

**RETIREMENT PLAN FOR THE EMPLOYEES' RETIREMENT  
FUND OF THE CITY OF DALLAS**  
ACTUARIAL VALUATION REPORT  
AS OF DECEMBER 31, 2014

May 12, 2015

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, 2014.

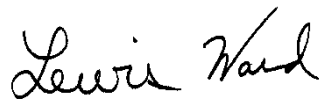
This valuation provides information on the funding status of ERF. It includes a determination of the actuarially calculated contribution rates for the 2015 calendar year. In addition, it also contains the information necessary to determine the current total obligation rate and the current adjusted total obligation rate for the fiscal year beginning October 1, 2015 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 2016.

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, 2014. 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.

As part of the five year experience review, the actuary recommended new assumptions to the Board of Trustees. Under its power as authorized in Chapter 40-A(4)(16) of the Dallas City Code, the Board adopted the recommended actuarial assumptions effective with this valuation. All actuarial assumptions and methods are described under Section O of this report. 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 Dallas City Code. 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  
Chief Executive Officer

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## 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, 2014, may be summarized as follows:

	<u>December 31, 2013</u>	<u>December 31, 2014</u>
	(1)	(2)
• Members		
- Actives	6,993	7,180
- Benefit recipients	6,447	6,598
- Deferred vested*	744	739
- Other terminated*	<u>308</u>	<u>360</u>
- Total	14,492	14,877
• Covered payroll (including overtime)	\$ 342,219	\$ 363,109
• Normal cost	\$ 59,158	\$ 72,598
as % of expected payroll	17.57%	20.29%
• Actuarial accrued liability	\$ 3,610,845	\$ 4,004,055
• Actuarial value of assets	\$ 3,074,284	\$ 3,241,053
• Market value of assets	\$ 3,325,440	\$ 3,390,579
• Unfunded actuarial accrued liability (UAAL)	\$ 536,561	\$ 763,002
• Estimated yield on assets (market value basis)	16.75%	6.14%
• Estimated yield on assets (actuarial value basis)	13.48%	10.29%
• Contribution Rates		
- Prior Adjusted Total Obligation Rate	35.29%	35.29%
- Current Total Obligation Rate	37.74%	43.17%
- Current Adjusted Total Obligation Rate	35.29%	36.00%
• Actuarial gains/(losses)		
- Assets	\$ 144,952	\$ 61,000
- Actuarial liability experience	\$ 19,699	\$ 21,967
- Assumption and method changes	\$ -	\$ (292,637)
• 30-year level % of pay funding cost	\$ 97,792	\$ 125,084
as % of payroll (Employee + City)	28.53%	34.32%
• Funded ratio		
- Based on actuarial value of assets	85.1%	80.9%
- Based on market value of assets	92.1%	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, 2014.

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 2015 calendar year; and
- To develop the current total obligation rate and the current adjusted total obligation rate for the fiscal year beginning October 1, 2015.

## REPORT HIGHLIGHTS

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

	<u>2014</u>	<u>2015</u>
<b>Contribution Rates (% of Payroll)</b>		
Normal Cost (including administrative expense)	18.62%	21.39%
Total Actuarial Contribution Rate	28.53%	34.32%
Total Projected Actuarial Contribution	\$97,792	\$125,084
	<u>December 31, 2013</u>	<u>December 31, 2014</u>
<b>Funded Status (on AVA basis)</b>		
Actuarial Accrued Liability	\$3,610,845	\$4,004,055
Actuarial Value of Assets	3,074,284	3,241,053
Unfunded Actuarial Accrued Liability	\$536,561	\$763,002
Funded Ratio	85.14%	80.94%

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## 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, 2014. This means that the "current adjusted total obligation rate" will increase to 36.00% of active member payroll for the fiscal year beginning October 1, 2015. It should be noted that under the contribution corridor methodology, the "current adjusted total obligation rate" would have been higher if not for the maximum rate of 36.00% allowed under Chapter 40-A of the Dallas City Code

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## ACTUARIAL CONTRIBUTIONS

The Actuarially Required Contribution Rate developed in this actuarial valuation is 34.32% 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 2016. As shown in Section M -Table 3 of this report, the debt service payment is determined to be 8.85% of projected payroll. The sum of these rates is 43.17% (the Current Total Obligation Rate), which is 7.88% more than the Prior Adjusted Total Obligation Rate of 35.29%. Because the difference is greater than 3.00%, the total contribution rate in fiscal year 2016 (the Current Adjusted Total Obligation Rate) to fund the ERF and make the debt service payment on the pension obligation bonds will be 36.00%, which is the maximum rate allowed under Chapter 40-A of the Dallas City Code.

