

OKLAHOMA CITY EMPLOYEE RETIREMENT SYSTEM
ANNUAL ACTUARIAL VALUATION
DECEMBER 31, 2014

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June 1, 2015

The Board of Trustees Oklahoma City Employee Retirement System Oklahoma City, Oklahoma

Dear Board Members:

The results of the December 31, 2014 annual actuarial valuation of the Oklahoma City Employee Retirement System are presented in this report. The purpose of the valuation was to measure the System's funding progress and to determine the employer contribution for the fiscal year beginning July 1, 2016. This report should not be relied upon for any other purpose. This report may be distributed to parties other than the Retirement Board only in its entirety and only with the permission of the Board.

The valuation was based upon information, furnished by the Retirement System Manager, concerning Retirement System benefits, financial transactions, and individual members, terminated members, retirees and beneficiaries. Data was checked for internal and year-to-year consistency, but was not otherwise audited by us. As a result, we are unable to assume responsibility for the accuracy or completeness of the data provided.

Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements.

To the best of our knowledge, this report is complete and accurate and the valuation was conducted in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the applicable state statutes. Louise M. Gates and James D. Anderson are independent of the plan sponsor and are Members of the American Academy of Actuaries (MAAA) who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. It is our opinion that the actuarial assumptions used for the valuation are reasonable.

Respectfully submitted,

Louise M. Gates ASA, MAAA

James D. anderson

James D Anderson, FSA, EA, MAAA

LMG/JDA:sc

SECTION A VALUATION RESULTS

Funding Objective

The funding objective of the Retirement System is to establish and receive contributions, expressed as percents of active member payroll, which will remain approximately level from year-to-year and will not have to be increased for future generations of citizens.

Contribution Rates

The Retirement System is supported by member contributions, City contributions and investment income from Retirement System assets.

Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are sufficient to:

- (1) Cover the actuarial present value of benefits allocated to the current year by the actuarial cost method described in Section C (the normal cost); and
- (2) Finance over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (unfunded actuarial accrued liability).

Computed contribution rates for the fiscal year beginning July 1, 2016 are shown on page A-2.

COMPUTED CONTRIBUTIONS EXPRESSED AS PERCENTAGES OF ACTIVE MEMBER PAYROLL

The total computed contribution rates determined in the current and prior year's valuation are shown below. The 2014 valuation results will be used by the City for the fiscal year beginning July 1, 2016.

Contributions for	2014
Normal Cost	
Service pensions	10.08%
Disability pensions	0.52%
Survivor pensions	
- Death before retirement	0.40%
Termination benefits	
- Deferred service pensions	0.30%
- Refunds of current member contributions	0.97%
Total normal cost	12.27%
Unfunded Actuarial Accrued Liability (UAAL)	
Total UAAL credit*	(0.94%)
Total Computed Contribution Rate	11.33%
Member portion	6.00%
City's computed rate	5.33%

Computed Contribution Rates as of December 31st of the Indicated Valuation Year

	Percents of Member Payroll			
Contributions for	2014	2013		
Normal Cost	12.27%	12.22%		
UAAL Credit *	(0.94%)	(0.34%)		
Total Computed Contribution Rate	11.33%	11.88%		
Member Portion	6.00%	6.00%		
City Portion	5.33%	5.88%		

^{*} The unfunded actuarial accrued liability (the UAAL) was amortized as a level percent of active member payroll over a period of 27 years.

Funding Progress

There is no single all-encompassing indicator to measure a retirement system's funding progress. A traditional measure has been the relationship of valuation assets to actuarial accrued liability - a measure that is influenced by the choice of actuarial cost method. Numeric information using this traditional measure is shown on the following page.

Additional understanding of funding progress can be achieved using the following tests, which compare the System's assets with:

- (1) members' contributions on deposit in the System;
- (2) present value of future benefits to present retired lives; and
- (3) present value of benefits based on service already rendered by active and inactive members.

In a system that has been following the discipline of level percent-of-payroll financing, member contributions on deposit (item 1) and the present value of future benefits to present retired lives (item 2) will be fully covered by present assets (except in rare circumstances). In addition, the present value of benefits based on service already rendered by members (item 3) will be partially covered by the remainder of present assets. The larger the funded portion of item 3, the stronger the condition of the system. Generally, if the system has been using level-percent financing, the funded portion of item 3 will increase over time. An historical comparison of funding progress tests is shown on the following page.

Limitations of the Funding Progress (funded status) Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based on the actuarial accrued liability and the actuarial value of assets. Unless otherwise indicated, with regard to the funded status measurements shown in this report we note the following:

The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

The measurement is inappropriate for assessing the need for or the amount of future employer contributions.

The measurement would produce a different result if the market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.

FUNDING PROGRESS TEST (DOLLAR AMOUNTS IN THOUSANDS)

Accrued Liabilities (AL)

