
**Performance Audit of the
San Diego Fire-Rescue Department's
Overtime Costs**

**THE FIRE-RESCUE DEPARTMENT
CAN BETTER CONTROL OVERTIME BY
HIRING ADDITIONAL FIRE FIGHTERS**

AUGUST 2014

Audit Report
Office of the City Auditor
City of San Diego



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THE CITY OF SAN DIEGO

August 25, 2014

Honorable Mayor, City Council, and Audit Committee Members

City of San Diego, California

Transmitted herewith is an audit report on the San Diego Fire-Rescue Department's overtime costs. This report was conducted in accordance with the Office of the City Auditor's Fiscal Year 2014 Audit Work Plan and is presented in accordance with City Charter Section 39.2. The Results in Brief are presented on page 1. The Administration's response to our audit recommendations can be found after page 41 of the report.

We would like to thank Fire-Rescue's staff, as well as representatives from the Financial Management Department, the Office of the City Comptroller, and the Human Resources Department for their assistance and cooperation during this audit. All of their valuable time and efforts spent on providing us information is greatly appreciated. The audit staff responsible for this audit report is Sunny McLernon, Luis Briseño, Stephen Gomez, Chris Kime, and Kyle Elser.

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Table of Contents

Results in Brief	1
Background	3
Audit Results	11
Finding 1: The Cost of Hiring New Staff is Similar to the Cost of Relying on Overtime, but There Are Benefits to Hiring Additional Staff	11
Finding 2: Annual Leave Liability is Growing Because it is Not Capped in Compliance with the Labor Agreement	29
Finding 3: Weaknesses in the Reconciliation of Timekeeping Data May Generate Errors in Overtime Payments	33
Conclusion	37
Recommendations	38
Appendix A: Definition of Audit Recommendation Priorities	39
Appendix B: Audit Objectives, Scope, and Methodology	40

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Results in Brief

The Fire-Rescue Department (Fire-Rescue) uses a “constant staffing” model to staff fire stations 24 hours per day, 365 days per year. If a post is vacant due to understaffing or for any other reason, such as vacation time, compensatory time, injury, or special assignment, the department will back-fill that position using overtime. Additionally, Fire-Rescue has historically relied on overtime to fill vacant shifts because overtime was less expensive than hiring. This practice has led to overtime expenditures representing about 25 to 30 percent of Fire-Rescue's personnel budget in fiscal years 2012, 2013, and 2014, and it has led to employees working, in some cases, in excess of 6,000 hours per year.

We found that, due to fringe benefit cost changes resulting from the partial implementation of Proposition B that went into effect in July 2012, there is currently no significant difference between the costs of hiring new staff or using overtime, aside from initial costs incurred in the first year of service to staff one position. In addition, because the overtime fringe rate is higher for new employees, reducing reliance on the use of overtime in the future by hiring additional staff will help to minimize personnel costs.

Moreover, as we indicate in the audit report, there are benefits to hiring other than monetary considerations. These benefits include controlling overtime costs; budgeting personnel expenditures more accurately; reducing the potential for fire fighter fatigue and improving fire fighter safety; reducing liability; having a larger workforce available for deployment in the case of an emergency; and, in the future, having a relief factor to reduce mandatory overtime. These non-monetary benefits are important because, although Fire-Suppression employees are scheduled for about 2,920 working hours per year, in fiscal year 2013 they were averaging about 3,600 hours of working time per year and in some cases worked more than 6,500 hours per year. Based on our analysis of Fire-Rescue overtime compensation in fiscal year 2013, we found:

- There is currently no significant difference in cost between hiring additional firefighters to fill regular duty (straight time) posts or relying on overtime to staff the Fire-Suppression Division, aside from initial training costs incurred in the first year of service;
- There are non-monetary benefits to hiring additional fire fighters;

- Strategic hiring will help to control personnel costs as the department's workforce and associated fringe benefits change;
- The Fire Suppression Division's annual leave liability is growing; and
- Weaknesses in the payroll reconciliation process may generate errors in overtime payments.

There are several variables to consider in the analysis of overtime and constant staffing levels. These include fringe benefit rates, workforce makeup (percent of workforce that has post-Proposition B fringe rates), absence rates, attrition, workload, and the total personnel cost. Not only are there several variables to consider, but the values themselves change from year to year, e.g. fringe benefit rates.

We made three recommendations:

1. Fire-Rescue should perform a staffing analysis annually to determine the optimal number of Fire-Suppression employees to hire in order to control overtime.
2. Human Resources should confer with Fire-Rescue and Financial Management to assess the financial impact of not capping the annual leave accruals.
3. Fire-Rescue should identify ways to integrate timekeeping systems to ensure the reliability of payroll.

The Fire-Rescue Department agreed to implement all three audit recommendations.

Background

Department Mission The San Diego Fire-Rescue Department (Fire-Rescue) protects the life and property of San Diego residents and visitors through a variety of safety services. Fire-Rescue's major activities include Fire-Suppression, emergency medical treatment and transport, technical rescue, hazardous materials response, fire investigation, fire safety inspection, beach safety rescue, and the operation of two 911 communications centers. Fire-Rescue's mission is to serve the community of San Diego by providing the highest level of emergency and rescue services, and ensuring the protection of life, property, and the environment. The department has 47 fire stations and provides life guard services for the City.

Fire-Suppression Fire-Rescue is made up of several divisions, including Field Operations (Fire-Suppression), Logistics, Lifeguards, and Emergency Medical Services (EMS). Employees in the Fire-Suppression division work 24-hour shifts with at least one and up to six scheduled days off between shifts, averaging 56 hours of work scheduled per week. Currently, the department needs 265 Fire-Suppression employees per day to fully staff its 47 fire stations. With three working divisions filling shifts, the department needs a total of 795 Fire-Suppression employees to fill every post for constant staffing. Fire-Suppression is made up of a defined combination of Shift Commanders, Battalion Chiefs, Captains, Engineers, Fire Fighter-Paramedics and Fire Fighters as shown in **Exhibit 1** on the following page.

In 2013, Fire-Suppression employees in each division were scheduled to work an average of 2,920 hours during the year. In this manner, the department keeps fire stations and Fire-Suppression apparatuses fully staffed, ensuring residents have protection 24 hours per day, 365 days per year.

Exhibit 1

Minimum Number of Fire-Suppression Employees Necessary for Constant Staffing

Rank / Position / Classification	Daily	Full Staffing of Three Divisions (Daily × 3)
Shift Commander	1	3
Battalion Chief	7	21
Captain (Including Helicopter Pilots)	64	192
Engineer	64	192
Fire Fighter-Paramedic	63	189
Fire Fighter	66	198
Total	265	795

Source: OCA generated using information from the San Diego Fire-Rescue Department.

Constant Staffing and Overtime

Fire-Rescue uses a “constant staffing” model to staff fire stations. This model ensures that each post is filled 24 hours per day, 365 days per year. If a position is vacant due to understaffing or for any other reason, such as vacation time, compensatory time, injury, or special assignment, the department will back-fill that position with another employee. If an employee volunteers to fill the vacant position with overtime, the employee is paid at their regular hourly wage—until they have logged more than 212 working hours in the working period. Based on Federal labor law, after 212 working hours have been reached in a working period, all working time is paid at the premium overtime rate of 1.5 times the hourly wage. However, if no employee volunteers to cover the vacant position and instead staff is called in to cover the shift, the assignment is considered a mandatory callback and is paid at the premium overtime rate of 1.5 times the hourly wage regardless of the 212 hour threshold.

Fire Fighter Overtime Under the Fair Labor Standards Act (FLSA)

The Fair Labor Standards Act (FLSA) establishes, among other things, minimum wage, overtime pay, and the recordkeeping affecting employees in the private sector and in Federal, State, and local governments. Non-exempt employees covered by FLSA must receive overtime pay for hours worked over 40 in a work week. FLSA Section 7K allows for employees engaged in fire protection and law enforcement to be paid based on a “work period” basis. For work periods of at least seven but less than 28 days, overtime pay is required when the number of hours worked exceeds the number of hours that bears the same relationship to 212 (fire protection

workers) as the number of days in the work period bears to 28. For the City of San Diego, this means that Fire-Suppression employees must be paid at an overtime rate (time-and-a-half) once they have worked more than 212 hours in one 28-day work period.

Compensatory time off, vacation, holidays, annual leave, sick leave, or other compensated leave or unpaid leave are not counted as hours worked during the 28-day work cycle in determining eligibility for FLSA overtime.

Scheduled Overtime

Based on Fire-Rescue's Fire-Suppression division schedule, each fire-suppression employee is scheduled for approximately 2,920 working hours per year.¹ Based on FLSA overtime rules, if an employee were to work their entire schedule without taking leave or working extra shifts, they would work approximately 156 hours of scheduled overtime annually.

Overtime Activities

In addition to the overtime required under FLSA, the City's labor agreement with the Fire Fighters' Union, Local 145, requires that certain activities also be paid as premium overtime. Activities that require premium overtime pay include:

- FLSA Overtime
- Mandatory Shift Coverage (coverage for vacant shifts)
- Mandatory Special Assignment or Training
- Incident Callback
- Deployment/Strike Teams

Overtime May be Awarded as Compensatory Time

Under certain prescribed conditions, a State or local government agency may give compensatory time, at a rate of not less than one and one-half hours for each overtime hour worked, in lieu of cash overtime compensation. Employees engaged in police and fire protection work may accrue up to 480 hours of compensatory time. The City's labor agreement with Local 145 requires that compensatory time balances be reduced to 48 hours as of June 30 each year unless an exception is granted by the Fire Chief and further states that members of the bargaining unit will not be permitted to accrue more than 120 hours of compensatory time for overtime worked.

¹ Each Fire-Suppression employee is assigned to one of three divisions, A, B, or C. Each division works 24-hour shifts, with at least one, and up to six days off between scheduled shifts. Annually, two divisions are scheduled for 2,904 working hours and the third division is scheduled for 2,952 working hours. The division assigned the extra two shifts rotates annually.

Historically, Fire-Rescue has Relied Heavily on Overtime to Meet Constant Staffing Needs

In order to meet constant staffing needs, the department has historically relied on overtime under the premise that overtime costs less than hiring additional permanent staff. In 2008, Fire-Rescue issued a business process re-engineering report (BPR) that compared the cost of using overtime to the cost of hiring additional staff in order to meet constant staffing needs. The BPR found that relying on overtime rather than hiring new employees would result in significant savings in fringe benefit costs.

