



**Invitation for Sealed Proposal Tac 581** Addendum #1 dated 4-26-01

**Description: Actuarial Liability Analysis**

**Human Resources Department**

City of Tulsa

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|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-------------------------------------------|
| <b>Mail Sealed Bid TO:</b>                                                                                                      |                                                                                                                                                                                       | <b>Sealed Bid Due By:</b>                                                                         | <b>Bid Opening:</b>                       |
| City of Tulsa<br>200 Civic Center, Room 109<br>Tulsa, Oklahoma 74103                                                            |                                                                                                                                                                                       | <b>5:00 PM Wednesday<br/>May 2, 2001</b>                                                          | 8:30 AM the next day<br>City Council Room |
| <b>Envelope/Box Labeling:</b>                                                                                                   |                                                                                                                                                                                       | Bid Bond Required: ___ Yes <input checked="" type="checkbox"/> No                                 |                                           |
| Proposal Number and opening date must appear on the lower left corner of all envelopes and box tops.                            |                                                                                                                                                                                       | Performance Bond: ___ Yes <input checked="" type="checkbox"/> No                                  |                                           |
|                                                                                                                                 |                                                                                                                                                                                       | PreBid Conference: ___ Yes <input checked="" type="checkbox"/> No                                 |                                           |
| Response to this request must be submitted on this form with requested and supporting documents attached to the back of packet. |                                                                                                                                                                                       |                                                                                                   | <u>8</u> Copies Required                  |
| <b>Published:</b>                                                                                                               | Tulsa Daily Commerce and Legal News (announcement only) April 18, 19, 20, 23, 24, 2001                                                                                                |                                                                                                   |                                           |
|                                                                                                                                 | Purchase Net Fax-on-Demand: 918-596-1171                                                                                                                                              |                                                                                                   |                                           |
|                                                                                                                                 | Purchase Net Website: <a href="http://www.cityoftulsapurchasing.org">www.cityoftulsapurchasing.org</a>                                                                                |                                                                                                   |                                           |
| <b>City Contacts:</b>                                                                                                           | <b>Project Buyer:</b>                                                                                                                                                                 | <b>Project Manager:</b>                                                                           |                                           |
|                                                                                                                                 | Bill Youngblood, CPM<br><a href="mailto:byoungblood@ci.tulsa.ok.us">byoungblood@ci.tulsa.ok.us</a><br>Fax: 918-699-3153; Ph: 918-596-7551                                             | Pam Marrs<br><a href="mailto:pmarrs@ci.tulsa.ok.us">pmarrs@ci.tulsa.ok.us</a><br>Ph: 918-596-7417 |                                           |
| <b>Questions:</b>                                                                                                               | <b>E-mail to project manager</b>                                                                                                                                                      |                                                                                                   |                                           |
| <b>Acknowledgement of Intent:</b>                                                                                               | <b>E-mail project buyer of your intent to bid</b>                                                                                                                                     |                                                                                                   |                                           |
| <b>Addendum:</b>                                                                                                                | All addenda will be communicated to all known respondents in writing. Any verbal communications by any City personnel or their agent shall not be a part of these bid specifications. |                                                                                                   |                                           |
| <b>NIGP Codes:</b>                                                                                                              | 946-77-00-000-0                                                                                                                                                                       |                                                                                                   |                                           |

**RETURN THIS ENTIRE RFB PACKET WITH ANY SUPPORTING DOCUMENTS ATTACHED TO THE BACK**

**I have read and understand these Bid Specifications and agree to adhere to all terms and conditions contained herein. I have included all costs in my bid to implement the solution requested in these bid specifications. Exceptions must be described in detail and attached to this bid packet. Note: Taking an exception to a "must item" may cause your bid to be rejected. ( DO NOT PRINT SIGNATURE)**

**Firm name: \_\_\_\_\_ Date: \_\_\_\_\_**

**Street: \_\_\_\_\_ County: \_\_\_\_\_ City/State: \_\_\_\_\_ Zip: \_\_\_\_\_**

**E-Mail \_\_\_\_\_ Fax: \_\_\_\_\_ Phone: \_\_\_\_\_**

**Print Name: \_\_\_\_\_ Signature: \_\_\_\_\_**

( Authorized agent for the firm shown)

**\*\*\*\* Entire packet must be notarized by Notarizing this page\*\*\*\***

**Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_\_.**

**Signature of Notary Public \_\_\_\_\_ MY COMMISSION EXPIRES: \_\_\_\_\_**



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**Addendum One**

Q1) Are reported losses now available as of 3/31/00?

A1) Yes, the losses are currently available

Q2) Are paid and reported losses and claim counts available as of 3/31/01?

A2) Yes

Q3) How have questions raised in previous actuarial report concerning the consistency of available loss data been addressed?

A3) I believe where data was not available, industry standards were substituted

Q4) Regarding recommendation from previous actuarial report, is excess coverage currently being considered?

A4) Money to pay premiums for excess coverage has been included in the budget request for FY 7-1-01/6-30-02. However, the final budget has not yet been adopted.



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**INTEREST AFFIDAVIT**

**State and County (Same as shown by the authorized agent on the front of this packet)**

**I, the authorized agent shown on the front of this packet**, of lawful age, being first duly sworn, states that s (he) is the agent authorized by the bidder to submit the attached bid. Affiant further states that no officer or employee of the City of Tulsa either directly or indirectly, owns a twenty-five percent (25%) interest in the bidder's business or such a percentage, which constitutes a controlling interest. Affiant further states that the following officers and/or employees of the City of Tulsa have some direct or indirect interest in the bidder's business:

-----  
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-----

**BIDDER AFFIDAVIT - TITLE 74 O.S. (1974 SUPP.) 85.22-85.25**

**State and County (Same as shown by the authorized agent on the front of this packet)**

**I, the authorized agent shown on the front of this packet**, of lawful age, being first duly sworn on oath says

1. (s) he is the duly authorized agent of the firm presenting this response, the bidder submitting the competitive bid which is attached to this statement, for the purpose of certifying the facts pertaining to the existence of collusion among bidders and between bidders and municipal officials or employees, as well as facts pertaining to the giving or offering of things of value to government personnel in return for special consideration in the letting of any contract pursuant to the bid to which this statement is attached.
2. (s) he is fully aware of the facts and circumstances surrounding the making of the bid to which this statement is attached and has been personally and directly involved in the proceedings leading to the submission of such bid; and
3. neither the bidder nor anyone subject to the bidder's direction or control has been a party;
  - a. to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding,
  - b. to any collusion with any municipal official or employee as to quantity, quality or price in the prospective contract, or as to any other terms of such prospective contract, nor
  - c. in any discussions between bidders and any municipal official concerning exchange of money or other thing of value for special consideration in the letting of a contract.



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**Contractor/Bidder Information Sheet**

**To be completed by all respondents to  
Invitations for Sealed Bids or Proposals  
(Print or type)**

|                                                                                                                    |                              |                             |
|--------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------|
| <b>Project No:</b>                                                                                                 |                              |                             |
| <b>Description:</b>                                                                                                |                              |                             |
| <b>Taxpayer Identification No:</b>                                                                                 |                              |                             |
| <b>Legal Identity:</b><br><small>Corporation, Partnership, Individual, etc.</small>                                |                              |                             |
| <b>Full Name of Bidder:</b>                                                                                        |                              |                             |
| <b>Street :</b>                                                                                                    |                              |                             |
| <b>City/State/Zip:</b>                                                                                             |                              |                             |
|                                                                                                                    |                              |                             |
| <b>Project Manager</b>                                                                                             |                              | <b>Legal Contact</b>        |
| Name:                                                                                                              |                              | Name:                       |
| Street:                                                                                                            |                              | Street:                     |
| City/State/Zip:                                                                                                    |                              | City/State/Zip:             |
| E-Mail:                                                                                                            |                              | E-Mail:                     |
| Phone:                                                                                                             |                              | Phone:                      |
| Fax:                                                                                                               |                              | Fax:                        |
| <b>Alternate Contact:</b>                                                                                          |                              | <b>Alternate Contact:</b>   |
| Name:                                                                                                              |                              | Name:                       |
| E-Mail:                                                                                                            |                              | E-Mail:                     |
| Phone:                                                                                                             |                              | Phone:                      |
| Fax:                                                                                                               |                              | Fax:                        |
| <b>Website Address:</b>                                                                                            |                              |                             |
|                                                                                                                    |                              |                             |
| Would you like to receive information to register as a potential supplier to the City of Tulsa for other projects? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| <b>If yes, Fax copy to: Phyllis Brown 918-699-3225</b>                                                             |                              |                             |



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**You Must List any Exceptions taken to these specifications**

If the bidder wishes to take exception to any part of these specifications (technical specifications and all terms and conditions), he does so with the full knowledge and understanding that his bid may be rejected. If exceptions are not listed in this section, the bidder may forfeit their bid bond if exceptions come to light later.

**I (circle one) have or have not taken any exceptions to these specifications.  
If exceptions have been taken, you must explain below:**



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**WORKERS' COMPENSATION  
ACTUARIAL LIABILITY ANALYSIS**

You are invited to submit a proposal to the City of Tulsa, Oklahoma, in accordance with the terms, conditions, and instructions as set forth in this Request for Proposal. No commissions or brokerage fees will be paid by the City of Tulsa in the selection or employment of an Actuarial Liability Services provider. You must give a bid on the attached specifications. If you believe there are additional changes required, indicate such in your response to the RFP.

The City of Tulsa would like to contract with a company to provide casualty actuarial services in compliance with GASB Statement No. 10 – Accounting and Financial Reporting for Risk Financing and Related Insurance Issues, for the workers' compensation program. The City requests the analysis to provide estimated liabilities for the City's workers' compensation program as of June 30, 2001 using data as of March 31, 2001. The City will provide exposure, loss and claim data.

**Your response must include a sample contract.**

All responses to questions will be in writing to all potential bidder. Questions received later than five days prior to bid submittal date may not be answered.



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## **AWARD OF CONTRACT**

The final approval of the selected provider will be subject to the final determination of the City in accordance with executive order 90-08 and will be subject to both parties successfully entering into a contract for the specified services.

## **EFFECT OF PERIOD OF PROPOSALS**

All terms and conditions within the proposal must remain in effect until at least July 31, 2001 to allow sufficient review, negotiation and approval time by the City of Tulsa.