	(1)	(2) Retirants	(3) Active & Inactive Members				ortion of L		5
Valuation Date	Member Contribs.	and Beneficiaries	(Employer Financed Portion)	Total AL	Assets ⁽¹⁾	(1)	Covered by (2)	y Assets (3)	Overall
-			,						_
12/31/95	\$31,423	\$ 67,408	\$ 71,283	\$ 170,114	\$ 168,203	100 %	100 %	97 %	99 %
12/31/96	33,507	72,225	75,504	181,236	185,368	100	100	105	102
12/31/97	35,654	76,275	107,169	219,098	219,602	100	100	100	100
12/31/98	37,900	82,258	118,498	238,656	260,877	100	100	119	109
12/31/99	39,866	85,724	120,316	245,906	307,872	100	100	152	125
12/31/00	41,550	100,936	180,814	323,300	350,398	100	100	115	108
12/31/01	42,226	116,552	185,819	344,597	372,737	100	100	115	108
12/31/02	44,368	128,120	200,072	372,560	375,382	100	100	101	101
12/31/03	46,654	136,873	207,496	391,023	374,192	100	100	92	96
12/31/04	48,487	150,664	216,013	415,164	381,495	100	100	84	92
12/31/05	54,239	169,752	212,913	436,904	424,182	100	100	94	97
12/31/06	55,557	187,693	214,297	457,547	476,913	100	100	109	104
12/31/07	60,118	204,470	224,239	488,827	529,876	100	100	118	108
12/31/08	62,128	221,456	235,650	519,234	528,664	100	100	104	102
12/31/09	65,106	237,302	254,019	556,427	529,137	100	100	89	95
12/31/10	64,922	267,120	234,792	566,834	524,731	100	100	82	93
12/31/11	67,324	252,166	214,229	533,719	514,499	100	100	91	96
12/31/12	69,987	257,057	226,544	553,588	547,686	100	100	97	99
12/31/13	72,209	281,206	228,451	581,866	589,527	100	100	103	101
12/31/14	74,142	297,061	236,092	607,295	628,686	100	100	109	104

⁽¹⁾ Beginning with 12/31/97, funding value of assets is shown.

COMMENTS

Comment A: As of the valuation date, the Retirement System has a funding surplus which was amortized and used as a credit against City normal cost contributions resulting in a City pension contribution rate of 5.33% of plan member payroll for the City's 2016-2017 fiscal year. The established maximum City contribution rate is 10% of payroll. It is important to note that once the funding surplus is depleted, City contributions will increase to the level of normal cost contributions plus any necessary UAAL payments.

Comment B: There were no benefit changes reported to the actuary in connection with this valuation of the System. In addition, there were no changes in the actuarial assumptions or methods used in the valuation of the System. The change in contribution rate over the prior valuation is due to the experience of the Retirement System during calendar year 2014.

Comment C: During the year ended December 31, 2014, the return on System assets was lower than long term expectations (7.5% per year). The market value smoothing techniques used in this valuation of the System recognize both past and present investment experience. As a result, the recognized rate of return on valuation assets was 8.85%. In addition, during the 2014 plan year, actual post retirement cost of living adjustments were lower than anticipated by actuarial assumptions. Additional information on the investment experience is provided on page B-4 of this report.

Comment D: The actuarial value of assets is based on a 4-year smoothed market value of assets and was used to determine both the funded status and the recommended employer contribution shown in this report. Use of the actuarial value of assets reduces the volatility of valuation results. As of the valuation date, the System's funded ratio was 104%. Last year the ratio was 101%. The increase in funded ratio over the prior year is due primarily to the favorable System experience during calendar year 2014. On a market value basis, the funded ratio was 108% as of December 31, 2014.

UNFUNDED ACTUARIAL ACCRUED LIABILITY (AMOUNTS IN THOUSANDS OF DOLLARS)

	December 31	
	2014	2013
A. Actuarial present value of future benefits	\$740,850	\$710,222
B. Actuarial present value of future normal costs	133,555	128,356
C. Actuarial accrued liability	607,295	581,866
D. Assets allocated to funding	628,686	589,527
E. Unfunded actuarial accrued liability	(21,391)	(7,661)
F. Ratio of assets to actuarial accrued liability	104%	101%

HISTORICAL SCHEDULE OF CITY CONTRIBUTION RATES AND THE ASSOCIATED AMORTIZATION PERIOD

Established City Contribution Rate

Valuation Date December 31	as a % of Active Member Payroll	Years to Amortize UAL	Years to Liquidate Surplus
2000 *	7.00 %	0.0	Elquidate Sur plus
2001	7.00 %	0.0	
		0.0	2.0
2002	7.00		3.8
2003	7.00	40.0	
2004 #	8.25	40.0	
2005	7.94	30.0	
2006	6.16		29.0
2007	5.04		28.0
2008	6.77		27.0
2009	8.56	26.0	
2010	9.49	25.0	
2011 *	7.15	30.0	
2012	6.44	29.0	
2013 ^	5.88		28.0
2014	5.33		27.0

^{*} Retirement System amended.

[#] The average established City contribution for the indicated fiscal year.

[^] Change in Actuarial Assumptions.

SECTION B SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

SUMMARY OF BENEFIT PROVISIONS EVALUATED OR CONSIDERED (DECEMBER 31, 2014)

Regular Retirement (no reduction factor for age)

Eligibility - Pre 3-1-67 hires: Age 60 with 20 years of service; or, any age with 30 years of service.

Post 3-1-67 hires: Age 65 with 5 years of service; or, any age with 25 years of service.

Annual Amount - Normal retirement benefit: 2% of average final compensation for all years and complete months of service, to a maximum of 100% of AFC.

Average Final Compensation (AFC) - Average earned compensation (excluding compensation for unused vacation and sick leave) during highest 36 months of service out of the last 60 consecutive months of service.

Early Retirement (reduction factor for age)

Eligibility - Age 55 with 5 years of service.

Annual Amount - Same as regular retirement amount but reduced 4% for each full year or portion of a year that payments commence prior to age 65 (age 60 if hired prior to 3-1-67).

Deferred Retirement (vested benefit)

Eligibility - 5 years of service. Benefit begins at age 65 (age 60 if hired prior to 3-1-67) or at age 55 on a reduced basis.

Annual Amount - Same as regular retirement based on service and average final compensation at time of termination.

Duty Disability Retirement

Eligibility - No age or service requirements.

Annual Amount - 40% of average final compensation, reduced if degree of disability is less than total disability.

Non-Duty Disability Retirement

Eligibility - Any age with 15 years of service.

Annual Amount - 2% of average final compensation for each full year of service, plus 1/12 of 2% for each full month of service due to a partial year of service to a maximum of 40% of AFC. Amount is reduced if degree of disability is less than total disability.