As previously mentioned, the department needs a total of 795 Fire-Suppression employees to fill every post under constant staffing. However, in fiscal year 2013, approximately 80 Fire-Suppression full time positions (FTEs) were vacant throughout the year; under the constant staffing requirement, these vacancies were filled using overtime. However, vacancies are not the only cause of overtime; scheduled and unscheduled leave time and special assignments also contribute to the department's need for overtime. **Exhibit 2** below illustrates the department's overtime expenses in relation to total personnel costs over the last four years,² and **Exhibit 3** on the following page provides an overview by activity of the premium overtime hours worked by Fire-Suppression employees in fiscal year 2013.

Exhibit 2

Fire-Rescue's Historic Overtime Use

Fiscal Year	Total Salary Costs	Premium Overtime (1.5x)	Compensatory Time	Total Overtime Paid	Overtime as Percentage of Payroll
2011 [^]	\$ 98,958,509	\$ 10,452,625	\$ 1,297,901	\$ 11,750,526	12%
2012	\$ 113,666,828	\$ 24,038,613	\$ 4,169,860	\$ 28,208,473	25%
2013	\$ 115,715,362	\$ 29,159,025	\$ 5,754,369	\$ 34,913,394	30%
2014	\$ 117,096,421	\$ 27,665,910	\$ 5,473,620	\$ 33,139,530	28%

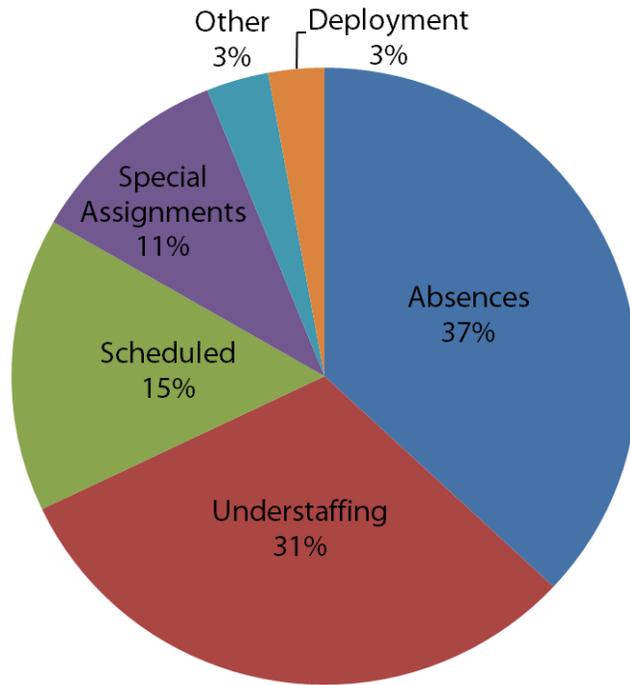
[^]During brown-out period in which fire station staffing was reduced.

Source: OCA generated using data from the City's enterprise resource planning system, SAP.

²The proposed fiscal year 2015 budget allocates \$112 million for personnel expenses (not including fringe benefit expenses), and \$26.7 million for overtime, which is a \$3.0 million increase in budgeted overtime from the prior year's budget.

Exhibit 3

Fire-Suppression Premium Overtime Hours by Activity, Fiscal Year 2013



Source: OCA generated using fiscal year 2013 payroll data from SAP.

Timekeeping Fire-Rescue utilizes a tiered daily approval model to manage the Fire-Suppression schedules for three working divisions working across 47 fire stations. Under this model, each fire station's Fire Captain reviews and approves time for the personnel under their command, ideally on a daily basis. Battalion Chiefs, in turn, ensure Fire Captains are approving time for the employees under their command, and Battalion Chiefs approve time for the Fire Captains under their command.

To plan and track employee work hours, the department uses Kronos Workforce TeleStaff™ (TeleStaff)—a scheduling, communications, and deployment system—in addition to the human capital management (HCM) component of the City's enterprise resource planning system, SAP. The TeleStaff system does not require employees to clock in or out, only that any time worked other than regular duty be recorded in TeleStaff and, for certain working activities, approved by the proper supervisor.

Fire Station Brown-Outs Contributed to the Department's Understaffing since Fiscal Year 2012

As a budget-saving tactic, in fiscal years 2010 and 2011, the City Administration instituted a fire station brown-out plan. Under the brown-out plan, the 13 stations with more than one fire apparatus had their staffing reduced so that they were no longer constantly staffed with multiple fire crews. During this period, between one and eight fire apparatuses were not staffed per day, creating a "brown-out." Because of the brown-outs, fewer Fire-Suppression employees were needed on a daily basis to staff the fire stations. Employees displaced from the browned-out fire stations worked in place of other fire fighters that were on leave, injured, in training, or filling in other department needs. According to the department, this "relief pool" of fire fighters eliminated the need to rely on overtime, thus creating a budgetary savings. However, when brown-outs were lifted in fiscal year 2012, the department was short-staffed, but there was a lack of funding for academies for hiring in that fiscal year.

Fire Academies and Their Role in Staffing the Fire-Suppression Division

Fire-Rescue hires Fire-Suppression employees exclusively from its fire academies. Starting in fiscal year 2010, however, no funds were allocated for fire academies as both a cost-cutting measure and because fire station brown-outs were in place (which created a relief pool). The lack of fire academies during that period resulted in the absence of hiring new Fire-Suppression employees. When the brown-outs were lifted in fiscal year 2012, the lack of hiring together with attrition caused Fire-Suppression to be short-staffed by about 80 people or 10 percent (in terms constant staffing). In fiscal years 2012 and 2013, Fire-Rescue held one academy each year, resulting in about 25 hires per year. Additionally, according to the department, it held one academy in 2014 resulting in another 25 new Fire Fighters. However, according to Fire-Rescue, as of September 25, 2013, those new hires were offset by six separations from the Fire-Rescue division. Funding for three fire academies is included in the Mayor's Fiscal Year 2015 Proposed Budget.

Vacancies as a Cost-Savings Measure

In addition to understaffing as a result of the brown-outs and the lack of fire academies, according to IBA reports over the years, the department purposely leaves positions vacant under the assumption that overtime is more cost effective than staffing them. According to a study by Fire-Rescue in 2008, this has been mostly as a result of the relatively higher fringe benefit costs associated with the hiring of additional employees. However, as described below, recent changes to the fringe benefits offered to employees have altered the costs of hiring.

Proposition B Changed Employee Benefits and New Hire Costs

Proposition B was passed by voters in June 2012 and amended the City Charter related to retirement benefits for City employees, including Fire-Rescue employees. In addition to seeking limits on the City employee compensation used to calculate pension benefits (for existing employees), Proposition B also eliminated defined benefit pensions for all City employees hired after July 20, 2012, except police officers, and replaced it with a 401(k)-type savings plan. Employees hired on or after July 20, 2012, with the exception of police officers, are no longer eligible to participate in the defined benefit pension plan.³ Instead they participate in the Supplemental Pension Savings Plan H (SPSP-H), which was previously used for hourly employees but was modified to include these new participants. Under this plan, both the City and its employees contribute 9.2 percent and 11.0 percent of eligible compensation for general members and safety members, respectively.

The full implementation of Proposition B is pending the outcome of ongoing litigation. In the meantime, the City is using an SPSP-H formula to allocate fringe benefits under Proposition B. It is unclear at this time when the lawsuits will be settled and what impact this will have on fringe rates. However, we used current fringe rate calculations and percentages, as developed by the Financial Management Department, to perform the analysis in this report.

Fringe Benefit Costs

We performed an analysis comparing the cost of overtime for existing (pre-Proposition B) employees to the cost of hiring new staff using the fringe rates that the City is currently using under the post-Proposition B benefits, SPSP-H. City fringe rates are calculated by the Financial Management Department and are comprised of variable and fixed components. **Exhibit 4** on the following page provides a list of the 14 components that make up the City's fringe benefit costs.

Variable fringe components vary as a percentage of salary or based on the number of employees within a classification. The fixed fringe components are a specific obligation amount which is then allocated to employees. These rates as well as the individual benefits that an employee chooses from the cafeteria-style benefit plan impact the City's overall fringe benefit costs.

Most of the fringe costs paid by the City are not affected if an employee works overtime. For Fire Safety employees that were hired after the Proposition B implementation date of July 20, 2012, of the 14 components making up fringe costs, two—Medicare and

³ New hire means that the employee has never before worked for the City of San Diego prior to July 20, 2012.

Supplemental Pension Savings Plan-H—are affected (increased) if an employee works overtime, adding 12.45 percent of fringe costs to the overtime rate.

Exhibit 4

Components of the City's Fringe Benefit Costs

Fixed Fringe Accounts
Annual Required Contribution (ARC) / Actuarially Determined Contribution (ADC)
Long-Term Disability (LTD)
Other Post-Employment Benefits (OPEB)
Unemployment Insurance
Risk Management Administration (RMA)
Workers' Compensation

Variable Fringe Accounts
Supplemental Pension Savings Plan (SPSP)
Retirement DROP
Employee Offset Savings
Flexible Benefits
Medicare
Retirement 401 Plan
Retiree Medical Trust
Defined Contribution Plan (SPSP-H)

Source: OCA generated using information from the City of San Diego's Financial Management Department.

Audit Results

Finding 1: The Cost of Hiring New Staff is Similar to the Cost of Relying on Overtime, but There Are Benefits to Hiring Additional Staff

The Fire Rescue-Department Can Better Control Overtime Cost By Hiring Additional Staff

The Fire-Rescue Department has historically relied on overtime to fill vacant shifts because overtime was less expensive than hiring. This practice has led to overtime expenditures representing about 25 to 30 percent of Fire-Rescue's personnel budget in fiscal years 2012, 2013, and 2014, and has led to employees working, in some cases, in excess of 6,000 hours per year. However, we found that, due to fringe benefit cost changes resulting from the partial implementation of Proposition B, there is no significant difference between the costs of hiring new staff for regular duty or using overtime by existing staff to fill vacancies, aside from initial training costs incurred in the first year of service. In addition, there are several other benefits to hiring and reducing reliance on overtime, including: reducing liability; more accurate personnel cost budgeting; reducing potential for fatigue and improving fire fighter safety; potential for improving employee and workplace morale; and having a larger workforce available for deployment in the case of an emergency.

In the first year of service, there are initial fire academy- and workers' compensation-related costs that raise the cost of hiring above the cost of using overtime. However, after the first year of service, it costs relatively the same for the City to fill one Fire-Suppression position with a new hire as it does to fill that position using overtime. Under the current fringe benefit rate formulas, any actual monetary savings to fill a position will be realized once new hires move into the position of Fire Engineer. At minimum, it would take a new Fire Recruit three years to advance to a Fire Engineer position.