The members contribute 37% of the Current Adjusted Total Obligation Rate and the City contributes 63%. Hence, the members portion of the 36.00% total contribution rate will be 13.32% and the City portion will be 22.68%. All of the member contribution rate will be contributed to the ERF. As noted above, 8.85% of the City's contribution rate will go towards the debt service on the pension obligation bonds and the remaining 13.83% will be contributed towards the ERF. This means a total contribution rate of 27.15% will be contributed to the ERF, which compares to the actuarially calculated rate of 34.32%.



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## 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 8.00% and includes an annual assumed rate of inflation of 3.00%.

An experience investigation was completed for the five-year period ending December 31, 2014. Based on that investigation, the actuary recommended numerous changes to the actuarial assumptions.

A brief description of the 2014 experience study follows. Please see Section O for a complete description of these assumptions.

### *2014 Experience Study*

As a result of our analysis, the Board approved several actuarial assumption modifications. The approved changes resulted in an actuarially calculated contribution rate that is higher than it would have been if no changes had been made. Some experience was analyzed using longer periods of data. To study the rates of salary increase and retirement, data from the prior experience study was included in the analysis. As a result of significant events occurring in the City of Dallas budget, layoffs occurred in both 2009 and 2010. In addition, there were furlough days and most employees received a reduction in their rate of pay effective October 1, 2010. As a result of these significant events, we excluded from the wage inflation analysis calendar years 2010, 2011, and 2012.

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## ACTUARIAL ASSUMPTIONS (cont.)

The following is a description of the main findings and recommendations of our study (the Board approved all of the recommendations except as noted below):

- ***Recommend a decrease in the investment return assumption of 8.25% to 8.00%***
  - This implies a lowering of the real rate of return net of expenses from 5.25% to 5.00%.
- ***Recommend changes to the promotional salary increase rates***
  - Three components analyzed: inflation, promotional/longevity, and general productivity.
  - Proposed service-based promotional increases are greater than those currently assumed.
  - Recommended extending the promotional component from 9 to 19 years.
  - No changes were recommended to the inflation and productivity assumptions, which keep general salary increases at 3.50%.
- ***Recommend modifying the post-retirement mortality rates***
  - For healthy-retired mortality, the proposed assumptions are those used by the Texas Municipal Retirement System. The base tables are the RP-2000 tables for healthy blue collar male and female retirees. Fully generational mortality improvement is then projected from 2000 using scale BB.
  - The new assumptions increase the life expectancies at most ages for both males and females.
  - No change recommended for disabled mortality.
- ***Recommend no change to active-member mortality rates***
- ***Recommend changes in retirement rates***
  - Early retirement rates remained unchanged.
  - The proposed rates for male and female members retiring in their fifties are slightly higher at first eligibility and lower beyond first eligibility compared to those currently assumed.
  - For ages sixty and over, different rates are used depending on whether the member has more or less than 18 years of service. Overall, the proposed rates are lower than the current rates for members retiring after attaining age 60.

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**ACTUARIAL ASSUMPTIONS (cont.)**

- ***Recommend no change to marriage assumption***
- ***Recommend change in assumed form of payment***
  - Assume 60% of married males and 75% of married females elect J & 50%
  - Continue adjusting form of payment assumption to reflect differences between actual conversion factors and factors derived from valuation assumptions.
  - Combining form of payment assumption with the marriage assumption produces the following valuation assumption:
    - Value future male retirees as J & 29.0% Survivor
    - Value future female retirees as J & 16.5% Survivor
- ***Recommend change to vacation leave conversion***
  - Members with 20 or more years of service are assumed to convert unused vacation leave to 1.5 months of service. Other members are assumed to convert unused vacation leave to 1 month of service. No vacation leave conversion is assumed for disability retirement.
- ***Recommend no change to 3.00% inflation***
- ***Recommend no change to 3.00% payroll growth assumption***
- ***Recommend no change to termination rates***
- ***Recommend no change to disability incidence rates***
- ***Recommend no change to refund election***
- ***Recommend no change to any liability or asset valuation method***

## **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 PREVIOUS YEARS

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 6.14% (calculated on a dollar-weighted basis, net of investment expenses). Given this return, the actual investment income was less than the expected investment income on the actuarial value of assets; therefore, an investment income loss 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 2013 - 2010), there was an overall actuarial gain of \$61 million on the actuarial value of assets as of December 31, 2014. The rate of return on the actuarial value of assets for 2014 was 10.29% (calculated on a dollar-weighted basis, net of investment expenses). This result was greater than the current investment return assumption of 8.00%.

During 2014, there was a liability actuarial gain of about -\$22.0 million derived from demographic assumptions and non-investment economic assumptions (cost-of-living-adjustment). As seen below, ERF experienced an overall experience actuarial gain in calendar year 2014 in the amount of -\$83.0 million.

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

	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
1) Actuarial (Gain)/Loss on Assets	\$117.40	\$209.96	(\$144.95)	(\$61.00)
2) Actuarial (Gain)/Loss on Liabilities	(101.31)	(6.04)	(19.70)	(21.97)
3) Total Actuarial (Gain) or Loss (1+2)	16.09	203.92	(164.65)	(82.97)

The unfunded actuarial accrued liability (UAAL) also increased \$8.9 million due to the difference between the calculated contribution rate and the actual contributions during 2014.

