base salary. The fringe costs are calculated based on the fringe rate established against the base salary. These rates are then applied to overtime wages earned to calculate the fringe costs for someone working overtime.

Not all categories of fringe are charged against wages earned by overtime. The categories counted are workers compensation, long-term disability, unemployment insurance, Medicare, and unused sick leave. This is because these expenses are time dependent and increase as total hours worked increase. The categories excluded are retirement, retirement offset, flexible benefits, risk management administration fee, retiree health, pension liability, uniform allowance, and training amortization. This is due to these fringe components already being counted as part of the cost of the full-time employee.

The reduced fringe costs are a major factor in the lower cost of overtime even though the salary is higher. Again, the costs shown below assume that 100% of overtime hours worked are paid at the premium rate. As this is not the case in the department, this hypothetical is shown for illustrative purposes as a worst case scenario only.

Rank	Premium Overtime Cost ( 100% OT Paid at 1.5 )		
	Salary	Fringe	Total
Battalion Chief	\$143,091	\$18,727	\$161,818
Captain	\$122,926	\$13,629	\$136,555
Engineer	\$106,318	\$9,129	\$115,447
Firefighter	\$90,123	\$7,068	\$97,191



Actual Overtime Cost

The table below contains the same cost components for each position. The cost for each position is what it would cost to staff that position for an entire year based on the actual overtime pay-out rate for each position. The reason for the use of an actual overtime rate is that fire personnel typically earn premium overtime only 78% of the time they work overtime. This converts the 1.5 premium overtime rate to an effective rate of 1.39. As previously discussed, the reasons for this have to do with the 56-hour work week, the 28-day work cycle and how much time an employee takes off during the 28-day cycle. Calculations used to determine the overtime rate are based on the 28-day cycle.

To earn premium overtime personnel need a balance of over 212 hours worked in a 28-day cycle. Any time not spent at work during that cycle (exceptions: Industrial Leave and Discretionary Leave) are subtracted from their balance. Only the hours worked above the 212 hours are paid at the premium overtime rate. Those hours of overtime worked below the 212 hours are paid at straight time (1.0 rate).

An example would be an employee taking a 24-hour Annual Leave shift off during the cycle, and working a 24-hour overtime shift during the same cycle. The hours of this overtime shift would be paid at a rate of 1.0 (straight time) at the end of cycle because the time off the employee took off counted against their overall balance for the cycle. Personnel take time off often enough that they earn premium overtime for only 78% of the hours they work overtime. This accounts for a greater reduction in the cost for overtime.

Rank	Actual Overtime Cost ( 1.39 payout )		
	Salary	Fringe	Total
Battalion Chief	\$132,597	\$17,354	\$149,951
Captain	\$113,911	\$12,629	\$126,541
Engineer	\$98,521	\$8,549	\$106,981
Firefighter	\$83,513	\$6,549	\$90,063

Cost Comparison of Salary and Fringe for each Rank

Provided below is a direct comparison and breakout of the salary and fringe cost for each position. The cost for each position is what it would cost to staff that position for an entire year under the three scenarios.

Salary

Rank	Salary (only) Comparison		
	Hiring	Premium OT ( Rate of 1.5 )	Actual OT ( Rate of 1.39 )
Battalion Chief	\$95,394	\$143,091	\$132,597
Captain	\$81,951	\$122,926	\$113,911
Engineer	\$70,879	\$106,318	\$98,521
Firefighter	\$60,082	\$90,123	\$83,513

Fringe Comparison

The fringe cost for hired positions is 73% of base salary while the fringe costs for overtime are only 9% of salary. This rate is then applied to the salary cost for overtime to determine what the actual fringe costs are for wages earned.

Rank	Fringe (only) Comparison		
	Hiring	Premium OT ( Rate of 1.5 )	Actual OT ( Rate of 1.39 )
Battalion Chief	\$69,093	\$18,727	\$17,354
Captain	\$59,199	\$13,629	\$12,629
Engineer	\$50,851	\$9,129	\$8,549
Firefighter	\$44,289	\$7,068	\$6,549

Total Compensation Comparison with Staffing Strategy Savings

The table below is used to illustrate the complete personnel costs for each hiring strategy and then identify savings for each position by using one of the overtime strategies. It has already been established that covering constant staffing vacancies with hiring is more expensive; this table identifies those savings.

Rank	Hiring Strategy Position Costs			Overtime Strategy Savings	
	Hiring	Premium OT ( Rate of 1.5 )	Actual OT ( Rate of 1.39 )	Premium OT Savings	Actual OT Savings
Battalion Chief	\$164,487	\$161,818	\$149,951	-\$2,669.00	-\$14,536.00
Captain	\$141,150	\$136,555	\$126,541	-\$4,595.00	-\$14,609.00
Engineer	\$121,730	\$115,447	\$106,981	-\$6,283.00	-\$14,749.00
Firefighter	\$104,371	\$97,191	\$90,063	-\$7,180.00	-\$14,308.00

Budget Cost Comparison of Staffing Strategies for 2006 Calendar Year

This section mirrors the previous section but uses actual budget costs for Calendar Year 2006 to estimate the costs for each staffing strategy. These estimates are based on data from the TeleStaff software program used to schedule Operations personnel work shifts and track their time. The data from the TeleStaff software program consisted of the hours worked and the work codes associated with those hours. This data was then analyzed using the Local 145 M.O.U. rules for compensation and the pay rates for the hours worked. The results of this analysis were then compared against budget data from the City to verify its accuracy. Data from TeleStaff was used because the City data system does not readily allow the detailed analysis needed to fully analyze the different staffing strategies.