However, due to the fringe benefit changes, new hire overtime rates are higher than the overtime rates of existing employees. Because the department relies heavily on overtime to fill in budgeted vacancies, and because the department will have about 155 of the new fringe benefit employees on staff by the end of fiscal year 2015, it needs to carefully strategize its hiring.

Using pre-Proposition B fringe rates for current employees and post-Proposition B fringe rates for new hires after July 20, 2012 (partial

implementation, SPSP-H), we found that for Fire Fighter 2 and Fire Engineer the cost to fill one vacancy with overtime was not significantly different than the cost of hiring a new employee. **Exhibits 5 and 6** below provide a breakdown of the estimated costs of hiring additional employees and relying on overtime, respectively. Although the first year compensation cost for new employees is higher than relying on overtime by a Fire Fighter 1, in reality, all employees with pre-Proposition B fringe rates have moved out of the Fire Fighter 1 classification. Therefore, if relying solely on overtime, then the fire fighter positions would be filled by a Fire Fighter 2 or Fire Fighter 3. The initial year cost of a new hire is still more expensive than relying on overtime to fill vacancies; however, by year two the annual cost of a new employee—hired under post-Proposition B benefits—is only slightly more expensive (\$2,000 more, which is about two percent of their personnel costs), and by the time a new hire moves into a Fire Engineer position, the City begins to save on personnel expenses by using regular time instead of overtime. In this scenario the cost of the fire academy is a sunk cost, and there is no recoupment of this one-time hiring cost.

Exhibit 5

Estimated Annual Cost of Hiring New Employees to Fill Vacancies (Post-Proposition B Benefits)

New Hire Costs	Fire Fighter 1	Fire Fighter 2	Fire Engineer
Annual Salary	\$59,539	\$62,717	\$73,083
Fringe Benefits (Post-Proposition B)	\$48,881	\$32,864	\$34,203
Scheduled Overtime (156 hours per year)	\$1,590	\$1,675	\$1,952
Variable Fringe × Overtime Cost (156 hours per year)	\$198	\$209	\$243
One-time Hiring Cost	\$25,739	N/A	N/A
Total New Hire Compensation	\$135,947	\$97,465	\$109,481

Source: OCA generated using City of San Diego salary tables and fringe benefit information.

Exhibit 6

Estimated Annual Cost of Relying on Overtime to Fill Vacancies (Pre-Proposition B Benefits)

Overtime Costs	Fire Fighter 1	Fire Fighter 2	Fire Engineer
Overtime Cost (2,920 hours per year)	\$89,308	\$94,076	\$109,625
Variable Fringe × Overtime Cost (2,920 hours per year)	\$1,295	\$1,364	\$1,590
Total Overtime Cost	\$90,603	\$95,440	\$111,215

Source: OCA generated using City of San Diego fiscal year 2013 payroll data and fringe benefit information.

It is important to understand that this analysis is a “point in time” analysis and is based on current conditions. While new employees have a lower fringe benefit rate, making them less expensive to use for regular time, they also have a higher overtime cost due to differences in how retirement benefits are paid.

The New Hire Overtime Rate is More Expensive

Specifically, when a pre-Proposition B Fire-Suppression employee works overtime, only their Medicare fringe rate is affected. However, when a new (post-Proposition B) Fire-Suppression employee works overtime, both their Medicare and SPSP-H fringe rates are affected. As shown previously in **Exhibit 6**, the estimated fringe costs associated with filling one vacant position (1 FTE) with overtime by a pre-Proposition B employee is about \$1,300. **Exhibit 7** on the following page shows that to cover that same vacancy with overtime by a new hire, the fringe costs associated with the overtime is over \$11,000. As a result, and as time goes on, using overtime will become even more expensive as more and more new employees, who have a higher overtime cost, come into service. Therefore, it will become more cost effective to use straight time from a relief pool than rely on overtime to fill staffing needs. As such, it will be important for Fire-Rescue to continually monitor staffing levels to minimize the use of overtime, as discussed below.

Exhibit 7

Estimated Cost of Filling Vacancy with Overtime by New (Post-Proposition B) Hire

Overtime Costs	Fire Fighter 1	Fire Fighter 2	Fire Engineer
Overtime Cost (2,920 hours per year)	\$89,308	\$95,015	\$112,003
Variable Fringe × Overtime Cost (2,920 hours per year)	\$11,119	\$11,829	\$13,944
Total Overtime Cost	\$100,427	\$106,844	\$125,947

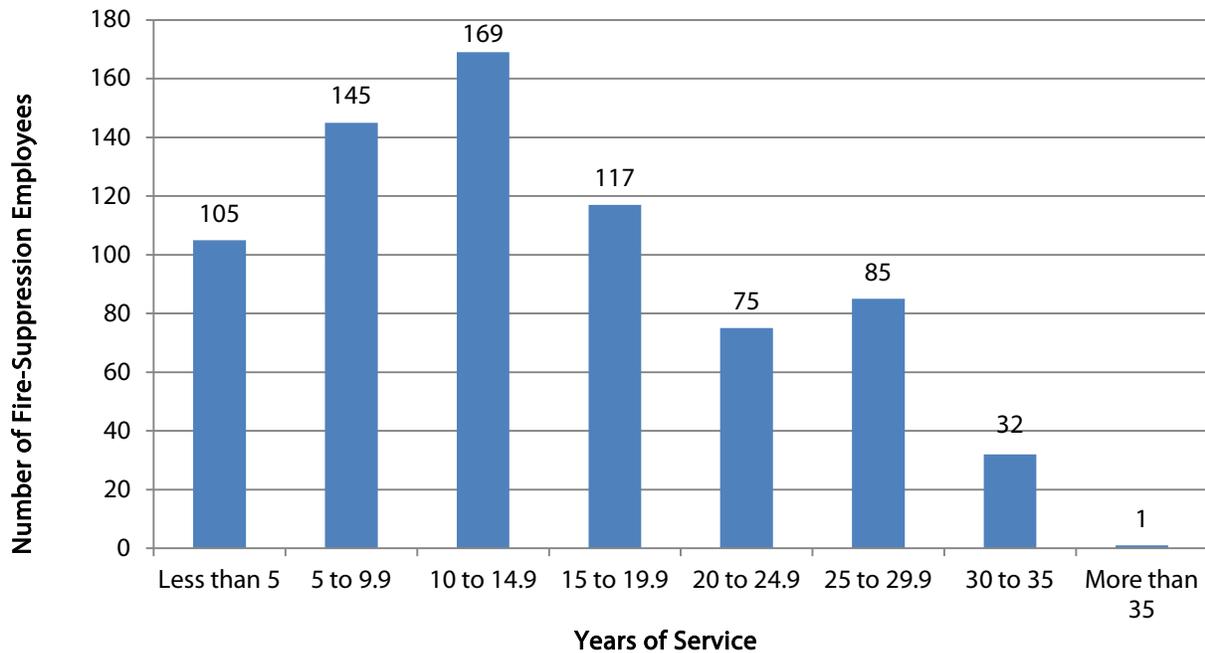
Source: OCA generated using City of San Diego salary tables and fringe benefit information.

Workforce Composition by Years of Service

Overtime costs differ between pre- and post-Proposition B employees, with post-Proposition B employees being more expensive (compare **Exhibits 6 and 7**). As fire fighters under the pre-Proposition B benefits structure begin to retire from service in larger numbers, the department will need to hire employees whose overtime costs are higher. As these new employees begin to make up the majority of the workforce, the cost of relying on overtime to meet constant staffing will become higher than the cost of hiring new employees. A critical component of examining future cost, then, is to examine how many current Fire-Suppression employees are or will soon be eligible to retire. According to the San Diego City Employees' Retirement System, Fire Safety Members who were hired before July 1, 2005 must be at least 50 years old and have at least 20 years of service credit or be at least 55 years old with at least 10 years of service credit in order to be eligible for a retirement benefit. **Exhibit 8** on the following page provides a breakdown of current Fire-Suppression employees' years of service.

Exhibit 8

Current Fire-Suppression Employees' Years of Service



Source: OCA generated using employee start dates from the City of San Diego's enterprise resource planning system, SAP.

Post-Proposition B Employees May Constitute a Majority of the Workforce Within Five to Ten Years

As shown in **Exhibit 8** above, 193 or 26 percent of the current workforce has 20 or more years of service. Moreover, 117 employees or 16 percent of the workforce is approaching 20 years of service within the next five years. As more new (post-Proposition B) employees are hired to fill the ranks, relying on overtime to meet constant staffing will cost more than hiring new employees. Based on the large percentage of current Fire-Suppression employees who have or are approaching 20 years of service, the point at which post-Proposition B employees make up more than half of the workforce will likely take place within five to ten years. The department should develop a hiring strategy in anticipation of this pending change in its workforce makeup.

Overtime Costs Will Change as New Fire Fighters are Hired

Currently, Fire-Rescue has about 80 Fire-Suppression employees that came into the department under the new fringe benefit structure. As previously indicated, although the fringe benefit rate for new hires' straight time is lower than the fringe rate for pre-Proposition B employees, the fringe rate for overtime is more expensive. In addition to these 80 employees, Fire-Rescue has budgeted three fire academies for fiscal year 2015. The academies will result in about 75

additional post-Proposition B Fire-Suppression workers by the end of fiscal year 2015, for a total of about 155 post-Proposition B employees. However, this will be offset by separations from the department. Although the hiring cost of these employees will already have been paid for, and even though their salaries will be incorporated into the department's budget, these employees will generate a higher hourly cost when they work overtime as compared to staff with pre-Proposition B benefits in the same rank. Therefore, it is important that Fire-Rescue control its overtime use. In fiscal year 2013, Fire-Rescue paid for 2.5 million working hours, with 686,000 (about 27 percent) being overtime hours. Therefore, because hiring has a similar cost as relying on overtime in the short run (and a savings in the future), the department can control its personnel costs by hiring to full staffing levels or above to reduce overtime and the associated fringe costs.

**Benefits to Hiring
Additional Staff**

As discussed above, increasing staffing levels to reduce the use of overtime saves money in the long run, but carries a one-time upfront cost. However, there are potential benefits to hiring other than monetary considerations: reducing potential for fatigue and improving fire fighter safety; reducing liability; improving employee and workplace morale; having a larger workforce available for deployment in the case of an emergency; as well as having a relief factor to reduce mandatory overtime. These factors likely justify the one-time upfront cost of hiring new employees. However, according to the Fire-Rescue Chief, hiring additional staff and therefore reducing overtime may have a negative effect on the overall morale of the department. He believes that Fire-Suppression staff, although cautioned otherwise, expects that overtime will be available to them. Currently, although Fire-Suppression employees are scheduled for about 2,920 working hours per year, they are averaging about 3,600 hours of working time per year at an average compensation of \$107,614.⁴ **Exhibit 9** on the following page provides the average number of hours worked and associated gross pay by rank.