## ASSET INFORMATION

The assets of the Fund (on a market value basis) increased from \$3,325 million as of December 31, 2013 to \$3,391 million as of December 31, 2014.

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, 2014.

The actuarial value of assets has increased from \$3,074 million to \$3,241 million during 2014. This increase is due to three positive investment years out of the five year averaging period.

The rate of return on investments for 2014 on the actuarial value of assets was 10.29%, compared to 13.48% in 2013. 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 significantly from 85.1% as of December 31, 2013 to 80.9% as of December 31, 2014. Although, as stated in a prior section, there was an experience gain of -\$83.0 million, the change in the actuarial assumptions adopted by the Board increased the liabilities of the Fund by \$293 million.

As a result, the UAAL increased from \$536.6 million as of December 31, 2013 to \$763.0 million as of December 31, 2014. Without the change in assumptions the funded ratio would have been 87% and the UAAL would have decreased to \$470 million.

## **GASB DISCLOSURE**

Governmental Accounting Standards Board (GASB) Statement Numbers 67 and 68 detail the current accounting standards for ERF and the Fund's sponsor, the City of Dallas, TX. These are new standards effective with the plan year ending December 31, 2014 for the Fund and the fiscal year ending September 30, 2015 for the City. The new standards created a clear distinction between the funding requirements of a pension plan and the accounting requirements. Because of these changes, the GASB disclosure information will no longer be included in the actuarial valuation report, but will instead be provided under separate cover.



## CLOSING COMMENTS

The calculated contribution rates and the unfunded actuarial accrued liability of the Fund have increased since the prior valuation due to changes in the actuarial assumptions. The change in assumptions also caused a corresponding decrease in the funded status of the Fund.

The calculated contribution rate necessary to pay the Fund's normal cost and amortize the UAAL over 30 years is 34.32% of pay. When the debt service payment on the Pension Obligation Bonds is considered the total contribution rate is 43.17% of payroll. However, Chapter 40-A of the Dallas City Code limits the contribution rate to 36.00% of payroll, therefore, the total rate to be contributed by the employees and the City for fiscal year 2016 will be 36.00% of pay.

The Fund is still deferring \$150 million in investment gains to be recognized in future valuations. However, even if these deferred gains are fully recognized in the future they are not expected to lower the calculated contribution rate below the 36.00% of pay maximum. When the Pension Obligation Bond debt is repaid, the calculated contribution rate would be expected to drop between 8.50% - 9.00% of pay. However, that is not expected to happen for another 20 years. Given the large difference between the calculated contribution rate and the maximum allowed contribution rate, we believe this situation should be closely monitored.

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## ACTUARIAL TABLES

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Summary of Actuarial Values  
As of December 31, 2014  
(\$ in 000's)

	APV* of Projected Benefits	Entry Age Actuarial Values		
		Actuarial Accrued Liability (AAL)	Normal Cost \$	Normal Cost % of Pay**
<b>1 Active Members</b>				
a. Retirement	\$ 1,585,848	\$ 1,256,624	\$ 49,767	13.92%
b. Death	34,177	21,961	1,915	0.54%
c. Disability	19,153	7,913	1,734	0.48%
d. Termination	122,891	9,521	16,539	4.63%
e. Health Subsidy	49,775	34,814	2,643	0.72%
<b>Total</b>	<b>1,811,844</b>	<b>1,330,833</b>	<b>72,598</b>	<b>20.29%</b>
<b>2 Benefit Recipients</b>	2,578,071	2,578,071		
<b>3 Other Inactive</b>	95,151	95,151		
<b>4 Total Actuarial Values of Benefits</b>	4,485,066	4,004,055	72,598	20.29%
<b>5 Actuarial Value of Assets</b>		3,241,053		
<b>6 Unfunded Actuarial Accrued Liability (4 - 5)</b>		763,002	613,476	
<b>7 Funding Ratio</b>		80.94%	84.68%	
<b>8 Market Value Measurements</b>				
UAAL on market value		613,476		
Funded Ratio on market value		84.68%		

\* APV – Actuarial Present Value

\*\* Percentage of expected payroll for continuing active members.

