Wichita Employees' Retirement System

Actuarial Valuation as of December 31, 2011

Prepared by:
Milliman, Inc.

William V. Hogan, FSA, MAAA
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April 3, 2012

Wichita Employees' Retirement System

Actuarial Valuation Report as of December 31, 2011

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April 3, 2012

The Board of Trustees
Wichita Employees' Retirement System
City Hall, 12th Floor
455 North Main Street
Wichita, Kansas 67202

Dear Members of the Board:

At your request, we have performed an annual actuarial valuation of the Wichita Employees' Retirement System as of December 31, 2011 for determining the contribution rate for fiscal year 2013. The major findings of the valuation are contained in this report. This report reflects the benefit provisions in effect as of December 31, 2011. There were no changes in the actuarial methods or assumptions from the prior valuation.

In preparing this report, we relied, without audit, on information (some oral and some written) supplied by the System's staff. This information includes, but is not limited to, plan provisions, member data and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

On the basis of the foregoing we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board (ASB) and the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries.

We further certify that all costs, liabilities, rates of interest and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations of future experience); and which, in combination, offer our best estimate of anticipated experience affecting the System. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions. The Board of Trustees has the final decision regarding the appropriateness of the assumptions and adopted them as outlined in Appendix C.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the System's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations presented in this report are for purposes of determining the actuarial contribution rates for funding the System. Actuarial computations presented in this report under GASB Statements No. 25, 27, and 50 are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and of GASB Statements No. 25, 27, and 50. Determinations for purposes other than these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work product was prepared exclusively for the Wichita Employees' Retirement System of Wichita, Kansas for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning the Wichita Employees' Retirement System of Wichita, Kansas operations, and uses data from the Wichita Employees' Retirement System of Wichita, Kansas, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

Any distribution of the enclosed report must be in its entirety including this cover letter, unless prior written consent is obtained from Milliman, Inc. This report has been prepared in accordance with the terms and provisions of the Consulting Services Agreement effective August 15, 2007.

We would like to express our appreciation to Barbara Davis, Pension Manager, and to members of her staff, who gave substantial assistance in supplying the data on which this report is based.
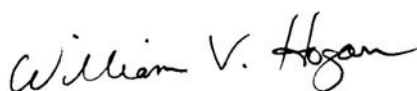
I, William V. Hogan, FSA, am an actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and a Fellow of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I, Timothy J. Herman, FSA, am an actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and a Fellow of the Society of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

We herewith submit the following report and look forward to discussing it with you.

Respectfully Submitted,

Milliman, Inc.

William V. Hogan, FSA, MAAA
Principal and Consulting Actuary

Timothy J. Herman, FSA, MAAA
Consulting Actuary

WVH/TJH/cw

Section 1

Board Summary

OVERVIEW

This report presents the results of the December 31, 2011 actuarial valuation of the Wichita Employees' Retirement System (WER). The primary purposes of performing a valuation are to:

- estimate the liabilities for the benefits provided by the System,

- determine the employer contribution rates required to fund the System on an actuarial basis,

- disclose certain asset and liability measures as of the valuation date,

- monitor any deviation between actual plan experience and experience projected by the actuarial assumptions, so that recommendations for assumption changes can be made when appropriate,

- analyze and report on any significant trends in contributions, assets and liabilities over the past several years.

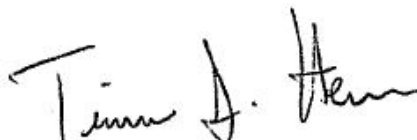All new employees hired by the City participate in Plan 3 (a defined contribution plan) for the first seven years. After seven years, the member makes an election to either remain in the defined contribution plan or move to Plan 2 (a defined benefit plan). The members that elect to remain in the defined contribution plan are referred to as Plan 3b members in this report. This report is intended to value assets and liabilities only for employees who are members of the defined benefit plans (Plan 1 and 2) or Plan 3 members who will have the right to elect such coverage in the future. Therefore, the member data, liability and asset values shown in this report exclude Plan 3b members (those who have elected to remain in the defined contribution plan).

There were no changes in the benefit provisions, actuarial assumptions, or actuarial methods from the last valuation.

In the 2010 valuation, actuarial assets were lower than actuarial liability, so there was an unfunded actuarial liability of $24.1 million. The 2011 valuation shows a large increase to the unfunded actuarial liability of $17.8 million for a total of $41.9 million (actuarial liability exceeds actuarial assets). A detailed analysis of the change in the unfunded actuarial liability/(surplus) from December 31, 2010 to December 31, 2011 is shown on page 3. The actuarial valuation results provide a "snapshot" view of the Plan's financial condition on December 31, 2011. The valuation results reflect net unfavorable experience for the past plan year as demonstrated by an unfunded actuarial liability that was higher than expected based on the actuarial assumptions used in the December 31, 2010 actuarial valuation. Unfavorable experience on the actuarial value of assets resulted in a loss of $18.2 million and favorable experience on liabilities resulted in a gain of $1.2 million. Net experience was an actuarial loss of $17.0 million.

The Plan uses an asset smoothing method in the valuation process. As a result, the plan's funded status and the actuarial contribution rate are based on the actuarial (smoothed) value of assets – not the market value. On a market value basis, the rate of investment return was 0.4% in 2011. Because this is less than the actuarially assumed rate of return of 7.75%, it is considered to be an actuarial loss on investments. Under the asset smoothing method used in the valuation process, a portion of this investment loss is deferred to future years. Primarily because of this investment loss in 2011, the deferred (unrecognized) investment loss increased from $36 million in the December 31, 2010 valuation to $54 million in the December 31, 2011 valuation. Actual returns over the next few years will determine if and how, the $54 million of deferred investment loss is recognized. For example, a return of 19% on the market value of assets in 2012 would be necessary to attain a return of 7.75% on the actuarial value of assets and offset the recognition of prior deferred losses in 2012.

In the following pages the change in the assets, liabilities, and contributions of the Plan over the last year are discussed in more detail.

ASSETS

As of December 31, 2011, the System had total assets, when measured on a market value basis, of $459 million. This was a decrease of $22 million from the December 31, 2010 figure of $481 million. The market value of assets is not used directly in the calculation of the City's contribution rate. An asset valuation method, which smoothes the effect of market fluctuations, is used to determine the value of assets used in the valuation, called the "actuarial value of assets". The actuarial value of assets is equal to the expected value (calculated using the actuarial assumed rate of 7.75%) plus 25% of the difference between the market and expected value. See Table 3 on page 12 for a detailed development of the actuarial value of assets. The rate of return on the actuarial value of assets was 4%. Due to less than expected return on the market value of assets on average over the past 4 years, the actuarial value of assets remains 12% higher than the actual market value.