SUMMARY OF BENEFIT PROVISIONS EVALUATED OR CONSIDERED (DECEMBER 31, 2014)

Duty Death Before Retirement

Eligibility - No age or service requirements.

Annual Amount - 20% of average final compensation to an eligible spouse. Payments cease upon death. If there is no eligible spouse, accumulated employee contributions are paid to designated beneficiary. For members eligible under age and service conditions, the benefit is the amount the spouse would have received as a joint annuitant under normal or early retirement conditions.

Non-Duty Death Before Retirement

Eligibility - Any age with 15 years of service.

Annual Amount - Same as duty death.

Post-Retirement Adjustments

Pensions may be adjusted annually (in January) for changes in the Consumer Price Index. The maximum adjustment is 2% per year compounded. The first adjustment is made one year following retirement for those age 65 (60 for pre 3-1-67 hires) or those awarded disability allowances. For all others, the first adjustment is made no earlier than 4 years following retirement.

Post-Retirement Death Benefit

Eligibility – Retiree currently collecting pension benefits from the System.

Amount – A one-time payment of \$5,000 payable upon the death of the retiree. This benefit is payable only upon the death of the retiree, and is payable to the designated beneficiary.

Member Contributions

6% of annual pay.

Employer Contributions

7% of annual payroll effective March 2, 2001 – December 31, 2005.

The actuarially determined contribution rate (up to a maximum of 10% of pay) effective January 1, 2006.

Partial Lump Sum Payment Option

Members who are eligible for Regular Retirement may elect this optional form of payment, which allows for cash at retirement of up to \$30,000. Any remaining monthly retirement benefit is reduced actuarially to reflect the payment of cash at retirement.

ASSET INFORMATION SUBMITTED FOR VALUATION

The net market value of Retirement System assets was reported to be \$656,859,845 as of December 31, 2014. The derivation of the funding value of assets used for the actuarial valuation is shown on the following page.

Revenues and Expenditures – Market Value Basis

	Year Ended December 31,		
	2014	2013	
Revenues:			
a. Member contributions	\$ 7,557,179	\$ 7,220,213	
b. City contributions	8,050,846	10,606,891	
c. Investment income			
1. Interest and dividends	5,509,206	9,189,109	
2. Realized & unrealized gain/(loss)	39,541,650	81,558,358	
3. Securities lending income	0	22,645	
d. Other	139,272	100,451	
e. Total revenues	\$60,798,153	\$ 108,697,667	
Expenditures:			
a. Refunds of member contributions	\$ 1,219,379	\$ 1,070,270	
b. Benefits paid	26,985,076	25,665,693	
c. Administrative expenses	433,317	440,574	
d. Investment expenses	1,417,272	1,659,312	
e. Other expenses	0	0	
f. Total expenditures	\$ 30,055,044	\$ 28,835,849	
Reserve Increase (Decrease):			
Total revenues minus total expenditures	\$ 30,743,109	\$ 79,861,818	

Reported Market Value of Assets

	December 31, 2014
Cash & Other	\$ 44,906,316
Fixed Income	132,838,084
Equities	446,520,074
Real Estate	41,247,998
Total Assets	665,512,472
Less Accounts Payable	8,652,627
Net Assets	\$656,859,845

DEVELOPMENT OF VALUATION ASSETS

Year Ended December 31:	2013	2014
A. Funding Value Beginning of Year	\$547,685,505	\$589,526,647
B. Market Value End of Year	626,116,736	656,859,845
C. Market Value Beginning of Year	546,254,918	626,116,736
D. Non-Investment Net Cash Flow	(8,808,408)	(12,457,158)
 E. Investment Income E1. Market Total: B - C - D E2. Amount for Immediate Recognition (7.5%) E3. Amount for Phased-In Recognition: E1-E2 	88,670,226 40,746,098 47,924,128	43,200,267 43,747,355 (547,088)
 F. Phased-In Recognition of Investment Income F1. Current Year: 0.25 x E3 F2. First Prior Year F3. Second Prior Year F4. Third Prior Year F5. Total 	\$ 11,981,032 4,622,519 (8,598,046) 1,897,947 9,903,452	\$ (136,772) 11,981,032 4,622,519 (8,598,046) 7,868,733
G. Funding Value End of Year: A + D + E2 + F5	589,526,647	628,685,577
H. Difference between Market & Funding Value	36,590,089	28,174,268
I. Net Recognized Rate of Return - Funding Value Basis	9.32%	8.85%
J. Net Recognized Rate of Return - Market Value Basis	16.36%	6.97%
K. Ratio of Funding Value to Market Value	0.942	0.957

RETIRANT AND BENEFICIARY DATA

Valuation					Total		Average	% Incr.
Date	1	No. of Pension	n Recipients		Annual	% of	Annual	in Total
Dec. 31	Service	Disability	Survivor	Total	Pensions ⁽²⁾	Payroll	Pension	Pensions
1995	630	54	198	882	\$ 6,131,477	8.8 %	\$ 6,952	5.7 %
1996	634	55	195	884	6,507,720	9.2	7,362	6.1
1997	634	54	200	888	6,818,103	9.1	7,678	4.8
1998	633	56	202	891	7,134,692	9	8,008	4.6
1999	643	56	202	901	7,470,215	9.2	8,291	4.7
2000	646	61	203	910	9,188,323	11.4	10,097	23.0
2001	694	63	205	962	10,386,513	12.4	10,797	13.0
2002	725	65	210	1,000	11,261,772	13.0	11,262	8.4
2003	731	68	207	1,006	11,972,938	14.0	11,902	6.3
2004	773	66	207	1,046	13,038,432	14.7	12,465	8.9
2005	796	67	213	1,076	14,355,655	15.7	13,342	10.1
2006	823	69	221	1,113	15,766,306	16.5	14,166	9.8
2007	854	66	233	1,153	17,117,037	17.2	14,846	8.6
2008	894	59	225	1,178	18,459,873	17.5	15,671	7.8
2009	936	56	226	1,218	19,673,159	17.8	16,152	6.6
2010	995	59	229	1,283	21,945,667	21.3	17,105	11.6
2010	1,018	56	225	1,283	22,946,844	21.0	17,105	4.6
2011	1,018	55	239	1,299	22,940,844	20.7	17,003	3.5
	•			*			·	
2013	1,062	54 55	229	1,345	25,047,506	21.0	18,623	5.4
2014	1,101	55	224	1,380	26,599,897	21.4	19,275	6.2

⁽¹⁾ Reflects a one-time increase resulting from purchasing power study.