The costs in the following tables is different from the previous tables in that they are based on the actual hours worked for all of the budgeted positions requiring constant staffing in Operations. The table on the next page shows the number of budgeted positions for each rank in Operations.

Rank	Budgeted Positions ( Butts-in-Seats )
Battalion Chief	21
Captain	192
Engineer	195
Firefighter	192
Firefighter/PM	192

Hiring

The costs in this table are based on what it would have cost to hire personnel to backfill for the constant staffing vacancies.

Rank	Estimated Hiring Cost		
	Salary	Fringe	Total
Battalion Chief	\$490,335	\$355,145	\$845,481
Captain	\$2,120,228	\$1,531,591	\$3,651,820
Engineer	\$1,555,419	\$1,115,910	\$2,671,329
Firefighter	\$1,215,917	\$896,304	\$2,112,222
Firefighter/PM	\$1,776,237	\$1,113,445	\$2,889,682
<b>TOTAL</b>	<b>\$7,158,138</b>	<b>\$5,012,397</b>	<b>\$12,170,536</b>

Premium Overtime Cost

The costs in this table are based on it would have cost if personnel earning premium overtime were used to backfill for the constant staffing vacancies and all overtime was paid at the premium rate. Consequently, this represents a hypothetical only and is used simply to illustrate a worst case scenario.

Rank	Estimated Premium Overtime Cost ( 1.5 Payout )		
	Salary	Fringe	Total
Battalion Chief	\$735,503	\$96,261	\$831,764
Captain	\$3,180,343	\$352,608	\$3,532,951
Engineer	\$2,333,128	\$200,333	\$2,533,462
Firefighter	\$1,823,876	\$143,039	\$1,966,916
Firefighter/PM	\$2,531,481	\$177,692	\$2,709,174
<b>TOTAL</b>	<b>\$10,604,333</b>	<b>\$969,935</b>	<b>\$11,574,269</b>

Actual Overtime Cost

The costs in this table are based on the actual cost of backfilling for constant staffing vacancies using personnel on overtime. Because of the Local 145 M.O.U. rules and the 28-day cycle, the actual earned rate of overtime is 1.39 of base salary.

Rank	Actual Overtime Cost ( 1.39 payout )		
	Salary	Fringe	Total
Battalion Chief	\$688,953	\$90,168	\$779,121
Captain	\$2,879,964	\$319,304	\$3,199,269
Engineer	\$2,073,940	\$178,078	\$2,252,019
Firefighter	\$1,623,751	\$127,344	\$1,751,095
Firefighter/PM	\$2,296,487	\$159,263	\$2,455,750
<b>TOTAL</b>	<b>\$9,563,096</b>	<b>\$874,159</b>	<b>\$10,437,256</b>

### Total Budget Comparison with Staffing Strategy Savings

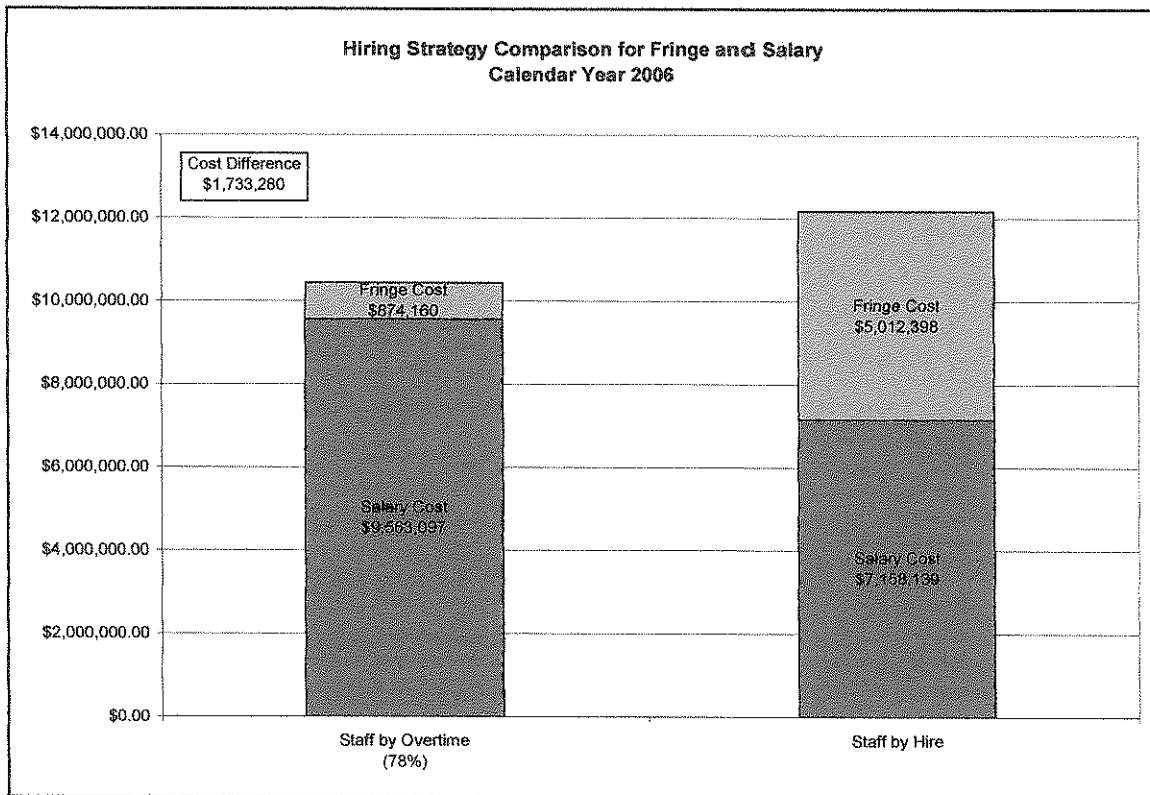
The table below is used to illustrate the estimated actual personnel costs for each hiring strategy and identifies savings for each position for each of the overtime staffing strategies. It has already been established that covering constant staffing vacancies with hiring is more expensive; this table identifies those savings.