The components of the change in the market and actuarial value of assets for the Retirement System (in millions) are set forth below:

	Market Value ($M)	Actuarial Value ($M)
Assets, December 31, 2010	$480.7	$516.3
▪ City and Member Contributions	11.3	11.3
▪ Benefit Payments, Refunds and Transfers	(35.3)	(35.3)
▪ Investment Income (net of expenses)	2.1	21.0
Assets, December 31, 2011	$458.8	$513.3

The unrecognized investment losses represent about 12% of the market value of assets. Unless offset by future investment gains or other favorable experience, the recognition of the $54 million loss is expected to have an impact on the future funded ratio and actuarial contribution requirement. If the deferred losses were recognized immediately in the actuarial value of assets, the funded percentage would decrease from 93% to 83% and the actuarially determined contribution rate would increase from 12.6% to 17.9%.
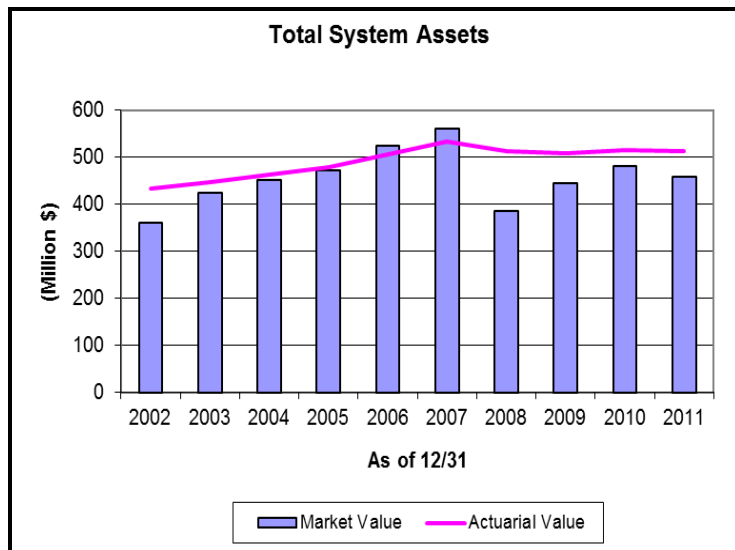
The actuarial value of assets has both been greater than and less than the market value of assets during this period, which is expected when using a smoothing method.

Rate of Return on Assets

Year Ending 12/31
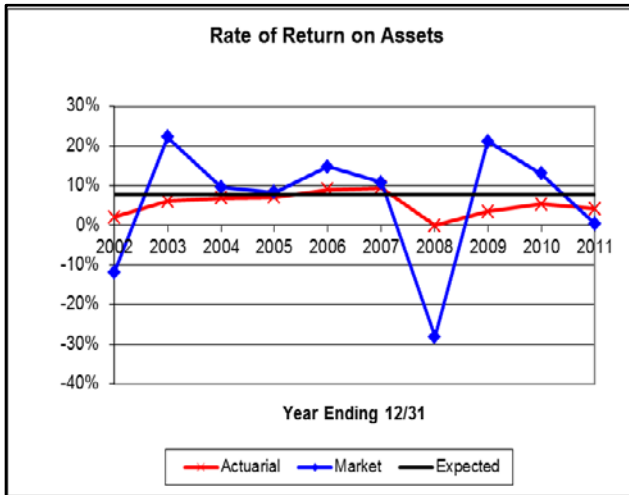
The rate of return on the actuarial value of assets has been less volatile than the market value return, which is the main reason for using an asset smoothing method.

LIABILITIES

The actuarial liability is that portion of the present value of future benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and asset values at the same date is referred to as the unfunded actuarial liability (UAL), or (surplus) if the asset value exceeds the actuarial liability. The unfunded actuarial liability will be reduced if the employer's contributions exceed the employer's normal cost for the year, after allowing for interest earned on the previous balance of the unfunded actuarial liability. Benefit improvements, experience gains and losses, and changes in actuarial assumptions and procedures will also impact the total actuarial liability and the unfunded portion thereof.

The Actuarial Liability and Unfunded Actuarial Liability for the System are:

Actuarial Liability	$555,173,723
Actuarial Value of Assets	513,298,382
Unfunded Actuarial Liability/(Surplus)	41,875,341

Between December 31, 2010 and December 31, 2011, the change in the unfunded actuarial liability for the System was as follows (in millions):

Change in Unfunded Actuarial Liability	$(M)
UAL, December 31, 2010	$24.1
+ Normal cost for year	9.9
+ Assumed investment return for year	2.6
- Actual contributions (member + City)	11.3
- Assumed investment return on contributions	.4
= Expected Unfunded Actuarial Liability, December 31, 2011	24.9
+ Change from amendments	0.0
+ Change from assumption changes	0.0
= Expected UAL after changes	24.9
Actual UAL, December 31, 2011	41.9
Experience gain/(loss) (Expected UAL – Actual UAL)	$ (17.0)

The experience loss for the 2011 plan year of $17.0 million reflects the combined impact of an actuarial loss of about $18.2 million on System assets (actuarial value), and an actuarial gain of about $1.2 million on System liabilities.

Analysis of the unfunded actuarial liability strictly as a dollar amount can be misleading. Another way to evaluate the unfunded actuarial liability and the progress made in its funding is to track the funded status, the ratio of the actuarial value of assets to the actuarial liability. This information for recent years is shown below (in millions). Historical information is shown in the graph following the chart.

	12/31/07	12/31/08	12/31/09	12/31/10	12/31/11
Actuarial Liability ($M)	$483.4	$512.4	$529.3	$540.4	$555.2
Actuarial Value of Assets ($M)	$533.9	$512.9	$509.5	$516.3	$513.3
Funded Ratio (Actuarial Value)	110.5%	100.1%	96.3%	95.5%	92.5%
Funded Ratio (Market Value)	115.8%	75.3%	84.0%	88.9%	82.6%
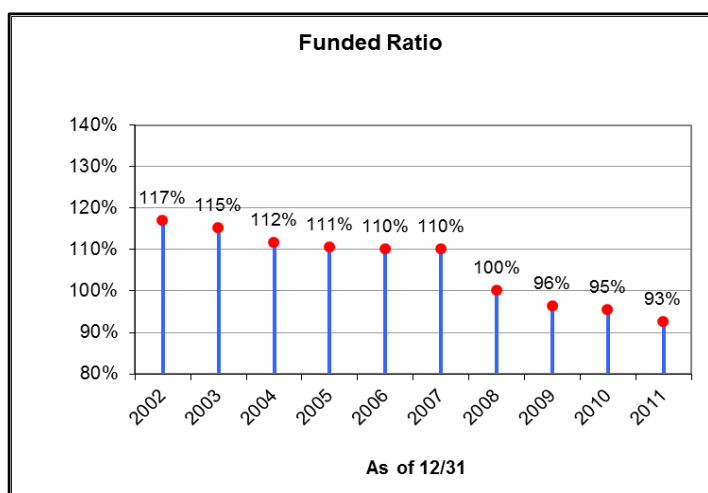
The funded ratio has declined over the last decade due to various reasons including benefit improvements, assumption changes and most significantly, investment experience. There are still deferred investment losses that will be recognized in future years, absent investment returns above the 7.75% assumption. Without these gains, the funded ratio will continue to decline toward the market value percentage shown above.

As mentioned earlier in this report, due to the asset smoothing method there is currently about a $54 million difference between the actuarial value and the market value of assets. To the extent there is not favorable investment experience to offset the deferred losses, the $54 million loss will be recognized in future years and the System's funded status will decline. The System's funded status in future years will be heavily dependent on actual investment returns.

CONTRIBUTION RATES

Generally, contributions to the System consist of:

- a "normal cost" for the portion of projected liabilities allocated to service of members during the year following the valuation date, by the actuarial cost method, and

- an "unfunded actuarial liability or (surplus) contribution" for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets.

Contribution rates are computed with the objective of developing costs that are level as a percentage of covered payroll. The contribution rate for fiscal year 2013 is based on the December 31, 2011 actuarial valuation results.

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As of December 31, 2011, the actuarial liability exceeds the actuarial value of assets. The resulting unfunded actuarial liability, when amortized over a 20-year rolling period, results in an amortization cost of 4.1% of pay. The contribution rate is the sum of the employer portion of the normal cost rate and the amortization cost. This valuation indicates the City's contribution rate to be 12.6% of pay (8.5% employer normal cost rate plus 4.1% unfunded actuarial liability contribution).

