OFFICE OF THE

CITY AUDITOR

AN AUDIT OF THE CITY OF SAN JOSE'S WORKERS' COMPENSATION PROGRAM CLAIMS DATABASE

– THE CITY COULD HAVE REDUCED ITS FINANCIAL STATEMENT LIABILITY FOR WORKERS' COMPENSATION BY $4.6 MILLION OVER AND ABOVE THE $4 MILLION PREVIOUSLY IDENTIFIED AS OF JUNE 30, 1993

A REPORT TO THE

SAN JOSE

CITY COUNCIL

JANUARY 1994 **94-01**

CITY OF SAN JOSÉ, CALIFORNIA

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GERALD A. SILVA
City Auditor

January 21, 1994

Honorable Mayor and Members
of the City Council
801 North First Street, Room 600
San Jose, CA 95110

Transmitted herewith is a report on *An Audit Of The City Of San Jose's Workers' Compensation Program Claims Database.* This report is in accordance with City Charter Section 805.

An Executive Summary is presented on the blue pages in the front of this report while an Administration response is shown on the yellow page before the Appendices.

I will present this report to the Finance Committee at its January 26, 1994, meeting. If you need additional information in the interim, please let me know. The City Auditor staff members who participated in the preparation of this report are Nestor Baula, Sharon Erickson, and Robin Klenke.

Respectfully submitted,

Gerald A. Silva
City Auditor

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EXECUTIVE SUMMARY

In accordance with the City Auditor's 1993-94 Audit Workplan, we have reviewed the city of San Jose (City) Workers' Compensation Program (Program). We conducted this audit in accordance with generally accepted government auditing standards and limited our work to those areas specified in the Scope and Methodology section of this report.

THE CITY COULD HAVE REDUCED ITS FINANCIAL STATEMENT LIABILITY FOR WORKERS' COMPENSATION BY $4.6 MILLION OVER AND ABOVE THE $4 MILLION PREVIOUSLY IDENTIFIED AS OF JUNE 30, 1993

In 1974, the city of San Jose (City) withdrew from the state of California Workers' Compensation Program and began to self-insure its own workers' compensation program. As such, the City is responsible for paying all of the workers' compensation claims its employees file and attendant administrative expenses. Once an employee files a workers' compensation claim, the City's policy essentially requires the City to estimate the total amount the City will have to pay over the life of the claim and to "fully fund," or set aside, a reserve of cash equivalent to that amount plus related expenses. Our audit of the City's Workers' Compensation Program (Program) revealed the following:

– The City's preliminary estimate of Program liability as of June 30, 1993, was approximately $10.9 million more than the Workers' Compensation Fund's (Fund) cash reserves. As such, the City's fully funded policy was not being followed. The Administration has proposed a multi-year program to address this situation;

– The City's Program liability as of June 30, 1993, was based upon an actuarial study that was conducted in accordance with an internal City policy that is outdated and unauthoritative;

- Recent and future actuarial studies to determine the City's Program liability have been and will be hampered by a lack of sufficient claims history information;

- Subsequent events reduced the City's Program liability as of June 30, 1993, by $4 million;

- Our survey of other California cities revealed that several rely on their own workers' compensation claims databases to estimate their workers' compensation liabilities;

- San Jose's average claims liability is in line with other California cities;

- Over the last three years, the City has developed a computerized database for workers' compensation claims that is now reliable and accurate enough to satisfy Governmental Accounting Standards Board requirements. This new capability obviates the need for an actuarial study to estimate the City's Program liability;

- Reliance on the information in the Program claims database and early implementation of a Governmental Accounting Standards Board pronouncement could have reduced the City's financial statement liability by an additional $4.6 million as of June 30, 1993; and

- Administrative and auditing procedures are needed to maintain the integrity of the claims database.

Accordingly, the City could have reduced by $4.6 million both the City's June 30, 1993, financial statement liability and the amount that the City Council will need to appropriate between now and June 30, 1999, to fully fund the Program.

RECOMMENDATIONS

We recommend that the Finance Department:

Recommendation #1:

Annually calculate the estimated liability for workers' compensation using current information in the workers' compensation claims database. The estimate should include:

- Total reserves net of administrative costs on all claims in the database at year end;
- An allowance for incurred but not reported claims (IBNR) based on recent reporting patterns;
- An allowance for disability leave supplement (DLS) payments; and
- An allowance for discounting the liability based on expected investment yields and recent payment patterns.

(Priority 1)

Recommendation #2:

Prepare monthly claims summary reports in a standard, consistent format to provide early information on developing trends in the database, better monitor claims, and improve reserving practices. (Priority 3)

Recommendation #3:

Prepare formal written policies and procedures regarding claims reserving practices including:

- Conventions for setting initial claims reserve levels by type of injury and for revising reserve estimates in light of new medical and/or legal information;
- Conventions for establishing precautionary permanent disability reserve amounts;
- Frequency, extent, and documentation of adjusters' reviews of claims reserves;
- Periodic management reports on closed claims to ensure that reserves are properly backed out;
- Periodic management reports on all open claims for review of reserve levels outside a conventional range; and
- Authorization limits and supervisory review of reserves.

(Priority 3)

Recommendation #4:

Prepare written procedures for entering data, producing consistent management reports, ensuring accuracy in the workers' compensation claims database, and reporting claims activity to the state. (Priority 3)

Recommendation #5:

Document the claims database errors which have been corrected as a result of the audit to ensure a clear record of changes to the historical record. Document recent cleanups of the claims database to explain changes in database reports from one period to another. (Priority 3)

Furthermore, we recommend that the City Council:

Recommendation #6:

Establish a City Council policy whether to fully fund the workers' compensation liability. (Priority 3)

Recommendation #7:

Direct the City Auditor to conduct an annual claims administration audit to ensure accuracy and correctness as part of a quality assurance program regarding the integrity of the workers' compensation claims database. (Priority 2)

INTRODUCTION

In accordance with the City Auditor's 1993-94 Audit Workplan, we have audited the city of San Jose Workers' Compensation Program. We conducted this audit in accordance with generally accepted government auditing standards and limited our work to those areas specified in the Scope and Methodology section of this report.

The City Auditor's Office thanks the Risk Management Unit, specifically the Risk Manager, the Workers' Compensation Manager, and the entire staff in the Workers' Compensation Section of the Risk Management Unit who gave their time, information, insight, and cooperation for this audit.

SCOPE AND METHODOLOGY

This is the second of three audit reports on the city of San Jose (City) Workers' Compensation Program (Program). This report focuses on estimating the outstanding liability, while the third report will address cost containment methods for the Program. Our methodology included interviews with City personnel in the Workers' Compensation Section, Finance Department, Accounting Section, Office of Management and Budget, Department of Human Resources, and the Police Department and meetings with the City's external auditors and actuaries. In addition, we

- Conducted interviews with industry experts;
- Surveyed other jurisdictions;
- Reviewed claims listings;
- Analyzed summary and detail data reports;
- Reviewed actuarial reports;
- Assessed internal policies and procedures for compliance with state requirements;
- Reviewed applicable Governmental Accounting Standards Board statements;
- Assessed the adequacy of reserves;
- Evaluated the validity of City information and assumptions provided to the actuary;
- Evaluated payroll rates for appropriateness, accuracy, and the capability to pay current and future claims liabilities;
- Analyzed whether claims are over- or under-reserved;
- Determined whether unauthorized payments on claims were made; and
- Performed a statistical sample of individual claims in the workers' compensation claims database.

In July 1991, the Program acquired a computer system with a claims management database. The statistical sample mentioned above was performed to test the integrity and accuracy of information in the claims database and to analyze the efficiency and effectiveness of claims management.

BACKGROUND

Department Mission

The mission of the Finance Department in administering the Workers' Compensation Program (Program) within its Risk Management Unit is *"to operate a self-insured program providing State-mandated benefits to City employees for work-related injuries and illnesses more economically than is possible through a State-insured program."*

In addition, the specific goals of the Risk Management Unit are

TO serve both the public and the City organization by identifying risks and minimizing or transferring those risks in order to protect the assets of the City and to preserve the well-being of citizens and City employees.

TO uniformly provide Workers' Compensation Benefits in accordance with the State of California Labor Code and in conjunction with the Memorandums of Agreement as well as other applicable City policies and procedures. These benefits are to be provided while exercising fairness in working with all parties in a timely, cost-effective, and professional manner.

Department Organization

The Program is administered by the Risk Management Unit of the Finance Department. Chart I shows the organization of the unit as of September 1992. It should be noted that as of September 1993 the Program has lost two positions--one staff technician and one senior account clerk.

Chart I

A new management team has been put into place over the past few years. The Risk Manager position had been vacant for nearly two years when it was filled in July 1992. The Workers' Compensation Manager position was vacant for almost one and a half years before it was filled in June 1991. In addition, the Director of Finance position was vacant during the same period.

History

California first dealt with the problem of uncompensated work injuries in 1911 by adopting the Roseberry Act, which provided employers a voluntary plan of compensation benefits. It was superseded in 1913 by the Boynton Act, which made these benefits compulsory. This enactment, as amended and codified, is the one in force today. Since the enactment, California workers have been entitled to medical treatment and compensation payments for industrial injuries. According to Jeffrey V. Nackley's Primer On Workers' Compensation,

> *Workers' compensation is considered a beneficial system and remedial in character. Accordingly, it is liberally construed in favor of the intended beneficiaries. Liberal construction does not mean that courts are free to deviate from plainly stated legislation but it does mean that ambiguities in statutes will be resolved in favor of coverage and that otherwise valid claims will not be denied on the basis of technicalities.*

Employers within the workers' compensation system must comply with workers' compensation law by either obtaining insurance or, where permitted, insuring themselves. All employers are required to abide by the workers' compensation laws of the state of California and must follow the pronouncements of the Workers' Compensation Appeals Board (WCAB) in rating permanent disability claims and handling disputed claims. All permanent disability awards must be approved by the WCAB. There are three options available to employers seeking workers' compensation coverage: state fund insurance, private insurance, and self-insurance.

The Five Major Benefits

The California Workers' Compensation Act provides for five major benefits.

1. *Medical Care* - The injured employee is eligible for all reasonable medical care necessary to cure or treat an injury.

2. *Temporary Disability* (TD) - The injured worker is also entitled to a TD benefit, which is the wage loss benefit payable during absence from work authorized by a medical practitioner.

3. *Permanent Disability* (PD) - The injured employee may also be entitled to a PD benefit, which is a benefit predicated on the reduction of the worker's ability to compete for a job in the open market.

4. *Vocational Rehabilitation* (Voc Rehab) - Should the worker be unable to return to his/her employment, he/she may be entitled to Voc Rehab benefits which include continued payment of any necessary medical expenses, vocational training under an approved plan, payment of maintenance allowances (Voc Rehab TD) while training, and additional living expenses necessitated by the plan.

5. *Death Benefit* - Should death ensue as a result of an injury that is found to be compensable under the compensation laws, the deceased's family may be entitled to death benefits and burial expenses.

Types Of Claims

There are four types of claims. They are information-only, medical-only, indemnity, and death.

Information-Only Claims

Information-only claims are filed to document an injury or illness when an employee does not plan to seek medical attention (e.g., when an employee suspects work-related exposure to communicable diseases, toxic substances, or smoke from fires). The purpose of filing a claim is to document the incident in case disease or injury develops at a later date that could be related. No costs are incurred by either the city of San Jose (City), as the employer, or the employee, and no reserve amount is required.

Medical-Only Claims

Medical-only claims are filed for work-related injuries or illnesses for which lost time does not exceed three days; the City, as the employer, pays all costs of medical treatment. The City assigns a beginning reserve amount of $2,000 to all medical-only claims.

Indemnity Claims

Indemnity claims are filed for a work-related injury or illness which normally results in loss of time from work. The employee is compensated for lost time and all medical costs of the injury or illness. The two major types of indemnity claims are TD and PD. Current workers' compensation law provides for a maximum of $336 per week for TD and a maximum of $140 per week for PD.

- Temporary Disability. Employees with work-related illnesses or injuries receive a state-mandated TD amount of $336 maximum per week. In the City, negotiated memorandums of agreement provide additional compensation in the form of a disability leave of absence or disability leave supplement (DLS) when employees are on TD. Sworn personnel receive TD of $336 per week and DLS to equal 100 percent of their regular salary, while non-sworn receive benefits equal to 85 percent of their salary. TD and DLS are paid out of departments' personal services budgets, not by the Workers' Compensation Fund. Adjusters reserve for the ultimate estimated cost of these claims including TD, but not including DLS.

- Permanent Disability. Most kinds of compensation available in workers' compensation systems are attempts to compensate for loss of either earnings or earning capacity and are usually paid or accrued weekly. The basis for an award of compensation is the worker's earnings at the time of injury or death and the fact that it was work-related, not the nature or location of the injury or the manner of inception of the disease. Compensation for PD is based on the state of California's Schedule For Rating Permanent Disabilities. The schedule rates a disability based on such factors as the claimant's age, occupation, and extent of injury to evaluate his or her ability to compete in the open labor market.

Death Benefit Claims

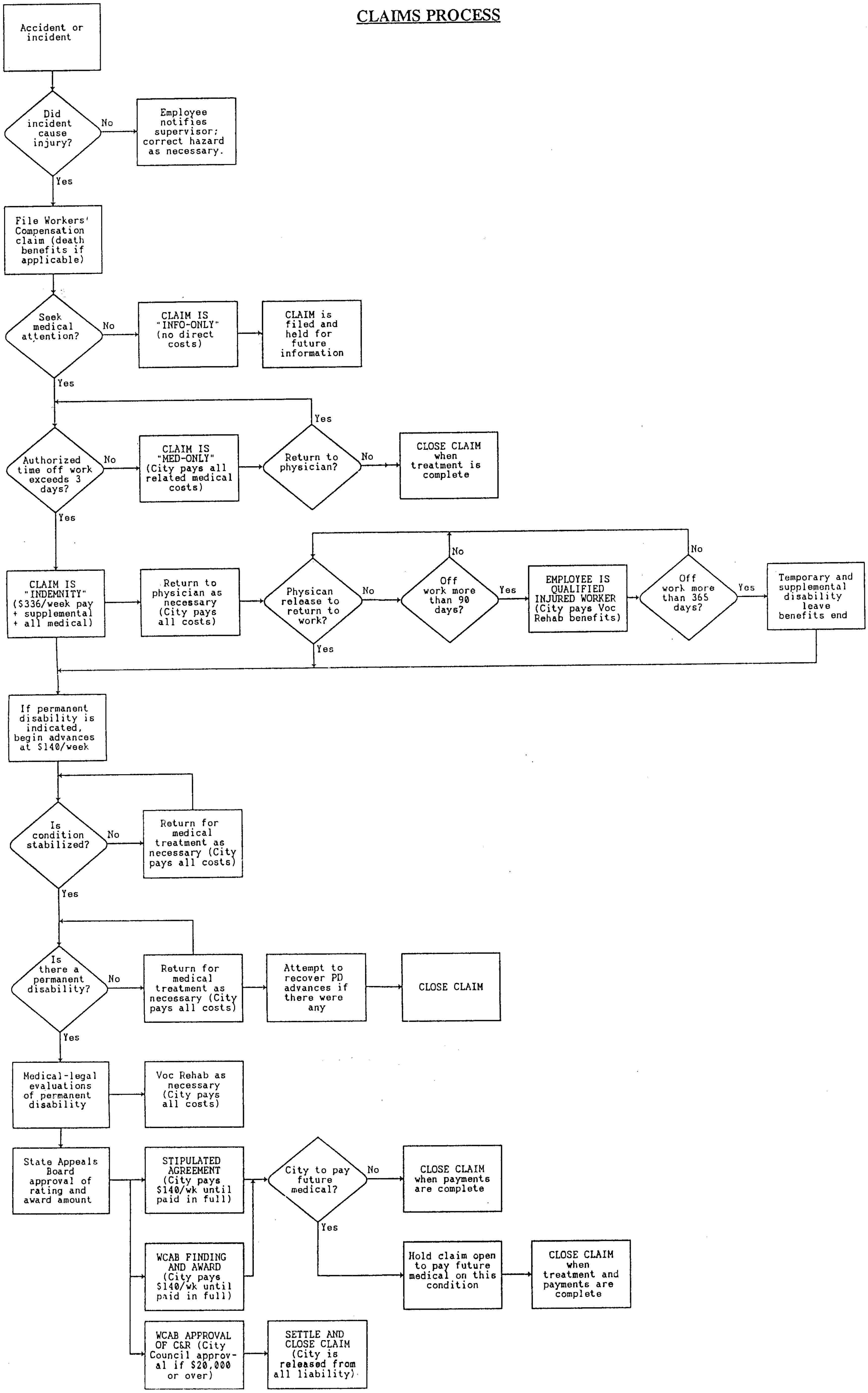
Death benefits in workers' compensation claims include burial expenses and support for the dependent survivors of the deceased employee. In addition, any payments for either temporary or total disability due and unpaid at the time of death are paid to the dependents. Adjusters establish a reserve amount for future payments of the death benefit.

Medical-only and indemnity claims are the most frequently reported types of claims and comprise about 50 percent each of the total number of claims in any one year. In 1992-93, 1,604 claims were reported: 791 were medical-only, and 813 were indemnity claims. Total number of claims reported in 1992-93 is down 131 from the 1,735 claims reported in 1991-92.

Chart II shows the claims process.