The cost advantage of using overtime to backfill for constant staffing vacancies is very clear. Even if personnel were always paid at a premium overtime rate the savings is \$596,267. With the effect of the 28-day cycle and Local 145 M.O.U. rules, the actual savings is \$1,733,280.

Rank	Hiring Strategy Budget Costs			Overtime Strategy Budget Savings	
	Hiring	Premium OT	Actual OT	Premium OT Savings	Actual OT Savings
Battalion Chief	\$845,481	\$831,764	\$779,121	-\$13,716	-\$66,359
Captain	\$3,651,820	\$3,532,951	\$3,199,269	-\$118,868	-\$452,550
Engineer	\$2,671,329	\$2,533,462	\$2,252,019	-\$137,867	-\$419,310
Firefighter	\$2,112,222	\$1,966,916	\$1,751,095	-\$145,306	-\$361,126
Firefighter/PM	\$2,889,682	\$2,709,174	\$2,455,750	-\$180,508	-\$433,932
<b>TOTAL</b>	<b>\$12,170,536</b>	<b>\$11,574,269</b>	<b>\$10,437,256</b>	<b>-\$596,267</b>	<b>-\$1,733,280</b>

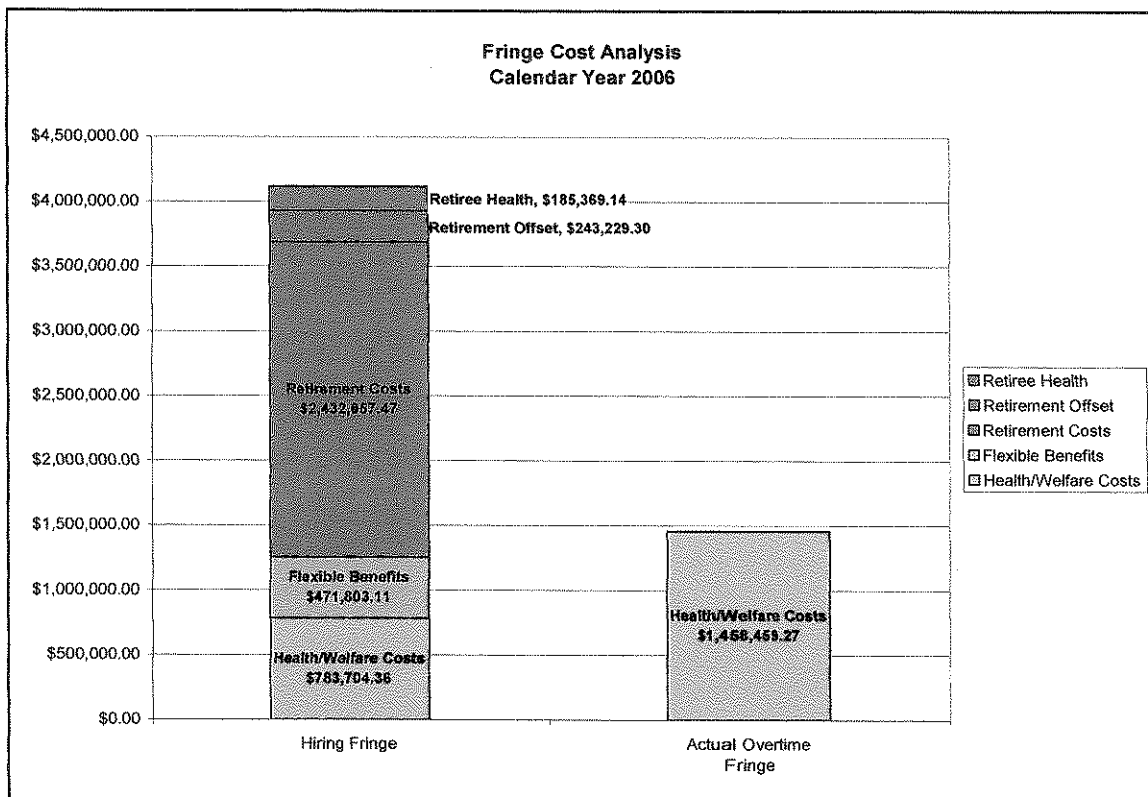
### Fringe and Salary Analysis

The chart on the next page seeks to illustrate the primary reason for the lower cost of the “Rover-by-Overtime” strategy. As illustrated below, even though the salary costs are higher for the overtime strategy, the fringe costs are dramatically less. This is due to the fact the majority of the fringe costs are already paid as part of each budgeted position. Overtime personnel are covering the time someone in that position takes off. They are already City employees with their fringe paid for, and the person they are filling in for is a City employee with their fringe paid for. The small amount of additional fringe that is charged against the backfill person’s overtime is added to cover the fringe cost associated with the additional risk for the extra hours worked by that employee working overtime.



