

**RETIREMENT PLAN FOR THE EMPLOYEES' RETIREMENT
FUND OF THE CITY OF DALLAS**
ACTUARIAL VALUATION REPORT
AS OF DECEMBER 31, 2012

May 14, 2013

Board of Trustees
Employees' Retirement Fund of the City of Dallas, Texas
600 North Pearl Street
Suite 2450
Dallas, Texas 75201

Dear Members of the Board:

We are pleased to present our report of the actuarial valuation of the Employees' Retirement Fund of the City of Dallas, Texas ("ERF" or the "Fund") as of December 31, 2012.

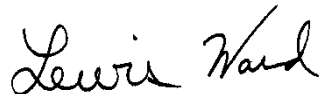
This valuation provides information on the funding status of ERF. It includes a determination of the actuarially calculated contribution rates for the 2013 calendar year. In addition, it also contains the information necessary to determine the current total obligation rate and the current adjusted total obligation rate for the fiscal year beginning October 1, 2013 per City Ordinance. This rate is a function of the previous year's adjusted total obligation rate, this year's actuarially calculated contribution rate, and the rate necessary to make the debt service payment on the previously issued pension obligation bonds for fiscal year 2014.

This valuation is based on the provisions of ERF in effect as of the valuation date, data on the ERF membership and information on the asset values of the Fund as of December 31, 2012. The member, annuitant and asset data used in the valuation were all prepared and furnished by ERF staff. While certain checks for reasonableness were performed, the data used was not audited.

There were no changes in the actuarial assumptions or methods since the prior valuation. All actuarial assumptions and methods are described under Section O of this report and meet the parameters of Governmental Accounting Standards Board Statement No. 25. We believe the actuarial assumptions individually and collectively represent reasonable expectations of experience over the long-term future.

To the best of our knowledge, this report is complete and accurate and was conducted in accordance with the Actuarial Standards of Practice as set forth by the Actuarial Standards Board and in compliance with the provisions of the City Ordinance. The undersigned are independent actuaries and consultants. Mr. Randall is an Enrolled Actuary and a Member of the American Academy of Actuaries and he meets the Qualification Standards of the American Academy of Actuaries. Both Mr. Randall and Mr. Ward have significant experience in performing valuations for large public retirement systems.

Respectfully submitted,



Lewis Ward
Consultant



Mark R. Randall, MAAA, FCA, EA
Executive Vice President & Senior Consultant

Section	Page	
	Number	
		COVER LETTER
A	2	EXECUTIVE SUMMARY
B	3	PURPOSES OF THE ACTUARIAL VALUATION
C	4	REPORT HIGHLIGHTS
D	5	FUNDING PROCESS
E	6	ACTUARIAL CONTRIBUTIONS
F	7	ACTUARIAL ASSUMPTIONS
G	8	ERF BENEFITS
H	9	EXPERIENCE DURING PREVIOUS YEARS
I	10	ASSET INFORMATION
J	11	FUNDED STATUS
K	12	GASB DISCLOSURE
L	13	CLOSING COMMENTS
M	15	ACTUARIAL TABLES
N	34	EXPERIENCE TABLES
O	42	ACTUARIAL METHOD AND ASSUMPTIONS
P	49	SUMMARY OF BENEFIT PROVISIONS

EXECUTIVE SUMMARY

(\$ in 000's)

The key results from the actuarial valuation of the Employees' Retirement Fund of the City of Dallas as of December 31, 2012, may be summarized as follows:

	<u>December 31, 2011</u>	<u>December 31, 2012</u>
	(1)	(2)
• Members		
- Actives	6,745	6,864
- Benefit recipients	6,199	6,320
- Deferred vested*	698	722
- Other terminated*	<u>349</u>	<u>321</u>
- Total	13,991	14,227
• Covered payroll (including overtime)	\$ 309,682	\$ 330,536
• Normal cost	\$ 51,587	\$ 56,252
as % of expected payroll	17.09%	17.30%
• Actuarial accrued liability	\$ 3,391,652	\$ 3,518,356
• Actuarial value of assets	\$ 2,916,746	\$ 2,846,124
• Market value of assets	\$ 2,747,654	\$ 2,979,766
• Unfunded actuarial accrued liability (UAAL)	\$ 474,906	\$ 672,232
• Estimated yield on assets (market value basis)	0.86%	14.29%
• Estimated yield on assets (actuarial value basis)	1.15%	2.82%
• Contribution Rates		
- Prior Adjusted Total Obligation Rate	29.16%	32.08%
- Current Total Obligation Rate	37.62%	40.47%
- Current Adjusted Total Obligation Rate	32.08%	35.29%
• Actuarial gains/(losses)		
- Assets	\$ (209,960)	\$ (154,400)
- Actuarial liability experience	\$ 6,042	\$ (3,462)
- Assumption and method changes	\$ -	\$ (9,110)
• 30-year level % of pay funding cost	\$ 85,941	\$ 103,402
as % of payroll (Employee + City)	27.89%	31.18%
• Funded ratio		
- Based on actuarial value of assets	86.0%	80.9%
- Based on market value of assets	81.0%	84.7%

* *Deferred vested are members who have applied for a deferred pension. Other terminations are other members who have terminated and still have contribution balances in the Fund.*

PURPOSES OF THE ACTUARIAL VALUATION

At your request, we have performed the actuarial valuation of the Employees' Retirement Fund of the City of Dallas ("ERF" or the "Fund") as of December 31, 2012.

The purposes of an actuarial valuation are as follows:

- To determine the funding status of ERF as of the valuation date;
- To develop the actuarially determined level of contributions for ERF for the 2013 calendar year; and
- To develop the current total obligation rate and the current adjusted total obligation rate for the fiscal year beginning October 1, 2013.

REPORT HIGHLIGHTS

The following is a set of key actuarial results from the prior year's valuation as compared to the current year:

	<u>2012</u>	<u>2013</u>
Contribution Rates (% of Payroll)		
Normal Cost (including administrative expense)	18.20%	18.33%
Total Actuarial Contribution Rate	27.89%	31.18%
Total Projected Actuarial Contribution	\$85,941	\$103,402
	<u>December 31, 2011</u>	<u>December 31, 2012</u>
Funded Status		
Actuarial Accrued Liability	\$3,391,652	\$3,518,356
Actuarial Value of Assets	2,916,746	2,846,124
Unfunded Actuarial Accrued Liability	\$474,906	\$672,232
Funded Ratio	86.00%	80.89%

FUNDING PROCESS

Based on the previous work of the Employees' Retirement Fund Study Committee, which was ratified by both the City Council and the voters of Dallas, a new funding process commenced October 1, 2005. From this date forward, a new "current adjusted total obligation rate" will be contributed jointly by the City (63%) and the Membership (37%). This current adjusted total obligation rate will cover both the debt service tied to the pension obligation bonds issued in 2005 and the contributions to the ERF. In subsequent years, the contribution rate changes only if the actuarial valuation develops a "current total obligation rate" which differs from the "prior adjusted total obligation rate" by more than 3.00%.