CHART II

CLAIMS PROCESS



Claims Management

In 1991, the Program acquired a claims data management system that aids the adjusters in managing their caseloads and minimizing penalties. The stand-alone, computerized David System, designed by the David Corporation, with Release 5.1 of CompPlus software, came on line in July 1991. The system tracks the status of claims, produces management reports, and generates workers' compensation payments.

The Office of Benefit Assistance and Enforcement (OBAE), Audit and Enforcement Unit, conducts targeted and random audits of self-insurers. OBAE publishes a Schedule of Penalties listing the nature of the claims administration violations for which penalties from $25 to $5,000 may be assessed. Two examples of violations are (1) missing or incomplete file records ($100 penalty) and (2) failure of a claims administrator to provide a claim form within 24 hours upon request of an injured worker or his/her agent ($5,000 penalty).

Revenue

Funding for the City's Workers' Compensation Fund comes from four sources: (1) reimbursements from City funds, (2) investment interest earnings, (3) reimbursement from the State Compensation Insurance Fund, and (4) subrogation recovery. Revenues from the State Compensation Insurance Fund and subrogation recovery are extremely difficult to estimate as they are very unpredictable from year to year. Table I summarizes recent fund activity.

TABLE I

WORKERS' COMPENSATION FUND ACTIVITY FROM 1986-87 THROUGH 1992-93 (In Millions)

	1986-87 Actual	1987-88 Actual	1988-89 Actual	1989-90 Actual	1990-91 Actual	1991-92 Actual	1992-93 Actual
REVENUES							
Reimbursement from City funds	$11.5	$ 9.5	$ 7.9	$ 7.9	$ 7.7	$ 9.6	$ 9.8
Interest	2.2	2.5	3.0	2.6	2.2	1.8	1.7
Received from other sources	0.3	0.2	0.1	0.8	0.5	0.2	0.1
TOTAL REVENUES	$14.0	$12.2	$11.0	$11.3	$10.4	$11.6	$11.6
EXPENSES							
Operating expenses	$0.8	$0.8	$ 0.8	$1.5	$1.5	$ 1.5	$ 1.7
Payment of claims	5.9	5.0	5.9	8.0	8.4	10.3	10.2
Net adjustment to accrued liability[1]	14.5	7.0	(19.0)	(2.0)	0.3	5.9	7.0
TOTAL EXPENSES	21.2	12.8	(12.3)	7.5	10.2	17.7	18.9
TRANSFER IN (OUT)[2]	(2.0)	(2.2)	0.0	0.0	(4.9)	5.7	0.0
NET INCOME (LOSS)	$(9.2)	$(2.8)	$23.3	$3.8	$(4.7)	$(0.4)	$ (7.3)

Reimbursement From City Funds

The primary income stream for the Workers' Compensation Fund comes directly from each department's personal service budget and is based on payroll rates calculated for employees in five categories: police, fire, clerical, manual,

[1] In the financial statements, "adjustments to the accrued liability" appear in the "payment of claims" line.

[2] Interfund transfers are listed separately from revenues and expenses in the financial statements. The effect of a transfer is a change in retained earnings which, in turn, affects Fund equity. A "transfer out" will decrease retained earnings. A "transfer in" will increase retained earnings.

According to the Finance Department, of the $4.9 million that was transferred out of the Workers' Compensation Fund in 1990-91, $1 million was transferred to the General Fund and $3.9 million was transferred to the General Liability Fund. Then in 1991-92, the City transferred $5.7 million from the General Liability Fund into the Workers' Compensation Fund.

and non-manual. At year-end 1992-93, reimbursement from City funds was estimated to be $9.8 million.

Interest Earnings

Investment interest earnings are the main external source of revenue for the Workers' Compensation Fund. As of June 30, 1993, cash reserves for outstanding claims totaled approximately $32 million. These funds are invested with the City's pooled investments. For 1992-93, interest earnings were estimated at $1.7 million.

Reimbursement From The State

As a result of City participation in the State Compensation Insurance Fund prior to July 1974, the City continues to receive revenues in the form of reimbursements for pre-1974 claims that remain open. As of June 30, 1993, there were only four such open claims. In addition, if an employee with a pre-1974 claim was re-injured in later years and that injury is deemed to be related to the pre-1974 injury, that may also be a reimbursable claim. As deaths, retirements, and closed cases occur over the years, the payout from the State Compensation Insurance Fund has become less and less and is not predictable.

Subrogation

When an industrial injury is caused by the negligence or intentionally wrongful act of some person other than the employer, the injured employee has two rights (causes of action): (1) the right to workers' compensation benefits and (2) the right to sue the wrongdoer for damages in a court action. However, these rights are governed so as to give the employee only the greater of the two recoveries. The damage suit is called a "third-party action." The City, as employer, also has a right to sue the wrongdoer for damages which consist of any compensation payments made to the employee. In this respect, the employer is said to be "subrogated" to the rights of the employee whom it insures. The number of third-party actions that will occur in a fiscal year is unpredictable as is the total of their potential settlement awards. Therefore, revenues from this source are also difficult to estimate.

Major Accomplishments Relating To The Program

In Appendix B, Program management informs us of accomplishments related to the Program. According to Program management, it has

- Implemented a claims management database system as of July 1991;
- Achieved salary savings in claims administration through elimination of all contract workers as of October 1991;
- Enhanced and corrected claims computer data through several major efforts;
- Revised reserving policies and implemented guidelines for staff; and
- Implemented a cost containment program in October 1993.

Furthermore, Program management has informed us that it is

- Increasing efforts in the safety education process by developing training programs customized to reduce specific injury trends and
- Evaluating the use of an individual portfolio of investment funds for the Workers' Compensation Fund.

Appendix B contains the full text of the memorandum.

FINDING I

THE CITY COULD HAVE REDUCED ITS FINANCIAL STATEMENT LIABILITY FOR WORKERS' COMPENSATION BY $4.6 MILLION OVER AND ABOVE THE $4 MILLION PREVIOUSLY IDENTIFIED AS OF JUNE 30, 1993

In 1974, the city of San Jose (City) withdrew from the state of California Workers' Compensation Program and began to self-insure its own workers' compensation program. As such, the City is responsible for paying all of the workers' compensation claims its employees file and attendant administrative expenses. Once an employee files a workers' compensation claim, the City's policy essentially requires the City to estimate the total amount the City will have to pay over the life of the claim and to "fully fund," or set aside, a reserve of cash equivalent to that amount plus related expenses. Our audit of the City's Workers' Compensation Program (Program) revealed the following:

- The City's preliminary estimate of Program liability as of June 30, 1993, was approximately $10.9 million more than the Workers' Compensation Fund's (Fund) cash reserves. As such, the City's fully funded policy was not being followed. The Administration has proposed a multi-year program to address this situation;

- The City's Program liability as of June 30, 1993, was based upon an actuarial study that was conducted in accordance with an internal City policy that is outdated and unauthoritative;

- Recent and future actuarial studies to determine the City's Program liability have been and will be hampered by a lack of sufficient claims history information;

- Subsequent events reduced the City's Program liability as of June 30, 1993, by $4 million;

- Our survey of other California cities revealed that several rely on their own workers' compensation claims databases to estimate their workers' compensation liabilities;
- San Jose's average claims liability is in line with other California cities;
- Over the last three years, the City has developed a computerized database for workers' compensation claims that is now reliable and accurate enough to satisfy Governmental Accounting Standards Board requirements. This new capability obviates the need for an actuarial study to estimate the City's Program liability;
- Reliance on the information in the Program claims database and early implementation of a Governmental Accounting Standards Board pronouncement could have reduced the City's financial statement liability by an additional $4.6 million as of June 30, 1993; and
- Administrative and auditing procedures are needed to maintain the integrity of the claims database.

Accordingly, the City could have reduced by $4.6 million both the City's June 30, 1993, financial statement liability and the amount that the City Council will need to appropriate between now and June 30, 1999, to fully fund the Program.

San Jose Is Self-Insured For Workers' Compensation

Prior to July 1974, the City participated in the State Compensation Insurance Fund. On June 20, 1974, the City Council passed Ordinance No. 17284 which created and established the Workers' Compensation Fund and provided for the deposit and expenditure of monies therein. On July 1, 1974, the City began its self-insured workers' compensation program. Self-insured employers are required to pay their workers the same benefits as workers would receive under the state fund or private insurance. The City has never purchased excess insurance and has administered its own workers' compensation claims from the beginning.

According to the Department of Industrial Relations, Self-Insurance Plans Division, there are three standards that a company must meet to qualify as a self-insurer of workers' compensation in California. They are:

- Financial strength to pay normal and catastrophic workers' compensation losses;
- Competent administration of the benefit delivery system; and
- An effective safety and health/accident prevention program.

The City has held its self-insurance certificate continuously since 1974.

The City Has A Policy To "Fully Fund" Its Workers' Compensation Fund Claims Liability

Once an employee files a workers' compensation claim for a work-related illness or injury, a Program adjuster estimates the total expected cost of the claim. On an annual basis, the City recognizes the outstanding liability for workers' compensation claims on its financial statements. According to a 1981 Personnel Department policy,

> *The City of San Jose shall maintain a fully reserved Workers' Compensation Trust Fund in the same manner as the law requires of non-public agency self-insured employers and of Workers' Compensation insurance companies. To ensure the solvency of the Workers' Compensation Trust Fund, claim reserves shall be established by reviewing all disability claims that remain open more than six months on an individual basis to determine what costs are likely to result during the life of the claim. Reserve amounts for all open claims will be individually reviewed and revised on at least an annual basis.*

The City accounts for its Program in an internal service fund. This is the recommended accounting treatment. The state of California does not require the City to fully fund its workers' compensation liability. However, the Fund will show a deficit balance if there are insufficient assets for full funding.

Table II shows that the workers' compensation liability has been fully funded for the past several years and summarizes the percentage of the liability which has been funded. Table II also demonstrates that preliminary estimates indicate a less than fully funded liability for 1992-93.

TABLE II

COMPARISON OF BALANCE SHEET STATUS
OF WORKERS' COMPENSATION FUND
JUNE 30, 1987, THROUGH JUNE 30, 1993 (In Millions)

	6/30/87 Actual	6/30/88 Actual	6/30/89 Actual	6/30/90 Actual	6/30/91 Actual	6/30/92 Actual	6/30/93 Actuals
ASSETS							
Cash	$29.2	$34.1	$38.6	$31.7	$27.4	$32.2	$31.9
Other	1.6	0.9	0.7	0.8	1.0	1.0	1.0
TOTAL ASSETS	$30.8	$35.0	$39.3	$32.5	$28.4	$33.2	$32.9
LIABILITIES							
Liability for self-insurance	**$40.0**	**$47.0**	**$28.0**	**$26.5**	**$26.8**	**$32.7**	**$39.8**
Other	0.0	0.0	9.5	0.5	0.8	0.1	0.0
TOTAL LIABILITIES	$40.0	$47.0	$37.5	$27.0	$27.6	$32.8	$43.8
FUND EQUITY	**$ (9.2)**	**$(12.0)**	**$ 1.8**	**$ 5.5**	**$ 0.8**	**$ 0.4**	**$ (6.9)**
PERCENTAGE FUNDED*	77%	74%	106%	121%	103%	101%	83%
* Net assets available to fund liability for self-insurance							

NOTE: On December 8, 1993, the Finance Committee approved a Finance Department recommendation to fund an estimated $6.6 million deficit in the Fund. See Appendix G.

The most conservative risk management practice would be to fund in excess of the estimated liability to provide for actual loss experience turning out worse than expected. In practice, though, deficits are common. In fact, our survey of several self-insured California jurisdictions revealed that San Jose has actually been significantly more conservative than some cities in funding its liability for workers' compensation.

TABLE III

SURVEY OF COMPARABLE CALIFORNIA SELF-INSURANCE PLANS

JURISDICTION	ARE WORKERS' COMPENSATION RESERVES FULLY FUNDED?	ESTIMATED LIABILITY AS OF JUNE 30, 1992
City of Los Angeles	No. Current expenses recognized in the general fund; liability recognized in the general long-term debt account group (GLTDAG).	$191 million
City of Sacramento	Yes.	$22.6 million
City of San Bernardino	No. Goal is to begin fully funding in 1993-94.	$5.8 million
City of San Diego	No. Recognized as an unfunded liability (deficit) in an internal service fund.	$18.8 million
City and County of San Francisco	No. Current expenses recognized in the general fund; liability recognized in the GLTDAG.	$76.2 million
City of San Jose	Yes, with deficit projected in internal service fund.	$32.7 million
City of Oakland	No. Current expenses recognized in the general fund; liability recognized in the GLTDAG.	$24.4 million

It should be noted that by recognizing their workers' compensation liability as general long-term debt, many other jurisdictions are able to avoid the issue of funding the liability. In accordance with generally accepted accounting principles, the general long-term debt of a state or local government is secured by the general credit and revenue-raising powers of the government rather than by current assets or specific fund resources. As a result of this status, claims costs are recognized as expenses in the period in which they are paid, rather than the period in which the accident or illness occurred. The proposed Governmental Accounting Standards Board Statement No. 11 (GASB 11), "Measurement Focus and Basis of Accounting," which is currently on hold, would not allow this treatment. Generally, it would require that governments recognize expenditures when the underlying transactions take place and attempt to appropriate sufficient amounts to cover future cash outflows arising from current service. Thus, implementation of GASB 11 would leave San Jose in a much better position than many other California jurisdictions.

In our opinion, the City Council should establish a formal policy either to fully or partially fund the City's workers' compensation liability.

The City's Preliminary Estimate Of Program Liability As Of June 30, 1993, Was Approximately $10.9 Million More Than The Workers' Compensation Fund's Cash Reserves

The City has contracted for three actuarial reviews of its Program. The purpose of those reviews was to (1) develop estimates of the City's Program liability for current unpaid claims, (2) provide recommendations for appropriate funding levels to cover those losses, and (3) provide an estimate of expected losses in subsequent years. The City's first workers' compensation actuarial review was completed in April 1989. It estimated the liability as of June 30, 1989, at $22.7 million. A second actuarial review was completed in January 1992. It estimated a $28.8 million liability as of June 30, 1991. Then, in December 1992, the most recent actuarial study estimated the June 30, 1992, liability at

$40.7 million. These dramatic increases in incurred and projected workers' compensation costs caused great alarm in the City.[3]

The City's liability for workers' compensation was $32.7 million on its June 30, 1992, financial statements. This was almost $8 million less than the actuary's latest estimate of the June 30, 1992, liability. In addition, the actuary forecasted higher claims costs for 1992-93. As shown on Table IV, the Administration estimated that the City would need to book an additional $10.5 million liability on its June 30, 1993, financial statements. Of this amount, approximately 87 percent was estimated to be General Fund.

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[3] It should be noted that these figures are the actuary's estimate of the expected liability discounted at 6 percent in 1991 and 4 percent in 1992. It should also be noted that the 1991 and 1992 actuarial reports were prepared after the City's Comprehensive Annual Financial Reports (CAFR) for those years, which showed liabilities of $26.8 million for June 30, 1991, and $32.7 million for June 30, 1992 (see Table II).

TABLE IV

PRELIMINARY ESTIMATED ADDITIONAL LIABILITY FOR WORKERS' COMPENSATION AS OF JUNE 30, 1993

ESTIMATED LIABILITY AS OF JUNE 30, 1992		
City's estimated liability for self-insurance as of June 1992 CAFR	$32,742,216	
Actuarially expected liability for self-insurance from December 1992 review[4]	(40,700,000)	
Estimated additional liability as of June 30, 1992		$ (7,957,784)
ESTIMATED ADDITIONAL LIABILITY 1992-93		
Actuarially estimated additional claims liability for 1992-93 (December 1992 Review)	$(13,067,000)	
Estimated claims payments during 1992-93	10,500,000	
Estimated additional liability for 1992-93		$ (2,567,000)
ESTIMATED ADDITIONAL LIABILITY AT JUNE 30, 1993		**$(10,524,784)**

As a result of this additional claims liability, which the Finance Department revised to $11 million, and an operating deficit of $300,000 during 1992-93, the City's preliminary financial statements showed a Fund deficit of approximately $10.9 million as of June 30, 1993. The corresponding preliminary balance sheet showed a total estimated liability for self-insurance of $43,757,784. Table V shows the estimated deficit in the Fund.

[4] Discounted at 4 percent.