Fringe Analysis

The chart on the next page illustrates what the fringe costs would have been if personnel had been hired to cover the constant staffing vacancies and compares them against the estimated fringe costs for overtime personnel. The chart clearly illustrates that retirement and flexible benefit costs account for the vast difference between costs of the different strategies. Retirement benefits are determined solely by base salary, and thus any overtime worked is not part of any retirement calculation. Therefore retirement costs are not incurred as part of any overtime worked by personnel. Flexible benefits are similar in that they are a one-time benefit awarded to the each employee annually as part of their base budget cost, and therefore no flexible benefit fringe is charged to any overtime worked by personnel. With this information you can see how the previous chart would illustrate the overtime strategy costing less even though the salary costs are higher.



Benchmarking/Surveys Data

Constant staffing is the norm amongst the vast majority of the metropolitan fire departments surveyed. Covering constant staffing with overtime is the preferred staffing strategy. Very few departments used hiring to cover constant staffing as it was more cost effective to cover constant staffing vacancies with overtime. A notable exception is the City of Phoenix Fire Department. Phoenix elects to pay all overtime at the 1.5 premium rate. In addition, their fringe costs associated with hiring are less than the City of San Diego's. Consequently, they find it more cost effective to hire to cover most anticipated vacancies.

Departments surveyed use the same three division type schedule as San Diego Fire-Rescue. There are two divisions working while one is on a series of days off. Of the two remaining divisions, one is working a 24-hour shift while the other is off. This type of schedule was discussed in beginning of this BPR report. This schedule has been determined to be the most effective for fire service agencies around the country. This schedule inherently provides a depth of staffing for emergency recall for major incidents. All departments surveyed felt this was provided sufficient staffing and was economically feasible for their communities.

For disaster situations and the emergency recall of personnel, the main issue is not whether there is enough depth of personnel, but having enough apparatus and equipment for staff to use. The department runs out of fire apparatus to staff, and safety equipment to issue, long before it has used all the off-duty personnel who respond to the recall. San Diego Fire-Rescue is part of the state-wide mutual aid system. All fire departments in the state of California are part of the system that is managed by California Office of Emergency Services (OES). This system is used throughout the state in the event a fire department does not have enough resources to handle an emergency.

The mutual aid system will respond fully staffed and equipped emergency apparatus to anywhere in the state when requested. The system uses available resources in the local region first, and then reaches out further and further to fill requests. All emergency resources in the state are available. This system has the capability to provide thousands of firefighters on short notice. This system would be the main source of additional personnel and equipment in the event of a major emergency.

### “As-Is”

#### Staffing Levels

Staffing levels in Operations are determined by San Diego Fire-Rescue leadership in conjunction with the Deputy Chief Operating Officer of Public Safety/Homeland Security and the Mayor.

- The number and location of fire stations, and the types of fire apparatus at each fire station are developed and approved as part of this process.
- Currently San Diego Fire-Rescue has a constant staffing level of four personnel for each fire apparatus.
- This constant staffing level combined with the number of budgeted fire stations and apparatus determines the total number of budgeted positions for operations.

#### “Butts-in-Seats” Policy

The Fire Department implemented a policy a few years ago for hiring and promotions that is referred to as “butts-in-seats”. “Butts-in-seats” refers to the actual open budgeted positions in Operations and are evaluated by the leadership team on a monthly basis.

- Previous process
  - Near the end of the expiration of a promotion list, the next promotion test would occur. The results of this process would establish a list of eligible candidates broken down into categories. This would become the certified list of eligible candidates to be used for promotion interviews.
  - Interviews would not occur until there were enough openings to justify the expense of conducting interviews. A rule of three’s was applied to determine the minimum number candidates to be interviewed for the openings available.
  - This was considered inefficient as positions would remain open for extended periods of time waiting for the number of openings to build to a point it would justify the expense of an interview panel. Adding to the expense and inefficiency was the need to have multiple sets of interviews during the two-year life of a promotion list as new openings were created.
  - It was not uncommon to promote twenty or thirty positions at a time which represented that number of positions having been open quite some time waiting for the next set of promotion interviews.

- Current “butts-in-seats” review process:
  - The current “butts-in-seats” promotion policy was implemented to address the inefficiencies of the previous process.
    - Near the end of a current promotion list, the testing process for the next promotion list is scheduled.
    - This testing process differs from the previous in order to streamline the process, save money and address issues of fairness perceived by the work force.
    - Assessment centers now take the place of the previous promotion testing process. The interview is now part of the assessment center.
    - Only one assessment center occurs to establish the promotion list.
    - The final overall scores of the candidates establish the rank order of each person on the promotion list.
    - Candidates are promoted by their rank order on the list as promotions are made by the monthly review process.
  - Steps of the process:
    - Each month staff reviews all the counts for positions in Operations and determines the known openings and projected openings for the next month. Projected openings are those that have been determined because of retirement, injury or some other definitive reason. If it is known that a position will remain vacant for more than three months, it is considered and evaluated as part of this monthly review.
    - The leadership team reviews this report with staff and determines what vacancies will be filled through promotions for each rank
    - Hiring for vacancies at the firefighter level is determined through a separate process as they are filled by graduates of the fire academy.
    - The results of these monthly meetings are published in the form of a department bulletin to the entire work force.
    - Once the number of openings that will be filled through promotions is determined, authorization to make the promotions is requested.
    - If approved, the current promotion lists are reviewed and the promotees are selected in the order of the certified promotion list.
    - The promotion dates are usually selected to coincide with the beginning of the next pay period. This enables the openings to be filled as soon as possible and allow payroll to convert them to their new rank at the beginning of a pay cycle.