⁴ This average is based only on fiscal year 2013 SAP data and uses Fire-Suppression staff that worked over 2,904 hours in order to avoid including staff that separated from the City or were not scheduled for a full year due to other circumstances.

Exhibit 9

Fire-Suppression Employees' Average Work Hours and Gross Pay, Fiscal Year 2013

Classification	Average Hours Worked	Average Gross Pay
Fire Battalion Chief	3,353	\$ 132,814
Fire Captain	3,304	\$ 113,843
Fire Engineer	3,696	\$ 112,454
Fire Fighter	3,725	\$ 100,145
Fire-Suppression Average	3,613	\$ 107,614

Source: OCA generated using fiscal year 2013 payroll data.

Moreover, in extreme cases, Fire-Suppression employees worked more than 6,500 hours per year—more than twice their scheduled hours. **Exhibit 10** on the following page shows the top Fire-Suppression earners in fiscal year 2013. The exhibit shows that not only are some Fire-Suppression employees grossing more than \$200,000—almost three times the salary of a Fire Fighter 3⁵, but they are also working sometimes more than 6,000 hours per year.

⁵ The City of San Diego's fiscal year 2013 Salary Ordinance indicates that a Fire Fighter 3, without add-on pay, makes about \$67,000 annually.

Exhibit 10

Top Ten Fire-Suppression Earners in Fiscal Year 2013

	Classification	Gross Pay [^]	Total Cost to City [*]	Total Hours Worked	Days Worked	Overtime Hours Worked [‡]
1	Fire Engineer	\$247,873	\$265,394	6,518	286	3,615
2	Fire Engineer	\$246,202	\$324,495	5,781	271	2,932
3	Fire Fighter 3	\$241,945	\$259,500	6,903	299	4,123
4	Fire Engineer	\$230,462	\$316,045	5,670	251	3,072
5	Fire Engineer	\$215,459	\$299,747	4,683	237	1,842
6	Fire Fighter 2	\$208,021	\$285,863	5,453	258	2,665
7	Fire Fighter 2	\$203,532	\$229,662	5,873	252	3,334
8	Fire Engineer	\$197,443	\$278,930	5,654	239	2,823
9	Fire Engineer	\$195,364	\$275,632	5,122	225	2,432
10	Fire Engineer	\$191,273	\$264,190	4,979	216	2,451

* Includes all costs such as fringe benefits, add-on pay, holiday pay, uniform stipend, and compensatory time earned.

[^] Includes wages such as salary, holiday pay, paid leave, and overtime.

[‡] Includes overtime straight, overtime premium (paid at time-and-a-half), and late relief, but does not include regular duty or non-mandatory special assignment hours.

Source: OCA generated using fiscal year 2013 payroll data and fiscal year 2013 SAP timekeeping data.

With the average hours worked being equal to almost 1.25 FTEs and the fact that some employees are working more than 2 FTE hours annually, fatigue and burnout are both potential concerns. The significant average hours worked per employee combined with the extreme number of hours worked for some fire fighters could be potentially fatiguing and a detriment to fire fighter safety.

All of the extra working hours do equate to significant overtime pay, but they can also contribute to negative morale, as not all of the overtime worked is voluntary. If overtime is used too often, it may affect morale and reduce the number of fire fighters who volunteer, increasing the reliance on mandatory call-backs. And finally, hiring more fire fighters and creating a relief pool would create a larger workforce from which to draw in case of a major emergency.

As noted previously in this report, there are many factors contributing to Fire-Rescue's use of overtime for staffing. **Exhibit 9** shows that Fire-Rescue uses overtime to staff at all ranks in Fire-Suppression. We found that some employees are working weeks in a row. In one instance, using timekeeping data, we found that in the two month period of July 1, 2012 to August 31, 2012, one fire fighter worked 60 days, for a total of 1,381 hours. Of these days worked, all but three were 24-hour shifts. In another instance, we identified a fire fighter that worked 36 days straight. Of these 36 days, six were shifts between nine and twelve hours long, and the remaining were 24-hour shifts. We also found instances of fire fighters working seven to 10 days in a row, taking one or two days off and then working another week straight.

The City does not have a policy limiting the number of continuous shifts Fire-Suppression staff can work, nor are there federal or California state laws restricting the number of continuous hours that fire fighters can work. In the case of wildland fire fighting, there are national guidelines that recommend work/rest ratios. However, some fire departments do limit the number of consecutive shifts that can be worked.

There Are Benefits to Limiting Continuous Shifts

The Federal Emergency Management Agency (FEMA) has a U.S. Fire Administration Library with studies and research performed for different fire municipalities. There are many studies and research documents that state limiting consecutive shifts is a way to increase fire fighter safety and decrease City liability.

For instance, a study conducted for the Clark County, Nevada Fire Department noted that the minimum-unit staffing model (with no extra positions) has created opportunities for overtime. To maintain staffing levels, many personnel work beyond the typical 24-hour shift—many as much as 72 hours. The Collective Bargaining Agreement limits consecutive hours of overtime to 75, but there is no provision to prevent staff from working these hours in the busiest stations. The study concludes that "This combination of workload and policies presents a situation that can promote potential issues regarding firefighter safety."

Additionally, a research project that was initiated for the Redondo Beach Fire Department to identify the impact of increased overtime shifts on fire fighter performance concluded there is a significant decrease in the cognitive performance of fire fighters after 96 hours of consecutive shift work. This research used interviews, surveys, and cognitive computer tests to identify performance issues from fire

fighters that worked multiple shifts. The study also concluded that fatigue and sleep deprivation contributed to the decrease cognitive function, which also affected motivation. Ultimately the study recommended that policies should limit the number of consecutive shifts that fire fighters are allowed to work.

Additionally, according to this study, several Fire Departments throughout the country do limit the number of continuous shifts that fire fighters can work as a way to prevent fatigue. In the 2011 study on the effects of continuous multiple shifts, 65 percent of 114 surveys to Fire Departments in the U.S. indicated they do have policies limiting the number of consecutive shifts personnel can work.

The current operations of the Fire-Rescue Department rely so heavily on overtime for constant staffing operations that it would be difficult to limit consecutive shifts at current staffing levels. However, because the cost of hiring is similar to the cost of using overtime with a pre-Proposition B employee and more expensive with a post-Proposition B employee, the department should hire staff to alleviate its reliance on overtime.

In addition to these non-monetary benefits, hiring to full staff or above can also help the Fire-Rescue Department with their budgeting process. In fiscal years 2012, 2013, and 2014, the Fire-Rescue Department had to request mid-year budget augmentations to cover unbudgeted overtime expenditures. In fiscal years 2012, 2013, and 2014 the augmentations were \$4,800,000, \$840,000, and \$2,100,000 respectively. If the department were to hire more FTEs with a more predictable cost, then it would not need to rely as heavily on overtime, which has more of a variable cost associated with it (fringe rates depending on hire date and pay rate depending on the nature of the assignment and the number of hours worked in a pay period).

**Staffing Fire-Suppression
with a Relief Factor Would
Shift Overtime Costs to
Salary Costs**

When assessing the value of hiring additional staff under the new, post-Proposition B fringe benefit rates, the savings associated with newly-hired Fire-Suppression staff will cover the upfront cost of hiring in about 4.5 years. This cost recovery will come from the savings generated from paying post-Proposition B staff straight time instead of overtime. This is because each position that is filled by hiring will reduce the amount of overtime that employees will need to work to fully staff the Fire-Rescue Department. By comparing the totals from **Exhibits 5 and 7** you can see that in the first year there is a net loss of \$35,500 per new hire due to the one-time hiring cost, mostly related to the fire academy. However, in the subsequent years

the additional hire (who will reduce the need for one FTE of overtime) will save the department about \$9,380 annually. This savings will make up for the upfront loss in less than five years.

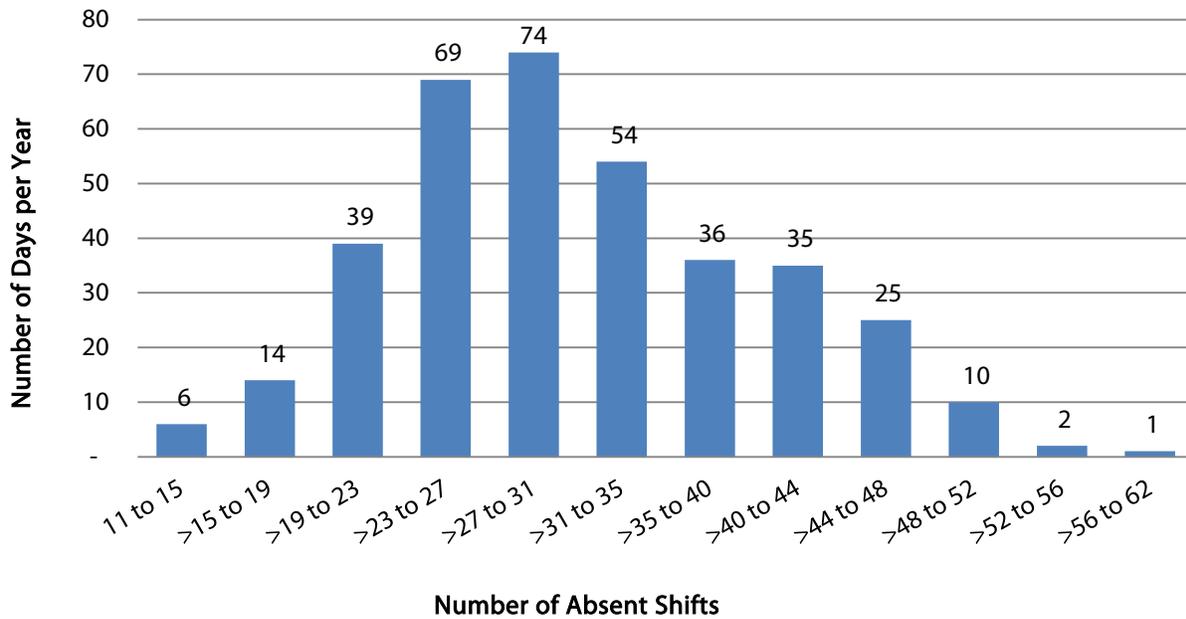
If the department wants to shift overtime cost to salary costs, reduce compensatory time, and spread minimum staffing hours, it will need to increase staffing above current levels and calculate a relief factor for its Fire-Suppression staff based on absences from duty (leave time). As described below, a relief factor would create a relief pool above the constant staffing level. The relief factor indicates, on average, how many persons it takes to fill a single job position for a single shift, taking into account vacation, sick leave, and compensatory time used. A relief factor can also be calculated to cover other activities that take employees away from their posts, such as training days including academy instruction, and other types of special assignments. A relief factor would allow Fire-Rescue to have staff to cover some scheduled and unscheduled leave without having to consistently fill those vacancies with overtime.