⁽²⁾ Annual pension amounts shown above are reported to the actuary by the City and reflect annual pension payments as of the indicated valuation date.

PENSIONS BEING PAID DECEMBER 31, 2014 TABULATED BY AGE OF RECIPIENT

	Service Disability Survivor Pensions Pensions Pensions			Totala				
	<u>P</u>	<u>ensions</u> Annual	<u> </u>	Pensions Pensions Annual Annu		<u>ensions</u> Annual		Totals Annual
Age	No.	Pensions	No.	Pensions	No.	Pensions	No.	Pensions
Under 45	1	\$ 9,312			1	\$ 11,700	2	\$ 21,012
45 - 49	10	269,052	1	\$ 16,932	4	45,348	15	331,332
50 - 54	48	1,280,916	2	27,216	8	129,144	58	1,437,276
55 - 59	138	3,408,924	16	216,401	17	268,392	171	3,893,717
60 - 64	193	4,517,268	17	170,844	18	275,352	228	4,963,464
65 - 69	231	4,969,174	7	67,260	28	381,084	266	5,417,518
70 - 74	198	3,968,616	6	69,348	30	354,180	234	4,392,144
75 - 79	117	2,194,560	1	13,224	38	572,266	156	2,780,050
80 - 84	101	1,683,324	4	38,568	33	321,792	138	2,043,684
85 - 89	42	568,428			31	294,252	73	862,680
90+	22	318,972	1	10,740	16	127,308	39	457,020
Totals	1,101	\$23,188,546	55	\$630,533	224	\$2,780,818	1,380	\$26,599,897

PENSIONS BEING PAID DECEMBER 31, 2014 TABULATED BY YEAR OF RETIREMENT

Year of		Annual Pensions		
Retirement	No. #	Total	Average	
1970 - 1974	1	\$ 10,742	\$ 10,742	
1975 - 1979	6	61,830	10,305	
1980 - 1984	22	196,275	8,922	
1985	6	83,207	13,868	
1986	12	198,245	16,520	
1987*	44	787,875	17,906	
1988	7	67,517	9,645	
1989	7	124,533	17,790	
1000	7	110.700	17.112	
1990	7	119,790	17,113	
1991	16	219,429	13,714	
1992	13	114,704	8,823	
1993	13	126,800	9,754	
1994	19	318,831	16,781	
1995	28	392,106	14,004	
1996	31	475,865	15,350	
1997	31	454,848	14,673	
1998	28	356,043	12,716	
1999	33	453,210	13,734	
-,,,		,	,	
2000	36	538,620	14,962	
2001	63	1,303,389	20,689	
2002	55	968,496	17,609	
2003	50	990,403	19,808	
2004	71	1,342,975	18,915	
2005	(2)	1 220 740	10.025	
2005	62	1,229,748	19,835	
2006	70	1,525,709	21,796	
2007	74	1,467,892	19,836	
2008	73	1,486,588	20,364	
2009	78	1,768,124	22,668	
2010	116	2,623,522	22,617	
2011	65	1,417,246	21,804	
2012	66	1,355,574	20,539	
2013	84	1,884,121	22,430	
2014	93	2,135,640	22,964	
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Totals	1,380	\$26,599,897	\$19,275	

^{*} Reflects early retirement incentive program. # Includes surviving spouses of deceased retirees.

SYSTEM MEMBERS INCLUDED IN VALUATION COMPARATIVE SCHEDULE

Date Active Inactive Annual Active Member Averages	Active to	(Decrease)
Date Immediate Interruption Interruption		(Decrease)
Dec. 31 Members Members Payroll ⁽¹⁾ Age Service Pay Re	etired Members	in Avg Pay
1994 2,492 14 \$70,151 41.6 yrs. 10.0 yrs. \$28,150	2.8	7.0 %
1995 2,428 16 69,754 42.2 10.5 28,729	2.8	2.1
1996 2,401 17 70,972 42.8 10.9 29,559	2.7	2.9
1997 2,418 19 74,752 43.3 11.1 30,908	2.7	4.6
1998 2,404 25 79,195 43.7 11.6 32,929	2.7	6.5
1999 2,453 36 80,897 43.8 11.6 32,979	2.7	0.2
2000 2,454 41 80,503 44.0 11.6 32,805	2.7	(0.5)
2001 2,454 49 83,862 44.0 11.4 34,174	2.6	4.2
2002 2,374 55 86,428 44.5 11.7 36,406	2.4	6.5
2003 2,290 61 85,666 45.2 12.3 37,409	2.3	2.8
2004 2,302 54 88,866 45.2 12.3 38,604	2.2	3.2
2005 2,312 58 91,641 45.5 12.3 39,637	2.1	2.7
2006 2,353 62 95,504 45.5 12.1 40,588	2.1	2.4
2007 2,380 66 99,574 45.5 12.0 41,838	2.1	3.1
2008 2,422 71 105,566 45.8 11.9 43,586	2.1	4.2
2009 2,380 73 110,408 46.3 12.3 46,390	2	6.4
2010 2,304 81 102,915 46.4 12.3 44,668	1.8	(3.7)
2011 2,398 75 109,293 46.3 12.1 45,577	1.8	2.0
2012 2,459 83 114,933 46.4 12.0 46,740	1.9	2.6
2013 2,487 82 119,457 46.4 11.9 48,032	1.8	2.8
2014 2,500 82 124,142 46.5 11.9 49,657	1.8	3.4

⁽¹⁾ In thousands of dollars.