As shown in Table 3 (under Section M) and discussed later in this report, the "current total obligation rate" (Item 4 in Table 3) differs from the "prior adjusted total obligation rate" (Item 1 in Table 3) by more than 3.00% as of December 31, 2012. This means that the "current adjusted total obligation rate" will increase from 32.08% to 35.29% of active member payroll effective October 1, 2013.

ACTUARIAL CONTRIBUTIONS

The Actuarially Required Contribution Rate developed in this actuarial valuation is 31.18% of active member payroll. This rate excludes the amount needed to make the City's debt service payment on the pension obligation bonds in fiscal year 2014. As shown in Section M -Table 3 of this report, the debt service payment is determined to be 9.29% of projected payroll. The sum of these rates is 40.47% (the Current Total Obligation Rate) which is 8.39% more than the Prior Adjusted Total Obligation Rate of 32.08%. Because the difference is more than 3.00%, the total contribution rate in fiscal year 2014 (the Current Adjusted Total Obligation Rate) to fund the ERF and make the debt service payment on the pension obligation bonds will increase to 35.29%, which is 110% of Prior Adjusted Total Obligation Rate of 32.08%.

The members contribute 37% of the Current Adjusted Total Obligation Rate and the City contributes 63%. Hence, the members portion of the 35.29% total contribution rate will be 13.06% and the City portion will be 22.23%. All of the member contribution rate will be contributed to the ERF. As noted above, 9.29% of the City's contribution rate will go towards the debt service on the pension obligation bonds and the remaining 12.94% will be contributed towards the ERF. This means a total contribution rate of 26.00% will be contributed to the ERF, which compares to the actuarially calculated rate of 31.18%.

ACTUARIAL ASSUMPTIONS

Section O of this report includes a summary of the actuarial assumptions and methods used in this valuation. In short, costs are determined using the Entry Age Normal actuarial cost method. The assumed annual investment return rate is 8.25% including an annual assumed rate of inflation of 3.00%.

There were no changes in the actuarial assumptions since the prior valuation report. Please see Section O for a complete description of the actuarial assumptions and methods currently being employed in the actuarial valuation.

ERF BENEFITS

There were no changes in the benefit provisions of ERF since the prior valuation. Please see Section P for a summary description of the ERF benefits.

EXPERIENCE DURING 2012

An Actuarial (Gain)/Loss Analysis [(G)/L] reviews the effects of the actual experience that differs from the assumed experience based on the actual results for the year. If any difference increases assets or reduces liabilities, we have an actuarial gain. The reverse is an actuarial loss.

On a market value return basis, the Fund gained approximately 14.29% (calculated on a dollar-weighted basis, net of investment expenses). Given the outstanding return, the actual investment income was more than the expected investment income on the actuarial value of assets; therefore, an investment income gain is being partially recognized this year (1/5) and partially deferred into the near future (4/5). After recognizing prior years' deferred investment gains and losses (years 2011 - 2008), there was an overall actuarial loss of \$154 million on the actuarial value of assets as of December 31, 2012 due to the final recognition of the large deferred loss on the market value of assets that occurred in calendar year 2008. The rate of return on the actuarial value of assets for 2012 was 2.82% (calculated on a dollar-weighted basis, net of investment expenses). This result was less than the current investment return assumption of 8.25%.

During 2012 there was an aggregate actuarial loss of about \$3.5 million derived from demographic assumptions and non-investment economic assumptions (salary increases). As seen below, ERF experienced an overall actuarial loss in calendar year 2012. This year's overall actuarial experience loss amounted to approximately \$157.9 million.

The total (G)/L for the prior 4 years is broken down as follows (\$ in millions):

	2009	2010	2011	2012
1) Actuarial (Gain)/Loss on Assets	\$146.94	\$117.40	\$209.96	\$154.40
2) Actuarial (Gain)/Loss on Liabilities	(23.70)	(101.31)	(6.04)	3.46
3) Total Actuarial (Gain) or Loss (1+2)	123.24	16.09	203.92	157.86

The unfunded actuarial accrued liability (UAAL) also increased \$23.4 million due to the difference between the calculated contribution rate and the actual contributions during 2012.

ASSET INFORMATION

The assets of the Fund (on a market value basis) increased from \$2,748 million as of December 31, 2011 to \$2,980 million as of December 31, 2012.

The assets recognized for actuarial valuation purposes (known as “the actuarial value of assets”) are the product of a five-year market smoothing asset method. The purpose of such a smoothing method is to allow the use of market values, but to dampen the effect of the typical year-to-year market fluctuations. See Table 6 in Section M of this report for the determination of the actuarial value of assets as of December 31, 2012.

The actuarial value of assets has decreased from \$2,917 million to \$2,846 million during 2012. This decrease is due primarily to the continued recognition of the 2008 investment loss.

The rate of return on investments for 2012 on the actuarial value of assets was 2.82% compared to 1.15% in 2011. The detailed determinations of asset values utilized in this valuation and the change in assets in the last year are exhibited in Tables 4 and 5 of Section M of this report.

FUNDED STATUS

The funded status of ERF is measured by the Funded Ratio and the Unfunded Actuarial Accrued Liability (UAAL). The Funded Ratio is the ratio of the actuarial value of assets available for benefits to the actuarial accrued liability (AAL) of the Fund on the valuation date. Therefore, it reflects the portion of the AAL that is covered by ERF assets. The UAAL is the difference between these two amounts.

A Funded Ratio of 100% means that the funding of ERF is precisely on schedule as of the particular valuation date. In addition, an increasing funded ratio from year-to-year may also mean that the funding of ERF is on schedule. By monitoring changes in the Funding Ratio each year we can determine whether or not funding progress is being made.

Based on the actuarial value of assets, the Funded Ratio of ERF decreased from 86.0% as of December 31, 2011 to 80.9% as of December 31, 2012. This decrease is due to the continued recognition of the significant downturn in the investment markets during 4th quarter of 2008 and due to the difference between the calculated contribution rate and the actual contribution rate as a result of the corridor funding policy.

The UAAL increased from \$474.9 million as of December 31, 2011 to \$672.2 million as of December 31, 2012. Since the UAAL is positive, this implies the actuarial accrued liabilities exceed the actuarial assets of the Fund as of December 31, 2011 and 2012.

GASB DISCLOSURE

Governmental Accounting Standards Board (GASB) Statement Numbers 25 and 27 detail the current accounting standards for ERF and the Fund's sponsor, the City of Dallas, TX. Tables 10a, 10b, and 10c located in Section M of this report provide footnotes and/or Required Supplemental Information tables required to be disclosed by these statements.

Note on Table 10b that for the past few years the City has contributed less than 100% of the actuarially determined GASB Annual Required Contribution (ARC). This follows four straight years in which the City contributed significantly more than the ARC. Differences between the ARC and the actual contribution must be recognized each year on the City's financial statements. Depending upon whether the cumulative total is a shortfall or excess, then the City would recognize a Net Pension Obligation or Net Pension Asset.