TABLE V

ESTIMATED WORKERS' COMPENSATION FUND DEFICIT
FROM PRELIMINARY DRAFT FINANCIAL STATEMENTS
FOR JUNE 30, 1993

FUND EQUITY AS OF JUNE 30, 1992		$ 365,906
FUND ACTIVITY 1992-93		
Employer contributions	$ 9,780,387	
Investment income	1,670,954	
Operating expenses	(1,663,447)	
Payment of claims	(10,229,883)	
Other	141,760	
Net income (loss) before change in liability		$ (300,229)
CHANGE IN ESTIMATED LIABILITY		$(11,015,568)
Net income (loss)		$(11,315,797)
FUND DEFICIT AS OF JUNE 30, 1993		$(10,949,891)

Thus, the City's fully funded policy was not being followed. In March 1993, the Administration presented a series of options for funding workers' compensation to the Finance Committee. Specifically, the Administration proposed that the City

1. Delay funding the June 30, 1993, projected additional liability of $10.5 million until 1995-96;

2. Freeze departmental contribution levels to the Fund at $11.1 million for the next two fiscal years resulting in a projected cash shortfall of $2.4 million for 1993-94 and a projected cash shortfall of $3.9 million in 1994-95; and

3. Begin funding the cumulative $16.8 million shortfall in the Fund in 1995-96 over a four-year period.

The City's Policy To Use An Actuarial Study To Estimate Its
<u>Program Liability Is Outdated And Unauthoritative</u>

According to a 1988 Program policy,

> *Risk Management shall be directed by the Risk and Loss Control Manager who reports to the Director of Finance . . . . An annual actuarial study shall be conducted to review claims and establish the amount of the trust fund required to meet all claims and expenses. The amount of reserves so required shall be funded by action of the City Council. To maintain the stability of the fund, the fund shall not be reduced more than 15% per year.*

Although the above policy requires that an annual actuarial study shall be conducted, our review revealed that actuarial reviews have been conducted only sporadically--once in 1989 and twice in 1992. In addition, we determined that this policy was written only to provide internal guidelines for the Workers' Compensation Section and that neither the Administration nor the City Council formally adopted the policy. Furthermore, new governmental accounting standards were issued in November 1989 which obviate the need for an actuarial study (see page 48 for full discussion). Moreover, in July 1991, the Program obtained an on-line claims database which can reliably estimate the Program liability (see page 37 for full discussion). As such, in our opinion, the policy is outdated and unauthoritative.

Recent And Future Actuarial Studies To Estimate
The Program Liability Have Been And Will Be Hampered
<u>By A Lack Of Sufficient Claims History Information</u>

Actuarial projections are made on the basis of historical trends and estimated future growth factors. They depend on the accuracy and consistency of the information provided to them. If reports of City performance are not consistent and accurate, the actuarial estimates based on those reports may be biased. The December 1992 actuarial study clearly qualified its projections:

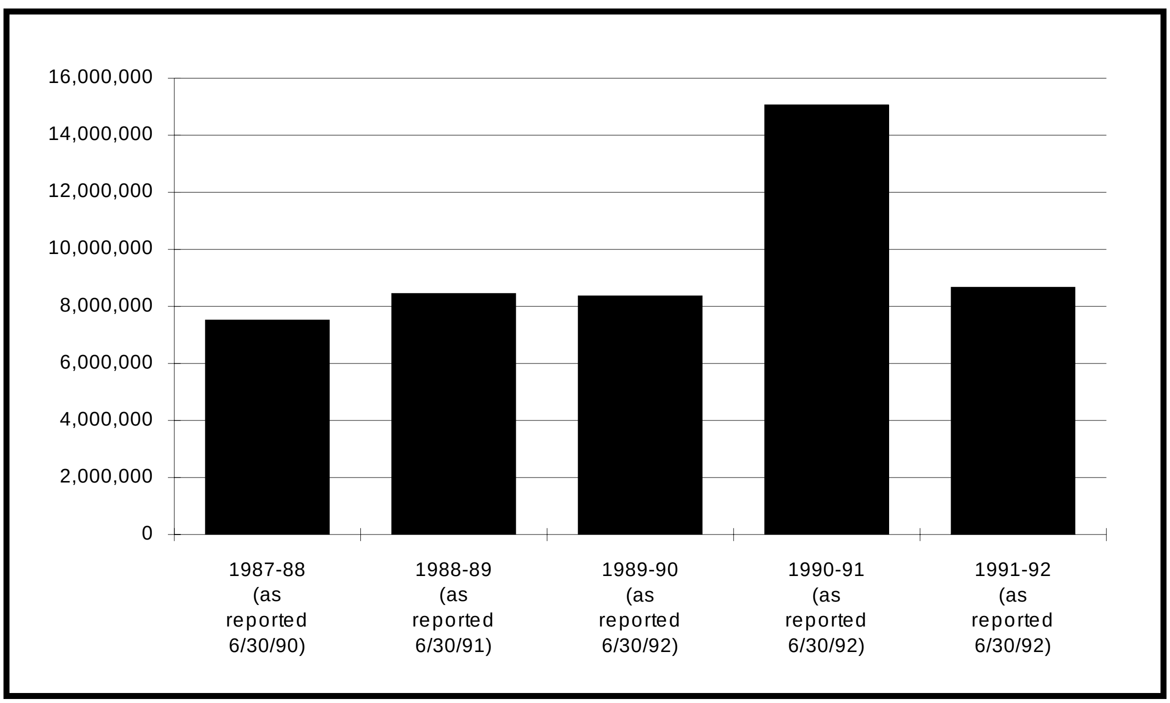
In this report, we used loss and exposure data provided by City officials. We have not audited this data and are not responsible for its accuracy. The accuracy and relevance of our conclusions depend on the accuracy and relevance of the underlying data.

Because the claims database cannot recompile data from previous fiscal periods with reliability, the December 1992 review used historical data presented in the annual self-insurer's reports which the Workers' Compensation staff prepared for the state of California's Department of Industrial Relations, Self-Insurance Division. Thus, figures from those reports were the basis for actuarial projections.

Our review revealed that the City dramatically increased its estimate of the ultimate cost for claims reported during 1990-91 on the June 30, 1992, self-insurer's report to the state of California as is shown in Graph I.

GRAPH I

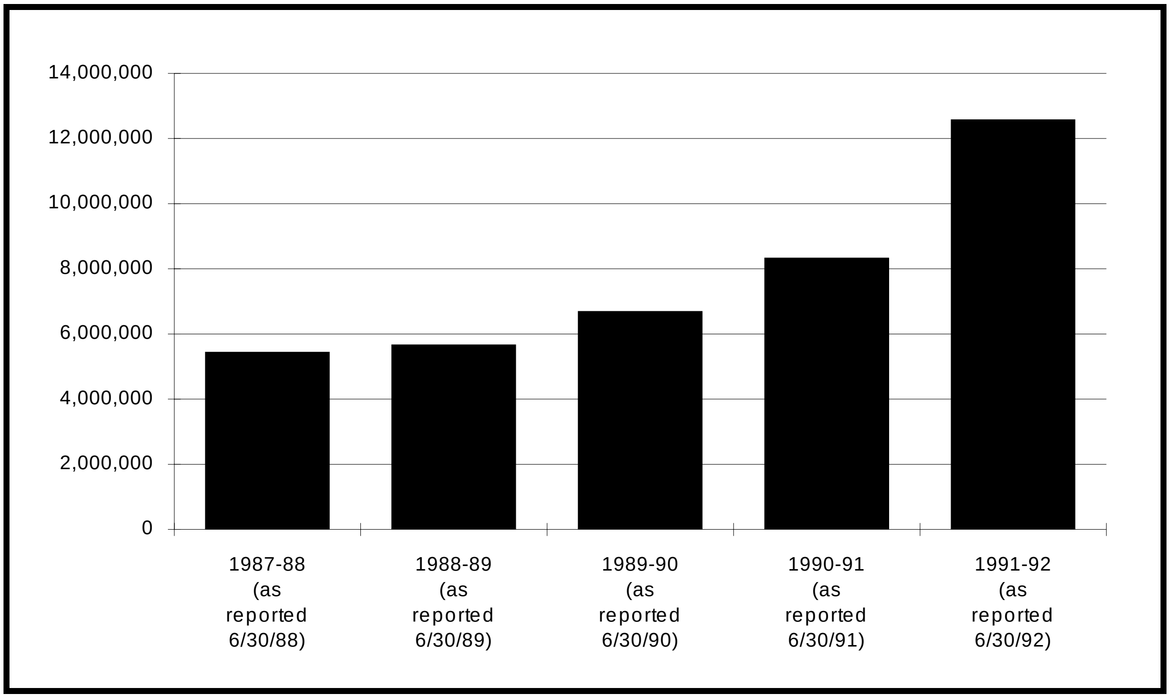
TOTAL ESTIMATED CLAIMS LIABILITY BY REPORT YEAR
<u>AS REPORTED ON STATE SELF-INSURER'S REPORTS</u>



As shown in Graph I, the reported annual claims liability jumped by 80 percent between 1989-90 and 1990-91; however, the number of reported claims increased by only 8 percent. On that report, the City also reported paying out more cash benefits than in any previous year as is shown in Graph II.

GRAPH II

TOTAL BENEFITS PAID BY FISCAL YEAR AS REPORTED
ON STATE SELF-INSURER'S REPORTS



According to the actuarial review, these dramatic increases in the City's estimate of its workers' compensation costs had a correspondingly dramatic effect on the actuarial estimate of the City's liability. In fact, the December 1992 actuarial review noted that

> *The most recent actuarial report performed by C&L for the City of San Jose was completed January 6, 1992. In that report, the program's claims liability as of June 30, 1992, was projected to be $39.9 million. In this report, we estimate the liability to be $46.0 million, a 15% difference.*

This increase is due primarily to *__unusually high loss development over the past year__*. *For several report years, the losses reported to date already exceed our previous estimate of ultimate losses. For example, our previous report estimates the ultimate losses for the 1990-91 report year to be $10.5 million. Yet 1990-91 losses reported to date as of June 30, 1992 total $15.1 million, exceeding the previous estimated ultimate amount.*
[Emphasis added.]

The effect was clear in the actuary's estimate of ultimate losses. As of June 1992, the claims database, which tracks outstanding claims reserves on a case-by-case basis, showed total claims reserves for medical and indemnity costs of $31.5 million. However, the December 1992 actuarial review estimated the June 1992 liability for outstanding claims at $41.6 million.[5] The difference lies in the actuary's projection of loss development--that is, the expected growth of current reported losses to their ultimate cost. Thus, as shown in Table VI, the actuary started with the City's reported $31.5 million in estimated claims reserves as of June 20, 1992, and then projected $10.1 million in loss development on those claims--a 32 percent loss development factor.

TABLE VI

DECEMBER 1992 ACTUARIAL ESTIMATE
OF THE CITY'S ULTIMATE WORKERS' COMPENSATION LIABILITY
__FOR OUTSTANDING CLAIMS AS OF JUNE 30, 1992__

Outstanding claims reserves (as reported 6/30/92)	$31,487,134	
Expected adverse loss development on outstanding claims	10,105,866	(32%)
	$41,593,000	

[5] The actuary estimated the liability at $41.6 million before discounting. Discounting is a method used to determine the present value of future cash payments that takes into consideration the time value of money. Discounting $41.6 million at 4 percent yields a $40.7 million liability.

As is shown in Table VI, the actuaries felt that the $31.5 million in e stimated ultimate payouts for known claims as of June 30, 1992, would really cost $41.6 million when all was said and done.

Our review revealed that there are several explanations for the spike year of 1990-91. First, a major workers' compensation reform took effect January 1, 1990, and the December 1992 actuarial review included an adjustment factor for legislative changes. Second, our review revealed that Program usage may have changed. Specifically, during 1990-91, police and fire claims liabilities increased to 82 percent of the City-wide total (although as a percentage of all claims filed, they held even).

However, our review also revealed multi-million dollar misstatements in the information which the City reported to the actuary and to the state. Specifically, three errors contributed to the reported spike in 1990-91 claims liabilities and the dramatic loss development which was reported on those claims.

First, we found $3.1 million of prior years' claims that were mistakenly reported as 1990-91 claims. Our review revealed that 73 claims[6] from prior years were entered as 1990-91 report year claims during the computer conversion process. As a result, the claims liability total for the 1990-91 report year was overstated by $3.1 million on the June 30, 1992, report. Correspondingly, report years 1975-76 through 1989-90 were understated; however, because the errors

---

[6] We provided a listing of these 73 claims to the Workers' Compensation Manager, and those errors have been corrected in the claims database. We reviewed claims listings to verify that the same misclassification error did not happen to 1991-92 claims. In addition, we compared summary data for previous years to assure ourselves that 1990-91 was the only year in which this occurred. Database information will be correct as of the date corrections are made. However, there appear to be lingering problems regarding historical data. As such, any actuarial study based on that data will be flawed to the extent historical information is unavailable.

were spread out over many years, the largest misclassification for any one report year other than 1990-91 was $600,000.

Second, $1.3 million in incurred costs[7] for 1990-91 report year claims were not reported until June 1992. As of June 30, 1991, a block of 218 claims reported in the last two months of 1990-91 showed no incurred costs. As of June 30, 1992, this same block of claims showed incurred costs of $1.3 million. This delay in data entry occurred because of backlogs during the computer conversion in the summer of 1991. Special Payment Demands (SPD) were generated to pay bills during that period, but the information regarding those payments was not entered into the new computer system until July 1991. Thus, June 1991 estimates of the cost of those claims were understated. As a result, the June 1992 self-insurer's report showed an inflated rate of loss development when compared to the June 1991 report.

Third, report year 1990-91 claims showed $182,000 in negative reserve amounts as of June 1991. The Workers' Compensation Manager corrected the problem by June 1992. Accordingly, claims reserves were understated as of June 30, 1991, and showed an inflated rate of loss development in the subsequent year.

As was noted in Graph II, the June 1992 self-insurer's report also showed dramatic increases in total cash benefits paid during the fiscal year. Our review revealed two reasons why these figures were also unreliable.

[7] Claims costs, paid or unpaid, for which the City had become liable.

First, 1991-92 cash claims payments were overstated by $978,000. The June 30, 1992, self-insurer's report shows "*total benefits paid during FY 1991-92*" of $12.6 million. However, our review of claims database records revealed that $978,000 in payments were incorrectly coded as being paid during 1991-92. Thus, the report actually should have shown $11.6 million in cash benefits paid during that year. The payment dates on these transactions were changed when historical payment balances on claims were reviewed for accuracy. When discrepancies were found, the old transaction was backed out of the system, and the corrected payment amount was entered. However, the payment was mistakenly coded as being paid on the date it was re-entered. This occurred during the data entry blitz after the installation of the new claims database system in July 1991.[8]

Second, reported 1991-92 "*total benefits paid*" on the June 30, 1992, self-insurer's report which the City provided to the actuary, apparently included temporary disability (TD) costs for the first time. According to the City's payroll system, TD costs totaled $1.2 million for the year. Previous years' reports of "*total benefits paid during fiscal year*" apparently did not include TD. While including TD payments was appropriate, the change to include TD benefits for the first time in 1991-92 created an unexplained jump in claims costs.[9]

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[8] There were no errors in payment amounts, only in the dates that the items were paid. Thus, claims files reflect accurate amounts paid. Because of the volume of transactions, we agreed with Program staff that to correct these dates on a payment-by-payment basis is not feasible at this time. Management reports from this time forward will not be affected by the incorrect payment dates.

[9] The confusion over TD payments probably stems from the fact that TD is included in the claims database, but is actually paid from the City's personal service budgets (with a few exceptions).

Several Other Factors Make Historical Data
From Previous City-Produced Reports Unreliable
For Predicting Future Claims Activity

In addition to the above inaccuracies, our review revealed several other factors which make historical data from previous City-produced reports unreliable in predicting future claims activity. Specifically, according to the American Institute of Certified Public Accountants,

> *Changes in the insurance company's claims processing system may invalidate the historical data used to develop and evaluate loss reserves. Types of changes that may have this result include . . .*
>
> - *Changes in settlement patterns, such as slowing down the payment of claims to increase the holding period of investable assets or speeding up the payment of claims to decrease the effects of inflation.*
> - *Changes in case reserving methodologies, either explicit or implicit, such as a change from estimating case basis reserves on an ultimate cost basis to estimating case-basis reserves on a current cost basis.*
> - *Changes in computerized information systems that result in faster or slower recognition and payment of claims.*

Our review of the Program revealed evidence of each of these factors including a new computerized information system, new staff direction on closing claims, and changes in reserve levels for open claims. According to the actuary, they not only need accurate information, but also consistent information in order to trend loss development. Inconsistent data makes it difficult for actuaries to identify and interpret claims reporting and payment trends.

Furthermore, there has been new staff direction on closing claims. Beginning in 1991, Program staff began to aggressively close claims. Allowing cases to remain open unnecessarily increases adjuster caseload and also increases the likelihood of higher claims costs. Thus, the new Workers' Compensation Manager directed adjusters to close at least one file for every file they opened.

Under this policy, claims costs are recognized sooner and excess reserves are released sooner. This type of change in claims settlement patterns makes the City's historic trends less reliable in predicting future activity.

Moreover, claims reserving practices have changed dramatically in the past several years. First, in 1990, the previous Workers' Compensation Manager, responding to a 1989 actuarial report which stated that the City had over reserved on claims, directed adjusters to lower reserves on open claims. In June 1991, the new Workers' Compensation Manager examined the City's open claims reserves and found them insufficient. He directed adjusters to raise claim reserve levels. This had, for example, a dramatic effect on the block of claims reported during 1990-91. Individual case reserves for those claims reported during 1990-91 averaged $3,400 per open claim as of June 1991 but were increased to an average of $13,600 per claim as of June 1992. Second, standard reserves for medical-only claims were increased. In June 1991, the automatic case reserves on medical-only claims were $500 per claim. By June 1992, the standard practice was to assign $2,000 in reserves to each claim. With approximately 850 medical-only claims per report year, this could account for up to $1.3 million in increased claim reserves.

In our opinion, all of the above items have and will impair any actuarial studies to estimate the City's Program liability.

Finally, it should be noted that legal and other allocated loss adjustment expenses were not included in the reports the actuary used. Legal and other expenses, which are directly attributable to individual claims, cost the program approximately $468,000 in 1991-92 and represent an estimated $2.2 million in claims reserves. Apparently, the actuary incorrectly assumed these items were included in the reports which they reviewed.