A summary of the City's historical contribution rate for the System is shown below:
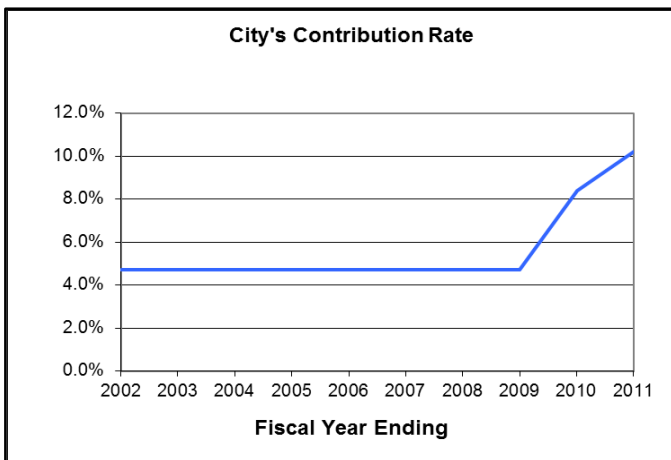
The City's Contribution Rate will be 10.6% and 12.6% for the Fiscal Year Ending 12/31/2012 and 12/31/2013, respectively.

COMMENTS

The stock market losses in 2008 are still impacting most public retirement plans. Favorable investment returns in 2009 and 2010 have helped alleviate some of the 2008 losses. However, the 2011 return of 0.4% has resulted in a setback to this improvement. The System utilizes an asset smoothing method to smooth out the peaks and valleys of investment returns. Under the asset smoothing method, the actuarial value of assets is determined as 75% of the expected value (using the 7.75% actuarial assumed rate of return) and 25% of actual market value. Due to the use of an asset smoothing method, the December 31, 2011 valuation reflected a return on the actuarial value of assets of 4%.

The deferred investment loss has grown considerably since last year. Given the size of the remaining deferred investment loss ($54M), the System's funded status could decrease and the actuarial contribution rate increase in future valuations absent favorable experience to offset the impact of the deferred losses. The City should be prepared for still higher contribution rates in the next few years, and perhaps longer, depending on future rates of return. As mentioned above, favorable asset returns in 2009 and 2010 have helped stabilize this issue; however, the 0.4% return on market value in 2011 created a larger deferred investment loss.

While the use of an asset smoothing method is a common procedure for public retirement systems, it is important to identify the potential impact of the deferred (unrecognized) investment experience. The key valuation results from the December 31, 2011 actuarial valuation are shown on the following page using both the actuarial value of assets and the pure market value.

	Using Actuarial Value of Assets	Using Market Value of Assets
Actuarial Liability	$555,173,723	$555,173,723
Asset Value	513,298,382	458,827,503
Unfunded Actuarial Liability	41,875,341	96,346,220
Funded Ratio	92.5%	82.6%
Normal Cost Rate	13.2%	13.2%
UAL Contribution Rate	4.1%	9.4%
Total Contribution Rate	17.3%	22.6%
Employee Contribution Rate	(4.7%)	(4.7%)
Employer Contribution Rate	12.6%	17.9%

The asset smoothing method impacts only the timing of recognizing the actual market experience on the assets. Due to deferred investment experience from 2008 and 2011, the actuarial value of assets exceeds the market value by 12%, despite strong returns in 2009 and 2010. If there are not higher returns than 7.75% consistently over the next few years, the $54 million of deferred investment experience will be recognized and the ultimate impact on the employer contribution rate can be expected to be similar to the column shown above using market value of assets.

The City offered an early retirement window in 2011 for eligible employees. While the pension benefits of the System were not changed in the window, there were a larger number of retirees than expected. The net result was a slight liability gain and a reduction in covered payroll. The reduction in covered payroll also resulted in an increase in the employer contribution rate to amortize the Unfunded Actuarial Liability (UAL).

The following graph shows the expected increase in the employer contribution rate in future years if 7.75% is earned in all future years and the full actuarial contribution rate is made by the City in all future years.
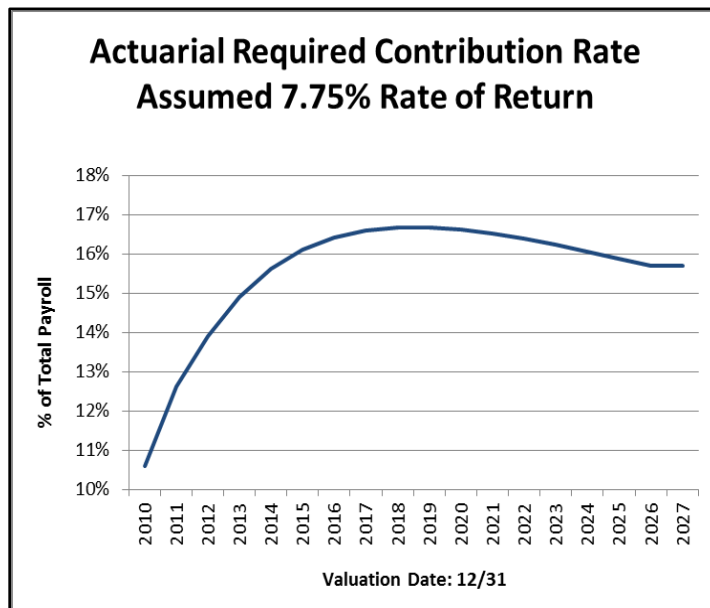
The projected Actuarial Required Contribution rate increased approximately 2% over the projection period from the 12/31/2010 report. This is due mainly to the decrease in covered payroll, which increased the amortization of the Unfunded Actuarial Liability (UAL).

SUMMARY OF PRINCIPAL RESULTS

1. PARTICIPANT DATA		12/31/2011 Valuation		12/31/2010 Valuation	% Change
Number of:					
Active Members					
Plan 1		2		7	(71.4)%
Plan 2		901		976	(7.7)%
Plan 3 (excluding Plan 3b)		611		661	(7.6)%
Total		1,514		1,644	(7.9)%
DROP Members					
Plan 1		29		54	(46.3)%
Plan 2		15		17	(11.8)%
Total		44		71	(38.0)%
Retired Members and Beneficiaries		1,310		1,193	9.8%
Inactive Vested Members		146		134	9.0%
Total Members		3,014		3,042	(0.9)%
Annual Valuation Payroll of Active Members (Including DROP)					
Plan 1	$	1,784,308	$	3,588,075	(50.3)%
Plan 2		46,221,547		50,519,542	(8.5)%
Plan 3		23,270,960		25,068,004	(7.2)%
Total	$	71,276,815	$	79,175,621	(10.0)%
Annual Retirement Payments for Retired Members and Beneficiaries	$	32,885,454	$	29,855,835	10.1%

2. ASSETS AND LIABILITIES

		12/31/2011		12/31/2010	% Change
Total Actuarial Liability	$	555,173,723	$	540,435,713	2.7%
Market Value of Assets		458,827,503		480,691,409	(4.5)%
Assets for Valuation Purposes		513,298,382		516,307,845	(0.6)%
Unfunded Actuarial Liability/(Surplus)	$	41,875,341	$	24,127,868	73.6%
Funded Ratio		92.5%		95.5%	(3.2)%

3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL

	12/31/2011	12/31/2010	% Change
Normal Cost	13.2%	13.3%	(0.8)%
Member Financed	4.7%	4.8%	(2.1)%
Employer Normal Cost	8.5%	8.5%	0.0%
Amortization of Unfunded Actuarial Liability or (Surplus)	4.1%	2.1%	95.2%
Employer Contribution Rate	12.6%	10.6%	18.9%

Section 2

Scope of the Report

This report presents the actuarial valuation of the Wichita Employees' Retirement System (WER) as of December 31, 2011. This valuation was prepared at the request of the System's Board of Trustees.