This difference between the ARC and the actual City contribution rate is a function of the corridor funding method in Chapter 40-A of the City Charter. This corridor funding method restricts when and how fast the contribution rate can increase or decrease in a given year.

CLOSING COMMENTS

The funded status and contributions rates of the Fund continue to be impacted by the significant financial market downturn experienced by all retirement systems in 2008. The funded status has declined by more than 25% and the Current Total Obligation Rate has increased from 20.21% of pay as of December 31, 2007 to 40.47% of pay as of December 31, 2012. While most of the change in the funded status and increased contribution rates is due to the 2008 market meltdown, the decline in covered payroll resulting in so many less active members today as compared to 2008 has also had a negative effect.

The contribution rate is comprised of several pieces, the normal cost, the administrative expenses, the amortization payment of the unfunded actuarial accrued liability (UAAL) and the debt service payment on the Pension Obligation Bonds. The last three of the items are specified dollar costs that are converted to percentages of payroll. When the amount of payroll available to pay for these items decreases, then the percentage of payroll necessary to pay the amounts increases. For example, if a fixed payment of \$1,000,000 is required and the payroll is \$10,000,000 then the payment is 10% of pay. However, if the payroll is only \$8,000,000, then the payment is now 12.5% of pay.

The amortization of the UAAL assumes that the payroll will grow at 3% per year. When the Pension Obligation Bonds were issued, their repayment schedule was designed to be an increasing payment schedule that approximated the payroll growth assumption of 3%. At December 31, 2008 the projected payroll for the following year was \$389.4 million. If payroll had grown as assumed (3% per year) then the projected payroll for the upcoming year (2013) would be expected to be \$438.3 million. However, the City has experienced severe budget issues due to the recent recession and as a result has reduced the active membership of the Fund by almost 20% over the past four years. This has resulted in a projected payroll for 2013 of only \$340.5 million (or 78% of what was expected as of four years ago).

CLOSING COMMENTS (CONTINUED)

The 2012 experience of the Fund reversed the trend of the prior three years, with an increase in the projected payroll of 6.7%. If payroll had only grown at 3% as assumed, the calculated contribution rate (including the debt service on the pension obligation bonds) would have been greater by 0.80% of payroll. This partially offset the more than 5% of payroll increase in the contribution rate during the prior three valuations as a result of the decline in active members, and the resulting decline in payroll.

ACTUARIAL TABLES

Table Number	Content of Tables	Page
1	Summary of Actuarial Values	16
2	Development of Actuarially Required Contribution for FY 2012	17
3	Information for City Ordinance 25695	18
4	Net Assets Available for Benefits	22
5	Change in Assets Available for Benefits	23
6	Development of Actuarial Value of Assets	24
7	Historical Investment Performance	25
8	Analysis of Change in Unfunded Actuarial Accrued Liability	26
9	Analysis of Actuarial Gains and Losses for 2012	27
10a	Schedule of Funding Status	28
10b	Schedule of Employer Contributions	29
10c	Notes to Required Supplementary Information	30
11	Summary of Data Characteristics	31
12	Distribution of Active Members and Payroll by Age and Years of Service	32
13	Distribution of Benefit Recipients	33

Summary of Actuarial Values
As of December 31, 2012
(\$ in 000's)

	APV* of Projected Benefits	Entry Age Actuarial Values		
		Actuarial Accrued Liability (AAL)	Normal Cost \$	Normal Cost % of Pay**
1 Active Members				
a. Retirement	\$ 1,349,573	\$ 1,111,987	\$ 37,415	11.52%
b. Death	28,903	19,340	1,557	0.48%
c. Disability	16,828	7,679	1,463	0.45%
d. Termination	98,740	9,609	13,554	4.17%
e. Health Subsidy	45,801	33,156	2,263	0.68%
Total	1,539,845	1,181,771	56,252	17.30%
2 Benefit Recipients	2,250,533	2,250,533		
3 Other Inactive	86,052	86,052		
4 Total Actuarial Values of Benefits	3,876,430	3,518,356	56,252	17.30%
5 Actuarial Value of Assets		2,846,124		
6 Unfunded Actuarial Accrued Liability (4 - 5)		672,232		
7 Funding Ratio		80.89%		
funded ratio M V		0.847		
uaal - M V		538,590		

* APV – Actuarial Present Value

** Percentage of expected payroll for continuing active members.

Development of Actuarially Required Contribution for FY 2014
(\$ in 000's)

	<u>\$</u>	<u>% of Pay</u>
Actuarial Requirement		
a. Payment to Amortize UAAL over 30 years*	\$ 43,748	12.85%
b. Normal Cost	56,252	17.30%
c. Administrative Expense	<u>3,402</u>	<u>1.03%</u>
Total	\$ 103,402	31.18%

* Amortization is determined as a level percentage of projected payroll

**Information for Ordinance 25695
For the Fiscal Year Commencing October 1, 2013**

1 Prior Adjusted Total Obligation Rate	32.08%
2 Actuarially Required Contribution Rate	31.18%
3 Debt Service	
a Scheduled Debt Service Payment for FY 2014	31,625,955
b Projected Payroll	340,452,430
c Pension Obligation Bond Credit Rate (a/b)	9.29%
4 Current Total Obligation Rate (2 + 3c)	40.47%
5 Current Adjusted Total Obligation Rate	35.29% *
6 Allocation of Contribution Rates for FY 2013	
a Employee (5 x .37)	13.06%
b City (5 x .63)	22.23%

* If the absolute value of the difference between the Prior Adjusted Total Obligation Rate (PATOR) and the Current Total Obligation Rate (CTOR) is less than or equal to 3.0% then:

 Current Adjusted Total Obligation Rate (CATOR) = PATOR

otherwise:

1) If $PATOR - CTOR > 3.00\%$ then the CATOR is set equal to the greater of:

- a) the average of the Prior Adjusted Total Obligation Rate and the Current Total Obligation Rate; or
- b) 90% of the Prior Adjusted Total Obligation Rate

or

2) If $PATOR - CTOR < -3.00\%$ then the CATOR is set equal to the lesser of:

- a) the average of the Prior Adjusted Total Obligation Rate and the Current Total Obligation Rate; or
- b) 110% of the Prior Adjusted Total Obligation Rate

Excerpts from City Ordinance 25695

ACTUARIALLY REQUIRED CONTRIBUTION RATE – means, for any fiscal year, a rate of contribution to the fund, expressed as a percentage of members' projected wages for such fiscal year, which is the sum of the following as determined in the actuarial valuation report for the preceding plan year:

- (A) the actuarial present value of the pension plan benefits and expenses that are allocated to a valuation period by the actuarial cost method; and
- (B) the contribution that will amortize the difference between the actuarial accrued liability of the fund and the actuarial value of the assets of the fund over the period of years required by generally accepted accounting principles.