Subsequent Events Reduced The City's Program Liability
As Of June 30, 1993, By $4 Million

In December 1993, through the cooperative efforts of the City Auditor's Office, the City Administration, and KPMG Peat Marwick, the City was able to reduce its June 30, 1993, financial statement liability for workers' compensation from $43.8 million to $39.8 million--a reduction of $4 million.[10]

It should be noted that although the June 30, 1993, adjustments reduced the City's liability from an expected $43.8 million to $39.8 million, the resulting liability still represents

- A $7.1 million (22 percent) increase over the June 30, 1992, liability of $32.7 million and
- A $13 million (49 percent) increase over the June 30, 1991, liability of $26.8 million.

There were two components to the adjustment. The first component of the adjustment was a $2-million reduction in the liability because of increasing the assumed discount rate from 4 to 5.5 percent when calculating the present value of the liability. This increase is due to the expected increase in the rate of return as a result of separately investing Workers' Compensation Fund reserves at longer maturities than would be allowed under the City's investment policies for pooled investments. In its memorandum to the Finance Committee of

[10] See Appendix F.

December 6, 1993, the Finance Department estimates that by extending maturities on Workers' Compensation Fund reserves to a maximum of ten years for any one investment and a maximum average maturity of eight years for the portfolio, it may be able to achieve yields from 5.44 to 7.31 percent depending on different economic scenarios. The adjustment is explained in greater detail in *An Audit Of The City Of San Jose's Investment Of Workers' Compensation Program Fund Reserves* which was issued in December 1993.

The second component of the adjustment was a $2-million reduction in the estimated liability for incurred but not reported (IBNR) workers' compensation claims because the City's claims reporting history is better than expected. The December 1992 actuarial review estimated the ultimate cost of IBNR claims as of June 30, 1993, at $2,991,056. This estimate was based on the assumption that, in a typical city, 87 percent of claims would be filed within the first year after an accident, 11 percent in the second year, and the remaining 2 percent thereafter. However, our review revealed that during the last two years nearly 97 percent of San Jose's claims were filed in the year in which the accident occurred, only 2 percent in the second year, and only 1 percent thereafter. We recalculated the IBNR allowance to reflect this change. The resulting allowance is $778,894 (6.85 percent of the last year's incurred costs). These calculations are included in detail in Appendix C.

It should be noted that the City's recent IBNR experience is consistent with legislative changes which became effective on January 1, 1990. These changes stipulate that employees must receive a claim form within 24 hours of work-related illness or injury, and they also increase the penalties for late payments. To ensure compliance with the new law, the City's Workers' Compensation Manager initiated a policy to set up all claims within five days of receipt in the

Program. As a result, the timeliness of claims reporting and processing has improved.

Several Other California Cities Use Their Workers' Compensation Claims Databases To Estimate Their Program Liabilities

We surveyed other California cities to determine whether they were valuing their workers' compensation liability based on an actuarial study or a claim-by-claim review. Survey results showed that 92 percent of the cities surveyed had claims databases. In addition, 33 percent of those with claims databases used a claim-by-claim review instead of an actuarial study to estimate their workers' compensation liability. Furthermore, the two largest cities in the state, Los Angeles and San Diego, use a claim-by-claim method rather than an actuarial review. Finally, the cities of Oakland and Glendale have the same claims database system as San Jose and use it to estimate their liabilities.
Table VII summarizes our survey results.

TABLE VII

SURVEY OF CLAIMS DATABASE USAGE
AND VALUATION METHODS
IN VARIOUS CALIFORNIA CITIES

City	Database Usage	Valuation Method
Anaheim	Database	Actuarial review
Fresno	Database*	Actuarial review
Glendale	Database*	Claim-by-claim
Long Beach	Database	Actuarial review
Los Angeles	Database	Claim-by-claim
Modesto	Database*	Actuarial review
Oakland	Database*	Claim-by-claim
Riverside	Database*	Actuarial review
Sacramento	Manual	Actuarial review
San Bernardino	Database	Actuarial review
San Diego	Database	Claim-by-claim
San Francisco	Database	Actuarial review
San Jose	Database*	Actuarial review
Santa Ana	Database	Actuarial review

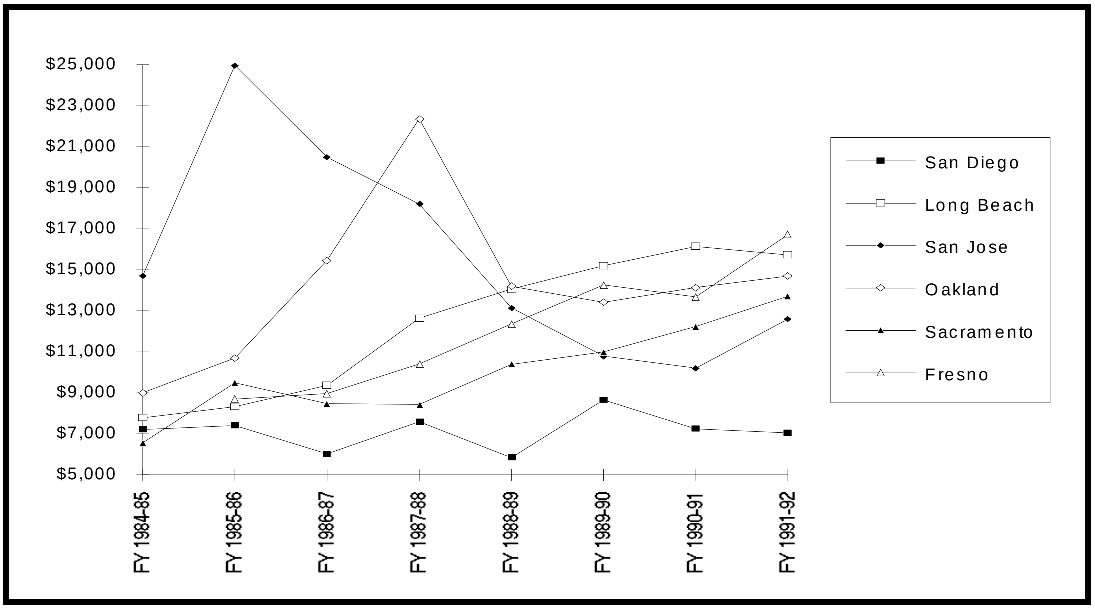
* These jurisdictions use the same claims management database as San Jose.

San Jose's Average Claims Liability Is In Line With Other California Cities

Our review revealed that San Jose's average liability amount per open claim is now comparable to other California cities. According to interviews with the Finance Department, at one time the City's adjusters estimated claims reserves on a worst case basis. As Graph III shows, San Jose's estimated liability per open claim was higher than San Diego, Long Beach, Oakland, Sacramento, and Fresno in 1984-85, 1985-86, and 1986-87. The estimated liability per open claim hit a high of $24,971 in 1985-86. Subsequently, adjusters were instructed to reserve at lower levels. By 1990-91, the estimated liability in San Jose had dropped to $10,209 per open claim. Finally, in 1991 adjusters were instructed to increase claims reserve levels. As of 1991-92, San Jose's estimated liability per open claim ($12,600) was mid-range of the other five cities we reviewed. Fresno was the highest at $16,700 per claim. San Diego was lowest at $7,049 per claim.

GRAPH III

COMPARISON OF ESTIMATED LIABILITY
PER OPEN CLAIM IN SIX CALIFORNIA CITIES



The City's New Computerized Claims Database
Is Now Reliable Enough To Obviate The Need
For Actuarial Studies To Estimate The City's Program Liability

Workers' compensation claims handling was a manual process when the City first self-insured for workers' compensation in 1974. In 1985, records for open claims were entered into a Wang system; historical information on closed claims (that is, prior to 1985) was not entered into the system. Then, in 1989, claims records were transferred to a PC-based system. The PC-based system did not have sufficient record capacity, and, as a result, closed claims were periodically purged to make room for new claims. Finally, in July 1991, the Program obtained an on-line workers' compensation claims database system called the David System. Programmers used a conversion process to download the PC-based claims information into the new system.

Program management informed us that there were serious problems with the conversion, and the process took several months. However, after the data conversion, staff undertook three major "cleanups" of the database by comparing file documentation to on-line computer information and making corrections to the database where necessary. Examples of the type of claims information that needed to be corrected were: (1) type of claim, (2) type of injury, (3) employee classification code, and (4) level of reserves.[11]

The information in the claims database is currently being used in several ways. First, to provide current and accurate information on claims status and payments so claims can be effectively managed by adjusters. Second, to compile information for reporting purposes, including the annual self-insurer's report. Third, to produce management and exception reports.

In June 1993, there were a total of 3,198 open claims in the database with injury dates stretching back to 1957 and with outstanding reserves of $38 million. Table VIII shows the open claims reserves as of June 1993 by year of injury.

[11] During the course of the audit, three extraordinary errors in reserves for legal expenses were detected in the database: a $19.3 million reserve on one claim that was meant to be $13,000; a $177.5 million reserve on a claim that should have been $10,000; and a $70 million reserve on a closed claim that should have been zero. All three errors originated at the time of the summer 1991 computer conversion. In each case, an error had been discovered and staff had attempted to correct it, but because of the size of the number, the system truncated the number and the correction did not take. The resulting, cumulative errors went undetected because legal reserves had not appeared on management reports. After we brought these errors to their attention, Program staff reversed the erroneous entries with the help of the software manufacturer and now includes legal reserves in management reports. Errors of this magnitude are no longer possible because of authorization limits now in place.

TABLE VIII

ESTIMATED FUTURE COSTS OF OPEN WORKERS' COMPENSATION CLAIMS IN THE CLAIMS DATABASE AS OF JUNE 30, 1993, BY DATE OF INJURY

Injury Year	Number Of Open Claims	Open Reserves
1957-58	1	$1,290
1968-69	1	1,793
1970-71	1	27,652
1972-73	1	3,352
1974-75	8	92,787
1975-76	18	188,406
1976-77	21	231,094
1977-78	17	52,380
1978-79	23	363,183
1979-80	25	399,320
1980-81	23	707,621
1981-82	31	264,297
1982-83	41	534,949
1983-84	74	1,035,732
1984-85	81	999,503
1985-86	107	1,351,017
1986-87	138	1,883,134
1987-88	164	1,964,742
1988-89	249	2,787,050
1989-90	287	3,238,225
1990-91	395	6,345,096
1991-92	493	6,914,684
1992-93	999	8,657,295
TOTAL OPEN CLAIMS	3,198	38,044,602

NOTE: Injuries prior to 1974 were insured by the State Compensation Insurance Fund but are administered by the City's Program. Expenses are reimbursed by the State Fund.

The computerized claims database facilitates recordkeeping. It includes:

- A reserving feature for adjusters to estimate the expected cost of each claim;

- A payment system which will not allow additional payments on a claim without sufficient reserves;
- A reporting feature which summarizes claims information by date of injury or date of report, type of claim, and paid and reserve amounts; and
- A "diary" system which flags claims needing adjuster review.

Initial reserves are established at the time a claim is filed. The standard reserve for a medical-only case is $2,000. All other case reserves are based on the best judgment of adjusters using known factors about the case including: type of injury, physical requirements of job, age of employee, physician, prior claims history, and the departments' ability to provide short-term, modified duty. Reserves are based on known or probable factors. Other open cases for the employee are reviewed, and the reserves are coordinated on all cases.

Estimating ultimate workers' compensation claims costs is a difficult and uncertain process. In addition to complicated human, medical, and legal factors, workers' compensation claims are commonly referred to as long-tailed claims because of the extended time that may be required before claims are ultimately settled. It is generally more difficult to estimate loss reserves for long-tailed claims because of the long period that elapses between the occurrence of a claim and its final disposition.

Adjusters are required to review reserve levels whenever needed, or at least once every six months when a case is on diary. Early in the process, adjusters estimate case reserves based on preliminary data which may be incomplete. Thus, the original estimate may differ from the ultimate settlement amount. However, as more information becomes available about the claim, the accuracy of reserve estimates increases.

The Workers' Compensation Manager has directed adjusters to establish reserves in the computer system based on the adjusters' estimate of the ultimate cost of an individual claim. This is not to say that the difference between expected and actual may not be significant for any particular case. For example, despite an adjuster's best estimate and case management, a claim may "blow up" into a major medical expense or, conversely, may be resolved for less than expected. People do "get worse" or "get better" unexpectedly. However, by reserving individual claims conservatively and encouraging adjusters to set aside reserves based on their best estimate of the ultimate cost of a claim, the management of the Program has established reserving policies such that excesses and deficiencies of reserves will, at least partially, offset each other.

Supervisors must approve all reserves or reserve changes which exceed an adjuster's authority before they are coded against a case. The Workers' Compensation Manager has established individual authorization levels based on the adjusters' experience levels. Supervisors are authorized to incur reserves and reserve changes of up to $75,000 per claim; adjusters are authorized to incur reserves of up to $30,000 per claim and reserve changes of up to $50,000. Reserves above those amounts must be approved by the Workers' Compensation Manager.

Adjustments Are Made As Losses Become Estimable

Loss development is the increase in the aggregate cost of claims due to additional information being received. The result is that the estimated final cost for a block of claims is often revised upward over time. Our review revealed that adjusters are making the necessary changes to reserve levels as they receive new information about claims and the losses become estimable. For example, as shown in Table IX, during 1992-93, adjusters increased estimates of the ultimate cost of prior years' claims by $6.3 million.

TABLE IX

ESTIMATION OF LOSS DEVELOPMENT ON CLAIMS
FROM ALL REPORT YEARS
DURING FISCAL YEAR ENDING JUNE 30, 1993

Claims reserves as of 6/30/92	31,370,065
1992-93 claims reported YTD	11,370,713
YTD claims payments (all report years)	(10,985,711)
	31,755,067
Estimated loss development on prior years' claims	**6,289,536**
Claims reserves as of 6/30/93	$38,044,603
Loss development as a percentage of 6/30/92 claims reserves	20%

However, our review of current database reports suggests that the rate of growth in prior years' losses is slowing down dramatically. Specifically, during the first trimester of 1993-94, adjusters added a total of $1.5 million in estimated costs to prior years' claims--significantly below the 1992-93 rate of growth. This is consistent with anecdotal evidence that the City's claims reserving practices were dramatically tightened and are now stabilizing.

Our analysis also showed that, during the first trimester of 1993-94, adjusters added $1.1 million in estimated costs to reserves for claims filed during 1992-93 but only $0.4 million to the estimated total cost of all prior years' claims. Table X shows the changes in the total estimated cost of claims by report year during this period.

TABLE X

NET CHANGE TO ESTIMATED ULTIMATE COST OF CLAIMS BY REPORT YEAR ENTERED IN THE DATABASE BY ADJUSTERS BETWEEN JULY 1, 1993, AND OCTOBER 31, 1993

Report Year	Net Change To Estimated Ultimate Cost Of Claims
Prior years	$(138,297)
1987-88	(46,664)
1988-89	(30,430)
1989-90	(42,376)
1990-91	116,661
1991-92	500,440
1992-23	1,094,181
Subtotal	$1,453,515

In addition, our analysis revealed that only 11 claims accounted for $750,000 of the $1.1 million in claims reserve increments for report year 1992-93 as of October 31, 1993. Upon further review, we determined that in each case a specific and unforeseen event triggered the re-estimation of costs. For example:

- In mid-August, an employee had complications after what was thought to be routine surgery and was in the hospital for 15 days at an estimated cost of $2,000 per day. Because this was the third surgery, the employee may have permanent work restrictions. As soon as the adjuster had this information, she added $52,000 to claims reserves for this case.

- At the end of July, a physician imposed permanent work restrictions on an employee who had been working modified duty for several months. Until that time, the adjuster had expected the employee to return to work. After additional tests during the month of August 1993, the employee had back surgery. As soon as the adjuster knew of this situation, she added claims reserves for this case.

- An employee had neck and back pain from a minor office accident. Due to the employee's history of medical problems, the adjuster reserved $20,000 for this claim. However, in July the employee's physician recommended major back surgery. Once informed of the physician's recommendation, the adjuster added $43,000 in reserves for this case.

Finally, we reviewed cases closed between July 1, 1993, and October 31, 1993. During that period, adjusters closed 299 claims which were reported during 1992-93. For those 299 claims, reserves were $922,000 more than the ultimate cost of the claims. In our opinion, this evidences that adjusters' estimates are more than reasonable and reserving practices appear to be sound.

As these cases demonstrate, adjusters re-estimate the total cost of a claim as soon as an event occurs that changes the nature of the claim. Depending on the timing of these events, additional costs may be accrued on a known claim after the end of the fiscal year. In our opinion, this is in accordance with the precepts of GASB Statement No. 10 (GASB 10), "Accounting and Financial Reporting for Risk Financing and Related Insurance Issues," which require that

> *. . . state and local government entities should report an estimated loss from a claim as an expenditure/expense and as a liability if <u>both</u> of these conditions are met:*
>
> *a. Information available before the financial statements are issued indicates that it is probable that an asset had been impaired or a liability had been incurred at the date of the financial statements. . . .*
>
> *b. The amount of loss can be reasonably estimated.*

Sample Of Claims Filed Between January 1990 And December 1992
And Review Of Largest Open Claims Revealed
<u>That Database Claims Reserves Are Reliable</u>

To test the accuracy and reliability of claims database information, we statistically sampled 79 of 4,858 claims filed between January 1, 1990, and December 31, 1992. The audit objective was to assess the

- Effectiveness of internal controls;
- Reasonableness and completeness of documentation in the files;
- Compliance with state of California documentation and timeliness standards;
- Accuracy of information in the claims database; and
- Adequacy of claims reserves.