Fire-Suppression Absences

In fiscal year 2013, Fire-Suppression experienced an average absence rate of 751 hours per day, which is the equivalent of 31 24-hour shifts per day (out of 265 shifts needed to fully staff all fire stations). The maximum number of absent hours in a single day was 1,484, which equates to almost 62 24-hour shifts, and the minimum was 267, roughly 11 shifts. If the department staffed using a relief factor, then it would have employees already scheduled to fill the daily vacancies, therefore reducing reliance on overtime. **Exhibit 11** on the following page summarizes absent hours and their 24-hour shift equivalents during fiscal year 2013. The absent shifts are shown by the number of days occurring during the year. For example, it was most common for absences to be between 27 and 31 shifts, which occurred on 74 days, while absences of 56 or more shifts happened on only one day.

Exhibit 11

Actual Fire-Suppression Absences by Days, Fiscal Year 2013



Source: OCA generated using fiscal year 2013 SAP time entries.

Relief Factor Calculation

As more of the Fire-Rescue staff has post-Proposition B fringe benefits, the cost of routinely staffing with overtime will become more expensive. To help minimize reliance on overtime, a relief factor can be calculated based on the department's constant staffing need and the average number of absences from duty during fiscal year 2013. **Exhibit 12** on the following page provides relief factors for each of the Fire-Suppression classifications, based on actual absences recorded during fiscal year 2013. This example does assume that minimum constant staffing levels have been reached, meaning that Fire-Rescue would not be relying on overtime to fill vacant positions. So, for example, for every Fire-Suppression post, the department could hire 0.14 employees above the constant staffing level to serve as a relief staff.

Exhibit 12

Fire-Suppression Relief Factor by Classification

Classification	Scheduled Hours [^]	Absent Hours [†]	Available Hours [‡]	Staffing Need [°]
Fire Battalion Chief	2,920	259	2,661	1.10
Fire Captain	2,920	320	2,600	1.12
Fire Engineer	2,920	427	2,493	1.17
Fire Fighter	2,920	362	2,558	1.14

[^]Calculation: (24 hours per day × 365 days per year) ÷ 3 working divisions, which coincides with the average number of scheduled work hours per division.

[†]Figures reflect the average of actual hours employees in each classification were absent from duty during fiscal year 2013. Note: special assignment hours are not included.

[‡]Calculation: Scheduled Hours – Absent Hours

[°]Calculation: Scheduled Hours ÷ Available Hours

Source: OCA generated using fiscal year 2013 SAP payroll data.

A Relief Factor Would Increase Fire-Suppression Staffing Levels

Because it requires 795 (265 × 3) employees to fully staff all three of Fire-Suppression's working divisions, the department could staff Fire-Suppression at 906 employees (795 × 1.14 = 906) to cover average vacancies. On a daily basis, this would mean that, instead of scheduling 265 Fire-Suppression employees (number of daily fire fighters needed to fully staff fire stations), the department would schedule 302 employees to cover the posts that will be vacant due to absences. In the instance that a post was overstaffed, Fire-Rescue could staff the fire truck with a fifth crew member or assign the staff to other duties such as fire inspections. Additionally, this relief factor does not account for other activities that take employees away from their posts, such as special assignment, training, or deployment. Therefore "extra" staff can fill in for employees that have work assignments away from their posts.

New Hires' Salary Versus Overtime Costs

This would help shift the overtime costs associated with absences to regular salary costs because the relief staff could fill in as regular duty, not at the overtime rate. For instance, in fiscal year 2013, each fire fighter took an average of 362 hours of leave per year, which the department backfilled using overtime. Even if Fire-Rescue had been fully staffed during this period, it would have needed to use overtime to back fill these vacancies under the constant staffing model. As we stated earlier, a new hire (under the post-Proposition B benefits) has 12.45 percent fringe rate added to their overtime rate. The fully loaded straight time rate (includes fringe benefits) for new hires is \$33.38 per hour versus a fully loaded rate of \$36.59 for overtime.

Therefore, to fill the 362 hours of leave going forward with post-Proposition B employees, it will be cheaper to backfill using additional firefighters paid at straight time rather than overtime by approximately \$1,200 per employee based on the current absence rate.

**Even with a Relief Pool,
Overtime is Not Eliminated
Completely**

It is important to note, however, that even with the use of relief staff, overtime would not be completely eliminated; this is because FLSA rules and the labor agreement would continue to require certain hours or assignments to be paid at the time-and-a-half rate. Additionally, because absences vary throughout the year, there would still be days when Fire-Suppression is understaffed and would require overtime shifts to meet constant staffing. Moreover, a relief pool will only be effective if short-staffing has been addressed by hiring to the level of constant staffing (fully staffed). Finally, it is important to note that this analysis should be completed annually and take into account changes in staffing, such as absence rates.

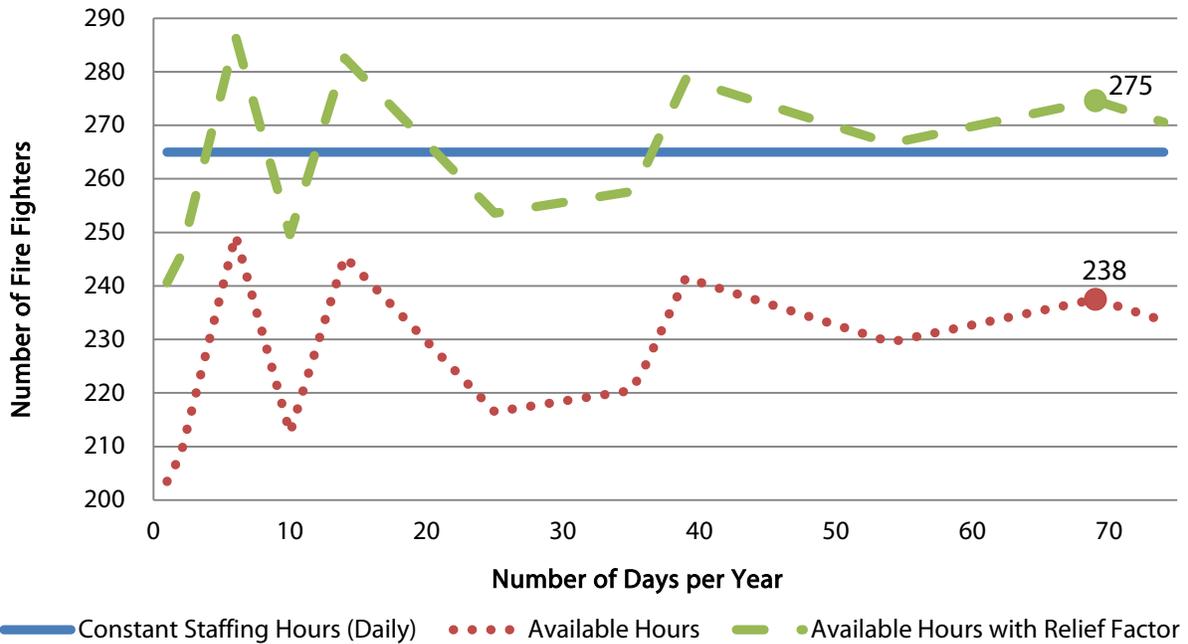
**Simulating Fire-
Suppression Staffing with
Relief Factor**

Using actual absence figures from fiscal year 2013, we calculated a relief factor for the Fire-Suppression division as a whole and simulated staffing levels during a year in order to visually compare the division's overtime in both scenarios. A relief factor would require hiring above the level of constant staffing, to allow for a relief pool. The relief factor used in our simulation is 0.14. Using the 0.14 relief factor would mean staffing Fire-Suppression with an additional 37 fire fighters on a daily basis.⁶ The results of our simulation are shown in **Exhibit 13** on the following page. The solid line represents the constant staffing level that needs to be met every day. The dotted line represents the regular duty staffing hours that actually occurred in fiscal year 2013, and the dashed line represents the modeled relief factor staffing.

⁶ The relief pool of fire fighters would be in addition to those hired to meet minimum constant staffing levels.

Exhibit 13

Simulated Fire-Suppression Staffing with Relief Factor



Note: Does not include absences due to special assignments or deployment.

Source: OCA generated using fiscal year 2013 timekeeping data.

This simulation shows that, for instance, on the far right of the graph there are about 70 days out of the year that 27 fire fighters are absent from duty. This requires 27 fire fighters to work overtime, which means on those days 292 fire fighters are being paid (265 + 27)—265 on straight time and 27 on overtime. With a relief factor of 1.14, a workforce of 302 is already in place, paid at straight time. The extra 37 fire fighters would offset the 27 absences, resulting in plus 10 for the day, which is a workforce of 275 (238 + 37). It is important to note that our calculation of available fire fighters does not include absences due to special assignments or deployment, since these are considered working activities (not absences). However, in reality, special assignments and deployments take fire fighters away from their regular fire suppression duties and must be backfilled. Therefore, in our example, the surplus of 10 fire fighters can be used to fill shifts where other fire fighters are absent because of special assignments and/or deployments.

If the 27 absences were filled using new hires, the costs would be similar to paying overtime, but the hours per employee would be reduced. As more new hires enter the system, there will be savings

from using straight time rather than overtime to fill in for absent fire fighters.

A similar but more comprehensive analysis, with input from operational experts within the department, can help ensure a relief factor calculation that allows Fire-Suppression to be staffed as efficiently as possible. Again, this analysis is based on current fringe rates and assumes that minimum staffing is met. It is important that this analysis be completed annually to assess the staffing methodology. Additionally, newly-hired (post-Proposition B) employees' fringe rate is affected by overtime, whereas pre-Proposition B employees' fringe costs are only affected minimally by overtime. If the department is relying on overtime to staff positions, it will need to take this into account as the number of post-Proposition B employees increases.