CITY CONTRIBUTIONS – means, for each pay period ending during a transition year, the city shall contribute to the retirement fund an amount equal to:

- (A) 63% times the current total obligation rate for that fiscal year times the members' wages for the pay period, minus
- (B) The pension obligation bond credit rate for that fiscal year times the members' wages for the pay period;

and, for each pay period ending during each fiscal year, except for a transition year, the city shall contribute to the retirement fund an amount equal to:

- (C) 63% times the current adjusted total obligation rate for that fiscal year times the members' wages for the pay period, minus
- (D) The pension obligation bond credit rate for that fiscal year times the members' wages for the pay period.

EMPLOYEE CONTRIBUTIONS – means, for each pay period ending during a transition year, each member shall contribute to the retirement fund an amount equal to:

- (A) 37% times the current total obligation rate for that fiscal year times the member's wages for the pay period;

and, for each pay period ending during each fiscal year, except for a transition year, the member shall contribute to the retirement fund an amount equal to:

- (B) 37% times the current adjusted total obligation rate for that fiscal year times the member's wages for the pay period.

CURRENT ADJUSTED TOTAL OBLIGATION RATE – means, for any fiscal year, the rate determined by the board as follows, using whichever formula is applicable:

(A) If the current total obligation rate minus the prior adjusted total obligation rate is greater than three, then the current adjusted total obligation rate for such fiscal year is equal to the lesser of:

- (i) the prior adjusted total obligation rate plus one-half times the difference of the current total obligation rate minus the prior adjusted total obligation rate; or
- (ii) 110 percent times the prior adjusted total obligation rate; or
- (iii) 36 percent.

(B) If the difference between the current total obligation rate and the prior adjusted total obligation rate is less than three, then the current adjusted total obligation rate for such fiscal year is equal to the prior adjusted total obligation rate.

(C) If the prior adjusted total obligation rate minus the current total obligation rate is greater than three, then the current adjusted total obligation rate for such fiscal year is equal to the greater of:

- (i) the prior adjusted total obligation rate minus one-half times the difference of the prior adjusted total obligation rate minus the current total obligation rate; or
- (ii) 90 percent times the prior adjusted total obligation rate.

CURRENT TOTAL OBLIGATION RATE – means, for any fiscal year, the rate adopted by the board that is equal to the sum of the pension obligation bond credit rate for such fiscal year plus the actuarially required contribution rate for such fiscal year.

PENSION OBLIGATION BOND CREDIT RATE – means, for any fiscal year, the rate adopted by the board that is a percentage calculated by dividing:

(A) the debt service due during such fiscal year on any pension obligation bonds, the proceeds of which have been deposited in the fund, by:

(B) the total members' projected wages for such fiscal year, as reported in the relevant actuarial valuation report.

PRIOR ADJUSTED TOTAL OBLIGATION RATE – means:

(A) for the fiscal year commencing October 1, 2006, the current total obligation rate that was effective for the prior fiscal year; and

(B) for each fiscal year commencing on or after October 1, 2007, the current adjusted total obligation rate that was effective for the prior fiscal year.

PROJECTED PAYROLL – means the covered payroll for the valuation proceeding the fiscal year multiplied by the payroll growth assumption.

TRANSITION YEAR – means each of the following:

- (A) the first fiscal year in which debt service payments related to pension obligation bonds are due from the city;
- (B) the first fiscal year in which no debt service payments related to pension obligation bonds are due from the city; and
- (C) the fiscal year beginning October 1, 2005.

	<u>December 31, 2011</u>	<u>December 31, 2012</u>
Net Assets Available for Benefits		
(\$ in 000's)		
1 Assets		
a. Cash & Short-Term	\$105,794	\$87,644
2 Receivables		
a. Accrued Investment Income	14,287	13,227
b. Securities Sold	3,837	8,713
c. Employer Contribution	325	521
d. Employee Contribution	382	604
e. Pending Contracts	77	1,539
	<u>18,908</u>	<u>24,604</u>
3 Investments		
a. Index Funds	106,288	74,337
b. Fixed Income	846,706	885,604
c. Equities	1,488,774	1,697,131
d. Real Estate	175,489	191,565
e. Private Equity	35,561	60,177
f. Venture Capital	0	0
	<u>2,652,818</u>	<u>2,908,814</u>
4 Total Assets	2,777,520	3,021,062
5 Liabilities		
a. Accounts Payable	4,582	4,715
b. Investment Transactions	25,284	36,581
	<u>29,866</u>	<u>41,296</u>
6 Net Assets Available For Benefits	<u>2,747,654</u>	<u>2,979,766</u>

Change in Assets Available for Benefits
Fiscal Year Ending December 31, 2012
(\$ in 000's)

	<u>2011</u>	<u>2012</u>
1 Assets Available at Beginning of Year	\$ 2,868,196	\$ 2,747,654
Adjustment *	-	807
	<u>2,868,196</u>	<u>2,748,461</u>
2 Revenues		
a. Employer Contributions	27,302	30,363
b. Employee Contributions	31,748	35,648
c. Investment Income	98,163	103,916
d. Investment Expense	(12,148)	(15,523)
e. Realized and Unrealized Gains (Losses)	(63,178)	292,137
f. Other (Security Lending)	1,269	1,533
Total Revenues	<u>83,156</u>	<u>448,074</u>
3 Expenses		
a. Benefits	195,270	209,097
b. Refunds	4,982	4,369
c. Administration Expense	3,446	3,303
Total Expense	<u>203,698</u>	<u>216,769</u>
4 Assets Available at End of Year (1 + 2 - 3)	<u><u>2,747,654</u></u>	<u><u>2,979,766</u></u>

* Change due to difference between unaudited asset value used for prior valuation and audited asset value reported the following year.

Development of Actuarial Value of Assets

As of December 31, 2012

(\$ in 000's)

	<u>Market Value</u>	<u>Actuarial Value</u>
1 Value of Assets @ 12-31-2011	\$ 2,747,654	\$ 2,916,746
2 Non-Investment Cash Flows during 2012		
a. Employer Contributions	30,363	30,363
b. Employee Contributions	35,648	35,648
c. Benefits (including refunds)	(213,466)	(213,466)
d. Administrative Expenses	(3,303)	(3,303)
Total	<u>(150,758)</u>	<u>(150,758)</u>
3 Expected Investment Returns @ 8.25%	234,536	234,536
4 Expected Assets @ 12-31-2012 (1 + 2 + 3)	2,831,432	3,000,524
5 Actual Assets Available for Benefits	2,979,766	
6 Gain/ (Loss) From Investment Returns (5 - 4)	148,334	
7 Recognition of Gains / (Losses)		
a. One-fifth of Current Year Gain/(Loss) (one-fifth of 6)		29,667
b. One-fifth of 2011 Gain/(Loss)		(43,962)
c. One-fifth of 2010 Gain/(Loss)		30,928
d. One-fifth of 2009 Gain/(Loss)		75,826
e. One-fifth of 2008 Gain/(Loss)		(246,859)
Total		<u>(154,400)</u>
8 Actuarial Value of Assets @ 12-31-2012 (4 + 7)		2,846,124