Our review of claims files revealed that

- Medical payments made on these claims were appropriate, documented, and authorized when required;[12]
- There were no outstanding reserves on closed claims; and
- Case reserves on these claims appeared appropriate, were authorized, and conformed to established procedures and accepted practices.

It should be noted that minor errors in outstanding reserve amounts were found in only 2 of 30 open claims (7 percent) reviewed; no pattern of deficiencies

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[12] Documentation in the majority of the files we reviewed was reasonable and complete. Only 18 minor discrepancies were found between hard copy information in the files and the database. Furthermore, the state mandates time requirements for processing claims and payments, and adjusters must self-impose penalties for late payments. According to Program management, 18,441 medical bills were processed in 1991-92, of which only 100 were late.

was indicated in this area. The average error was only $88 per claim for outstanding reserves in this sample; this would extrapolate to $275,000 for 3,126 open claims in the population.

In addition, based on the results of our sample, adjusters seem to be making reasonable estimates for total claims costs over the life of the claims and reserving appropriately. Of 43 closed claims in our sample, 39 settled for equal to or less than the initially reserved amount while only four closed for more than the initially reserved amount. Thus, our sample revealed only 9 percent of closed cases where claims costs were ultimately more than estimated and 91 percent where costs were less than or equal to originally estimated reserve amounts.

We also reviewed all open claims with reserves over $70,000 as of June 30, 1993--a total of 70 claims. Open database reserves on these claims were $8.1 million, or 21 percent of the total database reserves of $38 million. We found only six cases where reserves in the computer differed from the reserve worksheet in the file. In every case, the computer indicated higher reserves than the reserve worksheet; the total was only $181,000 out of $8.1 million. There were no cases where reserve increases approved by the adjuster were not entered into the claims database.

In addition, trend analysis on claims in the database confirmed that

- Claims payments and reserves in the database are behaving normally; that is, heaviest loss development occurs in the second year as more information is available and then tapers off over the life of the claim;

- Loss development in the claims database is a clear indicator that adjusters are revising reserve amounts as additional information on claims becomes available; and

- Our reserve levels per open claim are in the middle range when compared with other large California cities.

Our review of a sample of claims files confirmed that adjusters now set a minimum $2,000 reserve for each medical-only claim. They appear to reserve a reasonable estimate of the ultimate cost of a claim based on information then available. For example, our file review yielded several precautionary reserves established for possible permanent disability cases. In addition, although reserves are reviewed whenever significant events occur (for example, proposed surgery, diagnosis of additional medical problems, or settlement of a case), our interviews with adjusters revealed they are conscientious about not step reserving--that is, ratcheting up reserves after each new piece of information. Furthermore, adjusters talk to each other about cases, sharing information with each other regarding loss development and reserve levels. Moreover, our interviews confirmed management's expectation that "*reserves on a claim should reflect the ultimate probable value of a claim*."

It should be noted that the City's external auditors have reviewed our sampling methodology and resultant conclusions regarding the reliability of the information in the claims database. According to the external auditors, they are satisfied with our methodology and expressed that our conclusions regarding the reliability of the information in the claims database appear to be well founded and adequately documented.

Reliance On Its Program Claims Database And Early Implementation Of A Recent Governmental Accounting Standards Board Pronouncement Could Have Reduced The City's Financial Statement Liability By An Additional $4.6 Million As Of June 30, 1993

Our review revealed that GASB 10, which was issued in November 1989 and becomes effective in 1994-95,[13] requires financial statement recognition of probable liabilities only if they can be reasonably estimated. GASB 10 specifically prescribes that

> *. . . if a claim is asserted and the probable loss is reasonably estimable, the expenditure/expense and liability should be recognized in the financial statements . . . .*
>
> *Claims liabilities, including IBNR, should be based on the estimated ultimate cost of settling the claims (including the effects of inflation and other societal and economic factors), using past experience adjusted for current trends, and any other factors that would modify past experience. Expenditures/expenses and liabilities may be estimated through a case-by-case review of all claims, the application of historical experience to the outstanding claims, or a combination of these methods.* [Emphasis added.]

In other words, the liability may be estimated by actuarial methods, by a case-by-case review, or by some combination of the two methods. Actuarial methods take the "macro" view--they trend historical data against current estimated losses to project the entity's ultimate claims liability. On the other hand, a case-by-case analysis is a "micro" approach whereby qualified and experienced adjusters estimate the ultimate costs of individual claims; the liability is the sum of the individual claims reserves. The claims database, which was

[13] Early implementation is encouraged.

established by the City in July 1991, provides such a case-by-case estimate of outstanding claims costs.[14]

It should be noted that GASB 10 requires the application of different principles if an entity is transferring or accepting risk. These principles do not apply to the City, which is self-insured and accounts for its Program liability in an internal service fund. The City has neither transferred its risk to another entity nor accepted risk from another entity. Thus, if losses exceed initial estimates, the City will assess itself an additional amount to reimburse the Fund for those losses either by increasing payroll rates or initiating a fund transfer. On the other hand, if losses are below initial estimates, the City may choose to reduce payroll rates or transfer money out of the Fund.

GASB 10 requires recognition of incurred but not reported (IBNR) claims:

> *There are also situations in which incidents occur before the balance sheet date but claims are not reported or asserted when the financial statements are prepared. If an incurred but not reported (IBNR) loss can be reasonably estimated and it is probable that a claim will be asserted, the expenditure/expense and liability should be recognized.*

In addition, GASB 10 allows the practice of discounting whereby the City discounts its expected liability using a rate based on the City's portfolio yields. According to GASB 10,

> *The practice of presenting claims liabilities at the discounted present value of estimated future cash payments (discounting) is neither mandated nor prohibited.*

[14] It should be noted that the claims database includes records of TD payments and reserves on a claim-by-claim basis. Thus, estimated TD is included in the City's statement of its Program liability. However, the City also offers its employees a disability leave supplement which is not accrued in the database. Both types of payments are normally made out of departmental personal service budgets, not the Workers' Compensation Fund.

Furthermore, the Governmental Accounting Standards Board's Guide to Implementation of GASB Statement 10 on Accounting and Financial Reporting for Risk Financing and Related Insurance Issues, which was released in December 1993, requires the City to accrue for supplemental workers' compensation benefits. Specifically,

> *Q--Does Statement 10 apply to supplemental workers' compensation benefits?*
>
> *A--. . . To the extent that an entity has claims, either reported or incurred but not reported (IBNR), for which risk has not been transferred, it should accrue a liability or disclose a contingency . . .*

Disability leave supplement (DLS) is a supplemental workers' compensation benefit the City provides to its employees. The City pays approximately \$2 million per year for DLS. Although the City has not accrued for DLS in its financial statements, it will be required to do so under GASB 10. We estimate that if the City had accrued for DLS in its June 30, 1993, financial statements, the amount would have been approximately \$1.1 million (54 percent of annual expense). Our calculation of DLS is included in Appendix D.

However, on the positive side, our review revealed that the City unnecessarily included \$1.8 million in administrative costs in its June 30, 1993, workers' compensation financial statement liability. In other words, while the City is required to accrue for employee benefits, it is not required to do so for administrative costs. Specifically, according to the GASB 10 implementation guide,

> *Q--Should the claims liabilities calculated in accordance with . . . Statement 10 include costs related to the claims?*
>
> *A--No. Unlike for public entity risk pools, there is no requirement in Statement 10 to accrue these expenses with related claims.*

Finally, GASB 10 allows the City to use either an actuarial study or a claim-by-claim estimation of its workers' compensation liability. According to the GASB 10 implementation guide, ". . . *the help of an actuary may be desirable, although the GASB does not require that an actuary's services be used*." As such, the City can and should rely on its claims database to estimate its liability for workers' compensation claims.

Using the City's current actuarially based methodology, the City estimated that its liability for workers' compensation was approximately $43.7 million as of June 30, 1993. Using the database method, including allowances for other factors required by GASB 10, we estimated that the liability was approximately $35.1 million--a net difference of $8.6 million.

Table XI compares the difference between recognizing the liability based on a case-by-case review in the database versus using the actuarial estimate.

TABLE XI

ESTIMATED LIABILITY FOR WORKERS' COMPENSATION
AS OF JUNE 30, 1993

ESTIMATED LIABILITY FROM PRELIMINARY FINANCIAL STATEMENTS[15]		$43,757,784
ESTIMATED LIABILITY BASED ON DATABASE CLAIMS RESERVES		
Database claims reserves as of June 30, 1993[16]	$38,044,603	
Allowance for IBNR claims[17]	778,894	
Allowance for DLS payments[18]	1,115,927	
Allowance for discounting at 5.5%[19]	(4,794,435)	
ESTIMATED LIABILITY		$35,144,989
DIFFERENCE BETWEEN SCENARIOS		$ 8,612,795

As was noted earlier on page 33, the City reduced its estimated June 30, 1993, Program liability of $43,757,784 by $4 million to $39,757,784. However, in our opinion, the City could have reduced its June 30, 1993, Program liability by an additional $4.6 million if it had (1) relied on its Program claims database to estimate the expected ultimate cost of outstanding claims instead of relying on the December 1992 actuarial estimate and (2) implemented all of the provisions of GASB 10 as of June 30, 1993.

---

15 The estimated liability from the preliminary financial statements was based on actuarial projections of claims reserves (discounted at 4 percent), IBNR, and ULAE.

16 The adjusters' estimates of the ultimate cost of each reported claim less the amount paid to date on those claims.

17 These calculations are included in **Appendix C**.

18 Refer to **Appendix D**.

19 The December 1992 actuarial review estimated that 15 percent of payments are applied to claims in the first payment year after the accident, that 15 percent are applied in the second year, 14 percent in the third year, and so on. However, our review revealed that during 1992-93, 23 percent of payments were applied to claims in the first payment year, 26 percent in the second year, and 19 percent in the third year. This is consistent with legislative changes in 1990 mandating more timely payment of claims. Re-estimation of the discount factors is based on current claims payment information in the database. Details are included in **Appendix E**.

It should be noted that the City's external auditors have informed the City Auditor's Office that reliance on the claims database to estimate the City's liability is allowable under GASB 10. Further, the use of the claims database would not result in their issuing an adverse or qualified opinion on the City's financial statements provided that the criteria in GASB 10 are followed. The external auditors informed the City Auditor's Office that they have several other municipal clients who similarly use a claims database to estimate their workers' compensation liability.

Further, as was noted on page 35, several other California cities use their claims databases to estimate their workers' compensation liability, and all of these cities have received unqualified financial statement opinions from their international external auditing firms. According to the Workers' Compensation Manager in San Diego, the claims database methodology we are recommending works if claims reserves are posted correctly and claims administrators are competent. In our opinion, based upon months of detailed reviews of claims reserves and the City's adjusters having 128 years of experience managing claims and/or estimating claims costs, San Jose satisfies both of these criteria.

Administrative And Auditing Procedures Are Needed
To Maintain The Integrity Of The Claims Database

If the Council decides to rely on the claims database for its estimation, then written policies and procedures for maintaining database claims reserves will be extremely important to ensure the accuracy and objectivity of reserving practices. In addition, conducting an annual audit of the workers' compensation database claims reserves and obtaining the opinion of the City's external auditors at year-end, will give the City further assurance that its estimation is reasonable.

The Program's procedures manual should be updated to reflect current practices. A current procedures manual is necessary to ensure

- Consistent and efficient administration of claims;
- Consistent and reliable database information;
- Accurate state self-insurer's reports; and
- Reliable management and exception reports.

In addition, written policies regarding claims reserving practices should be prepared to ensure that management's direction to adjusters is clear. However, the Program's procedures manual has not been completely revised since 1989. Some, but not all, written procedures have been revised to address the computerized claims database that was installed in 1991. In addition, the procedures manual has not been updated to reflect current reserving practices (e.g., establishing precautionary reserves for permanent disability claims and standard reserves of $2,000 for each medical-only claim). The Workers' Compensation Manager has started an update of the manual. It is currently scheduled for completion in the winter of 1994.

Regular reserve analysis on open claims is an important claims management tool. By reviewing each claim file, it becomes possible to identify those cases with unusual claims activity and to then ensure that cases are reserved at the appropriate level. This ensures that the City's expected losses (which include case reserves) are correctly stated and that management reports are accurate. According to the Governmental Risk Management Manual,

> *Great care should be taken by the risk manager to watch reserving practices at the end of each policy year. At this time, reserves for all open cases should be reviewed inasmuch as . . . claims go into the formula at the reserved amount.*

For this reason, it is necessary that Risk Management include written policies regarding reserving practices in its updated procedures manual to ensure consistent application of those policies in the future. We also noted that the database does not show when an adjuster reviewed the reserves on a particular case unless a reserve change was made. We therefore recommend that adjusters initial and date reserve worksheets to document their periodic reviews. This procedure should also be included in the new procedures manual.

Further, we recommend that the Workers' Compensation Section prepare monthly claims summary reports in a standard, consistent format. Such reports will provide early information on developing trends in the database. In this way, the Workers' Compensation Section can better monitor claims and improve its reserving practices.

In addition, the claims database should be audited annually. The current City Auditor's audit of the City's Workers' Compensation Program contains the elements of a typical claims administration audit. Its scope and methods are comparable to those conducted elsewhere. To ensure the reliability of the claims database for use in managing workers' compensation claims and for estimating the City's liability for workers' compensation claims on its financial statements, the City Council should direct the City Auditor to conduct an annual claims administration audit to ensure accuracy and correctness as part of a quality assurance program regarding the integrity of the workers' compensation claims database.

Finally, the method for calculating year-end accruals for IBNR, DLS, and discount factors should be documented. Documentation of these calculations may be needed during the year-end audit of the City's financial statements.

CONCLUSION

Our review revealed that the December 1992 actuarial review of the City's workers' compensation liability relied on information that was inaccurate. Furthermore, the City's historical claims information cannot reliably predict future losses. However, our review revealed that the workers' compensation claims database does contain a reliable and reasonable estimate of the City's liability. Furthermore, GASB 10 allows for using this type of estimate on the City's financial statements. Accordingly, the City should rely on its claims database, coupled with an allowance for incurred but not reported claims and an allowance for disability leave supplement payments, to estimate its liability for workers' compensation on its financial statements. To ensure the reliability of this estimation, the Workers' Compensation Program's procedures manual should be completed and the City Auditor should annually audit the claims database.

RECOMMENDATIONS

We recommend that the Finance Department:

Recommendation #1:

Annually calculate the estimated liability for workers' compensation using current information in the workers' compensation claims database. The estimate should include:

- Total reserves net of administrative costs on all claims in the database at year end;
- An allowance for incurred but not reported claims (IBNR) based on recent reporting patterns;
- An allowance for disability leave supplement (DLS) payments; and
- An allowance for discounting the liability based on expected investment yields and recent payment patterns.

(Priority 1)

Recommendation #2:

Prepare monthly claims summary reports in a standard, consistent format to provide early information on developing trends in the database, better monitor claims, and improve reserving practices. (Priority 3)

<u>Recommendation #3</u>:

Prepare formal written policies and procedures regarding claims reserving practices including:

- Conventions for setting initial claims reserve levels by type of injury and for revising reserve estimates in light of new medical and/or legal information;
- Conventions for establishing precautionary permanent disability reserve amounts;
- Frequency, extent, and documentation of adjusters' reviews of claims reserves;
- Periodic management reports on closed claims to ensure that reserves are properly backed out;
- Periodic management reports on all open claims for review of reserve levels outside a conventional range; and
- Authorization limits and supervisory review of reserves.

(Priority 3)

<u>Recommendation #4</u>:

Prepare written procedures for entering data, producing consistent management reports, ensuring accuracy in the workers' compensation claims database, and reporting claims activity to the state. (Priority 3)

Recommendation #5:

Document the claims database errors which have been corrected as a result of the audit to ensure a clear record of changes to the historical record. Document recent cleanups of the claims database to explain changes in database reports from one period to another. (Priority 3)

Furthermore, we recommend that the City Council:

Recommendation #6:

Establish a City Council policy whether to fully fund the workers' compensation liability. (Priority 3)

Recommendation #7:

Direct the City Auditor to conduct an annual claims administration audit to ensure accuracy and correctness as part of a quality assurance program regarding the integrity of the workers' compensation claims database. (Priority 2)

RECEIVED
JAN 21 1994
CITY AUDITOR

CITY OF SAN JOSE - MEMORANDUM

TO: Gerald A. Silva
City Auditor

FROM: John Guthrie
Director of Finance

SUBJECT: **RESPONSE TO AN AUDIT OF THE CITY OF SAN JOSE'S WORKERS' COMPENSATION PROGRAM CLAIMS DATABASE**

DATE: January 21, 1994

Approved: [signature]

Date: 1-21-94

The Finance Department has reviewed the final draft report of an audit of the Department's Workers' Compensation Section in the Risk Management Division. The department agrees and supports several of the recommendations contained in the audit.

We do not agree with two major findings in the audit. Our disagreement lies with the misinterpretation of a major accounting pronouncement and with a proposed ongoing role for the auditor which the administration believes is inappropriate. The response to recommendations #1 and #7 will specifically address these areas.