**A Relief Factor Would also
Help Minimize
Compensatory Time, which
Generates Additional
Overtime**

The department may also reduce the potential for compensatory time accrual by staffing Fire-Suppression using a relief factor. In fiscal year 2013, Fire-Suppression employees collectively took 80,554 hours of compensatory time as leave from duty at a cost of \$1.9 million, plus the cost of overtime to fill these absent hours. As of July 5, 2013, Fire-Suppression employees collectively had a total of 20,999 hours of compensatory time accrued. With a relief staff available, these hours would not generate overtime if they are taken as leave from duty because the absences would be filled by employees earning their normal hourly rate and not the overtime (time-and-a-half) rate.

Compensatory time is earned by working mandatory overtime assignments. Fire-Suppression employees who work mandatory overtime assignments have the option of receiving compensation for their labor in the form of either a time-and-a-half payment on their next payroll check, or by accruing compensatory time. Employees who elect the compensatory time option accrue hours on an hour-for-hour basis and are paid the premium portion of the overtime at their regular rate on their next payroll check. For example, a fire fighter who is placed on a mandatory callback assignment for a 24-hour shift due to a vacancy and elects the compensatory time option would accrue 24 hours of compensatory time and be paid for 12 hours at their regular hourly rate. In this manner, the employee is compensated for the equivalent of time-and-a-half (36 hours) in either case.

One key difference between overtime paid and compensatory time earned is that employees are able to take compensatory time as leave from duty. Because of the department's constant staffing

requirement and with a lack of relief staff available, compensatory time taken as leave from duty also generates overtime because the temporary vacancy must be backfilled with existing staff. In this manner, overtime generates more overtime when earned as compensatory time and taken as leave from duty. Therefore, when a fire fighter takes compensatory time off, the City is effectively paying for two fire fighters to fill one post and generating additional overtime in the process. Employing a relief pool of fire fighters to fill absences would help to reduce these overtime costs. With relief staff, there would be fewer mandatory overtime shifts to fill, which would in turn generate less compensatory time. Additionally, it would allow regular duty staff to be available to fill in when compensatory time is taken as leave from duty.

Exhibit 14 below provides a total of premium overtime and earned compensatory time in fiscal year 2013.

Exhibit 14

Fire-Suppression's Premium Overtime and Earned Compensatory Time Totals, Fiscal Year 2013

Wage Type Description	Total Hours	Total Amount
FLSA Overtime	403,561	\$17,433,486
Overtime Premium	148,566	\$6,187,592
Compensatory Time Earned (Accrued Portion)	90,408	\$2,505,079
Mandatory Special Assignment or Training	14,560	\$767,666
FLSA Overtime while on Special Assignment	9,880	\$654,659
Special Assignment: Straight Day to Suppression Overtime	15,632	\$637,493
Compensatory Time Earned (Paid Portion)	42,528	\$495,687
Compensatory Time Earned while on Special Assignment (Accrued Portion)	2,565	\$113,458
Compensatory Time Earned while on Special Assignment (Paid Portion)	1,426	\$25,971
Special Assignment (Deployed) while on Shift Trade Worked	601	\$7,915
Mandatory Special Assignment while on Shift Trade Off	10	\$537
Compensatory Time Earned while on Holiday	12	\$499
TOTAL	729,749	\$28,830,043

Source: OCA generated using fiscal year 2013 payroll data.

Timekeeping Data is Not Specific Enough to Fully Identify all Drivers of Overtime

As discussed in the Background of this report (see **Exhibit 2**), in fiscal years 2012 and 2013, overtime costs represented 25 to 30 percent of the Fire-Rescue Department's personnel expenditures. The overtime costs were driven by factors such as vacancies, scheduled and unscheduled leave, and unpredictable events such as emergency deployments. In order to shift the overtime costs to salary costs, the department could establish a relief pool by calculating a relief factor for Fire-Suppression staff. However, the most effective way to calculate a relief factor is to understand what is driving the reliance on overtime.

In fiscal year 2013, Fire-Rescue's cost for approximately 729,748 hours of premium overtime and earned comp time totaled approximately \$28.8 million for Fire-Suppression employees. The reason behind approximately 20,458 hours of overtime is unknown. Without knowing all the reasons for overtime, it's difficult to complete a thorough cost-benefit analysis of overtime. The department may further examine the causes for overtime and assess whether using attendance and absence types in SAP that are more descriptive would be beneficial for this purpose.

Recommendation #1

The Fire-Rescue Department should perform a staffing analysis annually in order to determine the optimal number of Fire-Suppression employees to hire in order to control overtime. This annual review should be done to coincide with the City's budgeting process and should consider:

- A comparison between the cost of hiring additional employees and the cost of overtime based on workforce composition and associated fringe rates;
- Projections of attrition;
- The average absence rate and the economic benefits of the corresponding relief factor calculation for each Fire-Suppression classification;
- Other activities that take employees away from their posts, such as serving as an instructor for trainings, attending training, and other special assignments; and
- A determination of all activities that contribute to overtime, including:
 - Scheduled overtime;
 - Scheduled and unscheduled leave time;
 - All special assignments;
 - Deployments; and
 - Other factors. (Priority 2)

Finding 2: Annual Leave Liability is Growing Because it is Not Capped in Compliance with the Labor Agreement

We found that 41 percent of Fire-Suppression employees had annual leave balances in excess of the tiered limits outlined in the labor agreement with Local 145. As of July 5, 2013, Fire-Suppression employees have accrued approximately \$16.8 million in unused annual leave, with approximately \$6.9 million of that being over the annual leave limit. The liability is also growing based on the fact that the final valuation of an employee's annual leave accrual will be calculated on current salary, which typically increases over time due to pay increases and promotions.

In addition, the potential for large annual leave balances eventually being used to extend deferred retirement plans impacts staffing because overtime would be required to backfill those absences.

The Labor Agreement Allows for Accrual of Annual Leave but Has Limited Options for Cash-Out

The labor agreement for Local 145, which applies to Fire-Suppression employees, has restrictions for annual leave balances. Article 28, Section B of the agreement states that employees may not accrue annual leave hours in excess of certain caps based on hire date and years of service. The caps in **Exhibit 15** below are specified for 40-hour-per-week employees with a conversion for 56-hour-per-week employees. Article 28 of the labor agreement states that employees in the bargaining unit will not be allowed to exercise cash-out of annual leave in excess of 125 hours for 40-hour workers and 175 hours for 56-hour workers from July 1, 2002 prospectively.

Exhibit 15

Annual Leave Maximums Allowed by Local 145 Labor Agreement

Hire Date / Years of Service	40-hour Schedule	56-hour Schedule
Hired before 7/1/1994 and 15 or more years of service	700 hours	980 hours
Hired before 7/1/1994 and less than 15 years of service	600 hours	840 hours
Hired on or after 7/1/1994	350 hours	490 hours

Source: OCA generated using the Labor Agreement between the City of San Diego and the Fire Fighters' Union (Local 145).

Annual Leave Liability The labor agreement allows Fire-Rescue employees limited cash-out of accrued annual leave, but the City has not been capping annual leave balances. This has created a large annual leave liability. As of July 5, 2013, Fire-Suppression employees had accrued a total of 548,649 hours of annual leave. The estimated cash-out value of this leave, including add-on pays that would increase payments, is about \$16.8 million dollars, with approximately \$6.9 million of that being over the annual leave limit.

Employees Enrolled in the Deferred Retirement Option Plan (DROP) May Extend Their Separation Date Using Annual Leave, Furthering the Need for Overtime The labor agreement goes on to state that, because employees cannot cash out annual leave accrued after July 1, 2002, they are permitted to use annual leave accrued after July 1, 2002 to extend the Deferred Retirement Option Plan (DROP) beyond the five year maximum deadline, or use the leave as service credits for retirement formulas. DROP is a voluntary program that provides eligible employees an alternative method of accruing benefits from SDCERS while employed by the City of San Diego in addition to their existing service retirement benefit.

To participate, eligible⁷ employees must have entered into an irrevocable contract with SDCERS and the City and agree to leave employment and retire no later than five years from the date they entered DROP. However, employees can prolong their enrollment in DROP beyond the five year maximum by using certain hours of annual leave. To extend their DROP date, the employee is effectively running out their DROP-eligible annual leave balances, which in some cases is greater than 3,000 hours.

The practice of extending DROP with eligible annual leave hours contributes to the department's need for overtime to staff fire stations because an employee can use annual leave for an extended amount of time, and the department must use overtime to fill that post. Of the 548,649 hours mentioned above, 755 fire fighters had 543,777 hours collectively accrued in SDCERS-eligible annual leave, worth \$16.7 million. Eligible employees (who have enrolled in DROP) can use this type of annual leave to extend DROP beyond the five year maximum. In these instances, the department cannot avoid overtime costs by filling the absence with a new hire because the position is not vacant, as the DROP fire fighter still occupies a budgeted position.

⁷ Employees must be age and service eligible to participate in DROP, and must have been hired by the City of San Diego before July 1, 2005.

In addition to the 11 Fire-Rescue employees that are already extending their DROP with annual leave hours, we identified an additional 33 employees in fire fighter classifications participating in DROP who will reach their five year maximum by June 30, 2014 and could potentially extend their DROP with annual leave because they do not have the option to cash out more than 125 hours. All of these posts must then be backfilled with overtime by existing employees until the DROP employee's annual leave hours are exhausted.

**Practice of Not Capping
Annual Leave Started
Before 2009**

It is not clear exactly when the City began the practice of prohibiting annual leave cash-outs and not capping annual leave. However, based on the labor agreement language, it seems this practice may have started in 2002. In 2009, when the City was configuring its new enterprise resource planning system, SAP, the current Chief Operating Officer instructed the Personnel Department to configure SAP so that the system would not automatically apply a cap to annual leave accruals for certain Fire-Rescue employees. The email instructing this configuration of SAP also states that, although it was the City's intention to follow the rules of the labor agreement and Civil Service rules, due to the City's financial situation at the time of the email, the City was unable to pay out all leave that was accumulated above caps. The email also stated that it was the City's ultimate intent to conform to the rules related to annual leave caps.

Additionally, the City did not want to force employees in Fire-Suppression to take annual leave because that would in turn result in creating more overtime to backfill the empty posts. Currently, Fire-Rescue has daily annual leave limits in place for Fire-Suppression operations; a maximum of nine employees per rank may be absent from duty each day. Staffing with a relief factor would also provide an opportunity here to raise these daily maximums so that employees are able to take annual leave without increasing the need for overtime. With relief staff available to backfill at regular rates, fire fighters would be able to take annual leave before separating from employment at potentially higher hourly rates.