### Decision Making for Hiring

The hiring process is discussed in detail in another section of the report and will only be discussed briefly here. Hiring is tied to the seasonal fluctuations in leave usage by the work force, scheduled retirements, and long-term absences by personnel. As previously discussed, leave usage has peaks and valleys throughout the year, with the peaks occurring during the summer season. Retirements are monitored to project when personnel will separate service at the end of the Deferred Retirement Option Program (DROP), and when personnel go on terminal annual leave or extended annual leave. Long term absences occur as the result of military deployments, injury leave from on-the-job injuries, or leaves of absence.



The entire hiring process is timed to coincide with the leave usage cycles and projected retirements. The process must begin months before the vacancies will occur. Personnel must first be processed through the application, testing, interview, and background check process. This process takes several months to complete in order to have a pool of candidates ready for a fire academy. Personnel are then selected and sent to a fire academy which takes several more months. All of this is taken into consideration when scheduling academies each budget year.

### Decision Making for Promotions

The shift to the “Butts-in-Seats” policy put the focus on promoting personnel as soon as positions were open. This removed the delay in filling open positions while waiting for enough openings to justify the cost of interviewing candidates. This also gained efficiencies and reduced cost as candidates were promoted in their rank order on the list established by the testing process. There were no longer multiple sets of interviews during the life of a promotion list because the interview is now part of the testing process.

To implement this policy the focus is placed on monitoring long term absences and retirements. Leave usage by the work force and other short term (less than three months) vacancies are not a determining factor in promotions. San Diego Fire-Rescue has determined it is more cost effective to backfill vacancies in constant staffing with overtime. Vacancies of less than three months are considered short term and are backfilled with overtime. Filling a position with overtime costs less and avoids the risk of long-staffing. The risk of long-staffing is a real concern because of the fluctuations in vacancies throughout the year. These fluctuations occur because of seasonal usage of leave and emergency response to fires during fire season.

As described earlier, leave usage peaks during the summer months and declines during the winter. While a general trend can be established, the actual number of vacancies cannot be predicted accurately enough to avoid generating long-staffing if personnel were hired to fill those vacancies. Other short term vacancies are created in response to major fires or disasters throughout the country. San Diego Fire-Rescue is part of the statewide mutual aid system and provides fire engines and personnel in response to requests from California OES for major fires and disasters. In addition, department personnel also participate on Federal fire and natural disaster response teams and incident support teams that result in their absence from their regular assignment.

### Effectiveness of the “Butts-in-Seats” Policy

The effectiveness of the “Butts-in-Seats” policy can be demonstrated by two performance measures: Long-staffing FTE per 28-day cycle and the Mandatory Callback FTE per 28-day cycle. Monitoring the rate of long-staffing gauges whether the department has hired or promoted too many personnel. One of the primary goals of the current policy is to minimize this by promoting only for actual long-term vacancies and timing the fire academies to coincide as much as possible with seasonal peaks in retirements and annual leave use. All of this is monitored by the monthly meeting to review staffing needs and determine what promotions are needed the following month.

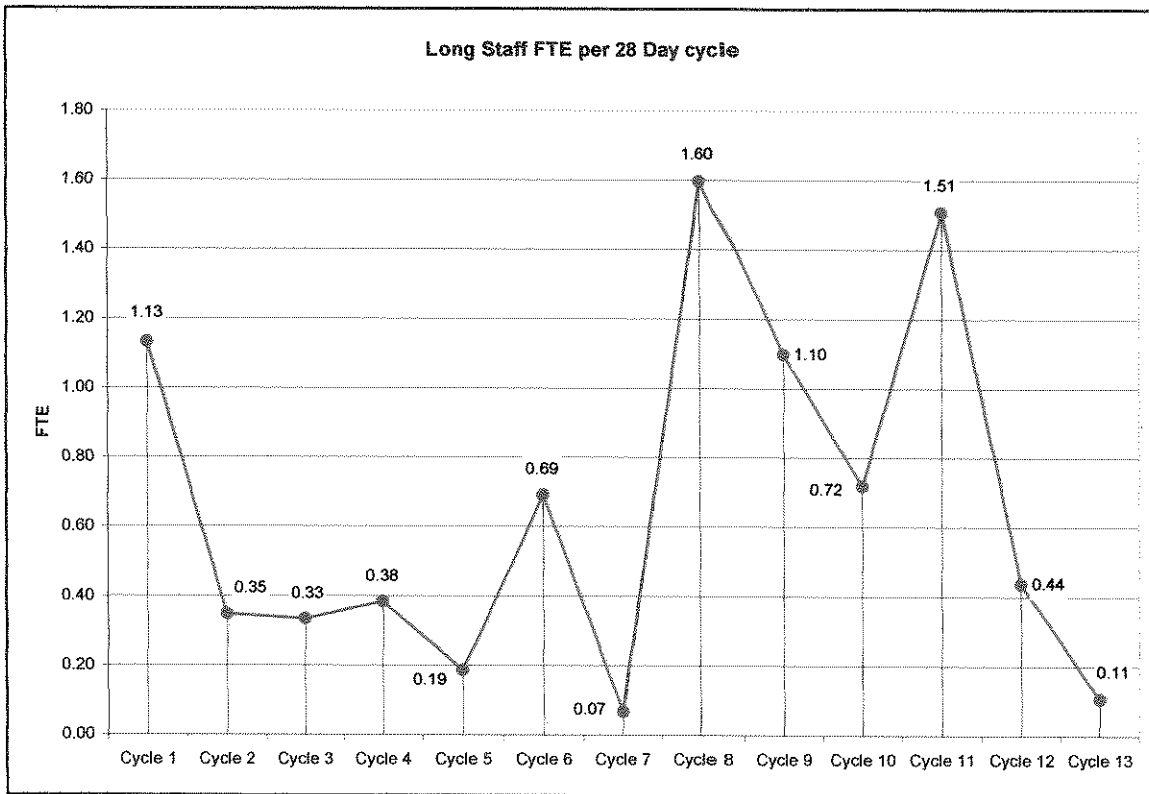
Monitoring the Mandatory Callback FTE per 28-day cycle enables the department to judge whether it has not hired or promoted enough personnel. The vast majority of overtime is voluntary, and the work force usually volunteers at a rate high enough to have a large pool of