In addition to providing the Finance Department with recommendations for improvement, we appreciate that your office acknowledged the measures taken by the Finance Department which have and will improve this City operation. The acknowledgments are listed in a separate section of the audit.

Recommendation #1 (Priority 1):

Annually calculate the estimated liability for workers' compensation using information in the workers' compensation claims database. The estimate should include:

- Total reserves **net of administrative costs** on all claims in the database at year end;
- An allowance for incurred but not reported claims (IBNR) based on recent reporting patterns;
- An allowance for **disability leave (DLS) payments**; and
- An allowance for discounting the liability based on expected investment yields and recent payment patterns.

Response:

This is an area where we agree in theory with the auditor's approach of using the claims database to estimate program liability but not with their interpretation of the underlying accounting literature. As a consequence we believe that the auditor's computation of program liability at June 30, 1993 is in error, and most of the alleged $2 million savings using the database approach is virtually non-existent.

The auditor's approach takes a very narrow interpretations of Government Accounting Standard Board Statement 10 (GASB 10) and understates the liability at June 3, 1993 by the most costly component of incurred but not reported claims (IBNR), adverse loss development. Both the City's Actuary, Coopers & Lybrand and the Actuary for the City's external auditor, Peat Marwick have stated that an aggregate adverse loss development factor would have to be included in the auditor's computation for proper valuations of the program liability.

To explain the adverse loss development factor it would be helpful to briefly review the claims adjusting process.

Claims Adjusting Process

As Exhibit A explains, when an employee files a claim, the adjuster estimates the probable time off work and medical expense based upon several factors for a normal claim with a reasonable recovery period. While there is a certain reserve cushion which is provided in all claims at the onset, and while the reserve levels are modified during the adjusting process, these cushions are for the normal claim, not for the 2 or 3 claims in 10 which will have major cost increases over time. As Exhibit A explains there are triggers such as a major change in diagnosis, the need for surgery and permanent disability injury confirmation which will cause a claim which was originally considered to be normal, to increase dramatically. While the claims adjusters know that at any point a certain percentages of claims will eventually become extremely costly, they simply do not know which claims, and so for valuation purposes they do not attempt to add this adverse loss development factor to a specific claim. Actuaries know this, so when evaluating liability they add an "aggregate adverse loss development factor" to the total of all claims reserves as set up by the claims adjuster.

According to Coopers & Lybrand, the City's Actuary, it is not uncommon for California employers to have an adverse loss development factor that amounts to 21% of all the claims in the database. An example of the method to determine adverse loss development on known claims is Table IX in the audit report. Using City data the display demonstrates the impact this component has on total outstanding liability.

TABLE IX

Estimated reserves - 6/30/92	$31,370,065
FY 92/93 Claims Incurred	11,370,713
FY 92/93 Claims Payments	(10,985,711)
	31,755,067
One Year's Net Loss Development on known claims at 6/30/92	**6,289,536**
Actual Claim Reserves 6/18/93	38,044,603

Loss Development as a % of 6/30/92 reserves - 20% (RND)

The table above confirms the importance of loss development on known claims. Loss development for claims existing on June 30, 1992 as of June 30, 1993 was $6.3 million. This compares to loss development annualized for all claims existing on June 30, 1993 as of December 31, 1993 of $1.9 million which computes to $3.9 million annually. We are all pleased that growth in adverse loss development (to date) is slowing down. While this slowing down trend currently annualized at $3.9 million is less than last year's $6.3 million it is significantly more than $0 loss development as is proposed by the audit.

Attempts to minimize the affect of aggregate loss development to the point where it is not considered to exist are in contradiction to empirical evidence. Data clearly shows it exists and continues to accumulate, albeit at decreasing rates. Attempts to ignore this clear evidential matter veer from financial responsibility.

Database Reliability

Working with the auditors we analyzed reserve increases that occurred in FY 92/93 as of October 31, 1993. The total increase was $1.1 million of which 11 claims accounted for $750,000. The rule of thumb is that 80% of claims costs come from 20% of the claims. In this analysis only reserve changes in excess of $50,000 were considered and the result was that 63% of the cost increases came from 2% of the claims. When the sample is expanded to consider reserve changes of $25,000 or more, 5.4% of the claims account for 83.4% of the costs. This proves our earlier statement that initial reserves do not account for the smaller percentage of claims which will incur higher costs.

The audit states "additional costs **may** be accrued on **a known claim** after the end of the fiscal year...." Evidence of this type of estimation or accrual was presented in the previous paragraph. A more complete statement is, adverse loss development of $6.3 million last year and an annualized amount of $3.9 million this year are a clear indication that total reserves for a **block of claims will** increase over time.

Sample of Reserve Valuation Methods in Other California Cities

Table VII in the audit, on page 36, lists four cities out of fourteen that use their data base to value their workers' compensation reserves. The table is used to suggest that since these four cities use this approach, San Jose should as well use this method. Our response to this position follows:

1. First, ten out of the fourteen cities listed use a combination of the data base and an actuarial review to determine reserve levels as San Jose does.

2. Next, a good comparison requires a similar base. Two of the remaining four cities, Los Angeles and Oakland, use the Government Long Term Account Debt Group accounting approach for this liability. Reserves are not funded in this approach. San Jose uses the Internal Service Fund approach and funds the reserves.

3. Glendale, the third remaining city, has a population of 175,000 people with 1,500 employees and as such is not an appropriate comparison to San Jose given its smaller size and significantly less claim activity.

4. The last remaining city, San Diego, appears to be a reasonable comparison in size only. Our approach to reserving is entirely different. We set initial reserves and adjust them when additional information arrives. We prefer our method of determining the outstanding liability of workers' compensation reserves to San Diego, which sets the initial reserve and makes no other changes until near the end of the fiscal year. At that time a sample of claims is drawn and based on the value of the reserves in the sample, all reserves are adjusted accordingly. A year end budget augmentation has been required 2 of the last 5 years in order to pay their claims.

5. Staff contacts at these four cities did not indicate early compliance with GASB 10.

Comments From The Outside Auditor

Our response to statements that the external auditors are satisfied with the audit's sampling methodology and a statement that the audit's conclusions appear to be well founded follows. When questions are posed within a limited scope it is expected that the response will be delivered in a similar manner. When the scope is broadened the response should follow accordingly. Based on our conversations with the external auditor their position on GASB 10 matches the Finance Department's position, mainly that adverse loss development must be included in the valuation of the claims. Further, the outside auditors could not use the internal auditors proposed methodology to certify the fund liability at June 30, 1993 without "a substantial increase in audit work including the involvement of our actuary...."

GASB Statement 10 Exhibit B attached provides a discussion of where our interpretation of GASB 10 differs with that of the auditor. It is not necessary however to become an expert on GASB Statement 10 or debate its subtle points to understand that it requires the inclusion of "expected future development of known claims" i.e. - adverse loss development. Additionally in the way our claims adjusters set up claims (see Exhibit A) there is no way the claims base at any point in time can include a complete factor for adverse loss development, therefore an aggregate factor has to be added.

The City's Actuary, Coopers & Lybrand (Exhibit B) states that in order to be in compliance with GASB 10 an aggregate adverse loss development factor must be added to the claims base in order to properly calculate the liability. The only question is how much?

The City's Actuary has already addressed this by their report which sets up the minimum program liability at $39.7 million. Peat Marwick's Actuary has stated that absent an actuarial review he is not in a position to state an amount but that the 1992-93 adverse loss development amount of $6.3 million on known claims as of 6/30/92, "looms quite large" as an indication that $-0- is inappropriate as an aggregate loss development factor.

GASB 10 states "liabilities may be estimated through a case-by-case review of all claims, the application of historical experience to outstanding claims or combination of these methods...." This audit suggests we take the combination approach by using the data base and some historical experience.

GASB 10 offers entities the choice to use a combination of the data base and historical experience. The document also states there are several components of IBNR, specifically incurred but not reported and expected future developments on claims already reported. Nowhere in this accounting standard does it suggest that with facts to the contrary, entities should understate liability by electing to consider parts of the pronouncement that support understatement of liability and ignore parts of the pronouncement that recognize true liability.

Lastly, the whole focus of the auditor's comment and the subsequent debate which has resulted, centers on the concept of saving money by lessening the City's estimate of the liability. The fact remains that whether it is currently valued at $35.1 million or $39.7 million over time, the liability will be the liability, i.e. the total of claims paid out. True savings will only result from a concentrated program to reduce incurred claims and future claims costs. The Administration, the Finance Department and Human Resources are dedicated to programs which reduce current claims trends and costs. Positive demonstrable results are starting to occur.

Recommendation #2: (Priority 3)

Prepare monthly claims summary reports in a standard, consistent format to provide early information on developing trends in the database, better monitor claims and improve reserving practices.

Response:

The department agrees with and has already implemented the recommendation. In November, 1993, we revised the specifications of our monthly claims summary reports for information to be provided in a standard and consistent format.

The following monthly claims summary reports facilitate our management of claims, development of trends in the database and improvement of reserving practices:

- o Examiner Open Claims Activity
  (This report provides claim inventory activity on each adjuster)

- o Management Summary
  (This report provides a summary of incurred, paid and reserves claim costs for all City Departments)

- o Monthly Projection
  (This report gives us a projection of the total expenditures for the current fiscal year)

- o Payments Exceeding Reserves
  (This report details all claims that contain a negative reserve)

- o Payment Type Code Totals
  (This report calculates medical, temporary disability and permanent disability penalties incurred by each adjuster)

- o Frequency Analysis
  (This report provides the numbers of occurrences in terms of the part of the body injured, the type of injury and the cause of injury)

Recommendation #3 (Priority 3):

Prepare formal written policies and procedures regarding claims reserving practices including:

Conventions for setting initial claims reserve levels by type of injury and for revising reserve estimates in light of new medical and/or legal information;

Conventions for establishing precautionary permanent disability reserve amounts;

Frequency, extent, and documentation of adjusters' reviews of claims reserves;

Periodic management reports on closed claims to ensure that reserves are properly backed out;

Periodic management reports on all open claims for review of reserve levels outside a conventional range; and

Authorization limits and supervisory review of reserves.

Response:

The department agrees with this recommendation and will formally adopt it in our Workers' Compensation Procedures Manual by 12/31/94.

Reserving policies and procedures are a vital component of the workers' compensation program and we recognize the significance of current and accurate claim reserves.

The following policies have already been enacted with the workers' compensation adjusting staff:

> Conventions for setting initial claims reserve levels by type of injury and for revising reserve estimates in light of new medical and/or legal information
>
> Frequency, extent, and documentation of adjuster's reviews of claim reserve
>
> Periodic management reports on all open claims for review of reserve levels outside a conventional range
>
> Authorization limits and supervisory review of reserves

We are in the process of implementing the following policies:

> Conventions for establishing precautionary permanent disability reserve amounts

Periodic management reports on closed claims to ensure that reserves are properly backed out

Recommendation #4 (Priority 3):

Prepare written procedures for entering data, producing consistent management reports, ensuring accuracy in the workers' compensation claims database, and reporting claims activity to the state.

Response:

The department agrees with this recommendation and will document the written procedures in our Workers' Compensation Procedures Manual by June 1, 1994.

We are currently defining the specific details and procedures for entering data in order to produce consistent management reports.

Claim activity is reported to the state by filing the Self Insurer's Annual Report. Written procedures will be written to document the preparation of the State Annual Report.

Recommendation #5 (Priority 3):

Document the claims database errors which have been corrected as a result of the audit to ensure a clear record of changes to the historical record. Document recent cleanups of the claims database to explain changes in database reports from one period to another.

Response:

The department agrees with this recommendation and will establish a Database Correction Manual/Log by August 1, 1994. We have already begun to document database errors which have been corrected as a result of the audit along with other past database errors.

Recommendation #6 (Priority 3):

Establish a City Council policy whether to fully fund the workers' compensation liability.

Response:

We agree that a City Council policy regarding the funding of workers' compensation reserves should be established. In a March

4, 1993 memo to the Finance Committee we discussed options on how the City could address this liability ranging from eliminating the reserve to fully funding as of June 30, 1993. The decision made at that time was a compromise that both preserves the policy of the separate proprietary fund for the total liability but defers the make up of the unfunded liability until 1995-96 when the City is, hopefully, experiencing better financial times. The 4-year make up program is flexible so it can be modified to react to an improved financial position. The Administration is currently evaluating a one time lump sum addition to the current reserves which would alter the 4 year make up program.

Recommendation #7 (Priority 2):

Direct the City Auditor to conduct an annual claims administration audit to ensure accuracy and correctness as part of a quality assurance program regarding the integrity of the workers' compensation claims database.

Response:

We disagree with the City Auditor conducting an annual claims administration audit. The workers' compensation operation should be audited periodically by the internal auditor just as all other City functions.

This recommendation raises two issues. First, while we disagree with the Auditor's approach to the evaluation of program liability, we agree with the auditor's comments that the program's record keeping is improving and as such it is questionable whether an annual claims administration audit is necessary.

Second, this recommendation raises an interesting policy question as to what is the role of the Internal Auditor. We believe the Internal Auditor's role should not be an integral part of the management process but should instead be an independent periodic review of management's efforts to administer the program.

The City of San Jose should seek the services of a qualified, independent claims auditing firm to conduct a comprehensive evaluation and audit of our self-insured workers' compensation claims management program. The audit will offer ways to reduce claims expenditures, as well as set standards for both effectiveness and efficiency. The outside firm will assist in establishing policies, procedures, goals and measurement criteria.

The City auditor grasped a relatively good understanding of the workers' compensation program but an outside workers' compensation program auditor, whose only responsibility is this function, will give San Jose the benefit of a broader view based on industry standards and suggestions for improvement.

John V. Guthrie
Director Of Finance

EWF:DMW:jsc

EXHIBIT A

Initial claim reserves are based upon the adjuster's best estimate utilizing available information. Factors such as the employee's age, occupation, past medical history, diagnosis and prognosis, extent of time off from work, type and plan of medical treatment, department's ability to provide modified work and reputation of the medical provider are taken into consideration when estimating initial reserves.

At any point during the claim, reserves are based upon the "ultimate probable value" (expected total expenditures based upon available information) of the claim. Our reserves reflect the exposure plus an additional amount to cover expenses that may arise during the course of a claim. This is to avoid the necessity of increasing reserves at frequent intervals.

For example, a Police Officer with a back strain injury is initially authorized two weeks of disability leave and an estimate to receive ten chiropractic treatments. Our reserves would reflect estimates in the range of four to six weeks of temporary disability and fifteen to twenty chiropractic treatments to avoid changing the reserves again if disability leave goes beyond 2 weeks and more than ten chiropractic treatments occurs. As a general policy, we rarely reserve for "worst case scenario" on our claims.

There is great deal of uncertainty regarding the "ultimate probable value" of a claim due to the numerous events that can occur. Using the above example, let's assume the employee continues to be off work after eight weeks and a MRI is performed which reveals a herniated disc. Subsequently, surgery is recommended and performed. Following surgery, the treating physician indicates that on a permanent basis, this employee will not be able perform the job duties of a Police Officer and will require vocational rehabilitation training. In addition, there will be permanent disability resulting from the injury. The initial estimated claim value was below $5,000. Following the unfortunate events, the estimated claim value is now grown to over $100,000.

This fluctuating nature of claims is illustrated in Figure A.

Figure A

On 7/1/92:

10 back claims are reserved at a value of $7,000 for each claim	**$ 70,000**

As of 6/30/93:

The following occurs on the same 10 back claims:

7 claims are closed with total paid costs of	$ 49,000
2 claims are open with an total increased increased reserve value of	$ 30,000
1 claim open with an increased reserved value	$120,000
Total Value Of Claims	**$199,000**

The initial estimate for 10 back claims was $70,000. As a result of the unforseen nature of events that may occur, the total value of the claims increased to $199,000. The average value per claim is $19,900. As you can determine, we do not reserve "all back claims" using the estimated average value per claim. If that reserving practice occurred, it would conflict with our reserving policy of reserving each claim based on available information.

On the average, a claim reaches maximum value 18 months after it is reported and set up by the adjuster.

The following claim events may cause the adjuster to increase reserves:

* extended time off authorized by the treating physician
* a change in the diagnosis or treatment plan (ie - proposed surgery)
* the claim becomes litigated with the employee being represented by an attorney
* the possibility or confirmation of the injury resulting in permanent disability and lifetime medical treatment
* the possibility or confirmation that an employee cannot return to his/her usual and customary occupation and will require vocational rehabilitation benefits

The adjuster's role is to provide workers' compensation benefits in accordance with the State of California Labor Code along with protecting City Of San Jose's liabilities. One of the most difficult tasks performed by the adjuster is estimating reserves. Unforseen information and events develop during the life of a claim. Determining the ultimate cost of a claim is a frustrating aspect of the claims adjusting. It is difficult to both predict the occurrence of future events and their resultant effects in an uncontrolled claim environment. The hidden nature of injuries and the variation in the healing process to the human body will simply not permit adjusters to determine ultimate claims costs at any point in time with complete accuracy. The previous points support the need for estimating future costs of known and unknown claims by using historical data.

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&Lybrand

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November 24, 1993

Mr. Errol Fitzpatrick
Risk and Loss Control Manager
City of San Jose
140 Asbury Street, Suite B
San Jose, CA 95110

Dear Mr. Fitzpatrick:

We have reviewed the draft report prepared by the Office of the City Auditor regarding the City's workers' compensation self-insurance program. The draft report is dated October 21, 1993. There are many items upon which we could offer comments and opinions. In this letter, we will provide our comments only on what we perceive to be the most important issues.