Historical Investment Performance
Dollar Weighted Basis Net of Investment Expenses

<u>Calendar Year</u>	<u>On Market Value</u>	<u>On Actuarial Value</u>
1997	20.48%	12.49%
1998	16.99%	15.17%
1999	16.74%	17.69%
2000	-3.45%	9.59%
2001	-5.46%	2.76%
2002	-9.81%	-5.37%
2003	27.05%	2.03%
2004	15.22%	9.38%
2005	7.93%	13.71%
2006	16.90%	13.03%
2007	3.56%	9.58%
2008	-31.31%	-3.76%
2009	30.35%	6.79%
2010	15.77%	4.30%
2011	0.86%	1.15%
2012	14.29%	2.82%
5-year average ending in 2012	3.62%	2.20%
10-year average ending in 2012	8.62%	5.77%

**Analysis of Change in Unfunded
Actuarial Accrued Liability
For the Year Ending December 31, 2012
(\$ in 000's)**

1 UAAL as of December 31, 2011		\$ 474,906
2 Expected Change in UAAL during 2012		
a. Expected Amortization Payment for CY 2012	(30,908)	
b. Interest adjustments on 1 & 2a to Year End @ 8.25%	<u>37,905</u>	
c. Expected change in UAAL		6,997
3 Increase/(Decrease) in UAAL Due to Difference Between Calculated Contribution Rate and Actual Contribution Rate		23,357
4 Net Actuarial Experience (Gains) & Losses		157,862
5 Assumption and Method Changes		9,110
6 UAAL as of December 31, 2012		\$ 672,232

**Analysis of Actuarial (Gains) and Losses
For 2012
(\$ in 000's)**

	<u>2012</u>
Investment Return	\$ 154,400
Salary Increase	25,143
Age and Service Retirement	(7,982)
General Employment Termination	3,174
Disability Incidence	(393)
Active Mortality	(293)
Benefit Recipient Mortality	(5,159)
Actual vs. Expected Cost of Living Adjustment (COLA)*	(8,509)
Other	<u>(2,519)</u>
Total Actuarial (Gain) Loss	\$ 157,862

* Actual COLA of 2.408% versus expected COLA of 3.00%

Schedule of Funding Status
(As Required by GASB #25)
(\$ in 000's)

End of Year	Actuarial Value of Assets (a)	AAL (b)	UAAL (b-a)	Funding Ratio (a/b)	Payroll* (c)	UAAL as % of Payroll ((b-a)/c)
1992	\$854,000	\$1,107,000	\$253,000	77.15%	\$200,000	126.50%
1993	945,000	1,123,000	178,000	84.15%	200,000	89.00%
1994	991,000	1,199,000	208,000	82.65%	208,000	100.00%
1995	1,176,000	1,459,000	283,000	80.60%	243,357	116.30%
1996	1,310,081	1,585,081	275,000	82.65%	257,169	106.90%
1997	1,437,533	1,673,761	236,228	85.89%	261,799	90.20%
1998	1,617,468	1,750,430	132,962	92.40%	275,547	48.30%
1999	1,862,644	1,873,998	11,353	99.39%	282,127	4.00%
2000	1,997,828	2,038,078	40,250	98.03%	298,355	13.50%
2001	2,017,041	2,276,488	259,447	88.60%	332,842	77.90%
2002	1,863,701	2,399,569	535,868	77.67%	324,615	165.08%
2003	1,843,099	2,489,071	645,972	74.05%	318,492	202.82%
2004	2,482,082	2,488,270	6,188	99.75%	331,201	1.87%
2005	2,739,269	2,606,173	(133,096)	105.11%	332,446	-40.04%
2006	2,998,099	2,761,404	(236,695)	108.57%	344,997	-68.61%
2007	3,183,260	2,915,164	(268,096)	109.20%	370,150	-72.43%
2008	2,957,506	3,075,385	117,879	96.17%	389,362	30.27%
2009	3,031,652	3,192,120	160,468	94.97%	375,164	42.77%
2010	3,027,439	3,282,126	254,687	92.24%	332,045	76.70%
2011	2,916,946	3,391,652	474,906	86.00%	318,972	148.89%
2012	2,846,124	3,518,356	672,232	80.89%	340,452	197.45%

* Projected to following year.

Schedule of Employer Contributions
(As Required by GASB #25)
(\$ in 000's)

<u>Year</u>	<u>Total ARC*</u>	<u>Member Contributions</u>	<u>Net City ARC</u>	<u>Actual City Contributions</u>	<u>City Cont. as Percent of Net ARC</u>
1997	\$58,095	\$13,193	\$44,902	\$22,404	49.90 %
1998	61,339	14,001	47,338	23,762	50.20 %
1999	57,159	14,932	42,227	25,217	59.72 %
2000	50,142	16,460	33,682	27,847	82.68 %
2001	52,535	20,814	31,728	35,182	110.91 %
2002	71,246	21,771	49,475	36,606	73.99 %
2003	86,429	20,580	65,849	34,729	52.74 %
2004	92,278	20,896	71,382	35,251	49.38 %
2005	51,290	23,392	27,898	565,569	2027.29 %
2006	44,503	30,123	14,380	23,000	159.94 %
2007	41,079	31,692	9,387	23,413	249.42 %
2008	42,637	31,839	10,798	22,720	210.41 %
2009	71,615	32,229	39,386	25,232	64.06 %
2010	72,765	31,666	41,099	27,323	66.48 %
2011	72,797	31,748	41,049	27,302	66.51 %
2012	85,941	35,648	50,293	30,363	60.37 %
2013	103,402	40,412 **	62,990 **		

* ARC – Annual Required Contribution as defined in GASB Statements No. 25 and No. 27.

** Estimated.

Note 1: Data for years prior to 1998 are based on prior actuarial work product.

Note 2: GASB Statements 25 and 27 are standards for accounting for public retirement systems and employers. They are not designed to limit the funding decisions of plan sponsors.

Notes to Required Supplementary Information

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the dates indicated. Additional information as of the latest actuarial valuation for GASB 25 purposes is as follows:

Valuation Date	December 31, 2012
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent Open
Payroll Growth Rate for Amortization	3.00%
Remaining Amortization Period	30 years
Asset Valuation Method	5-Year Smoothed Market
Actuarial Assumptions:	
Investment Rate of Return*	8.25%
Projected Salary Increases*	3.0% - 7.0%
*Includes Inflation at	3.00%
Cost-of-Living Adjustments	3.00%

Note: GASB Annual Required Contribution determined with 30-year funding period.
Actual contribution rate set by City Ordinance No. 25695.