**Development of Actuarially Required Contribution for FY 2016**  
(\$ in 000's)

	<u>\$</u>	<u>% of Pay</u>
<b>Actuarial Requirement</b>		
a. Payment to Amortize UAAL over 30 years*	\$ 48,358	12.93%
b. Normal Cost	72,598	20.29%
c. Administrative Expense	<u>4,128</u>	<u>1.10%</u>
<b>Total</b>	\$ 125,084	34.32%

*\* Amortization is determined as a level percentage of projected payroll*

**Information for Ordinance 25695  
For the Fiscal Year Commencing October 1, 2015**

<b>1 Prior Adjusted Total Obligation Rate</b>	35.29%
<b>2 Actuarially Required Contribution Rate</b>	34.32%
<b>3 Debt Service</b>	
<b>a Scheduled Debt Service Payment for FY 2016</b>	33,112,655
<b>b Projected Payroll</b>	374,002,035
<b>c Pension Obligation Bond Credit Rate (a/b)</b>	8.85%
<b>4 Current Total Obligation Rate (2 + 3c)</b>	43.17%
<b>5 Current Adjusted Total Obligation Rate</b>	36.00% *
<b>6 Allocation of Contribution Rates for FY 2014</b>	
<b>a Employee (5 x .37)</b>	13.32%
<b>b City (5 x .63)</b>	22.68%

\* 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

Additionally, the CATOR cannot exceed 36.00%.

### 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, 2013</u>	<u>December 31, 2014</u>
<b>Net Assets Available for Benefits</b>		
(\$ in 000's)		
<b>1 Assets</b>		
a. Cash & Short-Term	\$97,778	\$128,958
<b>2 Receivables</b>		
a. Accrued Investment Income	16,593	15,069
b. Securities Sold	13,949	19,535
c. Employer Contribution	834	1,100
d. Employee Contribution	851	1,103
e. Pending Contracts	0	1,601
	<u>32,227</u>	<u>38,408</u>
<b>3 Investments</b>		
a. Index Funds	80,972	119,878
b. Fixed Income	880,753	908,305
c. Equities	1,952,613	1,880,176
d. Real Estate	218,110	235,696
e. Private Equity	86,981	116,122
	<u>3,219,429</u>	<u>3,260,177</u>
<b>4 Total Assets</b>	3,349,434	3,427,543
<b>5 Liabilities</b>		
a. Accounts Payable	4,782	5,101
b. Investment Transactions	19,212	31,863
	<u>23,994</u>	<u>36,964</u>
<b>6 Net Assets Available For Benefits</b>	<u><u>3,325,440</u></u>	<u><u>3,390,579</u></u>

**Change in Assets Available for Benefits**  
**Fiscal Year Ending December 31, 2014**  
(\$ in 000's)

	<u>2013</u>	<u>2014</u>
<b>1 Assets Available at Beginning of Year</b>	\$ 2,979,766	\$ 3,325,440
Adjustment *	3,905	6,920
	<u>2,983,671</u>	<u>3,332,360</u>
<b>2 Revenues</b>		
a. Employer Contributions	37,823	45,833
b. Employee Contributions	41,730	46,536
c. Investment Income	103,768	100,762
d. Investment Expense	(15,847)	(17,156)
e. Realized and Unrealized Gains (Losses)	398,098	114,632
f. Other (Security Lending)	1,456	2,093
Total Revenues	<u>567,028</u>	<u>292,700</u>
<b>3 Expenses</b>		
a. Benefits	216,989	225,614
b. Refunds	4,675	4,859
c. Administration Expense	3,595	4,008
Total Expense	<u>225,259</u>	<u>234,481</u>
<b>4 Assets Available at End of Year (1 + 2 - 3)</b>	<u><u>3,325,440</u></u>	<u><u>3,390,579</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, 2014**

(\$ in 000's)

	<u>Market Value</u>	<u>Actuarial Value</u>
<b>1 Value of Assets @ 12-31-2013</b>	\$ 3,325,440	\$ 3,074,284
<b>2 Non-Investment Cash Flows during 2014</b>		
a. Employer Contributions	45,833	45,833
b. Employee Contributions	46,536	46,536
c. Benefits (including refunds)	(230,474)	(230,474)
d. Administrative Expenses	(4,008)	(4,008)
Total	(142,113)	(142,113)
<b>3 Expected Investment Returns @ 8.25%</b>	247,882	247,882
<b>4 Expected Assets @ 12-31-2014 (1 + 2 + 3)</b>	3,431,209	3,180,053
<b>5 Actual Assets Available for Benefits</b>	3,390,579	
<b>6 Gain/ (Loss) From Investment Returns (5 - 4)</b>	(40,630)	
<b>7 Recognition of Gains / (Losses)</b>		
a. One-fifth of Current Year Gain/(Loss) (one-fifth of 6)		(8,126)
b. One-fifth of 2013 Gain/(Loss)		52,493
c. One-fifth of 2012 Gain/(Loss)		29,667
d. One-fifth of 2011 Gain/(Loss)		(43,962)
e. One-fifth of 2010 Gain/(Loss)		30,928
Total		61,000
<b>8 Actuarial Value of Assets @ 12-31-2014 (4 + 7)</b>		3,241,053

**Historical Investment Performance**  
**Dollar Weighted Basis Net of Investment Expenses**

<u>Calendar Year</u>	<u>On Market Value</u>	<u>On Actuarial Value</u>
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%
2013	16.75%	10.65%
2014	6.14%	10.29%
5-year average ending in 2014	10.58%	5.77%
10-year average ending in 2014	6.82%	6.72%