volunteers to schedule for overtime. When it becomes necessary to mandate personnel to work overtime, the department has exceeded the rate at which its employees are willing to work additional overtime hours. With the current policy, and the monthly review of staffing needs, the rate of mandatory overtime has been greatly reduced.

To fully gauge the meaning of the FTE rates you must compare the rate against the vacancy FTE per 28-day cycle. When you compare these you quickly see the effectiveness of the policy by the low rates of long staffing and mandatory overtime when compared against the vacancy FTE.

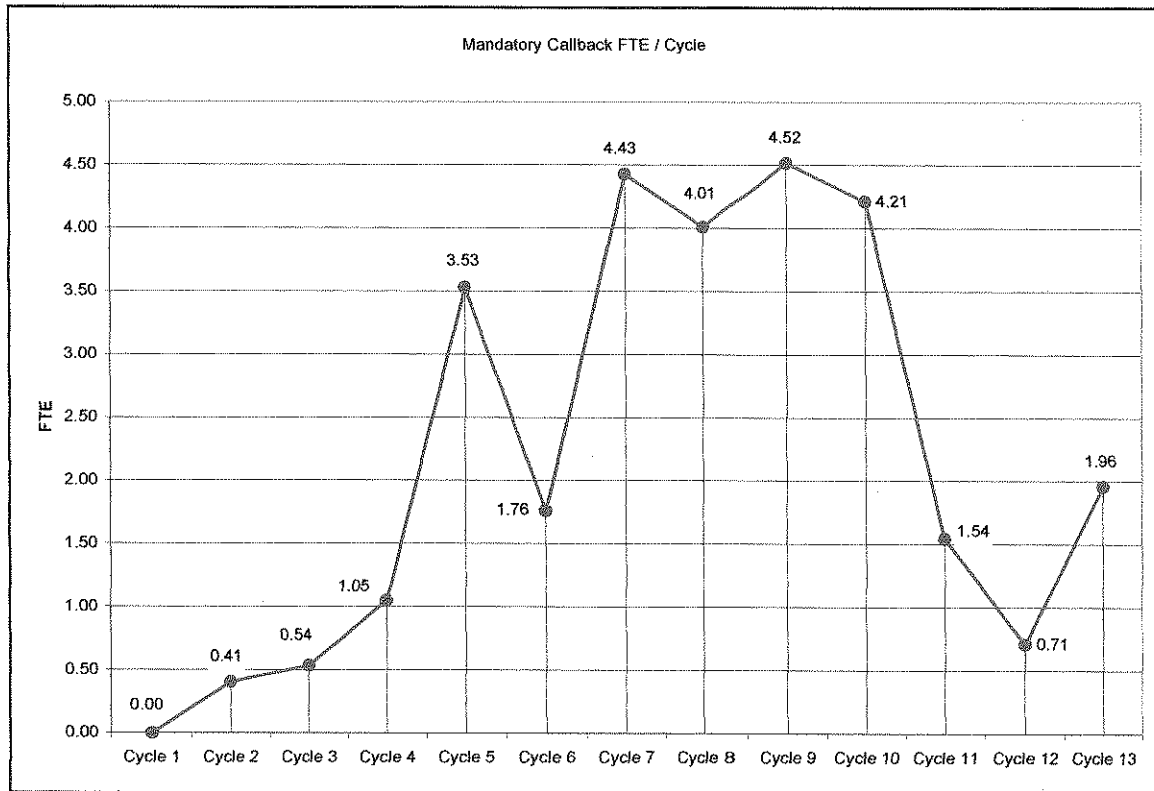
Long-Staff FTE per 28 Day-Cycle (CY 2006)