## **FINAL EVALUATION AND SELECTION**

Each finalist will be evaluated based on the capabilities described in the written proposal and will be evaluated according to the following criteria:

- Actuarial services and experience of organization.
- Financial arrangements.
- Scope, responsiveness, and quality of actuarial services; including data processing and management information reporting capabilities.
- Ability to comply with specifications as presented.

## **BACKGROUND**

The workers' compensation program for the City of Tulsa is self insured and administered by the Human Resources Department. The City of Tulsa has been self-insured for over twenty (20) years. Permanent disability judgements are funded through property taxes over a three-year period. Taxes collected in association with workers' compensation judgements are recorded in the Employee Insurance Service Fund. Lump-sum workers' compensation judgements are paid in full at the time of judgement and installment judgements are paid by the Employee Insurance Service fund as they become due. Judgements are included in the tax levy in the year subsequent to payment and the levy is recorded as long-term receivable. See page 32 of the City's Fiscal Year 2000 Annual Comprehensive Financial Report (attached). Currently, no excess coverage policy is in affect.

The City of Tulsa can provide the following data. Please note in your bid specifically any additional data required to complete the analysis:

- Loss Information: Unlimited loss and Allocated Loss Adjustment Expense and claim counts including and excluding judgements/settlements for all years of business, cumulative for this current fiscal year. Large losses for losses with an incurred minimum of \$50,000.
- Exposure Information: Actual audited payroll information
- Other Information: Judgements paid out during the current fiscal year, broken down by quarter. Accrual of unpaid judgements as of 3/31/01.



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- Most recent actuarial analysis

The City of Tulsa would require:

- comprehensive report including introduction, executive summary, background, methodology, analysis and glossary of terms.
- amount expected to be paid out and the loss rate to be provided both including and excluding judgements.
- final actuarial analysis report due within 60 days of receipt of City data.

### CONTRACT GUARANTEE

All contracts must be guaranteed for the rate guarantee periods and cannot be canceled by the Provider except for the City's non payment of rates or fees. This will be a 3-Year program beginning with one year with two(2) one(1) year renewal options. Evaluation of the costs will be based on the total 3 yr hourly costs and expenses.

You must use the pricing page to communicate your costs.

### ATTACHMENTS

- Page 32 of the City's Fiscal Year 2000 Annual Comprehensive Financial Report (not sure if this is correct – needs to be verified – it should address the funding for the COT WC)
- Most recent actuarial analysis



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**PRICING PAGE**

| <b>Fiscal Year</b> | <b>Total Hourly Charges</b> | <b>Total Expenses</b> |
|--------------------|-----------------------------|-----------------------|
| 2001/2002          |                             |                       |
| 2002/2003          |                             |                       |
| 2003/2004          |                             |                       |
|                    |                             |                       |
|                    |                             |                       |

**Total 3-Year Cost solution including all expenses:** \_\_\_\_\_

Hourly billable rate for services outside the scope of this proposal \$ \_\_\_\_\_

CITY OF TULSA  
 NOTES TO COMBINED FINANCIAL STATEMENTS  
 June 30, 2000  
 (dollar amounts expressed in thousands)

**NOTE 7. RISK MANAGEMENT**

The City has adopted GASB Statement No. 10, "Accounting and Financial Reporting for Risk Financing and Related Insurance Issues." The City's risk-management activities are recorded in the Employee Insurance Fund. The purpose of the fund is to administer the workers' compensation, health and dental insurance programs of the City. The use of this fund does not constitute a transfer of risk from the City.

Significant losses are covered by commercial insurance for all major programs except workers' compensation, for which the City retains all risk of loss. For insured programs, there have been no significant reductions in insurance coverage. Settlement amounts have not exceeded insurance coverage for the current year or the three prior years.

Reported judgments (tort liability) are principally funded through property taxes over a three-year period. Taxes collected are recorded in the Debt Service Fund, with the exception of those amounts associated with workers' compensation judgments which are recorded in the Employee Insurance Service Fund. The workers' compensation judgments include lump-sum judgments which are paid in full at the time of judgment and long-term installment judgments which are payable in installments.

Long-term workers' compensation installment judgments payable to employees and dependents, which are indeterminable as to total amount at the time of judgment, are paid by the Employee Insurance Service Fund as they become due. The estimated amount of this liability is recorded in the Employee Insurance Service Fund. The judgments will be included in the tax levy in the year subsequent to payment and the levy is recorded as a long-term receivable. The carrying amount of liabilities for long-term installment judgments and the related long-term accounts receivable in the amount of \$4,947 are presented at their net present value of \$2,219, and are discounted at an annual rate of 8.0%.

The City records an estimated liability for workers' compensation claims against the City. Claims liabilities are based on estimates of the ultimate cost of reported claims (including future claim adjustment expenses) and an estimate for claims which have been incurred but not reported based on historical experience.

The Employee Insurance Fund establishes a liability for both reported and unreported events which includes estimates of both future payments of losses and related claim adjustment expenses. The following represents the change in approximate aggregate liabilities for the City from July 1, 1997, to June 30, 2000.

|                                           | <u>2000</u>      | <u>1999</u>      | <u>1998</u>      |
|-------------------------------------------|------------------|------------------|------------------|
| Liability balance, beginning              | \$ 16,297        | \$ 16,622        | \$ 16,659        |
| Claims and changes in estimates           | 2,844            | 4,418            | 4,784            |
| Claims payments                           | <u>4,219</u>     | <u>4,842</u>     | <u>4,921</u>     |
| Liability balance, ending                 | <u>\$ 14,922</u> | <u>\$ 16,297</u> | <u>\$ 16,622</u> |
| Assets available to pay claims at June 30 | <u>\$ 14,750</u> | <u>\$ 13,487</u> | <u>\$ 12,727</u> |

**NOTE 8. WATERMAIN EXTENSION CONTRACTS**

The City contracts with various developers for the construction of Watermain to provide water service for areas under development. Such watermains are an extension of the City's existing water distribution system. Under such contracts, the contractor initially pays for all construction costs. Repayments to the contractors are generally limited to 40% or 60% of the collected revenues generated by the respective watermain extension, not to exceed the total cost as defined in the contract.

The contracts which are generally payable over a ten-year period and are non-interest bearing amounted to \$728 as of June 30, 2000. The City has no liability after the ten-year period if the respective revenues generated are insufficient to cover the contractors' costs. Historically, revenues generated within the ten-year period have been sufficient to permit recovery of the total costs incurred for the respective Watermain extensions. Payments of \$445 were due in accordance with these contracts for the fiscal year ended June 30, 2000.

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ATTACHMENT "B"

**CITY OF TULSA**  
**Workers' Compensation Actuarial Review**  
**As of June 30, 2000**



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**CITY OF TULSA**

Workers' Compensation Actuarial Review  
As of June 30, 2000

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**INTRODUCTION**

**Purpose**

The City of Tulsa (City) has retained PricewaterhouseCoopers LLP (PwC) to perform an analysis of the exposure and loss experience for its workers' compensation self-insurance program (the Program) and to provide estimated liabilities for the Program at June 30, 2000 including both case and incurred but not reported (IBNR) reserves.

This report documents the procedures and results of PwC's analysis.

**Distribution and Use**

This report has been prepared for the internal use of the City and the City's PwC auditors. Further distribution of this report to other parties without prior written approval of PwC is not authorized. Use of this report for other than the stated purpose may not be proper and must be preceded by written authorization of PwC.

**Reliance Upon City Data**

The data used in this analysis was provided by the Human Resources Department of the City. PwC's actuaries reviewed the data for reasonableness and consistency, but made no other attempts to verify the accuracy of the data. Concerns regarding the data are detailed in the Executive Summary section of this report. Judgments claims were identified by the City as the permanent partial disability claims and the permanent total disability claims.

**Limitations**

The evaluation of the Program requires the estimation of loss development over an extended period of time. During this period, numerous internal and external factors will affect the ultimate settlement of claims. Our analysis projects development based on historical insurance industry payment patterns, with consideration given to the Program's experience. Due to the uncertainty inherent in loss projections, particularly when some reliance has been placed on insurance industry development patterns, there can be no guarantee that actual loss development for the

Program will not vary significantly from that indicated in this report. We have, however, utilized methods that are in accordance with generally accepted actuarial principles. While we believe the total reserve and funding levels recommended in this report are reasonable, individual accident years can be expected to vary from the projections, developing either deficiencies or redundancies.

The loss provisions in this report are on a loss plus outside defense and adjustment expense basis (i.e., ALAE). No provisions have been included to meet other general administrative expenses of the Program.

Although we have not been involved in the consideration of establishing the Program and have not addressed its appropriateness, it is necessary to note certain implications inherent in self-insuring the City's exposure to loss. The first and most important is the fact that there is no transfer of risk similar to that which occurs when commercial insurance is purchased. The entire risk is retained by the City, and if actual losses exceed funded amounts, the difference must be paid by the City.

The City may also be exposed to greater fluctuations in financial experience as compared to those experienced when a commercial insurance program is employed. The City should have sufficient financial capacity to withstand those fluctuations. Under typical circumstances, the City should consider excess insurance in conjunction with its self-insurance program. Excess or catastrophic insurance can help to reduce the impact on financial capacity resulting from unusually large losses or a series of smaller losses.

This actuarial report provides professional input and guidance to the City. The final decision regarding reserve levels, however, is a management decision.

The attached exhibits should be considered an integral part of this report. Further reference to the term loss should be construed to mean both loss and ALAE.

## EXECUTIVE SUMMARY

This section provides a brief synopsis of the key findings and recommendations contained in our study.

1. Our analysis indicates the Program's liabilities for claims payable as of 6/30/2000 to be \$14,922,883, which is comprised of the following components:

|                                   |                     |
|-----------------------------------|---------------------|
| Reserve for workers' compensation | \$ 8,789,577        |
| Balance on unpaid judgments       | 2,122,510           |
| Additional IBNR on judgments      | 4,010,796           |
| <b>Total</b>                      | <b>\$14,922,883</b> |

Our estimate of amount expected to be paid from 7/1/2000 to 6/30/2001, of the total reserve of \$14,922,883, is \$4,275,712 with the remaining \$10,647,171 to be paid after 6/30/2001.

Accounting for Internal Service Funds (GASB 10) follows the full accrual basis of accounting. Therefore, the entire amount of the liability should be accrued as of 6/30/2000. Additional details on GASB 10 are included in the Other Considerations section of this report.