**Analysis of Change in Unfunded  
Actuarial Accrued Liability  
For the Year Ending December 31, 2014  
(\$ in 000's)**

<b>1 UAAL as of December 31, 2013</b>		\$ 536,561
<b>2 Expected Change in UAAL during 2014</b>		
a. Expected Amortization Payment for CY 2014	(34,931)	
b. Interest adjustments on 1 & 2a to Year End @ 8.25%	<u>42,825</u>	
c. Expected change in UAAL		7,894
<b>3 Increase/(Decrease) in UAAL Due to Difference Between     Calculated Contribution Rate and Actual Contribution Rate</b>		8,877
<b>4 Net Actuarial Experience (Gains) &amp; Losses</b>		(82,967)
<b>5 Assumption and Method Changes</b>		292,637
<b>6 UAAL as of December 31, 2014</b>		\$ 763,002

**Analysis of Actuarial (Gains) and Losses  
For 2014  
(\$ in 000's)**

	<u>2014</u>
<b>Investment Return</b>	\$(61,000)
<b>Salary Increase</b>	10,597
<b>Age and Service Retirement</b>	(6,785)
<b>General Employment Termination</b>	3,829
<b>Disability Incidence</b>	(6)
<b>Active Mortality</b>	(518)
<b>Benefit Recipient Mortality</b>	4,930
<b>Actual vs. Expected Cost of Living Adjustment (COLA)*</b>	(22,940)
<b>Other</b>	<u>(11,074)</u>
<b>Total Actuarial (Gain)/ Loss</b>	\$ (82,967)

\* Actual COLA of 1.608% versus expected COLA of 3.00%

Schedule of Funding Status  
(\$ 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%
2013	3,074,284	3,610,845	362,477	85.14%	352,486	102.83%
2014	3,241,053	4,004,055	763,002	80.94%	374,002	204.01%

\* Projected to following year.

Summary of Data Characteristics

	December 31, 2012	December 31, 2013	December 31, 2014
<b>Active Members</b>			
Number	6,864	6,993	7,180
Total Annualized Earnings of Members as of 12/31 (000's)	\$330,536	\$342,219	\$363,109
Average Earnings	48,155	48,937	50,572
<b>Benefit Recipients</b>			
Number	6,320	6,447	6,598
Total Annual Retirement Income (000's)	\$202,121	\$210,028	\$219,150
Total Annual Health Supplement (000's)	\$9,193	\$9,391	\$9,611
Average Total Annual Benefit	\$33,436	\$34,034	\$34,671
<b>Inactive Members*</b>			
Deferred Vested	722	744	739
Deferred Nonvested	321	308	360
Total	1,043	1,052	1,099

\* The number of inactives on 12/31/2014 includes 739 members who have applied for a deferred pension and 360 other members who have terminated and still have contribution balances in the Fund.

The number of inactives on 12/31/2013 includes 744 members who have applied for a deferred pension and 308 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	
<b>Under 20</b>	7								7
	154,588								154,588
<b>20-24</b>	107	52							159
	3,255,997	1,782,754							5,038,751
<b>25-29</b>	153	241	74						468
	5,602,186	9,483,162	3,004,588						18,089,936
<b>30-34</b>	116	268	211	32	4				631
	4,331,763	11,700,893	10,016,958	1,595,975	212,681				27,858,270
<b>35-39</b>	115	248	229	110	62	1			765
	5,251,035	11,499,907	11,355,066	6,003,057	3,120,849	48,438			37,278,352
<b>40-44</b>	92	203	216	145	182	60	1		899
	3,840,037	9,880,607	10,688,464	7,161,183	9,414,861	3,255,876	75,128		44,316,156
<b>45-49</b>	79	210	241	166	212	140	77	10	1,135
	2,951,808	8,803,482	11,720,805	9,192,170	11,924,945	8,345,598	4,716,024	650,583	58,305,415
<b>50-54</b>	71	169	293	183	276	129	132	50	1,303
	3,734,400	7,655,077	14,264,831	9,815,955	14,964,811	8,128,512	8,609,946	3,178,903	70,352,435
<b>55-59</b>	38	138	201	153	211	100	76	67	984
	1,955,211	6,877,363	10,161,383	7,993,564	11,556,082	6,068,839	5,040,200	4,852,089	54,504,731
<b>60-64</b>	17	63	133	87	144	56	46	41	587
	804,016	2,970,399	6,785,170	4,952,478	8,188,576	3,408,036	2,975,237	2,903,411	32,987,323
<b>65&amp;Over</b>	3	18	45	51	54	26	21	24	242
	125,309	943,530	2,464,093	2,812,553	3,247,796	1,638,900	1,546,837	1,443,797	14,222,815
<b>Totals</b>	798	1,610	1,643	927	1,145	512	353	192	7,180
	32,006,350	71,597,174	80,461,358	49,526,935	62,630,601	30,894,199	22,963,372	13,028,783	363,108,772