According to the Human Resources Department, the City is continuing to evaluate enforcement of the annual leave balance caps for employees represented by Local 145. It also stated that if Fire-Rescue were to pay out all current leave accumulated in excess of the annual leave caps, Fire-Rescue would experience a negative fiscal impact to its fiscal year 2015 budget. Moreover, this negative impact would continue in the future because, as Fire-Rescue allows fire fighters to take time off once they reach the annual leave cap, the

department would be paying annual leave and overtime to backfill those absences. However, as previously discussed, overtime can be minimized by staffing Fire-Suppression with a relief factor to accommodate absences from duty.

Shift Trades Allow for Time Off Without Using Annual Leave

The Fire-Rescue Department has a maximum quota of staff that can take leave each day. If the quota is met, staff has the option to trade shifts in order to take leave. Per the negotiated labor agreement, the City allows Fire-Suppression employees to trade work shifts with each other. Shift trades are limited to the exchange of scheduled work shifts between two employees in the same classification. In addition to allowing staff a way to take days off when leave quotas have already been met, this practice also allows staff to take days off without having to use time from their annual leave balances. Thus, without caps being enforced, shift trades also contribute to the City's growing annual leave liability. Although shift trades do not have to be approved by a supervisor prior to taking place, trades are entered into TeleStaff.

According to the department, shift trades are cost-neutral because they result in no impact to the City, both operationally and financially. When fire fighters trade shifts, the regularly-scheduled fire fighter is compensated as normal while the fire fighter actually working the shift is not compensated at all (other than accruing shift trade hours). However, as of July 5, 2013, Fire-Suppression employees have collectively accumulated 12,539 more hours of shift trade off than shift trade worked. In fact, 27 of 755 fire fighters (4 percent) had a negative shift trade balance greater than 240 hours (the equivalent of ten shifts). This may be significant because the hours for which a fire fighter is on trade off still count toward the FLSA threshold for overtime. In effect, then, fire fighters with large negative trade balances may have earned overtime without actually working.

Recommendation #2

The Human Resources Department should confer with the Fire-Rescue Department and the Financial Management Department to assess the financial impact to the City of continuing the practice of not capping annual leave accruals. The Human Resources Department should then use that information to discuss with the Office of the Mayor whether it should discontinue this practice and plan how to deal with the issue of high annual leave liability. (Priority 2)

Finding 3: Weaknesses in the Reconciliation of Timekeeping Data May Generate Errors in Overtime Payments

We found errors in the department's timekeeping data that may cause errors in payroll. Although we could not perform a complete reconciliation of timekeeping data due to a data completeness problem, the testing that we did perform revealed that there are errors in timekeeping data used for payroll. At least five of those errors would have created an overpayment. The department's payroll specialists are responsible for, among other things, reconciling the time entries in Fire-Rescue's two time keeping systems. However, this is a laborious and complicated manual process that is subject to human error.

Fire-Suppression Staff Use Two Timekeeping Systems

Fire-Rescue uses TeleStaff software to staff its 47 fire stations 24-hours a day, 365 days per year. To staff the stations, the department has assigned all Fire-Suppression staff to one of three divisions: A, B, or C division. Each division has a pre-set schedule of nine to ten shifts per 28-day working period. In addition, TeleStaff identifies and fills anticipated Fire-Suppression vacancies that will occur due to various reasons, such as short-staffing, scheduled leave, training, or the assignment of staff to a "special assignment" that takes them away from their scheduled Fire-Suppression post.

TeleStaff Automates Scheduling

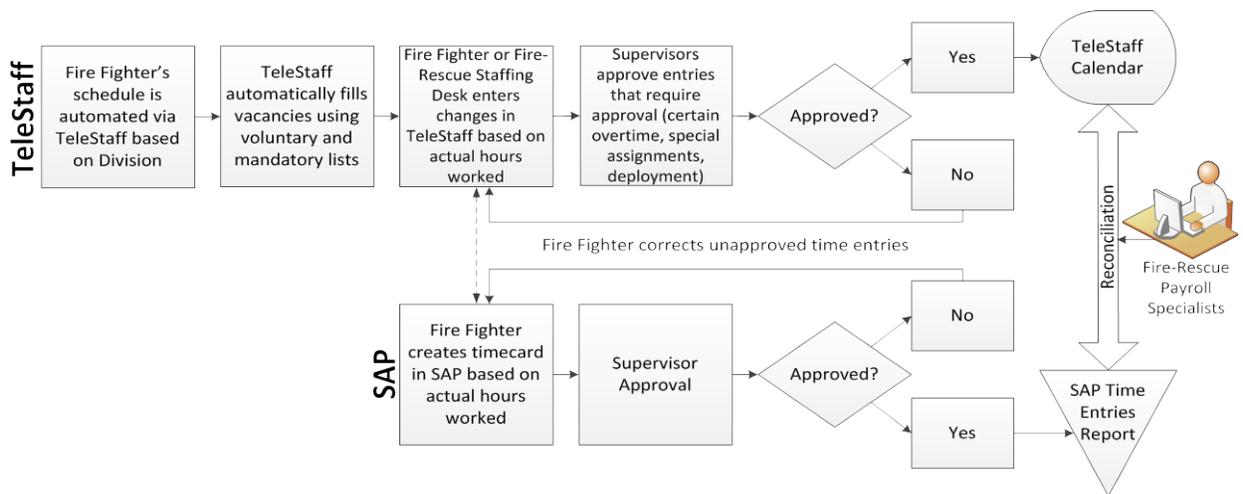
If an employee needs to make changes to their pre-set schedule before their shift (due to annual leave, shift trade, mandatory training, or any activity that will affect their post), they are to follow appropriate procedures, such as making changes in the TeleStaff system and seeking supervisory approvals. The TeleStaff software will then identify gaps in staffing and will assign employees who volunteer for overtime to fill these spots. If there are no volunteers available to fill the spots, staff will be assigned for mandatory overtime. Volunteer overtime assignment is based on a 90-day rolling balance of working hours. Assignments are given to those with the least total working hours scheduled in the 90-day period. Mandatory assignment of overtime is also a rolling list. When an employee's name comes up (based on classification), the employee is assigned mandatory overtime, and then their name goes to the bottom of the list. Additionally, if there are any changes during a shift—such as leaving early due to illness, or a late relief—the employee is responsible for entering such changes into the TeleStaff system.

SAP Automates Payroll Like the rest of the City, Fire-Rescue uses SAP as its payroll system. Employees enter their timecards in SAP based on time records in TeleStaff; these SAP timecards generate the employees' paycheck. Employees enter their actual working and/or leave times into SAP and use specific codes that differentiate between regular duty, voluntary overtime, or mandatory working activities such as mandatory recall, mandatory special assignment, or late relief; any mandatory activity is paid at a time-and-a-half rate automatically while regular or voluntary assignments are paid at a regular rate until 212 hours are reached in a work period. Captains are responsible for approving TeleStaff and SAP timekeeping for the employees assigned to their stations. Battalion Chiefs review and approve the timekeeping entries for Captains, and Shift Commanders review and approve the timekeeping entries for Battalion Chiefs.

Records in TeleStaff are Reconciled Manually to Time Entries in SAP The Fire-Suppression staff's timekeeping entries and resulting payments are subject to multiple nuances, such as converting hours from a 56-hour work week to a 40-hour work week for certain activities and time-and-a-half pay for certain activities based on the labor agreement. Additionally, 56-hour employees are subject to certain Federal labor laws related to overtime. On a bi-weekly basis, the department's payroll staff—three payroll specialists and one payroll supervisor—performs a manual reconciliation between an employee's schedule in TeleStaff and their timecard entries in SAP. Refer to **Exhibit 16** below for an illustration of Fire-Rescue's time keeping and payroll reconciliation process.

Exhibit 16

Fire-Rescue's Time Recording and Payroll Reconciliation Process



Source: OCA generated using Fire-Rescue department policies and interviews with management.

**TeleStaff Data Incomplete
Due to Finalization Status**

Our office had planned to test all of the TeleStaff timekeeping data against the SAP timekeeping data for fiscal year 2013 to discern if the SAP data was supported by the TeleStaff data, which is considered by the department as employees' time reporting and support for SAP entries. However, after initial completeness testing, we found that the TeleStaff report containing data was incomplete and therefore would not reconcile against the SAP data.⁸ After discussing the TeleStaff report with the department, and after the department further reviewed the data, the department determined that the data was incomplete due to a "finalization" error. The staffing schedule is "finalized" automatically by TeleStaff on a daily basis. If there are changes after the schedule is finalized, those changes become un-finalized and do not download into the report automatically. This may be important because the department could use such TeleStaff data in automating its payroll reconciliation process.

**Testing a Sample of the
Data Revealed Instances
Where Discrepancies
Between the Two Systems
Caused Overpayments**

Because we did not have complete TeleStaff data, we tested a sample of overtime entries in SAP during fiscal year 2013 for 63 Fire-Rescue employees selected at random. We found that five SAP time entries were not supported by TeleStaff and represented overpayments to employees totaling 26 hours. Additionally, in other testing, we identified an overpayment for 24 hours of overtime. Although Fire-Rescue dedicates three payroll specialists and one payroll supervisor to reconcile timekeeping records between TeleStaff and SAP, due to the complicated scheduling nature of Fire- Suppression work and the conversions between 40-hour work weeks and 56-hour work weeks, as well as the rules related to time-and-a-half overtime, the reconciliation process is detailed and subject to human errors. Exploring ways of automating or even eliminating the need for the reconciliation between TeleStaff and SAP may be beneficial to ensure the payroll is as accurate as possible.

**If Integrating the Two
Systems is Not Possible,
Automating the
Reconciliation Process May
Be an Alternative**

If Fire-Rescue were to integrate the TeleStaff software with SAP, this would eliminate the requirement for staff to enter time data into two systems and have supervisory review of two systems—thus saving time related to entering data, approving data, and reconciling data. Additionally, if timekeeping data was only required to be entered and approved in one system instead of two, this would allow more time for supervisory review of time entries for accuracy in the single system. According to Fire-Rescue, it has in the past attempted to

⁸ The TeleStaff data report that our office obtained for testing against SAP is not what the Fire-Rescue Department normally uses to reconcile TeleStaff and SAP. The department's payroll staff reviews each Fire-Rescue employee's TeleStaff calendar and manually compares that screen to a time entries report from SAP.

integrate TeleStaff with SAP, but it was unable to do so. However, based on the errors we identified, the department should again assess the benefits of integrating the two systems.

If the department is not able at this time to integrate TeleStaff with SAP timekeeping, it should review ways to automate the TeleStaff-SAP reconciliation process. Currently, after time is entered and approved in both systems, four payroll staff members spend approximately three days reconciling the two time keeping systems. However, in addition to being time consuming, this task is vulnerable to errors due to its manual nature and the complicated time keeping and payment rules related to 56-hour workers. In order to reduce errors in the data that is ultimately used to create payroll, the department needs to find ways to automate the reconciliation process.