2. The following table sets forth the allocation of the City's total indicated reserve as of 6/30/2000 for its self-insured workers' compensation exposures:

|                     | <b>Total Reserves<br/>as of 6/30/2000</b> | <b>Percentage of<br/>Total Reserves</b> |
|---------------------|-------------------------------------------|-----------------------------------------|
| Non-judgment Claims | \$ 8,789,577                              | 58.9%                                   |
| Judgment Claims     | 6,133,306                                 | 41.1%                                   |
| <b>Total</b>        | <b>\$14,922,883</b>                       | <b>100.0%</b>                           |

The reserve related to judgment claims has decreased from 50.5% of the total reserves as of 6/30/99 to 41.1% of the total reserves as of 6/30/00. Discussions with the City support this indication as the City's litigation rate related to judgment claims has decreased in the past year. We recommend continued monitoring of the frequency and award amounts of

**CITY OF TULSA**

Workers' Compensation Actuarial Review  
As of June 30, 2000

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these claims.

3. To determine the total indicated reserve, we projected losses including judgments. Because the City does not establish case reserves for judgments, we were unable to project incurred losses on a combined basis. Since case reserves are established for non-judgment claims, we projected both paid and incurred losses for the data excluding judgments. In this report, we have selected separate loss development patterns for losses including judgments and losses excluding judgments. The reserve for judgment claims was obtained by subtracting the reserve for non-judgment claims from the total reserve.

Additional information can be obtained by projecting incurred losses as well as paid losses for losses including judgments. Incurred losses provide a larger volume of data than just payments to estimate ultimate loss, which may make incurred patterns less erratic than payment patterns. As such, the City should establish case reserves for judgments to be used in our analysis.

4. The City maintains multiple sources of judgment data, including the permanent partial and permanent total disability claims data in the RISK ENVISION claim system and fiscal year count and payment information. We were unable to reconcile the three sources of data. Based on conversations with the City, we have relied most heavily on historical losses in the RISK ENVISION system. The City should periodically review the various data sources to ensure that these sources are consistent.
5. The City converted all claims data to the RISK ENVISION system in the first quarter of 2000 from the prior DAVID system. As a result, system processes were not fully developed to extract the necessary data to fully update our prior actuarial report. Paid loss development triangles were updated with data evaluated as of 3/31/2000, and selections of paid loss development factors were revised accordingly. Incurred losses as of 3/31/2000 were unavailable to update the historical development triangles. As a result, incurred loss projections were based on data evaluated as of 8/21/2000 and incurred development patterns were interpolated from our 6/30/99 report.
6. The loss summary reports, provided by the City, exhibited inconsistencies with respect to paid losses. We have relied on the report totals rather than the detail report. We were

**CITY OF TULSA**

Workers' Compensation Actuarial Review

As of June 30, 2000

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unable to obtain alternative sources of data, e.g. fiscal year payments, to perform certain reasonability checks. We recommend that the City track fiscal year payments separately for workers' compensation claims (judgments and non-judgments, separately) as an additional check on the accuracy of the claims system data.

7. The following table sets forth the average claim severity and indicated loss rates implied by our ultimate loss estimates including judgments.

| <b>Accident Year</b> | <b>Average Severity</b> | <b>Indicated Loss Rate</b> |
|----------------------|-------------------------|----------------------------|
| 7/1/95-6/30/96       | \$2,361                 | \$3.80                     |
| 7/1/96-6/30/97       | 2,186                   | 3.03                       |
| 7/1/97-6/30/98       | 2,506                   | 3.58                       |
| 7/1/98-6/30/99       | 3,431                   | 3.63                       |
| 7/1/99-6/30/2000     | 3,250                   | 3.88                       |
| <b>Total</b>         | <b>\$2,710</b>          | <b>\$3.59</b>              |

8. The City should consider purchasing excess insurance for its workers' compensation exposure.

## BACKGROUND

The City of Tulsa is completely self-insured for workers' compensation. The City has not commercially insured its workers' compensation exposure for several years.

## METHODOLOGY

Loss and exposure information were provided by the City's Human Resources Department. This information was organized and analyzed using the methods described below:

Since case reserves were not available for judgments, only two methods (paid loss development and paid Bornhuetter-Ferguson) were used to analyze the Program's data including judgments. The following four methods were used to analyze the data excluding judgments:

- paid loss development method;
- incurred loss development method;
- paid Bornhuetter-Ferguson method; and
- incurred Bornhuetter-Ferguson method.

Paid loss development assumes that the ratio of losses paid in one period to losses paid in an earlier period is approximately constant over time. For example, if, on average, paid losses at 24 months after the start of the year were 150% of losses at 12 months, loss development from 12 to 24 months is projected to be 50%. Similarly if losses at 36 months were 120% of losses at 24 months, then the combined loss development from 12 to 36 months is projected to be 80% ( $1.50 \times 1.20 = 1.80$ ). The process of estimating period to period development factors is normally continued until a level of maturity is reached at which point no additional movement is expected.

Incurred loss development is similar to the prior method but uses incurred losses (paid loss plus case loss reserves) instead of paid losses.

The Bornhuetter-Ferguson method based on exposures (payroll) and incurred (or paid) loss is a variation on the traditional development approach. The basic premise underlying this technique

**CITY OF TULSA**

Workers' Compensation Actuarial Review  
As of June 30, 2000

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is that loss varies proportionately with exposures. Expected loss rates are selected based on historical loss experience and resulting trends. This is balanced by assuming that only future losses will develop at this rate. The percent of incurred (or paid) loss to ultimate loss implied from the incurred (or paid) loss development method is used to determine what percentage of ultimate loss is yet to be developed. Current losses are added to losses yet to be developed, yielding an estimate for each year.

The Bornhuetter-Ferguson approaches are particularly useful for the most recent years because of their relative stability compared with that of development techniques. Paid loss development factors, in particular, can be very large for the most recent years: a relatively small change in the reporting or payment pattern could significantly distort the calculated result.

Because the historical data available was not fully credible, we relied to some extent on external insurance industry data. For purposes of the incurred loss development projection, we relied on the loss development patterns selected in the prior actuarial report as of 6/30/99. Incurred loss data as of 3/31/2000, which is needed to update the incurred loss development triangle, was unavailable. Paid loss data as of 3/31/2000 was available. As such, we were able to update the paid loss development triangle.

## ANALYSIS

### Loss Reserve

In completing our analysis, we used the projection methodologies described in the previous section to derive estimates of ultimate loss. Based on the two estimates and the assumptions underlying each, a best estimate of ultimate loss was selected by fiscal accident year.

The loss reserve as of June 30, 2000 was derived by subtracting cumulative paid loss from the selected ultimate loss by accident year both for losses excluding judgments and including judgments. The total reserve for the period prior to 1987 is based on the City's case reserves and industry payment and reporting patterns. The reserve for judgments is derived by subtracting the reserve excluding judgments from the reserve including judgments for the projection period. An additional reserve was selected to provide for future judgments for accident periods prior to 1987.

### Other Considerations

GASB 10, entitled "Accounting and Financial Reporting for Risk Financing and Related Insurance Issues", addresses the accounting treatment of losses within a public entity risk pool and self-insured losses for non-pool governmental entities (including public benefit corporation and authorities, public employee retirement systems, and governmental utilities, hospitals, colleges, and universities). Under GASB 10, pools and governmental entities other than pools are required to accrue liabilities associated with self-insurance, claims-made insurance, and retrospectively rated policies and contracts for property and liability risks. The accrual should be based on an estimate of the ultimate costs of the self-insured claim if a loss is probable and the amount of loss can be reasonably estimated (in conformity with FASB Statement No. 5, "Accounting for Contingencies").

GASB 10 requires that claim costs, including claim adjustment expenses and estimates of costs of claims relating to covered events that have occurred but have not been reported (IBNR), should be recognized in the financial statements. Estimates of liabilities should be based on the estimated ultimate cost of settling claims, using past experience adjusted for current trends, and any other factors that would modify past experience.

**CITY OF TULSA**

Workers' Compensation Actuarial Review

As of June 30, 2000

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GASB 10 also provides information on reporting of required supplementary information, acceptable methods of risk financing, transition requirements, and financial statement disclosures. These issues should be discussed with your auditor, or with other PwC personnel. The estimated liabilities contained in this report meet GASB 10 requirements.

We recommend the Program be reviewed annually for fundings on past accident periods as well as for the prospective period. The Program should continue to be reviewed prior to the next fiscal year end using data through March 31.

In order to keep our report as concise as possible, we have not included any of the source documents or sources of data used. We will be happy to forward any or all of this information on request.

## GLOSSARY OF TERMS

Whenever any of the following terms appear in this report or any of the attached exhibits they are defined as follows:

|                                                  |                                                                                                                                                           |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Accident Period</b>                           | A year or other period of time used to refer to all claims occurring during that period of time.                                                          |
| <b>Allocated Loss Adjustment Expense (ALAE):</b> | Claims handling expenses associated with one particular claim: primarily outside defense costs.                                                           |
| <b>Bornhuetter-Ferguson Method:</b>              | Common actuarial method used to project ultimate loss: project unpaid loss or IBNR based on expected losses and paid or incurred loss emergence patterns. |
| <b>Case Development:</b>                         | Additional loss reserves required to provide for subsequent development on outstanding case reserves.                                                     |
| <b>Case Reserve:</b>                             | Loss reserve assigned to a claim by a claims professional.                                                                                                |
| <b>Claim Frequency:</b>                          | The number of claims per exposure unit.                                                                                                                   |
| <b>Claim Severity:</b>                           | Amount of losses divided by number of claims.                                                                                                             |
| <b>Development (Emergence) Patterns:</b>         | The maturation of paid or incurred losses (or claim counts) from the beginning of an accident period until all claims are paid (or reported).             |
| <b>Excess Loss:</b>                              | A claim exceeding a per occurrence retention or loss limit.                                                                                               |
| <b>Exposure Unit:</b>                            | A measure of the relative likelihood or magnitude of loss: losses are expected to be directly proportional to units of exposure.                          |

**CITY OF TULSA**

Workers' Compensation Actuarial Review  
As of June 30, 2000

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**Incurred But Not Reported (IBNR)**

Pure Definition: The liability for future payments on losses which have already occurred, but have not been reported.

Total or Broad Definition: Pure IBNR plus case development; required reserves in addition to outstanding case reserves.

**Incurred Loss:**

Paid loss plus case reserves.

**Indemnity Loss:**

Claim payments made to reimburse claimant for lost wages and non-economic damages.