The Long Staff FTE varies from 0.07 FTE to 1.60 FTE with an average of 0.66 FTE



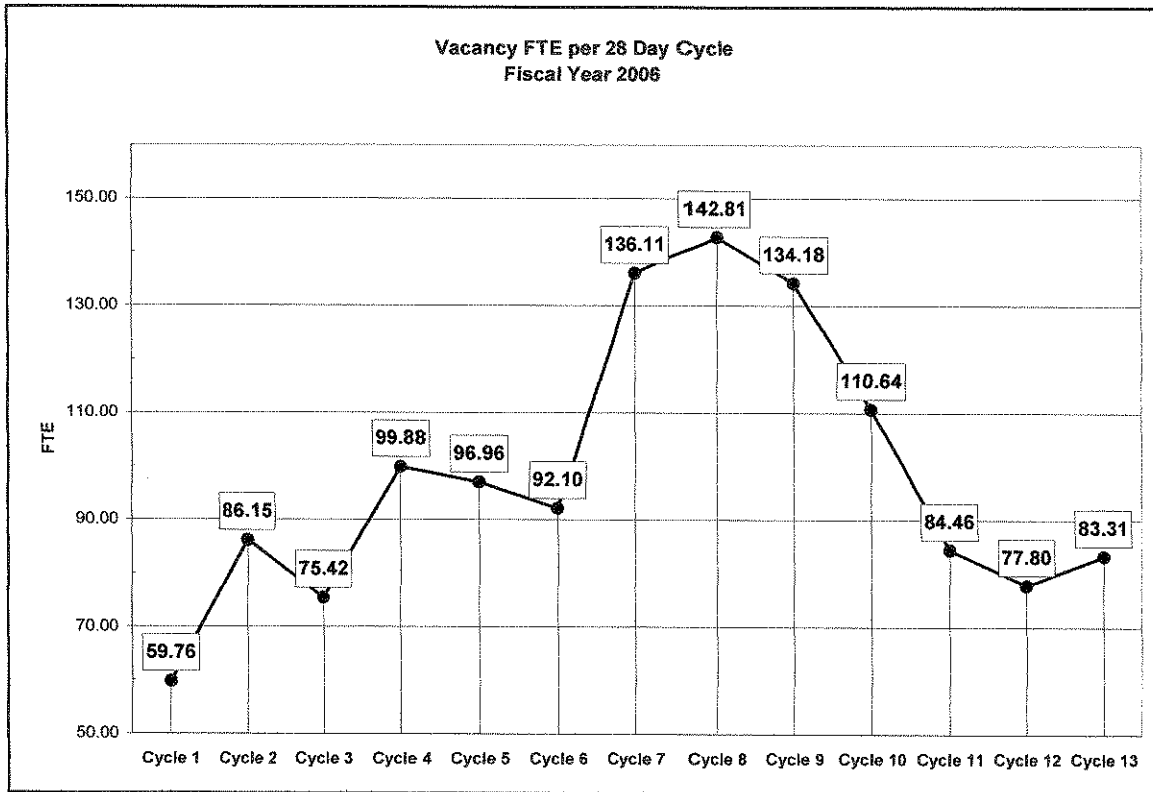
Mandatory Callback FTE per 28-Day Cycle

The Mandatory Callback FTE varies from 0.00 FTE to 4.52 FTE with an average of 2.21 FTE



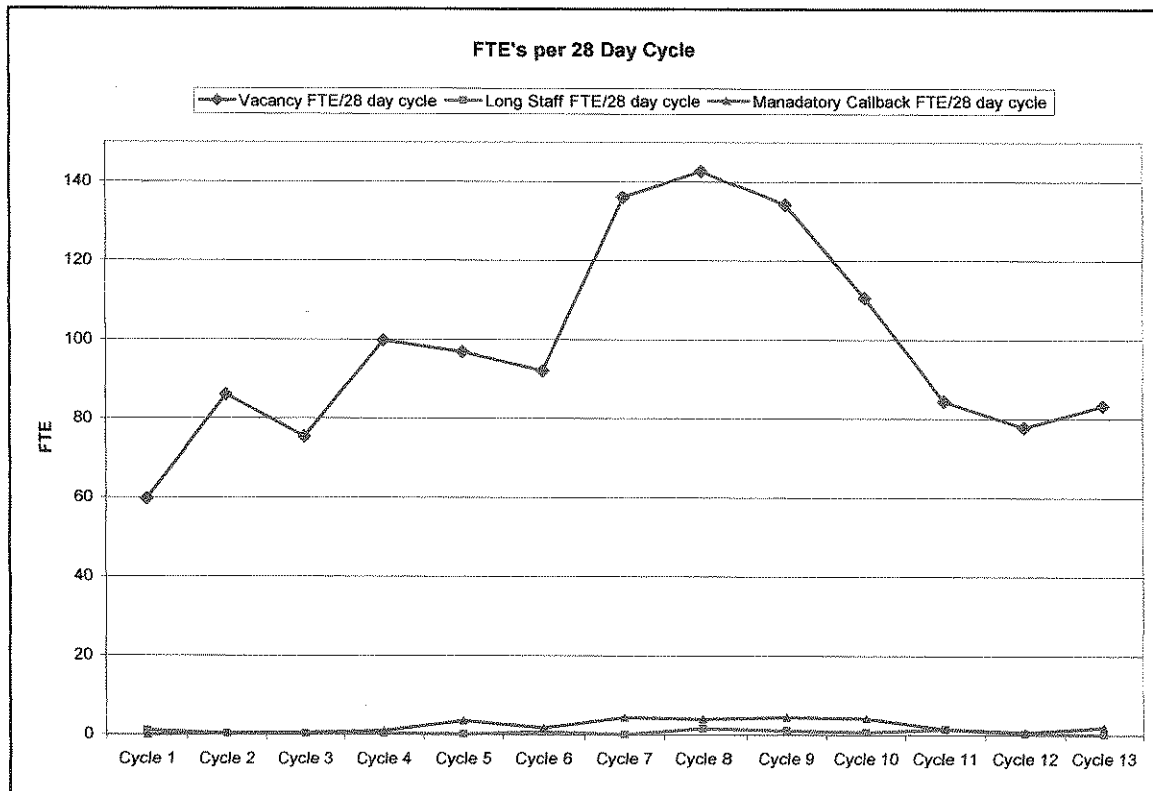
Fluctuations in Staffing Need

This is the measure needed to compare the Long Staff and Mandatory Callback FTE against. The Vacancy FTE varies from 59.76 FTE to 142.81 FTE.