Summary of Data Characteristics

	<u>December 31, 2010</u>	<u>December 31, 2011</u>	<u>December 31, 2012</u>
Active Members			
Number	7,034	6,745	6,864
Total Annualized Earnings of Members as of 12/31 (000's)	\$322,374	\$309,682	\$330,536
Average Earnings	45,831	45,913	48,155
Benefit Recipients			
Number	5,993	6,199	6,320
Total Annual Retirement Income (000's)	\$179,730	\$193,851	\$202,121
Total Annual Health Supplement (000's)	\$8,741	\$9,066	\$9,193
Average Total Annual Benefit	\$31,449	\$32,734	\$33,436
Inactive Members			
Number	1,111	1,047	1,043*

* The number of inactives on 12/31/2012 includes 722 members who have applied for a deferred pension and 321 other members who have terminated and still have contribution balances in the Fund.

* The number of inactives on 12/31/2012 includes 722 members who have applied for a deferred pension and 321 other members who have terminated and still have contribution balances in the Fund.

Distribution of Active Members and Payroll by Age and Years of Service

Age	Years of Service								Totals
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30 & Over	
Under 20	4	-	-	-	-	-	-	-	4
	108,449	-	-	-	-	-	-	-	108,449
20-24	50	46	2	-	-	-	-	-	98
	1,500,417	1,409,369	58,338	-	-	-	-	-	2,968,124
25-29	116	191	106	-	-	-	-	-	413
	4,235,088	7,428,277	3,913,663	-	-	-	-	-	15,577,028
30-34	138	197	194	37	-	-	-	-	566
	5,427,320	8,096,134	8,103,558	1,626,103	-	-	-	-	23,253,115
35-39	97	189	243	152	50	1	-	-	732
	4,049,527	8,395,282	11,258,914	6,832,189	2,427,053	46,434	-	-	33,009,399
40-44	90	151	244	166	168	48	1	-	868
	3,410,935	6,587,229	10,967,374	7,584,483	8,509,918	2,631,069	50,084	-	39,741,092
45-49	90	170	295	214	210	132	128	8	1,247
	3,343,643	7,172,081	14,119,738	10,456,214	11,013,549	7,959,052	7,446,121	531,780	62,042,178
50-54	65	165	262	226	195	186	148	43	1,290
	2,765,574	7,167,701	11,616,532	11,145,368	10,256,644	11,012,708	9,598,309	2,876,233	66,439,069
55-59	49	117	201	179	177	90	74	60	947
	1,877,231	5,490,035	8,988,932	9,148,450	9,543,461	5,698,994	4,423,439	4,085,509	49,256,051
60-64	20	53	121	109	92	47	47	27	516
	858,316	2,446,100	5,970,218	5,665,656	4,956,647	2,984,810	3,025,837	1,775,048	27,682,632
65 & Over	4	19	37	39	24	29	16	15	183
	257,914	812,183	1,889,620	2,117,214	1,339,767	1,787,579	1,080,154	1,174,772	10,459,203
Totals	723	1,298	1,705	1,122	916	533	414	153	6,864
	27,834,414	55,004,391	76,886,887	54,575,677	48,047,039	32,120,646	25,623,944	10,443,342	330,536,340

**Distribution of Benefit Recipients
as of December 31, 2012**

Age	Number	Annual Benefit*	Annual Average Benefit*
Under 50	68	\$ 1,106,241	\$ 16,268
50-54	381	15,660,764	41,104
55-59	761	32,057,170	42,125
60-64	1,480	54,994,725	37,159
65-69	1,237	40,717,623	32,916
70-74	818	22,404,508	27,389
75-79	625	16,019,253	25,631
80-84	477	10,587,811	22,197
85-89	287	5,694,815	19,843
90 & Over	186	2,877,672	15,471
Total	6,320	\$ 202,120,582	\$ 31,981

* Does not include Health Benefit Supplement.

EXPERIENCE TABLES

Table Number	Content of Tables	Page
14	Analysis of Pay Experience (Valuation Pay)	35
15a	Analysis of Retirement Experience – Each Age	36
15b	Analysis of Retirement Experience - Age Groups	37
16	Analysis of Turnover Experience	38
17	Analysis of Active Mortality Experience	39
18	Analysis of Disability Experience	40
19	Analysis of Retiree Mortality Experience	41

**Pay Experience for Employees who are Active at
 Beginning and End of Year
 Valuation Pay Analysis
 Analyzed by Years of Service**

Service Beginning of Year	Experience for 2012			
	Number	Expected Pay	Actual Pay	Ratio A/E
Under 5	1,046	41,097,374	44,546,753	108.39%
5-9	1,833	77,654,703	81,387,619	104.81%
10-14	1,107	52,382,629	54,090,846	103.26%
15-19	957	48,445,766	49,476,509	102.13%
20-24	562	32,545,705	33,391,925	102.60%
25-29	425	26,128,804	26,600,087	101.80%
30 & Over	178	11,624,513	11,916,744	102.51%
Total	6,108	\$ 289,879,494	\$ 301,410,483	103.98%
Over 10 Years	3,229	\$ 171,127,417	\$ 175,476,111	102.54%

Service Beginning of Year	Experience for 2011/2012			
	Number	Expected Pay	Actual Pay	Ratio A/E
Under 5	2,334	91,479,755	95,150,292	104.01%
5-9	3,463	147,460,930	150,214,713	101.87%
10-14	2,332	109,869,508	110,520,590	100.59%
15-19	1,850	94,496,310	94,468,947	99.97%
20-24	1,112	65,071,364	65,104,563	100.05%
25-29	903	55,275,099	54,975,193	99.46%
30 & Over	336	21,782,766	21,743,102	99.82%
Total	12,330	\$ 585,435,732	\$ 592,177,400	101.15%
Over 10 Years	6,533	\$ 346,495,047	\$ 346,812,395	100.09%

Analysis of Retirement Experience

Age	2012 Retirement			2011/2012 Retirement		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
46	-	-	N/A	-	-	N/A
47	-	-	N/A	-	-	N/A
48	-	0.20	0.00%	2	1.10	181.82%
49	-	1.00	0.00%	2	2.20	90.91%
50	15	13.45	111.52%	40	30.80	129.87%
51	14	16.29	85.94%	32	31.68	101.01%
52	19	18.06	105.20%	34	31.93	106.48%
53	9	13.60	66.18%	28	30.96	90.44%
54	11	16.97	64.82%	21	30.32	69.26%
55	11	16.34	67.32%	23	33.75	68.15%
56	10	15.60	64.10%	21	30.70	68.40%
57	12	13.24	90.63%	22	25.34	86.82%
58	5	10.88	45.96%	12	21.99	54.57%
59	8	11.82	67.68%	21	21.65	97.00%
60	17	19.63	86.60%	36	41.56	86.62%
61	12	17.42	68.89%	34	36.48	93.20%
62	9	18.48	48.70%	25	34.92	71.59%
63	12	14.44	83.10%	33	32.52	101.48%
64	9	12.58	71.54%	19	23.32	81.48%
65	14	13.70	102.19%	29	26.85	108.01%
66	7	9.95	70.35%	17	17.75	95.77%
67	4	5.25	76.19%	12	10.00	120.00%
68	1	2.10	47.62%	4	7.35	54.42%
69	3	3.60	83.33%	7	5.70	122.81%
70 & Over	6	39.00	15.38%	15	81.00	18.52%
Total	208	303.60	68.51%	489	609.87	80.18%
Total Under 70	202	264.60	76.34%	474	528.87	89.63%