**Limit of Liability (Loss Limit):**

Maximum amount to be paid for a single claim.

**Loss Development Methods:**

Common actuarial methods used to project ultimate loss: use paid or incurred loss development patterns of more mature periods to project development on less mature periods.

**Loss Rate:**

Loss and ALAE per exposure unit.

**Medical Loss:**

Claim payments made to reimburse claimant for medical procedures performed.

**Paid Loss:**

Loss and ALAE paid for a claim or group of claims.

**Tail Factor:**

Factor applied to a loss estimate to reflect the additional development of losses beyond the time period for which data has been provided.

**Ultimate Loss:**

Total loss and ALAE to be paid for an accident period; consists of paid losses, case reserves, case development, and pure IBNR.

City of Tulsa  
Workers' Compensation  
Current and Future Liability

| <u>Accident<br/>Year</u>  | (1)<br><br>Total Reserve<br><u>@ 6/30/00</u><br>(a) | (2)<br>Amount<br>Expected<br>to be Paid<br>from 7/1/2000<br><u>to 6/30/2001</u><br>(b) | (3)<br>Amount<br>Expected<br>to be Paid<br>7/1/2001 and<br><u>Subsequent</u><br>(1)-(2) |
|---------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Total Excluding Judgments | \$8,789,577                                         | \$2,811,266                                                                            | \$5,978,311                                                                             |
| Judgments                 | 6,133,306                                           | 1,464,446                                                                              | 4,668,860                                                                               |
| Total Including Judgments | \$14,922,883                                        | \$4,275,712                                                                            | \$10,647,171                                                                            |

Notes: (a) Exhibit 1, Sheet 2.  
(b) Based on payment pattern in Exhibit 2, Sheet 5.

City of Tulsa  
Workers' Compensation  
Total Reserve as of 6/30/00

|                                            | (1)                              | (2)                                             | (3)                                                 | (4)                                   |
|--------------------------------------------|----------------------------------|-------------------------------------------------|-----------------------------------------------------|---------------------------------------|
| Accident<br>Year                           | Selected<br>Ultimate Loss<br>(a) | Cumulative<br>Paid Loss<br>as of 3/31/00<br>(b) | Actual Payments<br>from 4/1/00<br>to 6/30/00<br>(c) | Total Reserve<br>as of 6/30/00<br>(d) |
| <b>(A) Projections Excluding Judgments</b> |                                  |                                                 |                                                     |                                       |
| Prior to 07/01/87                          | NA                               | NA                                              | NA                                                  | \$317,249                             |
| 07/01/87-06/30/88                          | \$3,900,000                      | \$3,650,647                                     | \$0                                                 | 249,353                               |
| 07/01/88-06/30/89                          | 3,525,000                        | 3,245,120                                       | 21,682                                              | 258,198                               |
| 07/01/89-06/30/90                          | 3,175,000                        | 2,922,717                                       | 3,442                                               | 248,841                               |
| 07/01/90-06/30/91                          | 3,975,000                        | 3,659,755                                       | 3,301                                               | 311,944                               |
| 07/01/91-06/30/92                          | 2,900,000                        | 2,609,510                                       | 10,917                                              | 279,573                               |
| 07/01/92-06/30/93                          | 3,200,000                        | 2,761,916                                       | 15,564                                              | 422,520                               |
| 07/01/93-06/30/94                          | 2,550,000                        | 2,263,798                                       | 3,469                                               | 282,733                               |
| 07/01/94-06/30/95                          | 3,325,000                        | 2,895,177                                       | 15,501                                              | 414,322                               |
| 07/01/95-06/30/96                          | 2,875,000                        | 2,447,416                                       | 18,812                                              | 408,772                               |
| 07/01/96-06/30/97                          | 2,600,000                        | 2,018,354                                       | 48,637                                              | 533,009                               |
| 07/01/97-06/30/98                          | 3,450,000                        | 2,137,613                                       | 381,050                                             | 931,337                               |
| 07/01/98-06/30/99                          | 3,800,000                        | 2,065,337                                       | 223,993                                             | 1,510,670                             |
| 07/01/99-06/30/00                          | 3,900,000                        | 454,444                                         | 507,251                                             | 2,938,305                             |
| <b>Total</b>                               | <b>\$43,175,000</b>              | <b>\$33,131,804</b>                             | <b>\$1,253,619</b>                                  | <b>\$8,789,577</b>                    |
| <b>(B) Projections Including Judgments</b> |                                  |                                                 |                                                     |                                       |
| Prior to 07/01/87                          | NA                               | NA                                              | NA                                                  | \$317,249                             |
| 07/01/87-06/30/88                          | \$4,250,000                      | \$3,943,350                                     | \$0                                                 | 306,650                               |
| 07/01/88-06/30/89                          | 4,150,000                        | 3,813,569                                       | 44,767                                              | 291,664                               |
| 07/01/89-06/30/90                          | 3,710,000                        | 3,407,711                                       | 3,442                                               | 298,847                               |
| 07/01/90-06/30/91                          | 5,150,000                        | 4,740,494                                       | 3,301                                               | 406,205                               |
| 07/01/91-06/30/92                          | 3,970,000                        | 3,568,187                                       | 10,917                                              | 390,896                               |
| 07/01/92-06/30/93                          | 5,000,000                        | 4,481,168                                       | 23,029                                              | 495,803                               |
| 07/01/93-06/30/94                          | 5,250,000                        | 4,613,426                                       | 57,763                                              | 578,811                               |
| 07/01/94-06/30/95                          | 6,000,000                        | 5,217,958                                       | 17,886                                              | 764,156                               |
| 07/01/95-06/30/96                          | 5,050,000                        | 4,070,942                                       | 95,041                                              | 884,017                               |
| 07/01/96-06/30/97                          | 4,250,000                        | 3,015,489                                       | 120,750                                             | 1,113,761                             |
| 07/01/97-06/30/98                          | 5,250,000                        | 3,034,486                                       | 534,938                                             | 1,680,576                             |
| 07/01/98-06/30/99                          | 5,600,000                        | 2,440,886                                       | 358,688                                             | 2,800,426                             |
| 07/01/99-06/30/00                          | 6,100,000                        | 472,498                                         | 716,431                                             | 4,911,071                             |
| <b>Total</b>                               | <b>\$63,730,000</b>              | <b>\$46,820,164</b>                             | <b>\$1,986,953</b>                                  | <b>\$14,922,883</b>                   |
| <b>(C) Judgments</b>                       |                                  |                                                 |                                                     |                                       |
| Judgments (e)                              | \$2,855,844                      |                                                 | \$733,334                                           | \$2,122,510                           |
| Additional IBNR on Judgments               |                                  |                                                 |                                                     | 4,010,796                             |
| <b>Total (f)</b>                           |                                  |                                                 |                                                     | <b>\$6,133,306</b>                    |

- Notes: (a) Exhibit 2, Sheet 1 and Exhibit 3, Sheet 1.  
 (b) Provided by the City.  
 (c) Provided by the City.  
 (d) (1)-(2)-(3). The period for 7/1/87 and prior is selected based on the City's case reserves and industry payment and reporting patterns.  
 (e) Provided by the City (unpaid balance @ 3/31/00).  
 (f) (B)-(A).

City of Tulsa  
Workers' Compensation  
Implied Severity and Indicated Loss Rates  
Including Judgments

| <u>Accident<br/>Year</u> | (1)<br><u>Selected<br/>Ultimate Loss</u><br>(a) | (2)<br><u>Ultimate Claims</u><br>(b) | (3)<br><u>Implied<br/>Severity</u><br>(1)/(2) | (4)<br><u>Payroll<br/>(00's)</u><br>(c) | (5)<br><u>Indicated<br/>Loss Rate</u><br>(1)/(4) |
|--------------------------|-------------------------------------------------|--------------------------------------|-----------------------------------------------|-----------------------------------------|--------------------------------------------------|
| 07/01/87-06/30/88        | \$4,250,000                                     | 1,361                                | \$3,123                                       | \$1,332,051                             | \$3.19                                           |
| 07/01/88-06/30/89        | 4,150,000                                       | 1,579                                | 2,628                                         | 1,012,783                               | 4.10                                             |
| 07/01/89-06/30/90        | 3,710,000                                       | 1,696                                | 2,188                                         | 1,022,358                               | 3.63                                             |
| 07/01/90-06/30/91        | 5,150,000                                       | 1,889                                | 2,726                                         | 1,097,055                               | 4.69                                             |
| 07/01/91-06/30/92        | 3,970,000                                       | 1,833                                | 2,166                                         | 1,190,968                               | 3.33                                             |
| 07/01/92-06/30/93        | 5,000,000                                       | 1,930                                | 2,591                                         | 1,146,222                               | 4.36                                             |
| 07/01/93-06/30/94        | 5,250,000                                       | 1,973                                | 2,661                                         | 1,253,603                               | 4.19                                             |
| 07/01/94-06/30/95        | 6,000,000                                       | 2,010                                | 2,985                                         | 1,283,393                               | 4.68                                             |
| 07/01/95-06/30/96        | 5,050,000                                       | 2,139                                | 2,361                                         | 1,327,500                               | 3.80                                             |
| 07/01/96-06/30/97        | 4,250,000                                       | 1,944                                | 2,186                                         | 1,403,403                               | 3.03                                             |
| 07/01/97-06/30/98        | 5,250,000                                       | 2,095                                | 2,506                                         | 1,465,314                               | 3.58                                             |
| 07/01/98-06/30/99        | 5,600,000                                       | 1,632                                | 3,431                                         | 1,540,847                               | 3.63                                             |
| 07/01/99-06/30/00        | 6,100,000                                       | 1,877                                | 3,250                                         | 1,572,316                               | 3.88                                             |
| Total                    | \$63,730,000                                    | 23,958                               | \$2,660                                       | \$16,647,813                            | \$3.83                                           |

Notes: (a) Exhibit 3, Sheet 1.  
(b) Exhibit 4, Sheet 1.  
(c) Provided by the City.