Please pay particular attention to our cover letter, where the guidelines employed in the preparation of this report are outlined. We also comment on the sources and reliability of both the data and the actuarial assumptions upon which our findings are based. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the findings resulting from this valuation is presented in the previous section. Section 3 describes the assets and investment experience of the System. Sections 4 and 5 describe how the obligations of the System are to be met under the actuarial cost method in use. Section 6 includes the information required for the financial reporting standards established by the Governmental Accounting Standards Board (GASB).

This report includes several appendices:

- Appendix A   Schedules of valuation data classified by various categories of members.

- Appendix B   A summary of the current benefit structure, as determined by the provisions of governing law on the valuation date.

- Appendix C   A summary of the actuarial methods and assumptions used to estimate liabilities and determine contribution rates.

- Appendix D   A glossary of actuarial terms.

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is December 31, 2011. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the System. The actuarial process then leads to a method of determining the contributions needed by members and the employer in the future to balance the System assets and liabilities.

Market Value of Assets

The current market value represents the "snapshot" or "cash-out" value of System assets as of the valuation date. In addition, market values of assets provide a basis for measuring investment performance from time to time. At December 31, 2011, the market value of assets for the System, excluding Plan 3b assets for members who have elected to remain in Plan 3, was $459 million. Table 1 is a comparison, at market values, of System assets as of December 31, 2010, and December 31, 2011, in total and by investment category. Table 2 summarizes the change in the market value of assets from December 31, 2010 to December 31, 2011.

Actuarial Value of Assets

Neither the market value of assets, representing a "cash-out" value of System assets, nor the book values of assets, representing the cost of investments, may be the best measure of the System's ongoing ability to meet its obligations.

To arrive at a suitable value for the actuarial valuation, a technique for determining the actuarial value of assets is used which dampens swings in the market value while still indirectly recognizing market values. This methodology, first adopted for the December 31, 2002 valuation, smoothes market experience by recognizing 25% of the difference between expected value (based on the actuarial assumption) and market value. Table 3 shows the development of the actuarial value of assets (AVA) as of December 31, 2011.

TABLE 1

Analysis of Net Assets at Market Value

	As of December 31, 2011		As of December 31, 2010	
	Amount ($ Millions)	% of Total	Amount ($ Millions)	% of Total
Cash and Equivalents	$ 0.2	0.0 %	$ 0.1	0.0 %
Government Securities	30.0	6.7	36.1	7.8
Corporate Debt	45.3	10.2	50.2	10.8
Mortgage Backed Securities	42.0	9.5	47.3	10.2
Pooled Funds	79.3	17.8	80.1	17.2
Domestic Equity	153.8	34.6	171.7	36.9
International Equity	69.4	15.6	78.0	16.8
Real Estate	15.7	3.5	13.9	3.0
Timber	4.7	1.1	0.0	0.0
Commodities	12.0	2.7	0.0	0.0
Securities Lending Collateral Pool	42.9	9.6	55.5	11.9
Other	0.2	0.1	0.3	0.1
Receivables	13.4	3.0	18.4	3.9
Liabilities	(64.3)	(14.5)	(86.3)	(18.5)
Total Plans 1 and 2	$ 444.6	100.0 %[1]	$ 465.3	100.0 %[1]

Plan 3 Assets

Members Electing to Stay in Plan 3	$ 3.8		$ 3.6	
Other Plan 3 Members	14.3		15.3	
Total Plan 3 and 3b	18.1		18.9	
Net Assets (Plans 1, 2, and 3)	$ 462.7		$ 484.2	

[1] *Numbers may not add to 100.0% due to rounding.*

TABLE 2

Summary of Changes in Net Assets
During Year Ended December 31, 2011

(Market Value)

	Plans 1 & 2	Plan 3*	Total
1. Market Value of Assets as of December 31, 2010	$ 465,349,979	$ 15,341,430	$ 480,691,409
2. Contributions:			
a. Members	$ 2,537,440	$ 1,099,193	$ 3,636,633
b. City	6,596,124	1,099,193	7,695,317
c. Transfers	2,680,431	(2,860,444)	(180,013)
d. Total [2(a) + 2(b) + 2(c)]	$ 11,813,995	$ (662,058)	$ 11,151,937
3. Investment Income:			
a. Interest and Dividends	$ 12,990,112	$ 416,229	$ 13,406,341
b. Net Depreciation in Fair Value	(8,540,380)	(197,540)	(8,737,920)
c. Commission Recapture	27,311	895	28,206
d. Net Securities Lending Income	195,407	6,192	201,599
e. Total [3(a) + 3(b) + 3(c) + 3(d)]	$ 4,672,450	$ 225,776	$ 4,898,226
4. Expenditures:			
a. Refunds of Member Contributions	$ 449,266	$ 475,006	$ 924,272
b. Benefits Paid:			
(1) Pension and Death Benefits	28,309,154	0	28,309,154
(2) DROP Payments	5,873,920	0	5,873,920
c. Administrative Expenses	507,646	126,185	633,831
d. Investment Expenses	2,102,027	70,865	2,172,892
e. Total [4(a) + 4(b) + 4(c) + 4(d)]	$ 37,242,013	$ 672,056	$ 37,914,069
5. Net Change [2(d) + 3(e) - 4(e)]	$ (20,755,568)	$ (1,108,338)	$ (21,863,906)
6. Market Value of Assets as of December 31, 2011 (1) + (5)	$ 444,594,411	$ 14,233,092	$ 458,827,503

* Excludes assets for Plan 3b members. The December 31, 2011 value of the assets for this group was $3,826,417.

TABLE 3

Development of Actuarial Value of Assets
as of December 31, 2011

	Plans 1 & 2	**Plan 3***	**Total**
1. Actuarial Value of Assets as of December 31, 2010	$ 500,087,605	$ 16,220,240	$ 516,307,845
2. Actual Contributions/Disbursements			
a. Contributions	$ 9,133,564	$ 2,198,386	$ 11,331,950
b. Transfers	2,680,431	(2,860,444)	(180,013)
c. Benefit Payments and Refunds	(34,632,340)	(475,006)	(35,107,346)
d. Net (a + b + c)	$ (22,818,345)	$ (1,137,064)	$ (23,955,409)
3. Expected Value of Assets as of December 31, 2011			
$[(1) \times 1.0775] + [(2d) \times (1.0775)^{.5}]$	$ 515,158,337	$ 16,297,005	$ 531,455,342
4. Market Value of Assets as of December 31, 2011	$ 444,594,411	$ 14,233,092	$ 458,827,503
5. Difference Between Market and Expected Values			
(4) - (3)	$ (70,563,926)	$ (2,063,913)	$ (72,627,839)
6. Actuarial Value of Assets as of December 31, 2011			
(3) + [(5) x 25%]	$ 497,517,355	$ 15,781,027	$ 513,298,382
7. Actuarial Value of Assets/Market Value of Assets			
(6) / (4)	111.90%	110.88%	111.87%
8. Market Value of Assets less Actuarial Value of Assets			
(4) - (6)	$ (52,922,944)	$ (1,547,935)	$ (54,470,879)

*_Excludes Plan 3b._

December 31, 2011 Actuarial Valuation   **Wichita Employees' Retirement System**

System Liabilities

In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of assets of the System as of the valuation date, December 31, 2011. In this section, the discussion will focus on the commitments of the System, which are referred to as its liabilities.