INACTIVE MEMBERS - DECEMBER 31, 2014 ELIGIBLE FOR DEFERRED PENSIONS TABULATED BY AGE

		Estimated
		Annual
Age	No.	Allowances
Under 40	11	\$ 62,971
40	5	43,474
41	2	22,019
42	4	25,087
43	3	22,609
44	4	29,913
45	4	55,305
46	1	3,366
48	1	26,324
49	4	44,679
50	4	34,297
51	5	68,093
52	6	71,952
53	3	44,152
54	2	45,342
55	4	29,910
56	1	5,441
57	3	70,509
58	3	19,315
59	3	24,338
60 & Over	9	111,652
Totals	82	\$860,748

ACTIVE MEMBERS AS OF DECEMBER 31, 2014 BY AGE AND YEARS OF SERVICE

									Totals
		Y	ears of Se	rvice on \	Valuation	Date			Valuation
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Payroll
20-24	53							53	\$ 1,556,983
25-29	129	25	1					155	5,305,749
30-34	170	78	25	1				274	10,954,314
35-39	129	73	38	14				254	11,276,769
40-44	102	65	69	47	20			303	14,928,371
45-49	82	80	49	45	60	20	2	338	17,407,481
50-54	66	74	42	66	70	57	41	416	22,731,813
55-59	62	76	42	50	62	35	55	382	21,230,362
60	9	7	8	8	6	11	12	61	3,519,415
61	7	9	5	7	11	11	9	59	3,305,344
62	3	9	5	8	13	4	14	56	3,346,245
63	3	3	7	7	1	4	8	33	1,816,554
64	4	3	5	4	4	4	6	30	1,787,578
65	5	2	3	3	6	5	6	30	1,737,937
66	2	1	3	2	3	3	5	19	1,212,402
67		4	2	2	1			9	512,655
68	1	1			1	1		4	196,215
69		2					2	4	242,606
70	2	1		1		1	1	6	334,599
71	1		1		2	1		5	354,661
73	1							1	39,213
74	1							1	17,045
75		1	1				1	3	170,038
78		1		1	1			3	137,081
79+	1							1	20,322
Totals	833	515	306	266	261	157	162	2,500	\$124,141,752

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Group Averages:

Age: 46.5 years Service: 11.9 years Annual Pay: \$49,657

SCHEDULE OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS COMPARATIVE STATEMENT

Year	Adde	d to Rolls (2)		moved m Rolls		Rolls End of Y	ear	
Ended		Annual		Annual		Annual	Avg. Annual	% Incr.
Dec. 31	No.	Benefits (1)	No.	Benefits	No.	Benefits	Benefits	in Benefits
		_		_				
2006	85	\$1,978,502	48	\$567,851	1,113	\$ 15,766,306	\$ 14,166	9.8 %
2007	95	1,989,651	55	638,920	1,153	17,117,037	14,846	8.6
2008	85	2,109,746	60	766,910	1,178	18,459,873	15,671	7.8
2009	86	1,905,592	46	692,306	1,218	19,673,159	16,152	6.6
2010	120	3,059,254	55	786,746	1,283	21,945,667	17,105	11.6
2011	70	1,778,917	54	777,740	1,299	22,946,844	17,665	4.6
2012	74	1,467,021	49	655,949	1,324	23,757,916	17,944	3.5
2013	86	2,215,300	65	925,710	1,345	25,047,506	18,623	5.4
2014	95	2,483,415	60	931,024	1,380	26,599,897	19,275	6.2

⁽¹⁾ Includes post retirement cost-of-living adjustments.

⁽²⁾ Includes reported data corrections.

SECTION C

ACTUARIAL METHODS, ACTUARIAL ASSUMPTIONS AND DEFINITION OF TECHNICAL TERMS

THE ACTUARIAL VALUATION PROCESS

The *actuarial valuation* is the mathematical process by which actuarial present values and contribution rates are determined. The flow of activity constituting the valuation may be summarized as follows:

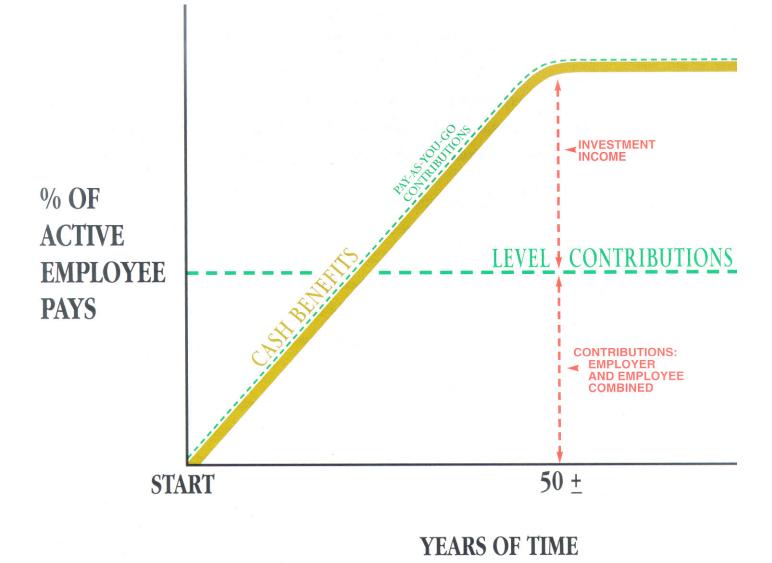
- A. *Census data*, furnished by plan administrator, including:
 - Retired lives now receiving benefits