City of Tulsa  
Workers' Compensation  
Comparison of Ultimate Losses  
Excluding Judgments

| Accident          | (1)<br>Paid Loss<br><u>Development</u><br>(a) | (2)<br>Incurred Loss<br><u>Development</u><br>(b) | (3)<br>Bornhuetter-<br>Ferguson<br>Using<br>Exposures and<br><u>Paid Loss</u><br>(c) | (4)<br>Bornhuetter-<br>Ferguson<br>Using<br>Exposures and<br><u>Incurred Loss</u><br>(d) | (5)<br>Selected<br><u>Ultimate Loss</u> | (6)<br>Payroll<br>(00's)<br>(e) | (7)<br><u>Indicated<br/>Loss Rate</u><br>(5)/(6) |
|-------------------|-----------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------|---------------------------------|--------------------------------------------------|
| 07/01/87-06/30/88 | \$3,942,853                                   | \$3,880,791                                       | \$3,822,305                                                                          | \$3,788,660                                                                              | \$3,900,000                             | \$1,332,051                     | \$2.93                                           |
| 07/01/88-06/30/89 | 3,544,948                                     | 3,515,767                                         | 3,408,638                                                                            | 3,413,065                                                                                | 3,525,000                               | 1,012,783                       | 3.48                                             |
| 07/01/89-06/30/90 | 3,198,238                                     | 3,146,853                                         | 3,091,146                                                                            | 3,069,283                                                                                | 3,175,000                               | 1,022,358                       | 3.11                                             |
| 07/01/90-06/30/91 | 4,016,066                                     | 3,937,899                                         | 3,847,722                                                                            | 3,819,209                                                                                | 3,975,000                               | 1,097,055                       | 3.62                                             |
| 07/01/91-06/30/92 | 2,899,707                                     | 2,901,097                                         | 2,845,970                                                                            | 2,862,458                                                                                | 2,900,000                               | 1,190,968                       | 2.43                                             |
| 07/01/92-06/30/93 | 3,098,926                                     | 3,238,475                                         | 3,017,969                                                                            | 3,170,857                                                                                | 3,200,000                               | 1,146,222                       | 2.79                                             |
| 07/01/93-06/30/94 | 2,557,567                                     | 2,495,554                                         | 2,561,994                                                                            | 2,503,435                                                                                | 2,550,000                               | 1,253,603                       | 2.03                                             |
| 07/01/94-06/30/95 | 3,345,640                                     | 3,317,918                                         | 3,270,757                                                                            | 3,269,028                                                                                | 3,325,000                               | 1,283,393                       | 2.59                                             |
| 07/01/95-06/30/96 | 2,911,703                                     | 2,827,708                                         | 2,913,200                                                                            | 2,836,460                                                                                | 2,875,000                               | 1,327,500                       | 2.17                                             |
| 07/01/96-06/30/97 | 2,534,399                                     | 2,532,105                                         | 2,650,807                                                                            | 2,610,521                                                                                | 2,600,000                               | 1,403,403                       | 1.85                                             |
| 07/01/97-06/30/98 | 3,375,952                                     | 3,474,670                                         | 3,388,236                                                                            | 3,467,160                                                                                | 3,450,000                               | 1,465,314                       | 2.35                                             |
| 07/01/98-06/30/99 | 3,638,298                                     | 3,917,062                                         | 3,663,084                                                                            | 3,864,006                                                                                | 3,800,000                               | 1,540,847                       | 2.47                                             |
| 07/01/99-06/30/00 | 3,391,579                                     | 4,155,977                                         | 3,711,991                                                                            | 4,018,011                                                                                | 3,900,000                               | 1,572,316                       | 2.48                                             |
| <b>Total</b>      | <b>\$42,455,876</b>                           | <b>\$43,341,876</b>                               | <b>\$42,193,819</b>                                                                  | <b>\$42,692,153</b>                                                                      | <b>\$43,175,000</b>                     | <b>\$16,647,813</b>             | <b>\$2.59</b>                                    |

- Notes: (a) Exhibit 2, Sheet 5.  
 (b) Exhibit 2, Sheet 8.  
 (c) Exhibit 2, Sheet 2.  
 (d) Exhibit 2, Sheet 3.  
 (e) Provided by the City.

City of Tulsa  
Workers' Compensation  
Ultimate Loss Based on Paid Bornhuetter-Ferguson Method  
Excluding Judgments

| (1)<br>Accident<br>Year | (2)<br>Payroll<br>(00's)<br>(a) | (2)<br>Selected<br>Loss Rate<br>Per \$100<br>of Payroll<br>(b) | (3)<br>Expected<br>Losses<br>(1)x(2) | (4)<br>Expected<br>Percentage<br>Unpaid<br>(c) | (5)<br>Expected<br>Unpaid<br>(3)x(4) | (6)<br>Actual<br>Paid<br>Losses<br>As of 8/21/00<br>(d) | (7)<br>Indicated<br>Ultimate<br>Loss<br>(5) + (6) |
|-------------------------|---------------------------------|----------------------------------------------------------------|--------------------------------------|------------------------------------------------|--------------------------------------|---------------------------------------------------------|---------------------------------------------------|
| 07/01/87-06/30/88       | \$1,332,051                     | \$1.74                                                         | \$2,317,769                          | 7.4%                                           | \$171,515                            | \$3,650,790                                             | \$3,822,305                                       |
| 07/01/88-06/30/89       | 1,012,783                       | 1.79                                                           | 1,812,882                            | 7.8%                                           | 141,405                              | 3,267,233                                               | 3,408,638                                         |
| 07/01/89-06/30/90       | 1,022,358                       | 1.85                                                           | 1,891,362                            | 8.3%                                           | 156,983                              | 2,934,163                                               | 3,091,146                                         |
| 07/01/90-06/30/91       | 1,097,055                       | 1.90                                                           | 2,084,405                            | 8.8%                                           | 183,428                              | 3,664,294                                               | 3,847,722                                         |
| 07/01/91-06/30/92       | 1,190,968                       | 1.96                                                           | 2,334,297                            | 9.4%                                           | 219,424                              | 2,626,546                                               | 2,845,970                                         |
| 07/01/92-06/30/93       | 1,146,222                       | 2.02                                                           | 2,315,368                            | 10.2%                                          | 236,168                              | 2,781,801                                               | 3,017,969                                         |
| 07/01/93-06/30/94       | 1,253,603                       | 2.08                                                           | 2,607,494                            | 11.3%                                          | 294,647                              | 2,267,347                                               | 2,561,994                                         |
| 07/01/94-06/30/95       | 1,283,393                       | 2.14                                                           | 2,746,461                            | 12.7%                                          | 348,801                              | 2,921,956                                               | 3,270,757                                         |
| 07/01/95-06/30/96       | 1,327,500                       | 2.20                                                           | 2,920,500                            | 14.9%                                          | 435,155                              | 2,478,045                                               | 2,913,200                                         |
| 07/01/96-06/30/97       | 1,403,403                       | 2.27                                                           | 3,185,725                            | 18.0%                                          | 573,431                              | 2,077,376                                               | 2,650,807                                         |
| 07/01/97-06/30/98       | 1,465,314                       | 2.34                                                           | 3,428,835                            | 23.6%                                          | 809,205                              | 2,579,031                                               | 3,388,236                                         |
| 07/01/98-06/30/99       | 1,540,847                       | 2.41                                                           | 3,713,441                            | 33.5%                                          | 1,244,003                            | 2,419,081                                               | 3,663,084                                         |
| 07/01/99-06/30/00       | 1,572,316                       | 2.48                                                           | 3,899,344                            | 63.1%                                          | 2,460,486                            | 1,251,505                                               | 3,711,991                                         |
| Total                   | \$16,647,813                    |                                                                | \$35,257,883                         |                                                | \$7,274,651                          | \$34,919,168                                            | \$42,193,819                                      |

- Notes: (a) Provided by the City.  
 (b) Exhibit 2, Sheet 4.  
 (c) Based on cumulative loss development factors in Exhibit 2, Sheet 7.  
 (d) Exhibit 2, Sheet 5.

City of Tulsa  
Workers' Compensation  
Ultimate Loss Based on Incurred Bornhuetter-Ferguson Method  
Excluding Judgments

| (1)               | (2)                      | (3)                                                     | (4)                           | (5)                                         | (6)                               | (7)                                                  |                                            |
|-------------------|--------------------------|---------------------------------------------------------|-------------------------------|---------------------------------------------|-----------------------------------|------------------------------------------------------|--------------------------------------------|
| Accident<br>Year  | Payroll<br>(00's)<br>(a) | Selected<br>Loss Rate<br>Per \$100<br>of Payroll<br>(b) | Expected<br>Losses<br>(1)x(2) | Expected<br>Percentage<br>Unreported<br>(c) | Expected<br>Unreported<br>(3)x(4) | Actual<br>Reported<br>Losses<br>As of 8/21/00<br>(d) | Indicated<br>Ultimate<br>Loss<br>(5) + (6) |
| 07/01/87-06/30/88 | \$1,332,051              | \$1.74                                                  | \$2,317,769                   | 5.8%                                        | \$134,431                         | \$3,654,229                                          | \$3,788,660                                |
| 07/01/88-06/30/89 | 1,012,783                | 1.79                                                    | 1,812,882                     | 6.0%                                        | 108,773                           | 3,304,292                                            | 3,413,065                                  |
| 07/01/89-06/30/90 | 1,022,358                | 1.85                                                    | 1,891,362                     | 6.2%                                        | 117,264                           | 2,952,019                                            | 3,069,283                                  |
| 07/01/90-06/30/91 | 1,097,055                | 1.90                                                    | 2,084,405                     | 6.5%                                        | 135,486                           | 3,683,723                                            | 3,819,209                                  |
| 07/01/91-06/30/92 | 1,190,968                | 1.96                                                    | 2,334,297                     | 6.8%                                        | 158,732                           | 2,703,726                                            | 2,862,458                                  |
| 07/01/92-06/30/93 | 1,146,222                | 2.02                                                    | 2,315,368                     | 7.2%                                        | 166,706                           | 3,004,151                                            | 3,170,857                                  |
| 07/01/93-06/30/94 | 1,253,603                | 2.08                                                    | 2,607,494                     | 7.8%                                        | 203,385                           | 2,300,050                                            | 2,503,435                                  |
| 07/01/94-06/30/95 | 1,283,393                | 2.14                                                    | 2,746,461                     | 8.6%                                        | 236,196                           | 3,032,832                                            | 3,269,028                                  |
| 07/01/95-06/30/96 | 1,327,500                | 2.20                                                    | 2,920,500                     | 9.5%                                        | 277,448                           | 2,559,012                                            | 2,836,460                                  |
| 07/01/96-06/30/97 | 1,403,403                | 2.27                                                    | 3,185,725                     | 12.1%                                       | 385,473                           | 2,225,048                                            | 2,610,521                                  |
| 07/01/97-06/30/98 | 1,465,314                | 2.34                                                    | 3,428,835                     | 16.6%                                       | 569,187                           | 2,897,973                                            | 3,467,160                                  |
| 07/01/98-06/30/99 | 1,540,847                | 2.41                                                    | 3,713,441                     | 25.1%                                       | 932,074                           | 2,931,932                                            | 3,864,006                                  |
| 07/01/99-06/30/00 | 1,572,316                | 2.48                                                    | 3,899,344                     | 53.7%                                       | 2,093,948                         | 1,924,063                                            | 4,018,011                                  |
| Total             | \$16,647,813             |                                                         | \$35,257,883                  |                                             | \$5,519,103                       | \$37,173,050                                         | \$42,692,153                               |

Notes: (a) Provided by the City.  
 (b) Exhibit 2, Sheet 4.  
 (c) Based on cumulative loss development factors in Exhibit 2, Sheet 8.  
 (d) Exhibit 2, Sheet 8.