Table 4 contains an analysis of the actuarial present value of all future benefits (PVFB) for contributing members, inactive members, retirees and their beneficiaries.

The liabilities summarized in Table 4 include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes the measurement of both benefits already earned and future benefits to be earned. For all members, active and retired, the value extends over benefits earnable and payable for the rest of their lives and for the lives of the surviving beneficiaries.

All liabilities reflect the benefit provisions in place as of December 31, 2011.

Actuarial Liability

A fundamental principle in financing the liabilities of a retirement program is that the cost of its benefits should be related to the period in which benefits are earned, rather than to the period of benefit distribution. An actuarial cost method is a mathematical technique that allocates the present value of future benefits into annual costs. In order to do this allocation, it is necessary for the funding method to "breakdown" the present value of future benefits into two components:

(1) that which is attributable to the past and

(2) that which is attributable to the future.

Actuarial terminology calls the part attributable to the past the "past service liability" or the "actuarial liability". The portion allocated to the future is known as the present value of future normal costs, with the specific piece of it allocated to the current year being called the "normal cost". Table 5 contains the calculation of actuarial liability for the System. The Entry Age Normal actuarial cost method is used to develop the actuarial liability.

TABLE 4

Present Value of Future Benefits (PVFB)
as of December 31, 2011

	Plan 1	Plan 2	Plan 3	Total
1. Active employees				
a. Retirement Benefit	$ 679,118	$ 186,755,237	$ 39,635,066	$ 227,069,421
b. Pre-Retirement Death Benefit	0	2,081,698	522,774	2,604,472
c. Withdrawal Benefit	0	11,586,713	6,205,629	17,792,342
d. Disability Benefit	0	4,953,510	1,487,449	6,440,959
e. Total	$ 679,118	$ 205,377,158	$ 47,850,918	$ 253,907,194
2. DROP Members				
a. DROP Account Balance	$ 4,596,912	$ 423,469	$ 0	$ 5,020,381
b. Monthly Retirement Benefit	14,518,644	4,763,335	0	19,281,979
c. Total	$ 19,115,556	$ 5,186,804	$ 0	$ 24,302,360
3. Inactive Vested Members	$ 245,575	$ 23,177,134	$ 0	$ 23,422,709
4. In Pay Members				
a. Disabled Members	$ 1,619,649	$ 1,785,655	$ 0	$ 3,405,304
b. Retirees	220,631,755	80,402,551	0	301,034,306
c. Beneficiaries	16,838,768	4,501,403	0	21,340,171
d. Total	$ 239,090,172	$ 86,689,609	$ 0	$ 325,779,781
5. Total PVFB				
(1e) + (2c) + (3) + (4d)	$ 259,130,421	$ 320,430,705	$ 47,850,918	$ 627,412,044

TABLE 5

**Actuarial Liability
as of December 31, 2011**

		Plan 1		Plan 2		Plan 3		Total
1. Active employees								
a. Present Value of Future Benefits	$	679,118	$	205,377,158	$	47,850,918	$	253,907,194
b. Present Value of Future Normal Costs		250,645		43,640,335		29,895,276		73,786,256
c. Actuarial Liability (1a) - (1b)	$	428,473	$	161,736,823	$	17,955,642	$	180,120,938
2. DROP Members	$	19,115,556	$	5,186,804	$	0	$	24,302,360
3. Inactive Vested Members	$	245,575	$	23,177,134	$	0	$	23,422,709
4. In Pay Members								
a. Disabled Members	$	1,619,649	$	1,785,655	$	0	$	3,405,304
b. Retirees		220,631,755		80,402,551		0		301,034,306
c. Beneficiaries		16,838,768		4,501,403		0		21,340,171
d. Total	$	239,090,172	$	86,689,609	$	0	$	325,779,781
5. Reserve for Plan 3 Members	$	0	$	0	$	1,547,935	$	1,547,935
6. Total Actuarial Liability								
(1c) + (2) + (3) + (4d) + (5)	$	258,879,776	$	276,790,370	$	19,503,577	$	555,173,723

December 31, 2011 Actuarial Valuation　　　　　　　　　　　　　　　　　　　　**Wichita Employees' Retirement System**

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TABLE 6

Present Value of Accrued Benefits
as of December 31, 2011

The present value of accrued benefits for the System reflects the benefits earned based on service, earnings, and the System provisions as of the valuation date. It also reflects the on-going nature of the System by using the same actuarial assumptions as are used for funding purposes. Further, because the System provides that the accrued benefits of deferred vested members are indexed until benefits begin, the present value of the accrued benefit liability for active members reflects this provision from the assumed termination of employment to the assumed benefit commencement date.

	Plan 1	Plan 2	Plan 3	Total
1. Active Members	$ 652,998	$ 104,678,313	$ 14,233,092	$ 119,564,403
2. DROP Members	$ 19,115,556	$ 5,186,804	$ 0	$ 24,302,360
3. Inactive Vested Members	$ 245,575	$ 23,177,134	$ 0	$ 23,422,709
4. In Pay Members				
a. Disabled Members	$ 1,619,649	$ 1,785,655	$ 0	$ 3,405,304
b. Retirees	220,631,755	80,402,551	0	301,034,306
c. Beneficiaries	16,838,768	4,501,403	0	21,340,171
d. Total	$ 239,090,172	$ 86,689,609	$ 0	$ 325,779,781
5. Total	$ 259,104,301	$ 219,731,860	$ 14,233,092	$ 493,069,253
6. Market Value of Assets*	$ 240,575,657	$ 204,018,754	$ 14,233,092	$ 458,827,503
7. Funded Ratio (6)/(5)	93%	93%	100%	93%

    * *Split of assets between Plan 1 and Plan 2 is in proportion to the liabilities for illustrative purposes only.*

Employer Contributions

The previous two sections were devoted to a discussion of the assets and liabilities of the System. A comparison of Tables 3 and 4 indicates that current assets fall short of meeting the present value of future benefits (total liability). This is expected in all but a completely closed fund, where no further contributions are anticipated. In an active system, there will almost always be a difference between the actuarial value of assets and total liabilities. This deficiency has to be made up by future contributions and investment returns. An actuarial valuation sets out a schedule of future contributions that will deal with this deficiency in an orderly fashion.

The method used to determine the incidence of the contributions in various years is called the actuarial cost method. Under an actuarial cost method, the contributions required to meet the difference between current assets and current liabilities are allocated each year between two elements: (1) the normal cost rate and (2) the unfunded actuarial liability contribution rate.

The term "fully funded" is often applied to a system in which contributions at the normal cost rate are sufficient to pay for the benefits of existing employees as well as for those of new employees. More often than not, systems are not fully funded, either because of past benefit improvements that have not been completely funded or because of actuarial deficiencies that have occurred because experience has not been as favorable as anticipated. Under these circumstances, an unfunded actuarial liability (UAL) exists. Likewise, when the actuarial value of assets is greater than the actuarial liability, a surplus exists.

Description of Contribution Rate Components

The Entry Age Normal (EAN) actuarial cost method is used for the valuation. Under this method, the normal cost for each year from entry age to assumed exit age is a constant percentage of the member's year by year projected compensation. The portion of the present value of future benefits not provided by the present value of future normal costs is the actuarial liability. The unfunded actuarial liability/(surplus) represents the difference between the actuarial liability and the actuarial value of assets as of the valuation date. The unfunded actuarial liability is calculated each year and reflects experience gains/losses.