**Distribution of Benefit Recipients  
 as of December 31, 2014**

<b>Age</b>	<b>Number</b>	<b>Annual Benefit*</b>	<b>Annual Average Benefit*</b>
<b>Under 50</b>	65	\$ 1,027,258	\$ 15,804
<b>50-54</b>	318	13,341,872	41,956
<b>55-59</b>	736	31,708,517	43,082
<b>60-64</b>	1,383	51,463,700	37,212
<b>65-69</b>	1,492	54,077,335	36,245
<b>70-74</b>	976	28,757,441	29,465
<b>75-79</b>	651	17,824,907	27,381
<b>80-84</b>	472	10,847,589	22,982
<b>85-89</b>	308	6,727,326	21,842
<b>90 &amp; Over</b>	197	3,374,126	17,128
<b>Total</b>	<b>6,598</b>	<b>\$ 219,150,070</b>	<b>\$ 33,215</b>

\* Does not include Health Benefit Supplement.

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## EXPERIENCE TABLES

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**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 2014			
	Number	Expected Pay	Actual Pay	Ratio A/E
<b>Under 5</b>	1,516	65,430,442	67,547,358	103.24%
<b>5-9</b>	1,577	74,767,799	76,497,638	102.31%
<b>10-14</b>	938	49,225,701	50,302,323	102.19%
<b>15-19</b>	1,186	63,337,107	64,017,318	101.07%
<b>20-24</b>	549	32,697,360	32,809,041	100.34%
<b>25-29</b>	355	23,130,048	23,114,575	99.93%
<b>30 &amp; Over</b>	233	15,825,076	15,696,755	99.19%
<b>Total</b>	6,354	\$ 324,413,533	\$ 329,985,008	101.72%
<b>Over 10 Years</b>	3,261	\$ 184,215,292	\$ 185,940,012	100.94%

Service Beginning of Year	Experience for 2011/2014			
	Number	Expected Pay	Actual Pay	Ratio A/E
<b>Under 5</b>	5,039	206,370,841	214,513,986	103.95%
<b>5-9</b>	6,866	305,290,563	311,039,285	101.88%
<b>10-14</b>	4,268	208,089,389	210,602,342	101.21%
<b>15-19</b>	4,103	214,057,228	214,691,441	100.30%
<b>20-24</b>	2,204	129,941,800	129,961,551	100.02%
<b>25-29</b>	1,671	105,025,693	104,573,115	99.57%
<b>30 &amp; Over</b>	775	51,706,130	51,299,771	99.21%
<b>Total</b>	24,926	\$ 1,220,481,644	\$ 1,236,681,491	101.33%
<b>Over 10 Years</b>	13,021	\$ 708,820,240	\$ 711,128,220	100.33%

Analysis of Retirement Experience

Age	2014 Retirement			2011/2014 Retirement		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
46	-	-	N/A	-	-	N/A
47	-	-	N/A	-	-	N/A
48	-	0.70	0.00%	2	2.30	86.96%
49	1	1.30	76.92%	4	4.40	90.91%
50	11	14.85	74.07%	64	63.95	100.08%
51	13	16.80	77.38%	63	64.75	97.30%
52	6	13.04	46.01%	48	59.96	80.05%
53	14	14.59	95.96%	53	60.40	87.75%
54	14	19.07	73.41%	47	66.33	70.86%
55	12	16.98	70.67%	46	67.61	68.04%
56	14	14.15	98.94%	44	57.40	76.66%
57	10	13.12	76.22%	44	53.58	82.12%
58	12	14.82	80.97%	33	50.61	65.20%
59	8	13.93	57.43%	38	47.61	79.82%
60	12	22.91	52.38%	66	89.68	73.60%
61	13	21.60	60.19%	56	76.10	73.59%
62	17	19.32	87.99%	60	72.16	83.15%
63	11	15.60	70.51%	50	67.44	74.14%
64	9	16.53	54.45%	35	50.94	68.71%
65	10	15.05	66.45%	53	59.40	89.23%
66	11	15.25	72.13%	34	44.15	77.01%
67	11	9.50	115.79%	26	27.25	95.41%
68	4	5.15	77.67%	11	15.65	70.29%
69	1	2.35	42.55%	9	9.60	93.75%
70 & Over	3	49.00	6.12%	29	183.00	15.85%
<b>Total</b>	217	345.61	62.79%	915	1,294.27	70.70%
<b>Total Under 70</b>	214	296.61	72.15%	886	1,111.27	79.73%