City of Tulsa  
Workers' Compensation  
Selected Loss Per Exposure  
Excluding Judgments

| Accident<br>Year   | (1)<br>Ultimate Loss<br>Based on<br>Paid Loss<br>Projection<br>(a) | (2)<br>Ultimate Loss<br>Based on<br>Incurred Loss<br>Projection<br>(b) | (3)<br>Preliminary<br>Selected<br>Ultimate Loss<br>(c) | (4)<br>Payroll<br>(00's)<br>(c) | (5)<br>Indicated<br>Loss Rate<br>(3)/(4) | (6)<br>Selected<br>Loss Rate<br>(d) |
|--------------------|--------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------|---------------------------------|------------------------------------------|-------------------------------------|
| 07/01/87-06/30/88  | \$3,942,853                                                        | \$3,880,791                                                            | \$3,900,000                                            | \$1,332,051                     | \$2.93                                   | \$1.74                              |
| 07/01/88-06/30/89  | 3,544,948                                                          | 3,515,767                                                              | 3,525,000                                              | 1,012,783                       | 3.48                                     | 1.79                                |
| 07/01/89-06/30/90  | 3,198,238                                                          | 3,146,853                                                              | 3,175,000                                              | 1,022,358                       | 3.11                                     | 1.85                                |
| 07/01/90-06/30/91  | 4,016,066                                                          | 3,937,899                                                              | 3,975,000                                              | 1,097,055                       | 3.62                                     | 1.90                                |
| 07/01/91-06/30/92  | 2,899,707                                                          | 2,901,097                                                              | 2,900,000                                              | 1,190,968                       | 2.43                                     | 1.96                                |
| 07/01/92-06/30/93  | 3,098,926                                                          | 3,238,475                                                              | 3,200,000                                              | 1,146,222                       | 2.79                                     | 2.02                                |
| 07/01/93-06/30/94  | 2,557,567                                                          | 2,495,554                                                              | 2,550,000                                              | 1,253,603                       | 2.03                                     | 2.08                                |
| 07/01/94-06/30/95  | 3,345,640                                                          | 3,317,918                                                              | 3,325,000                                              | 1,283,393                       | 2.59                                     | 2.14                                |
| 07/01/95-06/30/96  | 2,911,703                                                          | 2,827,708                                                              | 2,875,000                                              | 1,327,500                       | 2.17                                     | 2.20                                |
| 07/01/96-06/30/97  | 2,534,399                                                          | 2,532,105                                                              | 2,550,000                                              | 1,403,403                       | 1.82                                     | 2.27                                |
| 07/01/97-06/30/98  | 3,375,952                                                          | 3,474,670                                                              | 3,450,000                                              | 1,465,314                       | 2.35                                     | 2.34                                |
| 07/01/98-06/30/99  | 3,638,298                                                          | 3,917,062                                                              | 3,800,000                                              | 1,540,847                       | 2.47                                     | 2.41                                |
| 07/01/99-06/30/00  | 3,391,579                                                          | 4,155,977                                                              | 3,800,000                                              | 1,572,316                       | 2.42                                     | 2.48                                |
| Total              | \$42,455,876                                                       | \$43,341,876                                                           | \$43,025,000                                           | \$16,647,813                    | 2.58                                     |                                     |
| Subtotal 7/93-6/00 | \$21,755,138                                                       | \$22,720,994                                                           | \$22,350,000                                           | \$9,846,376                     | 2.27                                     |                                     |

- Notes:
- (a) Exhibit 2, Sheet 5.
  - (b) Exhibit 2, Sheet 8.
  - (c) Provided by the City.
  - (d) Based on the average loss rate (\$ 2.27) for the 7/1/93-6/30/00 period trended at 3.0% per annum.

City of Tulsa  
Workers' Compensation  
Paid Loss Development  
Losses Unlimited  
Excluding Judgments

|                          | (1)                                                       | (2)                                                   | (3)                                  |
|--------------------------|-----------------------------------------------------------|-------------------------------------------------------|--------------------------------------|
| <u>Accident<br/>Year</u> | <u>Cumulative<br/>Paid Loss<br/>as of 8/21/00<br/>(a)</u> | <u>Cumulative<br/>Development<br/>Factors<br/>(b)</u> | <u>Ultimate<br/>Loss<br/>(1)x(2)</u> |
| 07/01/87-06/30/88        | \$3,650,790                                               | 1.080                                                 | \$3,942,853                          |
| 07/01/88-06/30/89        | 3,267,233                                                 | 1.085                                                 | 3,544,948                            |
| 07/01/89-06/30/90        | 2,934,163                                                 | 1.090                                                 | 3,198,238                            |
| 07/01/90-06/30/91        | 3,664,294                                                 | 1.096                                                 | 4,016,066                            |
| 07/01/91-06/30/92        | 2,626,546                                                 | 1.104                                                 | 2,899,707                            |
| 07/01/92-06/30/93        | 2,781,801                                                 | 1.114                                                 | 3,098,926                            |
| 07/01/93-06/30/94        | 2,267,347                                                 | 1.128                                                 | 2,557,567                            |
| 07/01/94-06/30/95        | 2,921,956                                                 | 1.145                                                 | 3,345,640                            |
| 07/01/95-06/30/96        | 2,478,045                                                 | 1.175                                                 | 2,911,703                            |
| 07/01/96-06/30/97        | 2,077,376                                                 | 1.220                                                 | 2,534,399                            |
| 07/01/97-06/30/98        | 2,579,031                                                 | 1.309                                                 | 3,375,952                            |
| 07/01/98-06/30/99        | 2,419,081                                                 | 1.504                                                 | 3,638,298                            |
| 07/01/99-06/30/00        | 1,251,505                                                 | 2.710                                                 | 3,391,579                            |
| Total                    | \$34,919,168                                              |                                                       | \$42,455,876                         |

Notes: (a) Provided by the City.  
(b) Based on Exhibit 2, Sheet 7.



City of Tulsa  
Workers' Compensation

Exhibit 2  
Sheet 7

Paid Loss Development  
Excluding Judgments

| <u>Accident Year</u>                   | <u>9-21</u>  | <u>21-33</u> | <u>33-45</u> | <u>45-57</u> | <u>57-69</u> | <u>69-81</u> | <u>81-93</u> | <u>93-105</u> | <u>105-117</u> | <u>117-129</u> | <u>129-141</u> | <u>141-153</u> | <u>153-00</u> |
|----------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|----------------|----------------|----------------|----------------|---------------|
| 1987                                   |              |              |              |              |              |              |              | 1.005         | 1.002          | 1.000          | 1.000          | 1.000          |               |
| 1988                                   |              |              |              |              |              |              | 1.007        | 1.004         | 1.003          | 1.005          | 1.009          |                |               |
| 1989                                   |              |              |              |              |              | 1.007        | 1.004        | 1.001         | 1.011          | 1.007          |                |                |               |
| 1990                                   |              |              |              |              | 1.019        | 1.012        | 1.011        | 1.012         | 1.007          |                |                |                |               |
| 1991                                   |              |              |              | 1.030        | 1.022        | 1.012        | 1.004        | 1.008         |                |                |                |                |               |
| 1992                                   |              |              | 1.080        | 1.040        | 1.015        | 1.022        | 1.026        |               |                |                |                |                |               |
| 1993                                   |              | 1.224        | 1.078        | 1.061        | 1.018        | 1.011        |              |               |                |                |                |                |               |
| 1994                                   | 2.691        | 1.207        | 1.096        | 1.057        | 1.078        |              |              |               |                |                |                |                |               |
| 1995                                   | 2.925        | 1.221        | 1.100        | 1.010        |              |              |              |               |                |                |                |                |               |
| 1996                                   | 2.993        | 1.226        | 1.105        |              |              |              |              |               |                |                |                |                |               |
| 1997                                   | 3.091        | 1.093        |              |              |              |              |              |               |                |                |                |                |               |
| 1998                                   | 3.490        |              |              |              |              |              |              |               |                |                |                |                |               |
| Volume Weighted Average                | 3.025        | 1.191        | 1.092        | 1.039        | 1.030        | 1.013        | 1.010        | 1.006         | 1.006          | 1.004          | 1.004          | 1.000          |               |
| Average                                | 3.038        | 1.194        | 1.092        | 1.039        | 1.030        | 1.013        | 1.010        | 1.006         | 1.006          | 1.004          | 1.004          | 1.000          |               |
| 3 Year Volume Weighted Average         | 3.200        | 1.175        | 1.100        | 1.042        | 1.038        | 1.015        | 1.014        | 1.007         | 1.007          | 1.004          | 1.004          | 1.000          |               |
| 2 Year Volume Weighted Average         | 3.284        | 1.151        | 1.102        | 1.034        | 1.051        | 1.017        | 1.016        | 1.010         | 1.009          | 1.006          | 1.004          | 1.000          |               |
| City of Tulsa - 6/30/99 Reserve Review | 3.000        | 1.225        | 1.100        | 1.060        | 1.020        | 1.015        | 1.015        | 1.010         | 1.010          | 1.010          | 1.005          | 1.095          |               |
| NCCI - 2000 Oklahoma                   | 2.856        | 1.453        | 1.147        | 1.065        | 1.036        | 1.022        | 1.016        | 1.011         | 1.009          | 1.008          | 1.007          | 1.005          | 1.082         |
| Selected                               | <u>3.200</u> | <u>1.190</u> | <u>1.100</u> | <u>1.040</u> | <u>1.035</u> | <u>1.015</u> | <u>1.015</u> | <u>1.010</u>  | <u>1.007</u>   | <u>1.007</u>   | <u>1.005</u>   | <u>1.004</u>   | <u>1.082</u>  |
| Cumulative                             | 5.194        | 1.623        | 1.364        | 1.240        | 1.192        | 1.152        | 1.135        | 1.118         | 1.107          | 1.099          | 1.092          | 1.086          | 1.082         |