In general, contributions are computed in accordance with a level percent-of-payroll funding objective. The contribution rates based on this December 31, 2011 actuarial valuation will be used to determine employer contribution rates to the Wichita Employees' Retirement System for fiscal year 2013. In this context, the term "contribution rate" means the percentage, which is applied to a particular active member payroll to determine the actual employer contribution amount (i.e., in dollars) for the group.

As of December 31, 2011, the actuarial value of assets was less than the actuarial liability, resulting in an unfunded actuarial liability (UAL). The City's funding policy is to amortize the UAL over a rolling 20-year period. The amortization of the UAL is in addition to the employer normal cost rate.

Contribution Rate Summary

In Table 7, the amortization payment related to the unfunded actuarial liability, as of December 31, 2011, is developed. Table 8 develops the normal cost rate for the System. The derivation of the contribution rate for the City is shown in Table 9. Table 10 shows the historical summary of the City's contribution rates. Table 11 develops the experience gain/(loss) for the year ended December 31, 2011.

The rates shown in this report are based on the actuarial assumptions and cost methods described in Appendix C.

TABLE 7

Derivation of Unfunded Actuarial Liability Contribution Rate

1. Actuarial Liability	$	555,173,723
2. Actuarial Value of Assets	$	513,298,382
3. Unfunded Actuarial Liability/(Surplus)	$	41,875,341
4. Payment (Adjusted to Mid-Year) to Amortize Unfunded Actuarial Liability/(Surplus) Over 20 Years *	$	2,980,317
5. Total Projected Payroll for the Year	$	72,688,374
6. Amortization Payment as a Percent of Payroll		4.1%

* *The UAL is amortized as a level percent of payroll over a rolling 20-year period.*

TABLE 8

Derivation of Normal Cost Rate

Normal Cost at December 31, 2011

Service pensions	$	7,020,826
Disability pensions		275,881
Survivor pensions		112,626
Termination benefits		
- Deferred service pensions		864,343
- Return of member contributions		747,651
Total Normal Cost	$	9,021,327
Covered Payroll for Members Under		
Certain Retirement Age	$	68,394,001
Total Normal Cost Rate for Year		13.2%

TABLE 9

Employer Contribution Rates for Fiscal Year Commencing in 2013

	Contribution Requirements as % of Payroll	
Normal Cost		
Service pensions	10.2	%
Disability pensions	0.4	%
Survivor pensions	0.2	%
Termination benefits		
- Deferred service pensions	1.3	%
- Return of member contributions	1.1	%
Total Normal Cost	13.2	%
Unfunded Actuarial Liability		
Retired members and beneficiaries (1)	0.0	%
Active and former members (2)	4.1	%
Total UAL Contribution	4.1	%
Total Contribution Requirement		
Member Financed Portion (3)	4.7	%
City Financed Portion	12.6	%
Total	17.3	%

(1) *Actuarial value of assets exceeds the actuarial liability for retirees and beneficiaries as of December 31, 2011.*

(2) *The unfunded actuarial liability is amortized as a level percent of active member payroll over a rolling 20-year period*

(3) *The weighted average of member contribution rates: 6.4% for Plan 1, 4.7% for Plan 2, and 4.7% for Plan 3.*

TABLE 10

Historical Summary of City Contribution Rates

Contribution rates are computed in accordance with a level percent of payroll funding objective. As of December 31, 2011, the actuarial value of assets is less than actuarial liabilities resulting in an unfunded actuarial liability (UAL). The UAL is amortized over a rolling 20-year period.

Valuation Date	Fiscal Year	City Contributions as Percents of Active Member Pensionable Payroll	
		Funding Objective	Amortization Credit/Payment
11/30/92	1994	9.5%	- %
11/30/93	1995	9.5	-
11/30/94	1996	9.4	-
12/31/95	1997	9.0	-
12/31/96	1998	6.9 – 8.4	(1.5)
12/31/97	1999	4.6 – 8.5	(3.9)
12/31/98	2000	0.8 – 8.3	(7.5)
12/31/99	2001	2.5 – 9.8	(7.3)
12/31/00	2002	0.5 – 9.7	(9.2)
12/31/01	2003	1.9 – 9.4	(7.5)
12/31/02	2004	2.7 – 8.8	(6.1)
12/31/03	2005	3.1 – 8.9	(5.8)
12/31/04	2006	3.5 – 8.2	(4.7)
12/31/05	2007	3.9 – 8.2	(4.3)
12/31/06	2008	4.2 – 8.3	(4.1)
12/31/07	2009	4.2 – 8.4	(4.2)
12/31/08	2010	8.4	0.0
12/31/09	2011	10.2	1.7
12/31/10	2012	10.6	2.1
12/31/11	2013	12.6%	4.1%

TABLE 11

Derivation of System Experience Gain/(Loss)

	($M) Year Ended 12/31/11
(1)　UAL* at start of year	24.1
(2) +　Normal cost for year	9.9
(3) +　Assumed investment return on (1) & (2)	2.6
(4) -　Actual contributions (member + City)	11.3
(5) -　Assumed investment return on (4)	0.4
(6) =　Expected UAL at end of year	24.9
(7) +　Increase (decr.) from amendments	0.0
(8) +　Increase (decr.) from assumption change	0.0
(9) =　Expected UAL after changes	24.9
(10) =　Actual UAL at year end	41.9
(11) =　Experience gain (loss) (9) – (10)	(17.0)**
(12) =　Percent of beginning of year AL	3.1%

　* 　Unfunded Actuarial Liability/(Surplus)

　** 　Of this amount, $18.2 million of the experience loss is due to an experience loss on the actuarial value of assets and $1.2 million represents an experience gain on liabilities.

Section 6

Accounting Information

The actuarial liability is a measure intended to help the reader assess (i) a retirement system's funded status on an on-going concern basis, and (ii) progress being made toward accumulating the assets needed to pay benefits as due. Allocation of the actuarial present value of projected benefits between past and future service was based on service using the Entry Age Normal actuarial cost method. Assumptions, including projected pay increases, were the same as used to determine the System's level percent of payroll annual required contribution between entry age and assumed exit age. Entry age was established by subtracting credited service from current age on the valuation date.

The preceding methods comply with the financial reporting standards established by the Governmental Accounting Standards Board.

The Entry Age Normal actuarial liability was determined as part of an actuarial valuation of the plan as of December 31, 2011. Significant actuarial assumptions used in determining the actuarial liability include:

(a)   a rate of return on the investment of present and future assets of 7.75% per year compounded annually,

(b)   projected salary increases of 4.00% per year compounded annually, (3.5% attributable to inflation, and 0.50% attributable to productivity),

(c)   additional projected salary increases of 0.25% to 3.2% per year attributable to seniority/merit, and

(d)   the assumption that benefits will increase after retirement 3.0% per year (non-compounded) for Plan 1 and 2.0% per year (non-compounded) for Plan 2.

Actuarial Liability:

Active members	$181,668,873
DROP members	24,302,360
Retired members and beneficiaries currently receiving benefits	325,779,781
Vested terminated members not yet receiving benefits	23,422,709
Total Actuarial Liability	$555,173,723
Actuarial Value of Assets (market value was $458,827,503)	$513,298,382
Unfunded Actuarial Liability	$41,875,341

During the year ended December 31, 2011, the Plan experienced a net increase of $15 million in the actuarial liability.