**Analysis of Retirement Experience
 Age Groups**

Age Group	2012 Retirements			2011/2012 Retirements		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
Under 55	68	79.57	85.46%	159	158.99	100.01%
55-59	46	67.88	67.77%	99	133.43	74.20%
60-64	59	82.55	71.47%	147	168.80	87.09%
65-69	29	34.60	83.82%	69	67.65	102.00%
70 & Over	6	39.00	15.38%	15	81.00	18.52%
Total	208	303.60	68.51%	489	609.87	80.18%
Total Under 70	202	264.60	76.34%	474	528.87	89.63%

Analysis of Turnover Experience

Years of Service	2012 Quits			2011/2012 Quits		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
0-4	209	175.85	118.85%	507	375.72	134.94%
5-9	163	124.44	130.99%	302	238.67	126.54%
10-14	26	37.96	68.50%	71	81.03	87.62%
15-19	16	22.07	72.51%	36	43.88	82.03%
20-24	7	7.09	98.67%	15	14.22	105.50%
25-29	2	0.66	303.95%	2	1.58	1.26
Total	423	368.06	114.93%	933	755.10	123.56%

Analysis of Active Mortality Experience

Age	2012 Deaths			2011/2012 Deaths		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
20-24	-	0.03	0.00%	-	0.05	0.00%
25-29	-	0.14	0.00%	1	0.29	349.82%
30-34	-	0.29	0.00%	1	0.60	166.87%
35-39	1	0.57	174.67%	2	1.17	170.37%
40-44	-	1.04	0.00%	3	2.21	135.59%
45-49	1	2.23	44.84%	3	4.58	65.57%
50-54	1	3.39	29.49%	4	6.83	58.57%
55-59	-	3.95	0.00%	2	7.74	25.85%
60 and Over	-	5.19	0.00%	1	10.32	9.69%
Total	3	16.83	17.83%	17	33.79	50.31%

Analysis of Disability Experience

Age	2012 Disabilities			2011/2012 Disabilities		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
20-24	-	0.01	0.00%	-	0.03	0.00%
25-29	-	0.09	0.00%	-	0.19	0.00%
30-34	-	0.18	0.00%	-	0.36	0.00%
35-39	-	0.34	0.00%	-	0.70	0.00%
40-44	-	0.74	0.00%	-	1.57	0.00%
45-49	-	2.10	0.00%	3	4.32	69.52%
50-54	1	3.35	29.81%	4	6.76	59.13%
55-59	2	3.43	58.33%	3	6.79	44.15%
60 and Over	-	1.14	0.00%	-	2.09	0.00%
Total	3	11.38	26.36%	10	22.82	43.82%

Analysis of Retiree Mortality Experience*

Age	2012 Experience			2011/2012 Experience		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
Under 60	10	3.86	258.85%	20	7.87	254.21%
60-64	12	11.36	105.61%	25	22.49	111.18%
65-69	11	15.70	70.07%	24	30.02	79.95%
70-74	18	18.17	99.09%	35	35.13	99.64%
75-79	21	21.61	97.19%	44	42.33	103.95%
80-84	28	27.94	100.20%	49	56.10	87.35%
85-89	17	26.44	64.29%	42	52.14	80.55%
90 & over	20	20.30	98.52%	40	39.81	100.49%
Total	137	145.39	94.23%	279	285.87	97.60%

**This analysis does not include beneficiary, QDRO, or disabled deaths.*

ACTUARIAL METHOD AND ASSUMPTIONS ENTRY AGE NORMAL METHOD

The Entry Age Normal actuarial cost method is the actuarial valuation method used for all purposes under ERF.

The concept of this method is that funding of benefits for each member should be effected as a, theoretically, level contribution (as a level percentage of pay) from entry into ERF to termination of active status.

The Normal Cost (NC) for a fiscal year under this method is determined as described in the prior paragraph for each member. The ERF NC for the year is the total of individual normal costs determined for each active member.

The Actuarial Accrued Liability (AAL) under this method is the theoretical asset balance of the normal costs that would have accumulated to date based upon current actuarial assumptions. To the extent that the assets of the fund are insufficient to cover the AAL, an Unfunded Actuarial Accrued Liability (UAAL) develops.

The actuarially calculated contribution for a year is the Normal Cost for that year plus an amount to amortize the UAAL over 30 years as a level percentage of pay.

ACTUARIAL VALUE OF ASSET METHOD

The actuarial value of assets is equal to the expected actuarial value of assets adjusted for a five-year phase-in of actual investment return in excess of (or less than) expected investment return. The actual return is calculated net of investment expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's actuarial value of assets, adjusted for contributions, benefits paid, and refunds.

ACTUARIAL ASSUMPTIONS (AS OF DECEMBER 31, 2012)

Annual Rate of Investment Return. For all purposes under the Fund, the rate of investment return is assumed to be 8.25% per annum, net of investment expenses. This rate includes an annual assumed rate of inflation of 3.00%. In addition, annual cost-of-living adjustments are assumed to occur on average at the rate of 3.00% per annum.

Annual Compensation Increases. Each member's compensation is assumed to increase in accordance with a table based on actual ERF experience. Sample rates follow.

<u>Years of Service</u>	<u>Merit, Promotion, Longevity</u>		<u>General</u>		<u>Total</u>	
0	3.50	%	3.50	%	7.00	%
1	3.25		3.50		6.75	
2	2.75		3.50		6.25	
3	1.50		3.50		5.00	
4	1.25		3.50		4.75	
5	1.00		3.50		4.50	
6	0.75		3.50		4.25	
7	0.50		3.50		4.00	
8	0.25		3.50		3.75	
9 & Over	0.00		3.50		3.50	

Actuarial Assumptions (cont.)

Mortality:

Disabled Lives: RP-2000 Disabled Mortality Table for male annuitants, set forward one year.

Sample rates follow (rate per 1,000):

Age	Disability Mortality Rate	
	Male	Female
20	23	23
30	23	23
40	23	23
50	30	30
60	43	43
70	66	66
80	116	116
90	200	200

Other Benefit Recipients:

- a. Males – RP-2000 Healthy Mortality Table for male annuitants, projected to 2007 using scale AA, set forward two years.
- b. Females – RP-2000 Healthy Mortality Table for female annuitants.

Sample rates follow (rate per 1,000).

Age	Mortality Rate	
	Male	Female
30	0.5	0.3
40	1.1	0.7
50	2.3	1.7
60	7.9	5.1
70	24.5	16.7
80	76.1	45.9
90	212.1	131.7

Actuarial Assumptions (cont.)

Mortality:

Active Members:

- a. Males – RP2000 Healthy Mortality Table for male employees, set forward 4 years.
- b. Females – RP2000 Healthy Mortality Table for female employees, set back 5 years.

Sample rates follow (rate per 1,000).