City of Tulsa  
Workers' Compensation  
Incurred Loss Development  
Losses Unlimited  
Excluding Judgments

|                          | (1)                                                           | (2)                                                   | (3)                                  |
|--------------------------|---------------------------------------------------------------|-------------------------------------------------------|--------------------------------------|
| <u>Accident<br/>Year</u> | <u>Cumulative<br/>Incurred Loss<br/>as of 8/21/00<br/>(a)</u> | <u>Cumulative<br/>Development<br/>Factors<br/>(b)</u> | <u>Ultimate<br/>Loss<br/>(1)x(2)</u> |
| 07/01/87-06/30/88        | 3,654,229                                                     | 1.062                                                 | \$3,880,791                          |
| 07/01/88-06/30/89        | 3,304,292                                                     | 1.064                                                 | 3,515,767                            |
| 07/01/89-06/30/90        | 2,952,019                                                     | 1.066                                                 | 3,146,853                            |
| 07/01/90-06/30/91        | 3,683,723                                                     | 1.069                                                 | 3,937,899                            |
| 07/01/91-06/30/92        | 2,703,726                                                     | 1.073                                                 | 2,901,097                            |
| 07/01/92-06/30/93        | 3,004,151                                                     | 1.078                                                 | 3,238,475                            |
| 07/01/93-06/30/94        | 2,300,050                                                     | 1.085                                                 | 2,495,554                            |
| 07/01/94-06/30/95        | 3,032,832                                                     | 1.094                                                 | 3,317,918                            |
| 07/01/95-06/30/96        | 2,559,012                                                     | 1.105                                                 | 2,827,708                            |
| 07/01/96-06/30/97        | 2,225,048                                                     | 1.138                                                 | 2,532,105                            |
| 07/01/97-06/30/98        | 2,897,973                                                     | 1.199                                                 | 3,474,670                            |
| 07/01/98-06/30/99        | 2,931,932                                                     | 1.336                                                 | 3,917,062                            |
| 07/01/99-06/30/00        | 1,924,063                                                     | 2.160                                                 | 4,155,977                            |
| <b>Total</b>             | <b>\$37,173,050</b>                                           |                                                       | <b>\$43,341,876</b>                  |

Notes: (a) Provided by the City.  
(b) Interpolated from the 6/30/99 PwC report.  
Exhibit 2, Sheet 10.

City of Tulsa  
Workers' Compensation  
Comparison of Ultimate Losses  
Including Judgments

|                          | (1)                                     | (2)                                       | (3)                               | (4)                              | (5)                                       |
|--------------------------|-----------------------------------------|-------------------------------------------|-----------------------------------|----------------------------------|-------------------------------------------|
|                          |                                         | Bornhuetter-<br>Ferguson<br>Using         |                                   |                                  |                                           |
| <u>Accident<br/>Year</u> | <u>Paid Loss<br/>Development</u><br>(a) | <u>Exposures and<br/>Paid Loss</u><br>(b) | <u>Selected<br/>Ultimate Loss</u> | <u>Payroll<br/>(00's)</u><br>(c) | <u>Indicated<br/>Loss Rate</u><br>(3)/(4) |
| 07/01/87-06/30/88        | \$4,258,972                             | \$4,225,408                               | \$4,250,000                       | \$1,332,051                      | \$3.19                                    |
| 07/01/88-06/30/89        | 4,186,762                               | 4,091,018                                 | 4,150,000                         | 1,012,783                        | 4.10                                      |
| 07/01/89-06/30/90        | 3,730,300                               | 3,676,270                                 | 3,710,000                         | 1,022,358                        | 3.63                                      |
| 07/01/90-06/30/91        | 5,210,046                               | 5,049,663                                 | 5,150,000                         | 1,097,055                        | 4.69                                      |
| 07/01/91-06/30/92        | 3,972,427                               | 3,957,210                                 | 3,970,000                         | 1,190,968                        | 3.33                                      |
| 07/01/92-06/30/93        | 5,045,032                               | 4,910,681                                 | 5,000,000                         | 1,146,222                        | 4.36                                      |
| 07/01/93-06/30/94        | 5,292,548                               | 5,171,419                                 | 5,250,000                         | 1,253,603                        | 4.19                                      |
| 07/01/94-06/30/95        | 6,086,662                               | 5,870,543                                 | 6,000,000                         | 1,283,393                        | 4.68                                      |
| 07/01/95-06/30/96        | 5,056,927                               | 5,013,564                                 | 5,050,000                         | 1,327,500                        | 3.80                                      |
| 07/01/96-06/30/97        | 4,019,025                               | 4,279,577                                 | 4,250,000                         | 1,403,403                        | 3.03                                      |
| 07/01/97-06/30/98        | 5,163,044                               | 5,297,448                                 | 5,250,000                         | 1,465,314                        | 3.58                                      |
| 07/01/98-06/30/99        | 5,383,662                               | 5,704,020                                 | 5,600,000                         | 1,540,847                        | 3.63                                      |
| 07/01/99-06/30/00        | 5,706,742                               | 6,222,960                                 | 6,100,000                         | 1,572,316                        | 3.88                                      |
| Total                    | \$63,112,149                            | \$63,469,781                              | \$63,730,000                      | \$16,647,813                     | \$3.83                                    |

Notes: (a) Exhibit 3, Sheet 4.  
(b) Exhibit 3, Sheet 2.

City of Tulsa  
Workers' Compensation  
Ultimate Loss Based on Paid Bornhuetter-Ferguson Method  
Including Judgments

| (1)               | (2)                      | (3)                                                     | (4)                           | (5)                                     | (6)                           | (7)                                              |                                            |
|-------------------|--------------------------|---------------------------------------------------------|-------------------------------|-----------------------------------------|-------------------------------|--------------------------------------------------|--------------------------------------------|
| Accident<br>Year  | Payroll<br>(00's)<br>(a) | Selected<br>Loss Rate<br>Per \$100<br>of Payroll<br>(b) | Expected<br>Losses<br>(1)x(2) | Expected<br>Percentage<br>Unpaid<br>(c) | Expected<br>Unpaid<br>(3)x(4) | Actual<br>Paid<br>Losses<br>As of 8/21/00<br>(a) | Indicated<br>Ultimate<br>Loss<br>(5) + (6) |
| 07/01/87-06/30/88 | \$1,332,051              | \$2.86                                                  | \$3,809,666                   | 7.4%                                    | \$281,915                     | \$3,943,493                                      | \$4,225,408                                |
| 07/01/88-06/30/89 | 1,012,783                | 2.94                                                    | 2,977,582                     | 7.8%                                    | 232,251                       | 3,858,767                                        | 4,091,018                                  |
| 07/01/89-06/30/90 | 1,022,358                | 3.03                                                    | 3,097,745                     | 8.3%                                    | 257,113                       | 3,419,157                                        | 3,676,270                                  |
| 07/01/90-06/30/91 | 1,097,055                | 3.12                                                    | 3,422,812                     | 8.9%                                    | 304,630                       | 4,745,033                                        | 5,049,663                                  |
| 07/01/91-06/30/92 | 1,190,968                | 3.22                                                    | 3,834,917                     | 9.7%                                    | 371,987                       | 3,585,223                                        | 3,957,210                                  |
| 07/01/92-06/30/93 | 1,146,222                | 3.31                                                    | 3,793,995                     | 10.6%                                   | 402,163                       | 4,508,518                                        | 4,910,681                                  |
| 07/01/93-06/30/94 | 1,253,603                | 3.41                                                    | 4,274,786                     | 11.7%                                   | 500,150                       | 4,671,269                                        | 5,171,419                                  |
| 07/01/94-06/30/95 | 1,283,393                | 3.52                                                    | 4,517,543                     | 13.8%                                   | 623,421                       | 5,247,122                                        | 5,870,543                                  |
| 07/01/95-06/30/96 | 1,327,500                | 3.62                                                    | 4,805,550                     | 17.0%                                   | 816,944                       | 4,196,620                                        | 5,013,564                                  |
| 07/01/96-06/30/97 | 1,403,403                | 3.73                                                    | 5,234,693                     | 21.3%                                   | 1,114,990                     | 3,164,587                                        | 4,279,577                                  |
| 07/01/97-06/30/98 | 1,465,314                | 3.84                                                    | 5,626,806                     | 29.3%                                   | 1,648,654                     | 3,648,794                                        | 5,297,448                                  |
| 07/01/98-06/30/99 | 1,540,847                | 3.96                                                    | 6,101,754                     | 44.6%                                   | 2,721,382                     | 2,982,638                                        | 5,704,020                                  |
| 07/01/99-06/30/00 | 1,572,316                | 4.08                                                    | 6,415,049                     | 72.7%                                   | 4,663,741                     | 1,559,219                                        | 6,222,960                                  |
| <b>Total</b>      | <b>\$16,647,813</b>      |                                                         | <b>\$57,912,898</b>           |                                         | <b>\$13,939,341</b>           | <b>\$49,530,440</b>                              | <b>\$63,469,781</b>                        |

Notes: (a) Provided by the City.  
 (b) Exhibit 3, Sheet 3.  
 (c) Based on cumulative loss development factors in Exhibit 3, Sheet 6.