 Former employees with vested benefits not yet payable

 Active employees
- B. + Benefit provisions, furnished by plan administrator
- C. + Asset data (cash & investments), furnished by plan administrator
- D. + Assumptions concerning future experience in various risk areas
- E. + The *funding method* for employer contributions (the long-term, planned pattern for employer contributions)
- F. + Mathematically combining the assumptions, the funding method and the data
- G. = Determination of:

Plan Financial Position and/or

New Employer Contribution Rate



CASH BENEFITS LINE. This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

LEVEL CONTRIBUTION LINE. Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

Economic Risk Areas

Rates of investment return

Rates of pay increase

Changes in active member group size

Non-Economic Risk Areas

Ages at actual retirement

Rates of mortality

Rates of withdrawal of active members (turnover)

Rates of disability

ACTUARIAL METHODS

Actuarial Cost Method

The actuarial cost method is a procedure for allocating the actuarial present value of pension plan benefits and expenses to time periods. The method used for the valuation is known as the individual entry-age actuarial cost method and has the following characteristics.

- (i) The annual normal costs for each individual active member, payable from the date of employment to the date of retirement, are sufficient to accumulate the value of the member's pension at time of retirement.
- (ii) Each annual normal cost is a constant percentage of the member's year by year projected compensation.

The entry-age actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's compensation between the entry age of the member and the assumed exit ages.

The portion of the actuarial present value allocated to the valuation year is called the normal cost. The portion of the actuarial present value not provided for by the actuarial present value of future normal costs is called the actuarial accrued liability. Deducting System assets from the actuarial accrued liability determines the unfunded actuarial accrued liability.

Actuarial Value of Assets

The funding value of assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased-in over a closed 4-year period. During periods when investment performance exceeds the assumed rate, funding value of assets will tend to be lower than market value. During periods when investment performance is less than the assumed rate, funding value of assets will tend to be greater than market value. The funding value of assets is unbiased with respect to market value. At any time it may be either greater or less than market value. If assumed rates are exactly realized for 4 consecutive years, it will become equal to market value.

ACTUARIAL ASSUMPTIONS

Funding objective contribution requirements and actuarial present values are calculated by applying actuarial assumptions to the benefit provisions and people information of the System, using the actuarial cost method described on page C-3.

The principal areas of risk which require actuarial assumptions about future experiences are:

- (i) long-term rates of investment return to be generated by the assets of the System
- (ii) patterns of pay increases to members
- (iii) rates of mortality among members and retired lives
- (iv) rates of withdrawal of active members
- (v) rates of disability among active members
- (vi) the age patterns of actual retirements

In a valuation, the monetary effect of each assumption projected is for as long as a present covered person or potential beneficiary survives, a period of time which can be as long as a century. The actual experience of the System will not coincide exactly with assumed experience. From time-to-time one or more of the assumptions are modified to reflect experience trends (but not random or temporary year to year fluctuations).

The actuarial assumptions were based upon the results of an experience study for the System covering the period January 1, 2008 through December 31, 2012. A report dated December 4, 2013 presented the results of the experience study. The actuarial assumptions represent estimates of future experience.

ACTUARIAL ASSUMPTIONS

Investment Return (net of expenses)

The rate of investment return assumed in the valuation was seven and one-half percent (7.5%) per year, compounded annually net of investment and administrative expenses. The assumed real rate of return over wage inflation is 3.75% per year.

Wage Inflation

The wage inflation rate assumed in this valuation was 3.75% per year. The wage inflation rate is defined to be the portion of total pay increases for an individual that are due to macroeconomic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes rated to individual merit and seniority effects.

Salary Increase Rates

These assumptions are used to project current pays to those which will determine average final compensation.

_	Annual Rate of
Sample	Merit and
Ages	Longevity
1	3.50 %
2	3.50
3	3.50
4	3.50
5	3.50
6	3.50
7	3.50
8	3.50
9	3.50
10	3.50
11	3.50
12	3.50
13	3.50
14	3.00
15+	0.00

The active member population is assumed to remain constant. For purposes of financing the unfunded liabilities, total payroll is assumed to grow at a rate of 3.75% per year.

Price Inflation

The assumed rate of price inflation used in this valuation was 3.00% per year.

Mortality Table

The mortality assumption is used to measure the probabilities of a member dying before retirement and the probability of each benefit payment being made. The RP 2000 mortality table projected to 2010 was used in this valuation of the System. Sample statistics are shown below. This table was first used in the December, 31, 2013 valuation.

	Value at Ro	etirement of	Futu	ıre Life
Sample	\$1 Month	nly for Life	Expecta	ncy (Years)
Ages	Men	Women	Men	Women
50	\$143.70	\$146.33	31.81	34.12
55	135.81	139.26	27.13	29.40
60	125.75	130.27	22.62	24.85
65	113.65	119.46	18.40	20.57
70	99.83	107.03	14.56	16.65
75	84.10	93.08	11.08	13.11
80	67.47	77.78	8.09	9.96

Rates of Retirement

Rates of retirement are used to measure the probabilities of an eligible member retiring during the next year, and are summarized below. These rates were first used for the December 31, 2013 valuation.

Age of Member	Percent of Eligible Members Retiring During Next Year	Years of Service	Percent Retiring
55	6%	25	15%
56	6	26	10
57	6	27	10
58	6	28	10
59	6	29	10
60	6	30	10
61	6	31	10
62	6	32	10
63	6	33	10
64	6	34	10
65	40	35	10
66	25	36	10
67	25	37	10
68	30	38	10
69	40	39	10
70	100	40	20
		41	10
		42	20
		43	10
		44	10
		45	100

The service based retirement rates were applied to those members first eligible to retire under "25 and out". The age based retirement rates were applied to members retiring under '65/5' or the Plan's early retirement condition.