<u>Age</u>	<u>Mortality Rate</u>	
	<u>Male</u>	<u>Female</u>
30	0.7	0.2
40	1.4	0.5
50	2.8	1.1
60	7.0	2.5
70	33.9	5.8
80	99.8	28.1
90	250.7	77.4

10% of active deaths are assumed to be service related.

Disability: A client-specific table of disability incidence with sample rates follows (rate per 1,000).

<u>Age</u>	<u>Disability Rate</u>
30	0.3
40	0.6
50	2.4
60	6.0

35% of disabilities are assumed to be service related. There is a 0.00% assumption of disability for members who have over 10 years of service and are eligible for retirement.

Actuarial Assumptions (cont.)

Retirement: Upon eligibility, active members are assumed to retire as follows (rate per 1,000).

Age	Male		Female	
	First Year Eligible	Thereafter	First Year Eligible	Thereafter
48-49	100	100	100	100
50	550	550	350	350
51	450	450	430	430
52	450	330	430	430
53	380	330	300	300
54	380	330	300	300
55	380	330	300	300
56	350	300	250	250
57	350	300	220	220
58-59	330	280	220	220
	<u>Service < 18 yrs.</u>	<u>Service 18 yrs.+</u>	<u>Service < 18 yrs.</u>	<u>Service 18 yrs. +</u>
60	80	250	100	350
61	90	250	150	220
62	130	250	150	200
63	150	280	150	150
64	160	250	100	100
65	200	350	200	250
66	250	250	250	350
67	250	200	250	350
68	150	200	150	350
69	150	200	150	150
70	1,000	1,000	1,000	1,000

Actuarial Assumptions (cont.)

General Turnover: A table of termination rates based on ERF experience. A sample of the ultimate rates follows.

<u>Years of Service</u>	<u>Terminations (per 1,000)</u>
0	210.0
1	160.0
2	130.0
3	105.0
4	85.0
5	67.5
6	62.5
7	57.5
8	49.0
9	46.0
10-14	37.0
15-19	22.0
20 & Over	14.0

There is 0.00% assumption of termination for members eligible for retirement.

Mortality Improvement: To account for future mortality improvement, the post-retirement mortality rates were chosen so that the assumed mortality rates are smaller than the rates observed in the most recent experience study (dated 4-29-2012). The margin at the time of the study was 7%-14% for non-disabled annuitants. The margin for disabled annuitants is 17%-19%. No future mortality improvement after the measurement date is assumed except as described above.

Refunds of Contributions: Members are assumed to choose the most valuable termination benefit.

Operational Expenses: The amount of estimated administrative expenses expected in the next year is assumed to be equal to the prior year's expenses and is incorporated in the Normal Cost.

Marital Status: 75% of active male members and 50% of active female employees are assumed to be married.

Actuarial Assumptions (cont.)

Vacation Leave Conversions: Members with 20 or more years of service are assumed to convert unused vacation leave to 1.7 months of service. Members with 10 to 19 years of service are assumed to convert unused vacation leave to 1 month of service. Members with less than 10 years of service are assumed to convert unused vacation leave to 0.5 months of service. No vacation leave conversion is assumed for disability retirement.

Spouse Age: The female spouse is assumed to be 3 years younger than the male spouse.

Payroll Growth Rate: In determining the level percent amortization of UAAL rate, the payroll of the entire system is assumed to increase at 3% each year.

Member's Pay: In determining the member's valuation salary, the greater of the prior calendar year's gross pay and the member's rate of compensation is used.

Form of Payment: It is assumed that 60% of married active male members and 75% of married active female employees will elect a Joint & 50% Survivor form of payment. Taking into consideration the marriage assumption and the inherent subsidy in the System's Joint & 100% Survivor factors, the male employees are valued with Joint and 30.5% Survivor annuities and the female employees are valued with Joint and 15.0% Survivor annuities.

Changes in Assumptions and Methods Since Prior Valuation: The temporary adjustments to the rates of salary increase previously adopted by the Board through calendar year 2014 were eliminated.

SUMMARY OF BENEFIT PROVISIONS

Employees' Retirement Fund of the City of Dallas as of December 31, 2012

Membership	An employee becomes a member upon permanent employment and contributes to the Fund.
Contributions	Member: 37% of the current adjusted total obligation rate. New rates effective October 1 after the valuation date. City: 63% of the current adjusted total obligation rate. New rates effective October 1 after the valuation date.
Definitions	Final Average Salary: Average monthly salary over the member's highest three years of service. Credited Service: Length of time as an employee of the City of Dallas and while making contributions to the Fund.
Retirement Pension	Eligibility: a. Attainment of age 60; or b. Attainment of age 55 (if credited service began before May 9, 1972); or c. At any age after completion of 30 years of credited service with a reduced benefit before age 50; or d. Attainment of age 50, if the sum of an active member's age and credited service is at least equal to 78.

Summary of Benefit Provisions (cont.)

Retirement Benefits: The retirement benefit equals 2-3/4% multiplied by average monthly earnings multiplied by credited service limited to a maximum of 36.3636 years plus a monthly \$125 health supplement (prorated for service less than 5 years).

Form of Payment: An unreduced pension benefit under a joint and one-half survivor option or a ten-year certain and life option. An actuarially equivalent joint and full survivor option is also available.

Deferred Retirement

Eligibility: Deferred retirement pension benefit commencing at age 60 or at age 55, if employment commenced prior to May 9, 1972, with at least five (5) years of credited service, and accumulated contributions are left on deposit with the Fund.

Monthly Benefit: The deferred retirement benefit is equal to the retirement pension based on earnings and credited service at the time of termination.

Disability Retirement Pension

Non-Service Disability:

1. Eligibility: Five (5) years of service and totally and permanently incapacitated for duty.
2. Monthly Benefit: Computed based on average monthly earnings and credited service at time of disability but not less than 10 times the percentage multiplier multiplied by the average monthly earnings.

Summary of Benefit Provisions (cont.)

Service Disability:

1. Eligibility: Totally and permanently incapacitated from the further performance of duty as a result of injury while in the course of employment for the City.
2. Monthly Benefit: Calculated as a non-service disability pension but not less than \$500 per month.

Death Benefits

Form: Benefit paid in accordance with the option on file, or the eligible option, or if no eligible beneficiary, a lump sum equivalent of 10 years of benefit payments to the member's estate.

Monthly Benefit: Based on average monthly earnings and credited service at death but not less than 10 times the percentage multiplier multiplied by the average monthly earnings.

Minimum Service Death Benefit: Not less than \$500 per month if death resulted from a service related injury.

Return of Accumulated Contributions

A member at the time of termination is entitled to be paid accumulated contributions without interest.

Cost-of-Living Adjustments

An annual cost-of-living adjustment to the base pension benefit shall be made based on the greater of:

- a. The percentage of change in the price index for October of the current year over October of the previous year, up to 5%, or
- b. The percentage of annual average change in the price index for the 12-month period ending with the effective date of the adjustment, up to 5%.