City of Tulsa  
Workers' Compensation  
Selected Loss Per Exposure  
Including Judgments

| <u>Accident<br/>Year</u> | (1)<br>Ultimate Loss<br>Based on<br><u>Paid Loss<br/>Projection</u><br>(a) | (2)<br>Payroll<br><u>(00's)</u><br>(b) | (3)<br>Indicated<br><u>Loss Rate</u><br>(1)/(2) | (4)<br>Selected<br><u>Loss Rate</u><br>(c) |
|--------------------------|----------------------------------------------------------------------------|----------------------------------------|-------------------------------------------------|--------------------------------------------|
| 07/01/87-06/30/88        | \$4,258,972                                                                | \$1,332,051                            | \$3.20                                          | 2.86                                       |
| 07/01/88-06/30/89        | 4,186,762                                                                  | 1,012,783                              | 4.13                                            | 2.94                                       |
| 07/01/89-06/30/90        | 3,730,300                                                                  | 1,022,358                              | 3.65                                            | 3.03                                       |
| 07/01/90-06/30/91        | 5,210,046                                                                  | 1,097,055                              | 4.75                                            | 3.12                                       |
| 07/01/91-06/30/92        | 3,972,427                                                                  | 1,190,968                              | 3.34                                            | 3.22                                       |
| 07/01/92-06/30/93        | 5,045,032                                                                  | 1,146,222                              | 4.40                                            | 3.31                                       |
| 07/01/93-06/30/94        | 5,292,548                                                                  | 1,253,603                              | 4.22                                            | 3.41                                       |
| 07/01/94-06/30/95        | 6,086,662                                                                  | 1,283,393                              | 4.74                                            | 3.52                                       |
| 07/01/95-06/30/96        | 5,056,927                                                                  | 1,327,500                              | 3.81                                            | 3.62                                       |
| 07/01/96-06/30/97        | 4,019,025                                                                  | 1,403,403                              | 2.86                                            | 3.73                                       |
| 07/01/97-06/30/98        | 5,163,044                                                                  | 1,465,314                              | 3.52                                            | 3.84                                       |
| 07/01/98-06/30/99        | 5,383,662                                                                  | 1,540,847                              | 3.49                                            | 3.96                                       |
| 07/01/99-06/30/00        | 5,706,742                                                                  | 1,572,316                              | 3.63                                            | 4.08                                       |
| Total                    | \$63,112,149                                                               | \$16,647,813                           | \$3.79                                          |                                            |
| 07/01/93-06/30/00        | \$36,708,610                                                               | \$9,846,376                            | \$3.73                                          |                                            |

Notes: (a) Exhibit 3, Sheet 4.  
(b) Provided by the City.  
(c) Based on the average loss rate for 7/1/93 to 6/30/00  
(\$3.73) trended at 3.0% per annum.

City of Tulsa  
Workers' Compensation  
Paid Loss Development  
Losses Unlimited  
Including Judgments

|                                | (1)                                                                  | (2)                                                              | (3)                                       |
|--------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------|
| <u>Accident</u><br><u>Year</u> | <u>Cumulative</u><br><u>Paid Loss</u><br><u>as of 8/21/00</u><br>(a) | <u>Cumulative</u><br><u>Development</u><br><u>Factors</u><br>(b) | <u>Ultimate</u><br><u>Loss</u><br>(1)x(2) |
| 07/01/87-06/30/88              | \$3,943,493                                                          | 1.080                                                            | \$4,258,972                               |
| 07/01/88-06/30/89              | 3,858,767                                                            | 1.085                                                            | 4,186,762                                 |
| 07/01/89-06/30/90              | 3,419,157                                                            | 1.091                                                            | 3,730,300                                 |
| 07/01/90-06/30/91              | 4,745,033                                                            | 1.098                                                            | 5,210,046                                 |
| 07/01/91-06/30/92              | 3,585,223                                                            | 1.108                                                            | 3,972,427                                 |
| 07/01/92-06/30/93              | 4,508,518                                                            | 1.119                                                            | 5,045,032                                 |
| 07/01/93-06/30/94              | 4,671,269                                                            | 1.133                                                            | 5,292,548                                 |
| 07/01/94-06/30/95              | 5,247,122                                                            | 1.160                                                            | 6,086,662                                 |
| 07/01/95-06/30/96              | 4,196,620                                                            | 1.205                                                            | 5,056,927                                 |
| 07/01/96-06/30/97              | 3,164,587                                                            | 1.270                                                            | 4,019,025                                 |
| 07/01/97-06/30/98              | 3,648,794                                                            | 1.415                                                            | 5,163,044                                 |
| 07/01/98-06/30/99              | 2,982,638                                                            | 1.805                                                            | 5,383,662                                 |
| 07/01/99-06/30/00              | 1,559,219                                                            | 3.660                                                            | 5,706,742                                 |
| Total                          | \$49,530,440                                                         |                                                                  | \$63,112,149                              |

Notes: (a) Provided by the City.  
(b) Based on Exhibit 3, Sheet 6.



City of Tulsa  
Workers' Compensation

Exhibit 3  
Sheet 6

Paid Loss Development  
Including Judgments

| <u>Accident Year</u>                                             | <u>9-21</u>  | <u>21-33</u> | <u>33-45</u> | <u>45-57</u> | <u>57-69</u> | <u>69-81</u> | <u>81-93</u> | <u>93-105</u> | <u>105-117</u> | <u>117-129</u> | <u>129-141</u> | <u>141-153</u> | <u>153-07</u> |
|------------------------------------------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|----------------|----------------|----------------|----------------|---------------|
| 1987                                                             |              |              |              |              |              |              |              | 1.024         | 1.008          | 1.010          | 1.000          | 1.000          |               |
| 1988                                                             |              |              |              |              |              |              | 1.006        | 1.003         | 1.010          | 1.011          | 1.013          |                |               |
| 1989                                                             |              |              |              |              |              | 1.016        | 1.010        | 1.003         | 1.009          | 1.006          |                |                |               |
| 1990                                                             |              |              |              |              | 1.071        | 1.040        | 1.017        | 1.035         | 1.005          |                |                |                |               |
| 1991                                                             |              |              |              | 1.125        | 1.031        | 1.039        | 1.009        | 1.007         |                |                |                |                |               |
| 1992                                                             |              |              | 1.213        | 1.045        | 1.038        | 1.051        | 1.006        |               |                |                |                |                |               |
| 1993                                                             |              | 1.544        | 1.205        | 1.090        | 1.036        | 1.013        |              |               |                |                |                |                |               |
| 1994                                                             | 3.780        | 1.427        | 1.160        | 1.055        | 1.051        |              |              |               |                |                |                |                |               |
| 1995                                                             | 3.422        | 1.447        | 1.158        | 1.012        |              |              |              |               |                |                |                |                |               |
| 1996                                                             | 3.720        | 1.389        | 1.112        |              |              |              |              |               |                |                |                |                |               |
| 1997                                                             | 3.867        | 1.171        |              |              |              |              |              |               |                |                |                |                |               |
| 1998                                                             | 3.789        |              |              |              |              |              |              |               |                |                |                |                |               |
| Volume Weighted Average                                          | 3.713        | 1.391        | 1.171        | 1.062        | 1.046        | 1.032        | 1.010        | 1.016         | 1.008          | 1.009          | 1.006          | 1.000          |               |
| Average                                                          | 3.715        | 1.396        | 1.170        | 1.065        | 1.045        | 1.032        | 1.010        | 1.014         | 1.008          | 1.009          | 1.007          | 1.000          |               |
| 3 Year Volume Weighted Average                                   | 3.797        | 1.328        | 1.147        | 1.052        | 1.042        | 1.033        | 1.011        | 1.017         | 1.008          | 1.009          | 1.006          | 1.000          |               |
| 2 Year Volume Weighted Average                                   | 3.828        | 1.265        | 1.138        | 1.035        | 1.044        | 1.031        | 1.007        | 1.023         | 1.007          | 1.008          | 1.006          | 1.000          |               |
| City of Tulsa<br>- 6/30/99 Reserve<br>Review including Judgments | 3.700        | 1.450        | 1.185        | 1.080        | 1.040        | 1.035        | 1.015        | 1.010         | 1.010          | 1.010          | 1.005          | 1.095          |               |
| NCCI - 2000<br>Oklahoma                                          | 2.856        | 1.453        | 1.147        | 1.065        | 1.036        | 1.022        | 1.016        | 1.011         | 1.009          | 1.008          | 1.007          | 1.005          | 1.082         |
| Selected                                                         | <u>3.725</u> | <u>1.390</u> | <u>1.160</u> | <u>1.060</u> | <u>1.045</u> | <u>1.030</u> | <u>1.015</u> | <u>1.010</u>  | <u>1.010</u>   | <u>1.008</u>   | <u>1.005</u>   | <u>1.005</u>   | <u>1.082</u>  |
| Cumulative                                                       | 7.816        | 2.098        | 1.510        | 1.301        | 1.228        | 1.175        | 1.141        | 1.124         | 1.113          | 1.102          | 1.093          | 1.087          | 1.082         |

City of Tulsa  
Workers' Compensation  
Reported Claim Development  
Losses Unlimited  
Including Judgments

| <u>Accident<br/>Year</u> | (1)<br>Cumulative<br>Reported<br>Claims<br>as of 3/31/00<br>(a) | (2)<br>Cumulative<br>Development<br>Factors<br>(b) | (3)<br>Ultimate<br>Claims<br>(1)x(2) | (4)<br>Selected<br>Ultimate<br>Claims |
|--------------------------|-----------------------------------------------------------------|----------------------------------------------------|--------------------------------------|---------------------------------------|
| 07/01/87-06/30/88        | 1,361                                                           | 1.000                                              | 1,361                                | 1,361                                 |
| 07/01/88-06/30/89        | 1,579                                                           | 1.000                                              | 1,579                                | 1,579                                 |
| 07/01/89-06/30/90        | 1,696                                                           | 1.000                                              | 1,696                                | 1,696                                 |
| 07/01/90-06/30/91        | 1,889                                                           | 1.000                                              | 1,889                                | 1,889                                 |
| 07/01/91-06/30/92        | 1,833                                                           | 1.000                                              | 1,833                                | 1,833                                 |
| 07/01/92-06/30/93        | 1,930                                                           | 1.000                                              | 1,930                                | 1,930                                 |
| 07/01/93-06/30/94        | 1,973                                                           | 1.000                                              | 1,973                                | 1,973                                 |
| 07/01/94-06/30/95        | 2,010                                                           | 1.000                                              | 2,010                                | 2,010                                 |
| 07/01/95-06/30/96        | 2,139                                                           | 1.000                                              | 2,139                                | 2,139                                 |
| 07/01/96-06/30/97        | 1,944                                                           | 1.000                                              | 1,944                                | 1,944                                 |
| 07/01/97-06/30/98        | 2,095                                                           | 1.000                                              | 2,095                                | 2,095                                 |
| 07/01/98-06/30/99        | 1,627                                                           | 1.003                                              | 1,632                                | 1,632                                 |
| 07/01/99-06/30/00        | 1,265                                                           | 1.484                                              | 1,877                                | 1,877                                 |
| Total                    | 23,341                                                          |                                                    | 23,958                               | 23,958                                |

Notes: (a) Provided by the City.  
(b) Exhibit 4, Sheet 3.