**Analysis of Retirement Experience**  
**Age Groups**

<b>Age Group</b>	<b>2014 Retirements</b>			<b>2011/2014 Retirements</b>		
	<b>Actual</b>	<b>Expected</b>	<b>Ratio A/E</b>	<b>Actual</b>	<b>Expected</b>	<b>Ratio A/E</b>
<b>Under 55</b>	59	80.35	73.43%	281	322.09	87.24%
<b>55-59</b>	56	73.00	76.71%	205	276.81	74.06%
<b>60-64</b>	62	95.96	64.61%	267	356.32	74.93%
<b>65-69</b>	37	47.30	78.22%	133	156.05	85.23%
<b>70 &amp; Over</b>	3	49.00	6.12%	29	183.00	15.85%
<b>Total</b>	217	345.61	62.79%	915	1,294.27	70.70%
<b>Total Under 70</b>	214	296.61	72.15%	886	1,111.27	79.73%

**Analysis of Turnover Experience**

<b>Years of Service</b>	<b>2014 Quits</b>			<b>2011/2014 Quits</b>		
	<b>Actual</b>	<b>Expected</b>	<b>Ratio A/E</b>	<b>Actual</b>	<b>Expected</b>	<b>Ratio A/E</b>
<b>0-4</b>	241	260.01	92.69%	966	851.69	113.42%
<b>5-9</b>	115	95.44	120.49%	548	451.83	121.29%
<b>10-14</b>	22	33.21	66.25%	121	149.31	81.04%
<b>15-19</b>	17	26.33	64.56%	69	94.58	72.95%
<b>20-24</b>	9	6.78	132.67%	31	27.77	111.63%
<b>25-29</b>	-	0.74	0.00%	3	3.21	93.57%
<b>Total</b>	404	422.52	95.62%	1,738	1,578.38	110.11%

Analysis of Active Mortality Experience

Age	2014 Deaths			2011/2014 Deaths		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
20-24	-	0.03	0.00%	-	0.11	0.00%
25-29	-	0.15	0.00%	1	0.58	171.94%
30-34	-	0.34	0.00%	1	1.25	80.15%
35-39	-	0.61	0.00%	2	2.38	84.17%
40-44	-	1.01	0.00%	4	4.21	94.91%
45-49	-	2.09	0.00%	3	8.84	33.94%
50-54	-	3.49	0.00%	5	13.71	36.48%
55-59	-	4.22	0.00%	5	16.08	31.09%
60 and Over	1	6.15	16.26%	4	22.05	18.14%
<b>Total</b>	<b>1</b>	<b>18.07</b>	<b>5.53%</b>	<b>25</b>	<b>69.21</b>	<b>36.12%</b>



Analysis of Disability Experience

Age	2014 Disabilities			2011/2014 Disabilities		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
20-24	-	0.00	0.00%	-	0.04	0.00%
25-29	-	0.05	0.00%	-	0.33	0.00%
30-34	-	0.13	0.00%	-	0.69	0.00%
35-39	1	0.26	377.42%	1	1.31	76.46%
40-44	-	0.60	0.00%	1	2.90	34.53%
45-49	5	1.71	292.36%	8	8.06	99.20%
50-54	2	3.04	65.75%	6	13.15	45.64%
55-59	5	3.15	158.62%	9	13.50	66.65%
60 and Over	-	1.23	0.00%	-	4.54	0.00%
<b>Total</b>	<b>13</b>	<b>10.18</b>	<b>127.64%</b>	<b>25</b>	<b>44.52</b>	<b>56.16%</b>

**Analysis of Retiree Mortality Experience\***

Age	2014 Experience			2011/2014 Experience		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
<b>Under 60</b>	2	3.39	58.94%	26	14.82	175.46%
<b>60-64</b>	19	10.64	178.57%	57	44.40	128.37%
<b>65-69</b>	18	19.35	93.04%	71	66.93	106.07%
<b>70-74</b>	17	21.36	79.58%	60	75.66	79.30%
<b>75-79</b>	20	23.60	84.76%	80	88.48	90.42%
<b>80-84</b>	24	26.71	89.84%	93	110.77	83.96%
<b>85-89</b>	21	27.14	77.37%	91	106.04	85.82%
<b>90 &amp; over</b>	26	23.50	110.64%	89	85.48	104.12%
<b>Total</b>	147	155.69	94.42%	567	592.59	95.68%

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

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## 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 METHOD AND ASSUMPTIONS**  
**(AS OF DECEMBER 31, 2014)**

*Annual Rate of Investment Return.* For all purposes under the Fund, the rate of investment return is assumed to be 8.00% 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>	
<b>0</b>	3.00	%	3.50	%	6.50	%
<b>1</b>	3.00		3.50		6.50	
<b>2</b>	2.75		3.50		6.25	
<b>3</b>	2.00		3.50		5.50	
<b>4</b>	1.50		3.50		5.00	
<b>5</b>	1.50		3.50		5.00	
<b>6</b>	1.50		3.50		5.00	
<b>7</b>	1.00		3.50		4.50	
<b>8</b>	1.00		3.50		4.50	
<b>9</b>	0.75		3.50		4.25	
<b>10</b>	0.75		3.50		4.25	
<b>11</b>	0.75		3.50		4.25	
<b>12</b>	0.50		3.50		4.00	
<b>13</b>	0.50		3.50		4.00	
<b>14</b>	0.50		3.50		4.00	
<b>15</b>	0.50		3.50		4.00	
<b>16</b>	0.50		3.50		4.00	
<b>17</b>	0.50		3.50		4.00	
<b>18</b>	0.25		3.50		3.75	
<b>19 &amp; Over</b>	0.00		3.50		3.50	