The probability of retiring at age 70 was assumed to be 100% regardless of service.

Rates of Separation from Active Membership

This assumption measures the probabilities of a member terminating employment. The rates do not apply to members who are eligible to retire.

Sample	Years of	% of Active Members
Ages	Service	Separating within Next Year
ALL	0	25.00%
	1	17.00
	2	12.00
	3	8.00
	4	6.00
25	5 & Over	7.00
30		6.00
35		4.75
40		3.50
45		2.40
50		1.50
55		1.00
60		1.00

Rates of Disability

This assumption measures the probabilities of a member becoming disabled.

Age	% of Active Members During Next Year			
of Member	Males	Females		
25	0.08%	0.06%		
30	0.09	0.07		
35	0.11	0.09		
40	0.14	0.13		
45	0.21	0.19		
50	0.62	0.57		
55	0.97	0.86		
60	1.10	0.96		

Disabled life mortality is measured by the RP 2000 mortality table projected to 2010 at time of disability.

DEFINITIONS OF TECHNICAL TERMS

Actuarial Accrued Liability. The difference between the actuarial present value of System benefits and the actuarial value of future normal costs. Also referred to as "accrued liability" or "actuarial liability."

Actuarial Assumptions. Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Accrued Service. Service credited under the system which was rendered before the date of the actuarial valuation.

Actuarial Equivalent. A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of Retirement System benefits between future normal cost and actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Gain (Loss). The difference between actual experience and actuarial assumption anticipated experience during the period between two actuarial valuation dates.

Actuarial Present Value. The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment.

Amortization. Paying off an interest-discounted amount with periodic payments of interest and principal -- as opposed to paying off with lump sum payment.

DEFINITIONS OF TECHNICAL TERMS

Normal Cost. The actuarial present value of retirement system benefits allocated to the current year by the actuarial cost method.

Unfunded Actuarial Accrued Liability. The difference between actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded actuarial liability" or "unfunded accrued liability."

The existence of an unfunded actuarial accrued liability is not in itself bad, any more than a mortgage on a house is bad. The unfunded actuarial accrued liability does not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liability and the trend in its amount (after due allowance for devaluation of the dollar).

SUMMARY OF ASSUMPTIONS USED DECEMBER 31, 2014

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption: 80% of the population is assumed to be married for purposes of

death-in-service benefits.

Pay Increase Timing: Beginning of year. This is equivalent to assuming that reported

pays represent amounts paid to members during the year ended

on the valuation date.

Decrement Timing: All decrements were assumed to occur mid-year.

Eligibility Testing: Eligibility for benefits is determined based upon the age nearest

birthday and service nearest whole year on the date the

decrement is assumed to occur.

Benefit Service: Exact fractional service is used to determine the amount of

benefit payable.

Normal Form of Benefit: The assumed normal form of benefit is the straight life form.

Expenses: Assumed investment return is net of administrative and

investment expenses.

Non-forfeiture Assumption: All vested terminated members who terminate close to

retirement were assumed to elect a deferred retirement while those terminating with less service were assumed to elect a refund of their contributions in lieu of deferred retirement

benefits.

SECTION D SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION SCHEDULE OF FUNDING PROGRESS

(DOLLAR AMOUNTS IN THOUSANDS)

		Actuarial			Active	UAAL as
Actuarial	Actuarial	Accrued	Unfunded		Member	a Percentage of
Valuation	Value of	Liability	AAL	Funded	Covered	Active Member
Date	Assets	(AAL)	(UAAL)	Ratio	Payroll	Covered Payroll
December 31,	(a)	(b)	(b)-(a)	(a)/(b)	(c)	((b-a)/c)
2004	\$381,495	\$415,164	\$ 33,669	91.9 %	\$ 88,866	37.9 %
2005 #	424,182	436,904	12,722	97.1	91,641	13.9
2006	476,913	457,547	(19,366)	104.2	95,504	(20.3)
2007	529,876	488,827	(41,049)	108.4	99,574	(41.2)
2008	528,664	519,234	(9,430)	101.8	105,566	(8.9)
2009	529,137	556,427	27,290	95.1	110,408	24.7
2010	524,731	566,834	42,103	92.6	102,915	40.9
2011 *#	514,499	533,719	19,220	96.4	109,293	17.6
2012	547,686	553,588	5,902	98.9	114,933	5.1
2013 #	589,527	581,866	(7,661)	101.3	119,457	(6.4)
2014	628,686	607,295	(21,391)	103.5	124,142	(17.2)

[#] Changes in methods and assumptions.

Analysis of the dollar amounts of the actuarial value of assets, actuarial accrued liability, or actuarial accrued liability in isolation can be misleading. Expressing the actuarial value of assets as a percentage of the actuarial accrued liability provides one indication of the System's funded status on a going-concern basis. Analysis of this percentage over time indicates whether the System is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the plan. The unfunded actuarial accrued liability and annual covered payroll are both affected by inflation. Expressing the unfunded actuarial accrued liability as a percentage of covered payroll approximately adjusts for the effects of inflation and aids analysis of the progress being made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the plan.

^{*} Plan provision changes.

REQUIRED SUPPLEMENTARY INFORMATION SCHEDULE OF EMPLOYER CONTRIBUTIONS

Valuation	Annual
Date	Required
December 31,	Contribution (1)
2005	\$8,348,510
2006	8,323,183
2007	7,019,982
2008	5,911,702
2009	5,564,582
2010	6,077,150
2011	8,377,304
2012	10,372,658
2013	9,938,793
2014	8,435,432

⁽¹⁾ For the plan year ending on the valuation date.