For instance, if the department were to create a complete timekeeping report from TeleStaff every pay period, it could produce a similar report from SAP. Using both of these electronic reports, the payroll specialist could run automated checks to ensure details like total hours worked, dates worked, or total hours of overtime per person match in the two systems. The automated reconciliation should be robust enough so to ensure that the data used for payroll is accurate.

Recommendation #3 The Fire-Rescue Department should identify ways to integrate TeleStaff timekeeping with SAP timekeeping to ensure the reliability of payroll. If the Fire-Rescue Department is not able to integrate the two systems, it should implement an automated way to reconcile the two data sets based on data summary reports. (Priority 3)

Conclusion

The Fire-Rescue department has relied on overtime to fully staff its fire stations. Due to recent fringe benefit cost changes resulting from the partial implementation of Proposition B, there is currently little difference between the costs of hiring new staff or using overtime. However, due to changes in the overtime fringe rate because of Proposition B, the costs associated with continued reliance on overtime will rise. Additionally, there are potential benefits to hiring other than monetary considerations: reducing fatigue and improving fire fighter safety; improving employee and workplace morale; having a larger workforce available for deployment in the case of an emergency; as well as having a relief factor to reduce mandatory overtime. It will be important to continually assess staffing needs because the analysis is a "point in time" analysis and is based on current conditions.

We also found that the City does not cap Fire-Rescue employees' annual leave balances as described in the labor agreement. In addition to the financial liability to the City, the high leave balances create additional overtime because certain retiring employees can use the leave hours to extend their DROP. Then Fire-Rescue must rely on overtime to staff those positions. Finally, the reconciliation of timekeeping data needs to be strengthened to ensure the accuracy of payroll.

The Fire-Rescue Department agreed to implement all three of our recommendations.

Recommendations

- Recommendation #1** The Fire-Rescue Department should perform a staffing analysis annually in order to determine the optimal number of Fire-Suppression employees to hire in order to control overtime. This annual review should be done to coincide with the City's budgeting process and should consider:
- A comparison between the cost of hiring additional employees and the cost of overtime based on workforce composition and associated fringe rates;
 - Projections of attrition;
 - The average absence rate and the economic benefits of the corresponding relief factor calculation for each Fire-Suppression classification;
 - Other activities that take employees away from their posts, such as serving as an instructor for trainings, attending training, and other special assignments; and
 - A determination of all activities that contribute to overtime, including:
 - Scheduled overtime;
 - Scheduled and unscheduled leave time;
 - All special assignments;
 - Deployments; and
 - Other factors. (Priority 2)
- Recommendation #2** The Human Resources Department should confer with the Fire-Rescue Department and the Financial Management Department to assess the financial impact to the City of continuing the practice of not capping annual leave accruals. The Human Resources Department should then use that information to discuss with the Office of the Mayor whether it should discontinue this practice and plan how to deal with the issue of high annual leave liability. (Priority 2)
- Recommendation #3** The Fire-Rescue Department should identify ways to integrate TeleStaff timekeeping with SAP timekeeping to ensure the reliability of payroll. If the Fire-Rescue Department is not able to integrate the two systems, it should implement an automated way to reconcile the two data sets based on data summary reports. (Priority 3)

Appendix A: Definition of Audit Recommendation Priorities

The Office of the City Auditor maintains a priority classification scheme for audit recommendations based on the importance of each recommendation to the City, as described in the table below. While the City Auditor is responsible for providing a priority classification for recommendations, it is the City Administration's responsibility to establish a target date to implement each recommendation, taking into considerations its priority. The City Auditor requests that target dates be included in the Administration's official response to the audit findings and recommendations.

Priority Class ⁹	Description
1	Fraud or serious violations are being committed. Significant fiscal and/or equivalent non-fiscal losses are occurring. Costly and/or detrimental operational inefficiencies are taking place.
2	The potential for incurring significant fiscal and/or equivalent non-fiscal losses exists. The potential for costly and/or detrimental operational inefficiencies exists.
3	Operation or administrative process will be improved.

⁹The City Auditor is responsible for assigning audit recommendation priority class numbers. A recommendation which clearly fits the description for more than one priority class shall be assigned the higher number.

Appendix B: Audit Objectives, Scope, and Methodology

Objectives In accordance with the City Auditor's Fiscal Year 2014 Work Plan, and in response to a request received from Councilmember Scott Sherman, we conducted an audit to review the Fire-Rescue Department's overtime expenditures.

Specifically, our audit objectives were:

1. To determine if changing current Fire-Suppression staffing levels would save the City money without impacting operations;
2. To determine if the Fire-Rescue Department's current staffing model is the best way to provide services to the City;
3. To Determine if the Fire-Rescue Department's overtime approval controls are adequate; and
4. To determine if the Fire-Rescue Department and the City Comptroller's Office is monitoring and capping accrued leave to protect the City from large accrual liability.

Scope and Methodology To address our first and second objectives, we first had to understand the department's staffing methods and costs. Doing so involved interviewing department management and payroll staff, reviewing the staffing analysis conducted by Fire-Rescue in 2008 as part of their business process re-engineering report to the City Council, reviewing the staffing models used by other municipalities' fire safety functions, reviewing other published reports that have examined public safety overtime in other agencies, reviewing internal department policies related to staffing and overtime, and discussing Fire-Rescue personnel costs with the City's Financial Management Department (Financial Management), especially fringe benefit costs. We also reviewed documents related to Fire-Rescue's administration of overtime, including the labor agreement between the City and the Firefighters' Union, the City's Personnel Regulations and Administrative Regulations related to overtime, and guidelines related to the federal Fair Labor Standards Act (FLSA).

To calculate and compare the costs of a newly-hired employee versus the overtime to fill one vacant fire fighter position, we relied on fringe benefit rates prepared by Financial Management and fire academy costs prepared by the Fire-Rescue Department. We based

salary costs on the City's Salary Ordinance and the Average Salary and Fringe Rates prepared annually by Financial Management.

To address our third objective, we reviewed payroll time entry data from the City's enterprise resource planning system, SAP, and data from Fire-Rescue's scheduling system, TeleStaff. Our original plan was to test SAP data to TeleStaff data in its entirety for all of fiscal year 2013. However, during our initial testing, we discovered that the TeleStaff data file we received was incomplete. We therefore revised our testing to include only a random sample of fiscal year 2013 data entries for accuracy testing.

In addition, we interviewed Fire-Rescue management and staff to understand the role of TeleStaff in scheduling overtime and the controls in place for overtime approval. We discussed how the TeleStaff system works with the department's staffing desk, and we discussed how the TeleStaff system is used by Fire-Rescue payroll staff in the payroll process. Finally, to understand the City's payroll process—including time entry in SAP—and the special rules for Fire-Suppression employees, we met with payroll staff from the Office of the City Comptroller and the Fire-Rescue Department. We also reviewed City policies, process narratives, and regulations related to payroll and overtime, as well as FLSA guidelines for overtime.

To address our fourth objective, we reviewed sections of the labor agreement between the City and the Firefighters' Union that specify limits on annual leave accrual. We tested annual leave accrual data as of July 5, 2013 for employees in the Fire-Rescue Department, which was provided by the Office of the City Comptroller, against the limits specified by the labor agreement. To understand why some employees had accrued more than was allowed by the labor agreement, we communicated with staff from the Office of the City Comptroller, the Personnel Department, and the Human Resources Department.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.



THE CITY OF SAN DIEGO

M E M O R A N D U M

DATE: August 22, 2014

TO: Eduardo Luna, City Auditor

FROM: Javier Mainar, Fire Chief

SUBJECT: Management Response to Performance Audit of Fire-Rescue Overtime Costs

Fire-Rescue management has reviewed the City Auditor's recommendations in the performance audit examining the Fire-Rescue Department's overtime costs. The response to each of the audit recommendations is documented below.

Recommendation #1: The Fire-Rescue Department should perform a staffing analysis annually in order to determine the optimal number of Fire-Suppression employees to hire in order to control overtime. This annual review should be done to coincide with the City's budgeting process and should consider:

- A comparison between the cost of hiring additional employees and the cost of overtime based on workforce composition and associated fringe rates;
- Projections of attrition;
- The average absence rate and the economic benefits of the corresponding relief factor calculation for each Fire-Suppression classification;
- Other activities that take employees away from their posts, such as serving as an instructor for trainings, attending training, and other special assignments; and
- Determination of all activities that contribute to overtime, including:
 - Scheduled overtime;
 - Scheduled and unscheduled leave time;
 - All special assignments;
 - Deployments; and Other factors.

(Priority 2)

Management Response: Agree

Management agrees with the recommendation. Fire-Rescue will annually work with the Financial Management and Comptroller Departments to analyze staffing needs and associated costs to determine the optimal balance between hiring of FTE and use of overtime by existing

FTE to provide constant staffing. This analysis will take into account the factors cited in the recommendation. This recommendation will be implemented immediately.

Recommendation #2: The Human Resources Department should confer with the Fire-Rescue Department and the Financial Management Department to assess the financial impact to the City of continuing the practice of not capping annual leave accruals. The Human Resource Department should then use that information to discuss with the Office of the Mayor whether it should discontinue this practice and plan how to deal with the issue of high annual leave liability. (Priority 2)

Management Response: Agree

Management agrees with the recommendation. The Chief Operating Officer has directed the Human Resources Department to lead a collaborative effort between the Human Resources, Fire-Rescue, Financial Management and Comptroller's Departments to develop proposals to mitigate the impacts of annual leave accrual above the caps codified in the Memorandum of Understanding with Local 145. These proposals will be completed by January 2015.

Recommendation #3: The Fire-Rescue Department should identify ways to integrate TeleStaff timekeeping with SAP timekeeping to ensure the reliability of payroll. If the Fire-Rescue Department is not able to integrate the two systems, it should implement an automated way to reconcile the two data sets based on data summary reports. (Priority 3)

Management Response: Agree

Management agrees with the recommendation. Fire-Rescue staff will work with the Comptroller's Department and OneSD technical team to identify ways in which to better integrate the TeleStaff and SAP timekeeping systems to ensure accurate timekeeping and reliability of payroll. This work will be completed by March 2015.



Javier Mainar
Fire Chief

cc: Scott Chadwick, Chief Operating Officer
Stacey LoMedico, Assistant Chief Operating Officer
Brian Pepin, Director of Council Affairs, Office of the Mayor
Judy von Kalinowski, Human Resources Director