TABLE 12

Required Supplementary Information
Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Liability (AL) (b)	Unfunded AL (UAL) (b)–(a)	Funded Ratio (a)/(b)	Active Member Covered Payroll (c)	UAL as a Percentage of Active Member Covered Payroll ((b-a)/c)
11/30/92	$182,186	$204,730	$22,544	89.0%	$49,552	45.5%
11/30/93	200,853	218,603	17,750	91.9	52,093	34.1
11/30/94	215,385	230,217	14,832	93.6	52,169	28.4
12/31/95	238,441	242,354	3,913	98.4	54,039	7.2
12/31/96	266,404	252,968	(13,436)	105.3	53,534	(25.1)
12/31/97	296,705	263,573	(33,132)	112.6	54,346	(61.0)
12/31/98	340,417	276,980	(63,437)	122.9	56,093	(113.1)
12/31/99*	383,338	319,289	(64,049)	120.1	57,562	(111.3)
12/31/00	414,643	329,390	(85,253)	125.9	61,112	(139.5)
12/31/01	428,204	353,158	(75,046)	121.2	65,347	(114.8)
12/31/02	433,366**	370,399	(62,967)	117.0	68,117	(92.4)
12/31/03	446,794**	387,037	(59,757)	115.4	69,161	(86.4)
12/31/04*	462,994**	413,159	(49,835)	112.1	72,154	(69.1)
12/31/05*	479,275**	433,297	(45,978)	110.6	72,367	(63.5)
12/31/06*	505,756**	459,062	(46,694)	110.2	75,881	(61.5)
12/31/07*	533,911**	483,387	(50,524)	110.5	78,736	(64.2)
12/31/08*	512,853**	512,374	(480)	100.1	81,580	(0.6)
12/31/09*	509,494**	529,271	19,778	96.3	82,704	23.9
12/31/10*	516,308**	540,436	24,128	95.5	79,636	30.3
12/31/11*	513,298**	555,174	41,876	92.5	75,444	55.5

Rounded dollar amounts are in thousands.

 * After changes in benefits and/or actuarial assumptions and/or actuarial cost methods.
** Includes all members except Plan 3b.

Analysis of the dollar amounts of actuarial value of assets, actuarial liability, or unfunded actuarial liability in isolation can be misleading. Expressing the actuarial value of assets as a percentage of the actuarial liability provides one indication of the System's funded status on an on-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's funding. The unfunded actuarial liability and annual covered payroll are both affected by inflation. Expressing the unfunded actuarial 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's funding.

TABLE 13

Required Supplementary Information
Schedule of Employer Contributions

Fiscal Year	Actuarial Valuation Date	Annual Required Contribution	Percent Contribution
1997	12/31/95	$4,459,654	100.0%
1998	12/31/96	4,140,163	100.0
1999	12/31/97	4,134,826	100.0
2000	12/31/98	2,751,084	100.0
2001	12/31/99	1,843,213	100.0
2002	12/31/00	3,137,912*	100.0
2003	12/31/01	3,189,513*	100.0
2004	12/31/02	3,266,706*	100.0
2005	12/31/03	3,589,063*	100.0
2006	12/31/04	3,566,429*	100.0
2007	12/31/05	3,700,590*	100.0
2008	12/31/06	3,834,270*	100.0
2009	12/31/07	3,887,085*	100.0
2010	12/31/08	6,689,450*	100.0
2011	12/31/09	7,695,317*	100.0

*Reflects contributions to Plans 1, 2 and 3. Excludes contributions for Plan 3b members.

Notes to Required Supplementary Information
Summary of Actuarial Methods and Assumptions

Valuation Date	December 31, 2011
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level percent of payroll, open
Remaining Amortization Period	20 years
Asset Valuation Method	Expected + 25% of (Market – Expected Values)

Actuarial Assumptions:
Investment Rate of Return*	7.75%
Projected Salary Increases*	4.25% - 7.20%
* Includes Inflation at	3.50%

Cost-of-Living Adjustments	3.00% Non-compounded (Plan 1)
	2.00% Non-compounded (Plan 2)

TABLE 14

Solvency Test

	Aggregate Actuarial Liability For				Portion of Actuarial Liabilities Covered by Reported Assets		
Valuation Date	(1) Active Member Contributions	(2) Retirants and Beneficiaries*	(3) Active Members (Employer Financed Portion)	Reported Valuation Assets	(1)	(2)	(3)
12/31/95	$28,549,082	$123,759,638	$ 90,046,029	$238,441,351	100.0%	100.0%	95.7%
12/31/96	28,996,944	133,093,326	90,877,809	266,403,759	100.0	100.0	114.8
12/31/97	29,881,922	141,922,445	91,768,436	296,704,769	100.0	100.0	136.1
12/31/98	29,694,389	156,764,183	90,521,375	340,417,265	100.0	100.0	170.1
12/31/99	32,017,094	169,602,958	117,669,351	383,337,991	100.0	100.0	154.4
12/31/00	34,189,528	177,095,907	118,104,491	414,642,694	100.0	100.0	172.2
12/31/01	33,516,616	179,374,487	140,266,410	428,204,828	100.0	100.0	153.5
12/31/02	38,291,472	192,615,216	139,492,410	433,365,890	100.0	100.0	145.1
12/31/03	39,847,119	205,799,341	141,390,445	446,794,052	100.0	100.0	142.3
12/31/04	41,852,724	218,518,676	152,632,267	462,994,047	100.0	100.0	132.8
12/31/05	43,397,403	228,408,201	161,491,272	479,274,508	100.0	100.0	128.5
12/31/06	45,475,389	237,860,848	175,725,905	505,755,995	100.0	100.0	126.6
12/31/07	46,189,489	256,374,002	180,823,537	533,911,465	100.0	100.0	127.9
12/31/08	46,541,280	272,176,420	193,655,822	512,853,345	100.0	100.0	100.2
12/31/09	49,152,328	279,396,973	200,722,170	509,493,888	100.0	100.0	90.1
12/31/10	50,473,365	293,227,477	196,734,871	516,307,845	100.0	100.0	87.7
12/31/11	45,440,569	349,202,490	160,530,664	513,298,382	100.0	100.0	73.9

During the twelve months ended December 31, 2011, the Wichita Employees' Retirement System generated a net experience loss of $17.0 million. The amount is 3.0% of the actuarial liability at the beginning of the year.

*Includes vested terminated members

Summary of Membership Data

MEMBER DATA RECONCILIATION
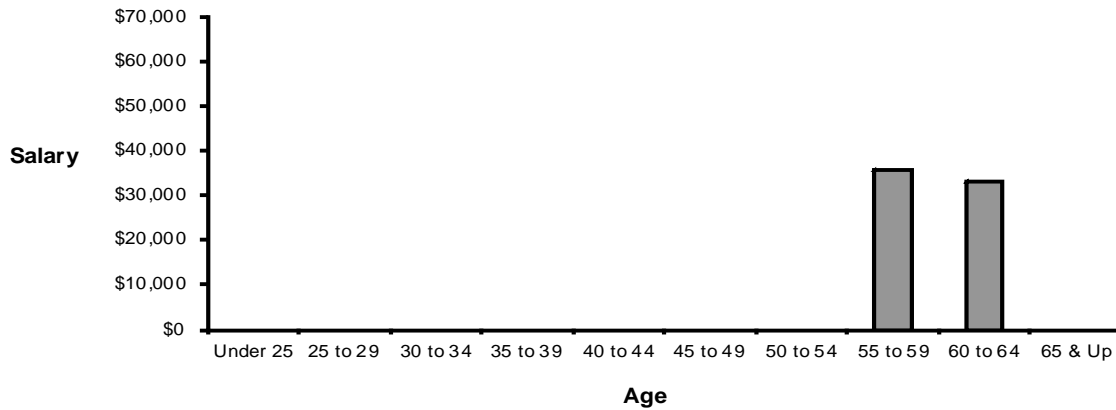December 31, 2010 to December 31, 2011

The number of members included in the valuation, as summarized in the table below, is in accordance with the data submitted by the System for members as of the valuation date.