Note: The City develops the annual required contribution for financial reporting purposes based on the recommendation of the actuary and the City's contribution policy.

SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

Valuation Date	December 31, 2014
Actuarial Cost Method	Individual Entry Age
Amortization Method	Level Percent of payroll
Amortization Period	27 years closed
Asset Valuation Method	4-year smoothed market
Actuarial Assumptions: Investment Rate of Return* Projected Salary Increases* *Includes Wage Inflation	7.5% 3.75% - 7.25% 3.75%
Cost-of-Living Adjustments	Up to 2.0% per year

SECTION E RETIREMENT SYSTEM EXPERIENCE ACTUAL VS. EXPECTED

DERIVATION OF EXPERIENCE GAIN (LOSS) CALENDAR YEARS 2010 - 2014

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is hoped that gains and losses will cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below, along with a year by year historic comparison.

	Amounts Shown are Expressed in Thousands of Dollars						
	2014 2013		2012	2011	2010		
(1) UAAL* at start of year	\$ (7,661)	\$ 5,902	\$ 79,423	\$ 42,103	\$ 27,290		
(2) Normal cost	15,170	14,550	15,252	14,470	13,626		
(3) Actual member and employer contributions	15,608	17,827	17,292	14,953	12,707		
(4) Interest accrual on (1), (2) and (3)	(591)	320	6,272	3,349	2,220		
(5) Expected UAAL before changes: $(1) + (2) - (3) + (4)$	(8,690)	2,945	83,655	44,969	30,429		
(6) Increase due to benefit/assumption changes	0	3,568	(65,947)	0	0		
(7) Increase due to revised actuarial methods	0	0	0	0	0		
(8) Expected UAAL after changes: $(5) + (6) + (7)$	(8,690)	6,513	17,708	44,969	30,429		
(9) Actual UAAL at end of year	(21,391)	(7,661)	5,902	79,423	42,103		
(10) Gain (loss): (8) - (9)	12,701	14,174	\$ 11,806	(34,454)	(11,674)		

^{*} Unfunded actuarial accrued liability (UAAL).

Note: Benefit changes reflected in the 2012 gain/loss but adopted retroactively for the 2011 valuation.

SERVICE RETIREMENTS DURING THE INDICATED PLAN YEARS

Number Retiring in the						
Indicated Year						

	Indicated Year 2014 2013 2012					
Age Group	2014	2013	2012			
40-44						
45-49	5	3	2			
50-54	2	8	5			
55-59	14	9	10			
60	5	3				
61	5	4	1			
62	10	11	5			
63	7	5	3			
64	4	4	4			
65	7	2	4			
66	2	3	3			
67	5	5	3			
68	3					
69		4	2			
70 & Over	5	5	3			
Total	74	66	45			
Expected	97.9	130.0	130.1			

The chart above shows actual versus expected retirements from City employment and does not include retirements from deferred status, death-in-service, or disability retirements.

NON-VESTED WITHDRAWALS FROM ACTIVE MEMBERSHIP DURING THE INDICATED PLAN YEARS

Number Terminating during the

	_	Indicated Year					
Age Groups	Years of Service	2014	2013	2012			
	0	41	42	37			
	1	19	19	17			
	2	17	8	13			
	3	7	5	11			
	4	3	5	9			
	Sub-Total	87	79	87			
Under 30	5 & Over	2	3	0			
30-34		2	5	4			
35-39		8	3	3			
40-44		2	6	5			
45-49		3	5	9			
50-54		6	5	6			
55-59		5	3	1			
60 & Over		3	2	3			
Sub-Total	_	31	32	31			
Total		118	111	118			
Expected No.		126.4	145.1	136.0			

NUMBER ADDED TO AND REMOVED FROM ACTIVE MEMBERSHIP ACTUAL & EXPECTED

Valuation Number Added Date During Year		r Added					Die	ed-In	Ot	her	Members
		Retirement Disabled		Service		Withdrawal		End of			
December 31	A	E	A	E	A	E	A	E	A	E	Year
2000	309	308	38	54.1	6	4.3	3	4.7	261	159.1	2,454
2001	331	331	82	74.6	4	3.6	5	3.7	240	162.7	2,454
2002	135	215	54	89.1	5	3.1	9	3.7	147	172.2	2,374
2003	120	213	42	87.6	2	3.2	7	3.7	153	146.7	2,290
2004	207	201	62	98.7	1	3.0	3	3.9	129	119.9	2,302
2005	200	190	57	100.2	3	3.1	6	4.1	124	129.6	2,312
2006	238	197	63	88.8	3	3.1	2	3.8	129	131.4	2,353
2007	206	179	64	93.4	1	3.0	5	3.9	109	148.9	2,380
2008	220	178	68	94.7	0	2.8	0	4.0	110	149.5	2,422
2009	138	180	67	106.8	1	2.6	2	4.0	110	159.2	2,380
2010	137	213	91	106.7	4	2.5	4	4.1	114	132.6	2,304
2011	257	163	48	111.6	1	2.4	3	4.2	111	124.0	2,398
2012	242	181	45	116.1	1	2.5	3	4.4	132	146.0	2,459
2013	221	193	66	130.0	2	2.4	4	4.6	121	154.9	2,487
2014	223	210	74	97.9	3	2.4	2	3.2	131	136.0	2,500
2010-2014	1,080	960	324	562.3	11	12.2	16	20.5	609	693.5	

A: Actual experience

E: Expected experience based on actuarial assumptions

Ms. Rena L. Hutton Retirement System Manager Oklahoma City Employee Retirement System 420 West Main, Suite 343 Oklahoma City, Oklahoma 73102

Dear Rena:

Please find enclosed 25 copies of the report of the annual actuarial valuation as of December 31, 2014 of the Oklahoma City Employee Retirement System.

Sincerely,

Louise M. Gates

LMG:bd Enclosures