We disagree with "FINDING I" on page 16 of the draft report. "Finding I" reads as follows:

THE CITY CAN REDUCE ITS FINANCIAL STATEMENT LIABILITY FOR WORKERS' COMPENSATION BY $6.3 MILLION BY RELYING ON ITS WORKERS' COMPENSATION PROGRAM DATABASE

The Auditor bases this finding on a review and evaluation of some actuarial issues in combination with his interpretation of the accounting literature on accounting for self-insurance liabilities. We disagree with the Auditor's conclusions regarding the actuarial issues and with his interpretation of the accounting literature. Since these conclusions and interpretation are the basis for "Finding I", we disagree with "Finding I".

Actuarial Issues

The draft report states that "Recent and future actuarial studies to determine the Program's liability have been and will be hampered by a lack of sufficient Program claims history information." This statement is based upon the Auditor's review of the City's database for workers' compensation claims. In reviewing the database the Auditor found that the database contained errors in claim amounts and that some claims had been coded to the wrong time periods. The Auditor implies that our current actuarial projections, which are found in our December 15, 1992 report, cannot be relied upon.

The real issue is whether the actuarial report contains a reasonable estimate of the City's liability for unpaid claims. We believe that the estimate of the City's liability for unpaid workers' compensation claims as of June 30, 1992 provided in the actuarial report was reasonable, and that the subsequent 16 months of experience support our position.

Consistent with actuarial principles, we used a variety of actuarial estimation techniques to produce our estimate. Each technique relied on different assumptions and employed a different subset of the historical claims data. Our estimate of the City's liability was based on an examination of the underlying assumptions and the results of each technique. The overall process is designed to provide reasonable results as often as possible, recognizing that in the real world the assumptions underlying some of the techniques employed will not hold. The true test of the accuracy of the projections comes after time has elapsed and one can measure the projections against what actually happened. The City paid $11.6 in claims between July 1, 1992 and June 30, 1993; our latest report, based on June 30, 1992 data, projected payments of $10.6 million during this period. We believe that this is reasonably close, especially considering the inaccuracies that were identified in the data, and that our estimate of the City's liability was reasonable, and remains reasonable.

The Auditor also says that future actuarial projections will be unreliable. He believes that future projections must be based not only upon the current evaluations of the individual claims, but also on the statistical patterns of claim reporting, development, and settlement that can be derived from the claims database. It often *is* necessary to use assumptions about claim reporting, development, and payment patterns to produce actuarial estimates of ultimate claims costs. Actuaries can use the data in a claims database to support their assumptions about these items. However it is incorrect to believe that these actuarial assumptions must necessarily be derived from a self-insured entities own observed claim development data.

It is standard actuarial practice to supplement a self-insurers claims data with development patterns or other information developed from the loss experience of other self-insured entities, if the situation warrants. The situation might warrant this treatment if the observed loss experience is insufficient, either because the self-insurance program is new or very small, or there are distortions in the claims experience data. The actuary must evaluate the facts and decide how much weight to place on an entity's own loss experience, and the degree to which this experience should be supplemented with information from external sources. In practice it is more common to use supplemental data on claim development patterns from external sources than to base the projections entirely upon the self-insured entities own experience. If an accurate history of past claim values is unavailable, it is absolutely wrong to conclude that reasonable actuarial projections are impossible. Reasonable projections are made routinely in exactly this situation.

Accounting Issues

Our disagreement here is based on the Auditor's interpretation of Statement No. 10 of the Governmental Accounting Standards Board (GASB 10). GASB 10 states that entities should report self-insured unpaid losses if it is probable that a liability has been incurred and if the amount of the loss can be reasonably estimated. We believe that the claims incurred under the City's workers' compensation program meet both these conditions. Our interpretation of GASB 10 is based on consultations with Mr. Robert Newman, the Partner who serves as Coopers & Lybrand's representative on the advisory committee to the GASB that is currently preparing an implementation guide (Q&A) for GASB 10. The implementation guide is scheduled to be issued in December. We strongly disagree with the Auditor's interpretation of the accounting treatment for incurred-but-not-reported (IBNR) claims of self-insured state and local governmental entities.

Paragraph 56 on page 20 of GASB 10 states:

> ". . . If an incurred but not reported (IBNR) loss can be reasonably estimated and it is probable that a claim will be asserted, the expenditure/expense and liability should be recognized. (See footnote 5.)"

Footnote 5 on page 7 of GASB 10 defines the three components of IBNR:

> "IBNR includes (a) known loss events that are expected to later be presented as claims, (b) unknown loss events that are expected to become claims, and (c) expected future development on known claims . . ."

The Auditor's report suggests that for financial statement purposes, the City should calculate its estimate of the liability for unpaid workers compensation claims by summing the case-by-case estimates established by the claims adjusters for known claims, and supplementing this amount with an actuarial calculation of the liability for IBNR components (a) and (b) as defined above. However, the Auditor recommends that no accrual be made for IBNR component (c).

For the City of San Jose, IBNR component (c) is the largest component of the IBNR liability. IBNR component (c), the expected development on known claims, exists because the estimated settlement values placed on the unsettled claims by claims adjusters change over time as new information about these claims becomes available. The changes in the case estimates over time are the "development" referred to in the definition of IBNR component (c). At any given point in time, the claims adjusters' estimates represent their best estimates of the ultimate settlement values of the claims, given the information that is available at that time. However, for an on-going workers' compensation program, this information is always incomplete. Less information is available about claims that have been reported recently than on those that are farther along in the settlement process, for which more extensive medical reports, etc., are available. As more information on the more recent claims becomes available to the adjusters, the adjusters change their estimates of the settlement values of those claims. We believe that the Auditor's recommendation not to attempt to estimate and accrue the liability for future development on known claims is based on an erroneous interpretation of GASB 10.

The Auditor supports his recommendation that IBNR component (c) may be ignored in calculating the total liability for unpaid claims by focusing on one sentence in paragraph 57 of the GASB.

Paragraph 57 on page 20 of GASB 10 states:

> "Claims liabilities, including IBNR, should be based on the estimated ultimate cost of settling the claims (including the effects of inflation and other societal and economic factors), using past experience adjusted for current trends, and any other factors that would modify past experience. Expenditures/expenses and liabilities may be estimated through a case-by-case review of all claims, the application of historical experience to the outstanding claims, or a combination of these methods. Estimates of IBNR losses should be based on historical experience. When historical experience is used, the outstanding claims should be stratified by amount and type of claim, and the strata should be sufficiently refined to assure that the estimation is reasonable."

The second sentence in this paragraph, ". . . liabilities may be estimated through a case-by-case review of all claims, the application of historical experience, or a combination of these methods," is the basis for the Auditor's recommendation. This sentence seems to imply that a case-by-case review of known claims is sufficient to determine the total liability. In his discussion, the Auditor states on page 43 of his report:

> "On the other hand, a case-by-case analysis is a "micro" approach whereby qualified and experienced adjusters estimate the ultimate costs of individual claims; the liability is the sum of the individual case reserves. The claims database which was established by the City in July 1991 provides such a case-by-case estimate of outstanding claims costs."

However, this interpretation contradicts the need for IBNR component (c), the expected development on known claims. If the liability is estimated by summing known reserves after a case-by-case review, as the Auditor suggests, the implied value of IBNR component (c) would always be $0.

We know that IBNR component (c) is not $0. Table VIII on page 39 of the Auditor's report shows that the reserve for known claims incurred as of June 30, 1992 developed by $6.8 million between July 1, 1992 and June 30, 1993. This implies that IBNR component (c) was at least

$6.8 million on July 1, 1992, or 21% of the total reserve for known claims. This is a typical California workers' compensation loss development pattern; it would not be unusual to observe a 21% development in the reserve for known claims every year. To ignore this very significant component of the City's liability for unpaid workers' compensation claims would violate the principles articulated in GASB 10.

The Auditor's report discusses at length problems and inaccuracies that were found in the City's claims database. We believe that the Auditor has done a real service by finding and correcting errors in the information contained in the database. A more accurate database will facilitate future projections of IBNR.

Finally, we understand that the Auditor has recently discussed with you a new argument (not contained in the October 21, 1993 preliminary draft report) to justify a $0 value for IBNR component (c). This new argument is based on Paragraph 54 of GASB 10. If I understand the new argument correctly, the premise is that the City's liability for IBNR component (c) is probable and reasonably estimable, but only in terms of a range of values. Furthermore the Auditor's new theory says that the range of reasonable values stretches from $0 to some very high amount, and that, *within this range, any value is as likely to be accurate as any other value*. In this situation, Paragraph 54 of GASB 10 requires that the lowest value in the range, in this case, $0, be recorded as the liability.

There are several problems with this argument. First, the construction of a range of reasonable estimates requires the recognition that reasonable estimates can be made, which contradicts some of the Auditor's previous arguments. Second, there is no reason to assume that the lower end of such a range should be $0. All the evidence in the form of the claims experience that has been compiled by the City in the last year or so would weigh heavily against such an assertion. Finally, it is very unlikely that every value in the range would be equally likely. Indeed, when actuarial projections are provided in terms of ranges, the interior values are usually interpreted as being more likely to be accurate than the values nearer the endpoints; some minimum standard of probability usually determines the position of the endpoints of such a range.

If you require further clarification, please call me at (415) 957-3262.

Respectfully,

John J. Joyce

John J. Joyce
Director, Casualty Actuarial and Risk Management Consulting
Fellow, Casualty Actuarial Society
Member, American Academy of Actuaries

APPENDIX A

DEFINITIONS OF PRIORITY 1, 2, AND 3 AUDIT RECOMMENDATIONS

The City of San Jose's City Policy Manual (6.1.2) defines the classification scheme applicable to audit recommendations and the appropriate corrective actions as follows:

Priority Class[1]	**Description**	**Implementation Category**	**Implementation Action**[3]
1	Fraud or serious violations are being committed, significant fiscal or equivalent non-fiscal losses are occurring.[2]	Priority	Immediate
2	A potential for incurring significant fiscal or equivalent fiscal or equivalent non-fiscal losses exists.[2]	Priority	Within 60 days
3	Operation or administrative process will be improved.	General	60 days to one year

---

1 The 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. **(CAM 196.4)**

2 For an audit recommendation to be considered related to a significant fiscal loss, it will usually be necessary for an actual loss of $25,000 or more to be involved or for a potential loss (including unrealized revenue increases) of $50,000 to be involved. Equivalent non-fiscal losses would include, but not be limited to, omission or commission of acts by or on behalf of the City which would be likely to expose the City to adverse criticism in the eyes of its citizens. **(CAM 196.4)**

3 The implementation time frame indicated for each priority class is intended as a guideline for establishing implementation target dates. While prioritizing recommendations is the responsibility of the City Auditor, determining implementation dates is the responsibility of the City Administration. **(CAM 196.4)**

APPENDIX B

CITY OF SAN JOSE - MEMORANDUM

TO: *Gerald A. Silva*
City Auditor

FROM: *John V. Guthrie*
Director Of Finance

SUBJECT: *WORKERS' COMPENSATION AUDIT*

DATE: *October 22, 1993*

Approved:

Date:

This memorandum is in response to your request of October 21, 1993, to provide a summary of any major accomplishments relative to the Workers' Compensation Program: We present the following accomplishments in accordance with this request:

- *A claims management database was implemented in June, 1991.*
- *Achieved salary savings in claims administration through the elimination of all contract employees as of October, 1991.*
- *Claims computer data has been enhanced and corrected through several major efforts.*
- *Reserving policy/guidelines revised and implemented with the staff.*
- *Increasing efforts in the safety education process by developing training programs customized to reduce specific injury trends.*
- *Developed a recognition process for department managers who encourage safety activities and get results.*
- *Implemented the cost containment program in October, 1993 which includes three components:*
    - *medical bill review*
    - *utilization review*
    - *preferred provider organization*

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- *Evaluating the use of an individual portfolio of investment funds for the Workers' Compensation Fund.*
- *Provided key input to the City's Legislative Analyst regarding 1993 Workers' Compensation Reform.*
- *Reduced Claim Adjuster workload by authorizing Claim Assistants the authority to approve medical bills up to $10,000.*
- *Release of semi-annual management reports to departments.*
- *Coordinated Disability Claims Task Force to redirect the manner in which Workers' Compensation is approached in the City.*

John V. Guthrie
Director of Finance

APPENDIX C

ESTIMATION OF INCURRED BUT NOT REPORTED CLAIMS

GASB 10 requires estimation and recognition of incurred but not reported (IBNR) claims. The December 1992 actuarial review estimated IBNR claims by using a typical accident year. When we reviewed the most current information available in the claims database, we found that San Jose's recent claims reporting patterns show that more claims are reported in the same year in which the accident occurred than was expected by the actuary. Regrettably, only two years of accurate claims reporting data is currently available in the claims database. Table C-1 shows a comparison of the data.

TABLE C-1

RECENT CLAIMS REPORTING PATTERNS FOR AN AVERAGE ACCIDENT YEAR (BASED ON NUMBER OF CLAIMS FILED)

Year In Which Claims Were Reported	Claims Reported During 1991-92	Claims Reported During 1992-93	Average	For Comparison Purposes: Estimate From December 1992 Actuarial Review
1	96.95%	96.64%	**96.79%**	*86.7%*
2	1.84%	2.08%	**1.96%**	*11.2%*
3	0.52%	0.49%	**0.51%**	*0.7%*
4	0.12%	0.25%	**0.18%**	*0.6%*
5	0.17%	0.18%	**0.18%**	*0.4%*
6	0.06%	0.12%	**0.09%**	*0.2%*
7	0.17%	0.00%	**0.09%**	*0.1%*
8	0.06%	0.06%	**0.06%**	*0.1%*
Subsequent	0.11%	0.18%	**0.15%**	*0.0%*
Totals	100.00%	100.00%	**100.00%***	*100.0%*

* Totals are slightly off due to rounding.

In Table C-2, we have followed the December 1992 review's methodology to compile an estimate of the accumulated total of IBNR claims which reasonably can be expected to be reported in coming years. According to this methodology, the accumulated total of IBNR claims is 6.85 percent. The actuary estimated 18.3 percent in the December 1992 review.

TABLE C-2

PERCENTAGE OF CLAIMS BY YEAR OF ACCIDENT WHICH CAN BE EXPECTED TO BE REPORTED DURING COMING FISCAL YEARS

	YEAR IN WHICH CLAIMS CAN BE EXPECTED TO BE REPORTED:								
	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
ACCIDENT YEAR:									
Prior to 1985-86	0.15%								
1985-86	0.06%	0.15%							
1986-87	0.09%	0.06%	0.15%						
1987-88	0.09%	0.09%	0.06%	0.15%					
1988-89	0.18%	0.09%	0.9%	0.06%	0.15%				
1989-90	0.18%	0.18%	0.09%	0.09%	0.06%	0.15%			
1990-91	0.51%	0.18%	0.18%	0.09%	0.09%	0.06%	0.15%		
1991-92	1.96%	0.51%	0.18%	0.18%	0.09%	0.09%	0.06%	0.15%	
1992-93	96.79%	1.96%	0.51%	0.18%	0.18%	0.09%	0.09%	0.06%	0.15%
TOTAL	100.00%*	**3.22%**	**1.26%**	**0.75%**	**0.57%**	**0.39%**	**0.30%**	**0.21%**	**0.15%**
Remaining IBNR claims as of 6/30/93 (Sum of percentages expected to be reported from 1993-94 through 2000-01)									**6.85%**

* Totals are slightly off due to rounding.

The December 1992 review estimated the number of claims expected during 1992-93 and applied percentages by year to estimate the number of IBNR claims, then multiplied by a selected cost per claim of $8,000, and adjusted for 7 percent per year in increasing costs. Instead of using that methodology, we have opted to estimate the liability based on the most recent estimate of claims costs in the database. This is consistent with Appendices D and E. Thus,

Report year 1992-93 incurred costs	$11,370,713
IBNR factor	6.85%
Indicated allowance for IBNR claims	$ 778,894

APPENDIX D

ESTIMATION OF ALLOWANCE
FOR DISABILITY LEAVE SUPPLEMENT PAY

The Governmental Accounting Standards Board's Guide to Implementation of GASB Statement 10 on Accounting and Financial Reporting for Risk Financing and Related Insurance Issues, which was released in December 1993, requires the City to accrue for supplemental workers' compensation benefits. Disability leave supplement (DLS) payments to employees cost the City approximately $2 million per year. In the past, the City has not accrued for DLS.

City employees on disability leave receive two types of pay:

- Temporary disability (TD) which is a state-mandated benefit and is tax-free to the employee and
- Disability leave supplement (DLS) payment which is a discretionary benefit provided by the City for its employees; DLS pay is available for up to one year per incident and is taxable to the employee.

Table D-1 shows the annual cost of these two types of leave over the past three years.

TABLE D-1

TEMPORARY DISABILITY AND DISABILITY LEAVE SUPPLEMENT EARNINGS 1990-91 TO 1992-93

	TD Earnings	DLS Earnings	Total Disability Leave Earnings
1990-91	1,048,483	1,890,515	2,938,997
1991-92	1,173,909	2,335,195	3,509,104
1992-93	1,032,087	1,956,713	2,988,799
Average	**1,084,826**	**2,060,807**	**3,145,633**

The workers' compensation claims database includes records of TD payments and reserves on a claim-by-claim basis. However, adjusters do not reserve for DLS or accrue for it in the database. Furthermore, it would be very time-consuming to track DLS in the claims database. However, using information the Workers' Compensation Unit provided to us, we determined that 54.15 percent of TD payments made during 1992-93 were for claims filed before 1992-93.