**ACTUARIAL METHOD AND ASSUMPTIONS (cont.)**

***Mortality:***

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

Sample rates follow (rate per 1,000):

<u>Age</u>	<u>Disability Mortality Rate</u>	
	<u>Male</u>	<u>Female</u>
<b>20</b>	23	23
<b>30</b>	23	23
<b>40</b>	23	23
<b>50</b>	30	30
<b>60</b>	43	43
<b>70</b>	66	66
<b>80</b>	116	116
<b>90</b>	200	200

Other Benefit Recipients:

- a. Males – RP-2000 Healthy Mortality Table for male annuitants, with a 109% multiplier and fully generational mortality using improvement Scale BB.
- b. Females – RP-2000 Healthy Mortality Table for female annuitants, with a 103% multiplier and fully generational mortality using improvement Scale BB.

Sample rates follow (rate per 1,000):

<u>Age</u>	<u>Mortality Rate</u>	
	<u>Male</u>	<u>Female</u>
<b>30</b>	0.8	0.3
<b>40</b>	1.4	0.9
<b>50</b>	2.5	1.9
<b>60</b>	8.2	4.4
<b>70</b>	23.6	16.2
<b>80</b>	62.2	42.6
<b>90</b>	169.7	120.6

**ACTUARIAL METHOD AND 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>
<b>30</b>	0.7	0.2
<b>40</b>	1.4	0.5
<b>50</b>	2.8	1.1
<b>60</b>	7.0	2.5
<b>70</b>	33.9	5.8
<b>80</b>	99.8	28.1
<b>90</b>	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>
<b>30</b>	0.3
<b>40</b>	0.6
<b>50</b>	2.4
<b>60</b>	6.0

20% of disabilities are assumed to be service related. There is a 0% assumption of disability for members who have over 10 years of service and are eligible for retirement.

**ACTUARIAL METHOD AND ASSUMPTIONS (cont.)**

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

<b>Age</b>	<b>Male</b>		<b>Female</b>	
	<u>First Year Eligible</u>	<u>Thereafter</u>	<u>First Year Eligible</u>	<u>Thereafter</u>
<b>48-49</b>	100	100	100	100
<b>50</b>	600	550	400	350
<b>51</b>	500	450	400	350
<b>52</b>	500	330	400	350
<b>53</b>	450	300	400	300
<b>54</b>	400	280	400	250
<b>55</b>	350	280	300	250
<b>56</b>	350	280	300	250
<b>57</b>	350	280	300	220
<b>58-59</b>	350	280	300	220
	<u>Service &lt; 18 yrs.</u>	<u>Service 18 yrs.+</u>	<u>Service &lt; 18 yrs.</u>	<u>Service 18 yrs. +</u>
<b>60</b>	80	250	100	300
<b>61</b>	90	250	150	220
<b>62</b>	100	250	150	200
<b>63</b>	150	250	150	150
<b>64</b>	150	250	100	100
<b>65</b>	180	250	200	200
<b>66</b>	200	250	250	250
<b>67</b>	200	250	250	250
<b>68</b>	200	250	150	250
<b>69</b>	200	250	150	250
<b>70</b>	1,000	1,000	1,000	1,000

**ACTUARIAL METHOD AND 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% assumption of termination for members eligible for retirement.

*Mortality Improvement:* Scale BB is used to project mortality improvements for Healthy Retirees. No margin is included in the current disabled mortality assumption to account for future mortality improvement. 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 METHOD AND ASSUMPTIONS (cont.)

**Vacation Leave Conversions:** Members with 20 or more years of service are assumed to convert unused vacation leave to 1.5 months of service. Other members are assumed to convert unused vacation leave to 1 month 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 84% 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 29.0% Survivor annuities and the female employees are valued with Joint and 16.5% Survivor annuities.

**Changes in Assumptions and Methods Since Prior Valuation:** Please refer to Section F and to the December 31, 2014 Experience Study report for a listing of assumptions changes. The assumptions shown in this section reflect the adopted assumption changes.

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## SUMMARY OF BENEFIT PROVISIONS

### Employees' Retirement Fund of the City of Dallas as of December 31, 2014

<b>Membership</b>	An employee becomes a member upon permanent employment and contributes to the Fund.
<b>Contributions</b>	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.
<b>Definitions</b>	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.
<b>Retirement Pension</b>	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.

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## 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.

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## 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%.