Comparison of FTE's

This chart visually illustrates the effectiveness of the current policies.



Recommendations

- Continue with the current staffing strategy and promotion process
- Establish a separate TeleStaff work code to identify intentional long-staffing to facilitate training. This will allow for a more accurate accounting of unintentional long-staffing.
- Establish a centralized data tracking system to facilitate analysis of staffing.

RESOLUTION NUMBER R-\_\_\_\_\_

DATE OF FINAL PASSAGE \_\_\_\_\_

A RESOLUTION ACCEPTING AND AUTHORIZING THE  
RECOMMENDATIONS OF THE FIRE DEPARTMENT'S  
BUSINESS PROCESS REENGINEERING REPORT AND  
AUTHORIZING THE EXPENDITURE OF FUNDS TO  
IMPLEMENT THESE RECOMMENDATIONS.

WHEREAS, the Office of the Mayor and the Fire Department have conducted Business Process Reengineering [BPR] review, analyzing aspects of the San Diego Fire-Rescue Department's management practices; and

WHEREAS, the BPR review resulted in a report attached to this resolution making recommendations to improve the efficiency and effectiveness of the Fire-Rescue Department's management; and

WHEREAS, the BPR review recommends retaining the current 28-day work cycle and average 56-hour work-week for firefighters as described in the attached reports; and

WHEREAS, the BPR review recommends retaining the current 4-person minimum crew staffing currently in place in the Fire-Rescue Department as described in the attached report; and

WHEREAS, the BPR review recommended retaining the Constant Staffing method of ensuring staffing when an employee is absent for more than seven hours in a shift, as described in the attached report; and

WHEREAS, the BPR review recommends retaining the Fire-Rescue Department's current policies and procedures for cross-training firefighters as emergency medical technicians; and

WHEREAS, the BPR review recommends continuing the current practice of using overtime staffing to cover short-term vacancies within the firefighter ranks of the Fire-Rescue Department, as described in the attached report; and

WHEREAS, the BPR review process has led to sixty recommendations, listed in Attachment A to the attached committee report; and

WHEREAS, these sixty recommendations are anticipated to improve the Fire-Rescue Department's management efficiency and effectiveness; and

WHEREAS, implementing these recommendations is anticipated to be feasible in Fiscal Year 2008 from moneys already appropriated to the Fire-Rescue Department's budget; and

WHEREAS, it is anticipated that the Fire-Rescue Department, in order to implement the BPR recommendations, will need to expend approximately \$27,141 from its Fiscal Year 2008 budget on increased bomb squad training and enhanced computerized staffing systems; and

WHEREAS, implementing the BPR review recommendations will require the Fire-Rescue Department to expend approximately \$65,260 out of the Fiscal Year 2009 budget and anticipates that this expenditure will be more than offset by an anticipated \$163,665 savings from ending overtime staffing for the Light and Air Unit; and

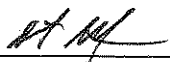
WHEREAS, any expenditures will be conducted in full compliance with all federal, state, and local laws and all Council Policies and Administrative Regulations; NOW, THEREFORE

BE IT RESOLVED, that the City Council for The City of San Diego accepts the report of the Fire-Rescue Department management's BPR Review and approves the recommendations listed in Attachment A to the attached report.

BE IT FURTHER RESOLVED, that the Mayor, the Auditor-Comptroller, or their designee may expend up to \$27,141 in money already appropriated to the Fire-Rescue Department's Fiscal Year 2008 budget necessary to implement the recommendations in Attachment A of the attached report, in compliance with all federal, state, and local laws and relevant Council Policies and Administrative Regulations.

BE IT FURTHER RESOLVED, that the Mayor, the Auditor-Comptroller, or their designee may expend up to \$65,260 for increased bomb squad training from the Fiscal Year 2009 budget necessary to implement the recommendations in Attachment A of the attached report, in compliance with all federal, state, and local laws and relevant Council Policies and Administrative Regulations.

APPROVED: MICHAEL J. AGUIRRE, City Attorney

By   
\_\_\_\_\_  
David M. Stotland  
Deputy City Attorney

DMS:ar  
04/15/08  
Or.Dept:Fire-Rescue  
R-2008-912  
MMS# 41



I hereby certify that the foregoing Resolution was passed by the Council of the City of San Diego, at this meeting of \_\_\_\_\_.

ELIZABETH S. MALAND  
City Clerk

By \_\_\_\_\_  
Deputy City Clerk

Approved: \_\_\_\_\_  
(date)

\_\_\_\_\_  
JERRY SANDERS, Mayor

Vetoed: \_\_\_\_\_  
(date)

\_\_\_\_\_  
JERRY SANDERS, Mayor