TABLE D-2

ANALYSIS OF 1992-93 TEMPORARY DISABILITY PAYMENTS

	1992-93 TD Payments	
Payments made for prior years' claims	$769,989	***54.15%***
Payments made for current year's claims	$651,908	*45.85%*
TOTAL	$1,421,897	*100.00%*

Thus, we estimate that if the City had accrued for DLS as of June 30, 1993, the amount would have been:

Average annual cost for DLS	$2,060,807
Percentage of payments for prior years' claims	54.15%
Estimated DLS accrual as of 6/30/93	$1,115,927

APPENDIX E

CALCULATION OF DISCOUNT FACTORS AND ALLOWANCE FOR ANTICIPATED INVESTMENT INCOME ON RESERVES

GASB 10 allows for discounting reserves by the amount of anticipated investment income expected prior to payment of claims for which reserves are being held. Thus, an interest rate must be assumed and the length of time that reserves are expected to be held must be calculated in order to calculate an allowance for anticipated investment income.

The December 1992 actuarial review estimated that 15.3 percent of payments would be applied to claims in the first payment year after the accident, 15.3 percent in the second year, and 13.8 percent in the third year. However, our review found that last year (1992-93) 23 percent of payments were for accidents that occurred during that year, 26.1 percent for the previous year, and 19.4 percent for the second previous year. This accelerated payment pattern is consistent with anecdotal evidence. Table E-1 summarizes claims payments during 1992-93. Regrettably, there is only one year of accurate data; accurate data are not yet available for previous years because of the errors detailed in Finding I (specifically $978,000 in errors in 1991-92).

TABLE E-1

ACTUAL CLAIMS PAYMENTS BY ACCIDENT YEAR FOR 1992-93

Year Of Accident	Claims Payments During 1992-93	As A Percentage Of 1992-93 Claims Payments
1976-77	$ 32,646	*0.3%*
1977-78	7,190	*0.1%*
1978-79	119,722	*1.0%*
1979-80	38,303	*0.3%*
1980-81	27,463	*0.2%*
1981-82	29,975	*0.3%*
1982-83	9,593	*0.1%*
1983-84	1,405	*0.0%*
1984-85	59,695	*0.5%*
1985-86	613,319	*5.3%*
1986-87	354,661	*3.1%*
1987-88	455,871	*3.9%*
1988-89	818,276	*7.1%*
1989-90	1,091,176	*9.4%*
1990-91	2,238,841	*19.4%*
1991-92	3,013,758	*26.1%*
1992-93	2,655,587	*23.0%*
TOTAL	$11,567,481	*100.0%*

Table E-2 follows the methodology used in the December 1992 review, applying the payment history shown in Table E-1 to

1. Estimate the average percentage unpaid at the beginning of each payment year (column 2 accumulated upward);

2. Calculate the discounted reserve amounts (the sum of next year's discounted reserves in column 4 discounted one year and this year's payments from column 2 discounted six months); and

3. Calculate a series of discount factors which can be applied to outstanding reserves (discounted reserves in column 4 divided by percentage unpaid at beginning of year in column 3).

We have assumed an investment interest rate of 5.5 percent for these calculations. The City's June 1993 portfolio effective yield was 4.765 percent as of June 30, 1993. The State Compensation Insurance Fund's June 1993 yield was 6.25 percent. This issue was discussed in greater detail in *An Audit Of The City Of San Jose's Investment Of Workers' Compensation Program Fund Reserves* (December 1993).

TABLE E-2

ESTIMATED AVERAGE PERCENTAGE OF ACCIDENT YEAR CLAIMS PAID BY PAYMENT YEAR AND CALCULATION OF DISCOUNT FACTORS ASSUMING A 5.5 PERCENT RATE OF RETURN

COLUMN 1	*COLUMN 2*	*COLUMN 3*	*COLUMN 4*	*COLUMN 5*
Payment Year Relative To Accident Year	**Estimated Average Percentage Paid During Year**	**Calculated Percentage Unpaid At Beginning Of Year**	**Discounted Reserves**	**Discount Factor**
1	23.0%	100.0%	86.7%	0.867
2	26.1%	77.0%	67.9%	**0.882**
3	19.4%	51.0%	44.9%	**0.881**
4	9.4%	31.6%	27.5%	**0.870**
5	7.1%	22.2%	19.4%	**0.872**
6	3.9%	15.1%	13.2%	**0.870**
7	3.1%	11.2%	9.8%	**0.879**
8	5.3%	8.1%	7.2%	**0.891**
9	0.5%	2.8%	2.2%	0.775
10	0.0%	2.3%	1.8%	0.771
11	0.1%	2.3%	1.9%	0.812
12	0.3%	2.2%	1.9%	0.851
13	0.2%	1.9%	1.7%	0.880
14	0.3%	1.7%	1.6%	0.915
15	1.0%	1.4%	1.3%	0.951
16	0.1%	0.3%	0.3%	0.932
17	0.3%	0.3%	0.3%	0.973
18	0.0%	0.0%	0.0%	1.000
19	0.0%	0.0%	0.0%	1.000
20	0.0%	0.0%	0.0%	1.000
Total	100.0%			

Table E-3 shows the calculation of the allowance for investment income (discounting). The methodology follows the actuarial review; however, the recalculated discount factors (which were recalculated to conform to current claims database information) are applied to open claims reserve amounts in the claims database, IBNR, and DLS rather than to the actuarial estimate of ultimate losses.

TABLE E-3

CALCULATION OF ALLOWANCE FOR INVESTMENT INCOME
ASSUMING A 5.5 PERCENT RATE OF RETURN

Claim Year	June 30, 1993 Database Reserves	Discount Factor	Discounted Reserves
Prior	7,808,305	0.891	6,953,397
1987-88	2,084,349	0.879	1,833,156
1988-89	2,567,614	0.870	2,233,836
1989-90	3,309,567	0.872	2,885,919
1990-91	6,179,051	0.870	5,377,500
1991-92	7,223,383	0.881	6,365,330
1992-93	8,872,334	0.882	7,824,756
Estimated IBNR	778,894	0.882	686,928
Estimated DLS	1,115,927	0.882	984,167
TOTAL	39,939,424		35,144,989
ALLOWANCE			**4,794,435**

Allowance for anticipated investment income on reserves: $4,794,435

APPENDIX F

CITY OF SAN JOSÉ, CALIFORN

GERALD A. SILVA
City Auditor

SAN JOSE, CALIFORNIA 95110
(408) 277-4601

Finance Committee: 12/08/93 #4
Council Agenda: 01/11/94 #7d

December 2, 1993

Honorable Members of the Finance Committee
801 North First Street, Room 600
San Jose, CA 95110

Due to recent developments, part of the City Auditor's report on the ***City of San Jose's Workers' Compensation Program*** will be deferred until January 1994.

However, we can report at this time that through the cooperative efforts of the City Auditor's Office, the City Administration, and KPMG Peat Marwick, the City was able to reduce its June 30, 1993, financial statement liability for workers' compensation from $43.8 million to $39.8 million--a reduction of $4 million. This action effectively reduces the City's unfunded liability for worker's compensation at June 30, 1993, from approximately $11 million to $7 million.

The City Auditor's January report on the Workers' Compensation Program will address the $4 million reduction in the June 30, 1993, workers' compensation financial statement liability noted above as well as other issues.

Respectfully,

Gerald A. Silva
City Auditor

John Guthrie
Director of Finance

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GS:mtn

Finance Committee: 12/8/93 #6
Council Agenda: 1/11/93 #7d

CITY OF SAN JOSE - MEMORANDUM

TO:	Finance Committee	**FROM:**	John V. Guthrie Director of Finance Larry Lisenbee Budget Director
SUBJECT:	**Workers' Compensation/ Liability Reserve Alternatives**	**DATE:**	December 2, 1992
APPROVED	Williams	**DATE**	

RECOMMENDATION

It is recommended that the City Council:

1) Consider the Workers' Compensation Reserve and the General Liability Reserve as funding priorities and appropriate amounts necessary to fund these reserves at the June 30, 1993 financial statement requirements. The Workers' Compensation Reserve and Liability Reserves will require $6.6 and $2.4 million respectfully.

2) Direct the Administration to develop a plan to incorporate make-up and on-going funding for the City's General Liability Reserve in the FY 1994-95 budget.

3) Direct the Administration to report back in the FY 1994-95 budget process with a funding recommendation for Workers' Compensation which considers the pending actuarial study of the reserve and any projected reserve funding shortfalls and the overall status of the projected General Fund shortfall.

BACKGROUND

In March the Finance Department presented to the Finance Committee a report on the Workers' Compensation Reserve shortfall and alternatives for funding that shortfall. At that time the Committee, and subsequently the Council, accepted the report's recommended action of holding the General Fund's contribution to Workers' Compensation constant until FY 95-96, and to then start funding the cumulative shortfall. In accepting the recommendation, the Finance Committee asked that a follow-up report be presented this fall with additional alternatives for accelerating the funding of the shortfall and/or preventing the continued growth of the shortfall.

With the close of the 92-93 FY books, the Reserve projection has been updated for actual financial statement numbers and in the course of the City Auditor's review of the Workers' Compensation Program the actuarial assumptions have been somewhat adjusted. These changes reduce the projected shortfall at June 30, 1993 by $4.0 million to $6.6 million from the $10.6 reported last spring. The financial statements will also show a funding shortfall in the General Liability Reserve of $2.4 million.

Exhibit A has been prepared to show Council the approved funding scenario for Workers' Compensation with these new numbers to allow a base point of reference for the Committee.

LIABILITY RESERVE

The Liability Reserve has its own pressures since it has relied on interest earnings in the past as its sole funding source. With the decline in interest rates over the past two to three years, this Reserve's funding has seriously been eroded and the Reserve has been drawn down to pay claims. The Reserve reduction has further contributed to decreased interest earnings aggravating this Reserve's shortfall.
As of June 30, 1993 the fund has a $2.4 million shortfall.

WORKERS' COMPENSATION FUNDING ALTERNATIVES

While there are numerous alternatives available for consideration, staff have modeled three different scenarios for the possible make-up funding of the Workers' Compensation Reserve. These scenarios are based on cost projections which are calculated from the last actuarial report of November 1992. These costs could very well change when the current study is completed. It should be kept in mind that Exhibit A is the default option if no action is taken.

Exhibit B presents the first alternative. Under this scenario the Reserve funding would be brought current as of June 30, 1994 and kept current thereafter. Additional funding of $10,252,898 for the Reserve would be required with the General Fund being responsible for $9,022,550. The $1,230,348 additional funding would be required of the City's other operating funds (ie. Airport, Waste Water). With this scenario the General Fund contribution in FY 94-95 would need to be increased to $12.0 million from the current $8.6 million in order to remain at a current funded basis at June 30, 1995. This is the most conservative option and would totally end, deferred funding of Workers' Compensation liabilities. It would also require an immediate appropriation of General Fund resources.

Exhibit C presents a alternative where the Reserve shortfall makeup funding is postponed until FY 95-96 but the shortfall growth is capped at the June 30, 1993 level in the amount of $6.6 million. This would require the additional funding of $3.8 million in this fiscal year, with the General Fund's share at $3.3 million. This alternative puts the City on a pay-as-you-go basis for current periods while allowing the shortfall makeup postponement as planned last spring.

Exhibit D's alternative is where the Reserve shortfall as of June 30, 1993 is funded in FY 1993-94 but the funding shortfalls of FY 93-94 and 94-95 are accumulated until FY 1995-96. In FY 1995-96 the City would begin a current funding basis with a make-up of four years for the accumulated shortfall. This would require an addition of $6.6 million to the Reserve this fiscal year of which $5.9 would be required of the General Fund. This is essentially the opposite of the alternative shown in Exhibit C in that it incorporates a one-time funding but continues a deferral of the on-going costs.

This alternative is favored in that it funds the already determined liability shortfall, but defers the on-going costs until a new actuary study can be completed. It also allows the on-going funding to be addressed in the FY 1994-95 budget development process.

CONCLUSION

Since one-time funding is available, funding of the Reserves' shortfall should be a priority and is therefore recommended. The alternative shown in Exhibit D provides both a full makeup of the June 30, 1993 shortfall and keeps funding flexibility so that this issue may be revisited in the budget process. Postponement of the shortfalls' ongoing funding is merely a timing issue. The City will have to look towards operations to fund the shortfall if one-time funds are not used and funding is delayed until FY 95-96. Given the City's fiscal uncertainty it would be fiscally prudent to appropriate a one time make-up at this time for the know liability at June 30, 1993.

John V. Guthrie
Director of Finance

Larry Lisenbee
Budget Director

Exhibits

City of San Jose
Worker's Compensation Funding Projection 8-Year
FY 92-93 thru 99-00

EXHIBIT A
RESERVE MAKE-UP FUNDING BEGINNING FY 95-96
(EQUALLY DISTRIBUTE SHORTFALL OVER 4 YEARS)

Fiscal Year	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00
Estimated Acturial Costs	13,067,000	13,589,000	14,132,560	14,697,862	15,285,777	15,897,208	16,533,096	17,194,420
Estimated Claim Payment	(10,229,883)	(11,350,000)	(12,144,500)	(12,994,615)	(13,904,238)	(14,877,535)	(15,918,962)	(17,033,289)
Make-up of Shortfall	0	0	0	3,219,813	3,219,813	3,219,813	3,219,813	0
Net Change to Shortfall		2,539,231	3,690,360	(4,923,061)	(4,601,352)	(4,239,487)	(3,833,947)	(161,131)
Cumulative Shortfall	6,649,662	9,188,893	12,879,253	9,659,440	6,439,627	3,219,813	0	0
General Fund WC Charge	8,606,741	8,606,741	8,606,741	15,916,545	16,299,900	16,707,623	17,006,787	14,822,372

City of San Jose

Worker's Compensation Funding Projection 8-Year
FY 92-93 thru 99-00

EXHIBIT B

RESERVE MAKE-UP IN FY 93-94
(ENTIRE AMOUNT TO BRING CURRENT)

Fiscal Year	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00
Estimated Acturial Costs	13,067,000	13,589,000	14,132,560	14,697,862	15,285,777	15,897,208	16,533,096	17,194,420
Estimated Claim Payment	(10,229,883)	(11,350,000)	(12,144,500)	(12,994,615)	(13,904,238)	(14,877,535)	(15,918,962)	(17,033,289)
Make-up of Shortfall	0	6,649,662	0	0	0	0	0	0
Net Change to Shortfall		(6,649,662)	0	0	0	0	0	0
Cumulative Shortfall	6,649,662	0	0	0	0	0	0	0
General Fund WC Charge	8,606,741	17,629,291	12,050,878	12,483,482	13,022,677	13,586,238	14,041,241	14,690,262

City of San Jose

Worker's Compensation Funding Projection 8-Year
FY 92-93 thru 99-00

EXHIBIT C

HOLD FY 92-93 SHORTFALL AT CONSTANT UNTIL FY 95-96
(EQUALLY DISTRIBUTE SHORTFALL OVER 4 YEARS)

Fiscal Year	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00
Estimated Acturial Costs	13,067,000	13,589,000	14,132,560	14,697,862	15,285,777	15,897,208	16,533,096	17,194,420
Estimated Claim Payment	(10,229,883)	(11,350,000)	(12,144,500)	(12,994,615)	(13,904,238)	(14,877,535)	(15,918,962)	(17,033,289)
Make-up of Shortfall	0	0	0	1,662,416	1,662,416	1,662,416	1,662,416	0
Net Change to Shortfall		0	0	(1,662,416)	(1,662,416)	(1,662,416)	(1,662,416)	0
Cumulative Shortfall	6,649,662	6,649,662	6,649,662	4,987,247	3,324,831	1,662,416	0	0
General Fund WC Charge	8,606,741	11,938,510	12,372,721	14,187,791	14,646,524	15,129,625	15,504,167	14,690,262

City of San Jose

Worker's Compensation Funding Projection 8-Year
FY 92-93 thru 99-00

EXHIBIT D

FUND 92-93 SHORTFALL IN FY 93-94
(DISTRIBUTE 93-94 AND 94-95 SHORTFALL OVER 4 YEARS)

Fiscal Year	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00
Estimated Acturial Costs	13,067,000	13,589,000	14,132,560	14,697,862	15,285,777	15,897,208	16,533,096	17,194,420
Estimated Claim Payment	(10,229,883)	(11,350,000)	(12,144,500)	(12,994,615)	(13,904,238)	(14,877,535)	(15,918,962)	(17,033,289)
Make-up of Shortfall	0	6,649,662	0	1,543,629	1,543,629	1,543,629	1,543,629	0
Net Change to Shortfall	0	(4,110,431)	3,635,285	(1,543,629)	(1,543,629)	(1,543,629)	(1,543,629)	0
Cumulative Shortfall	6,649,662	2,539,231	6,174,516	4,630,887	3,087,258	1,543,629	0	0
General Fund WC Charge	8,606,741	14,458,443	8,606,741	14,162,233	14,626,716	15,115,566	15,495,857	14,786,484