	Active Participants			DROP Participants		Retirees and Beneficiaries		Terminated Vested		Total
	Plan 1	Plan 2	Plan 3	Plan 1	Plan 2	Plan 1	Plan 2	Plan 1	Plan 2	
Members as of 12/31/10	7	976	661	54	17	830	363	2	132	3,042
New Members	0	0	+79	0	0	+9	+6	0	0	+94
Transfers	0	+67	-73	0	0	0	0	0	0	-6
Terminations										
Refunded	0	-8	-56	0	0	0	0	0	0	-64
Deferred Vested	0	-26	0	0	0	0	0	0	+26	0
Retirements										
Service	-2	-92	0	-27	-14	+30	+119	-1	-13	0
Disability	0	0	0	0	0	0	0	0	0	0
DROP	-3	-12	0	+3	+12	0	0	0	0	0
Deaths										
Cashed Out	0	0	0	0	0	0	0	0	0	0
With Beneficiary	0	0	0	0	0	-8	-5	0	0	-13
Without Beneficiary	0	-1	0	-1	0	-25	-7	0	-1	-35
Data Adjustments	0	-3	0	0	0	0	-2	0	+1	-4
Members as of 12/31/11	**2**	**901**	**611**	**29**	**15**	**836**	**474**	**1**	**145**	**3,014**

Summary of Active Members
(Excluding DROP Members)
as of December 31, 2011

Plan 1

Age	Number			Valuation Salaries		
	Male	Female	Total	Male	Female	Total
Under 25	0	0	0	$ 0	$ 0	$ 0
25 to 29	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0
45 to 49	0	0	0	0	0	0
50 to 54	0	0	0	0	0	0
55 to 59	1	0	1	35,485	0	35,485
60 to 64	1	0	1	32,870	0	32,870
65 & Up	0	0	0	0	0	0
Total	2	0	2	$ 68,355	$ 0	$ 68,355

Average Salary by Age

Milliman

Summary of Active Members
(Excluding DROP Members)
as of December 31, 2011

Plan 2

	Number			Valuation Salaries		
Age	Male	Female	Total	Male	Female	Total
Under 25	0	0	0	$ 0	$ 0	$ 0
25 to 29	2	1	3	68,120	36,628	104,748
30 to 34	23	6	29	942,599	247,916	1,190,515
35 to 39	29	26	55	1,139,790	1,164,051	2,303,841
40 to 44	61	38	99	2,929,037	1,781,127	4,710,164
45 to 49	102	61	163	4,763,882	2,980,993	7,744,875
50 to 54	139	82	221	7,071,101	4,180,614	11,251,715
55 to 59	139	93	232	7,177,182	4,818,688	11,995,870
60 to 64	55	35	90	2,924,306	1,657,569	4,581,875
65 & Up	6	3	9	286,828	138,530	425,358
Total	556	345	901	$ 27,302,845	$ 17,006,116	$ 44,308,961

Average Salary by Age

Milliman

Summary of Active Members
as of December 31, 2011

Plan 3

Age	Number			Valuation Salaries		
	Male	Female	Total	Male	Female	Total
Under 25	12	7	19	$ 336,048	$ 185,380	$ 521,428
25 to 29	51	33	84	1,638,873	1,054,163	2,693,036
30 to 34	62	41	103	2,242,177	1,494,023	3,736,200
35 to 39	47	39	86	1,660,750	1,479,844	3,140,594
40 to 44	43	30	73	1,616,050	1,108,843	2,724,893
45 to 49	47	27	74	1,806,762	970,977	2,777,739
50 to 54	41	33	74	1,687,679	1,209,556	2,897,235
55 to 59	40	19	59	1,730,965	673,644	2,404,609
60 to 64	17	9	26	768,255	399,751	1,168,006
65 & Up	10	3	13	394,486	114,846	509,332
Total	370	241	611	$ 13,882,045	$ 8,691,027	$ 22,573,072

Average Salary by Age
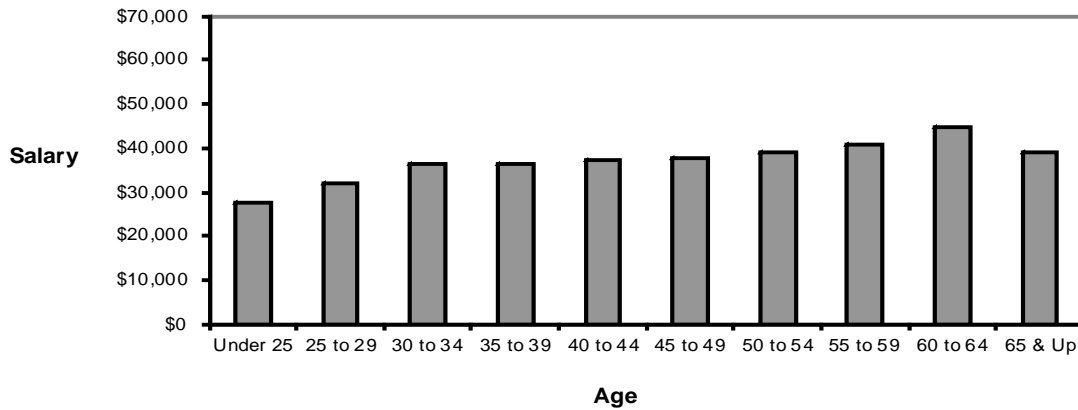
Milliman

Summary of Active Members
(Excluding DROP Members)
as of December 31, 2011

All Plans

	Number				Valuation Salaries		
Age	Male	Female	Total		Male	Female	Total
Under 25	12	7	19	$	336,048	$ 185,380	$ 521,428
25 to 29	53	34	87		1,706,993	1,090,791	2,797,784
30 to 34	85	47	132		3,184,776	1,741,939	4,926,715
35 to 39	76	65	141		2,800,540	2,643,895	5,444,435
40 to 44	104	68	172		4,545,087	2,889,970	7,435,057
45 to 49	149	88	237		6,570,644	3,951,970	10,522,614
50 to 54	180	115	295		8,758,780	5,390,170	14,148,950
55 to 59	180	112	292		8,943,632	5,492,332	14,435,964
60 to 64	73	44	117		3,725,431	2,057,320	5,782,751
65 & Up	16	6	22		681,314	253,376	934,690
Total	928	586	1,514	$	41,253,245	$ 25,697,143	$ 66,950,388

Average Salary by Age

Milliman

Distribution of Active Members
(Excluding DROP Members)
as of December 31, 2011

Plan 1

Years of Service

Age	0 to 3	4 to 5	6 to 7	8 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	Total
Under 25	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0	0	0
45 to 49	0	0	0	0	0	0	0	0	0	0
50 to 54	0	0	0	0	0	0	0	0	0	0
55 to 59	0	0	0	0	0	0	0	0	1	1
60 to 64	0	0	0	0	0	0	0	0	1	1
65 & Up	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	2	2

Age Distribution

Age
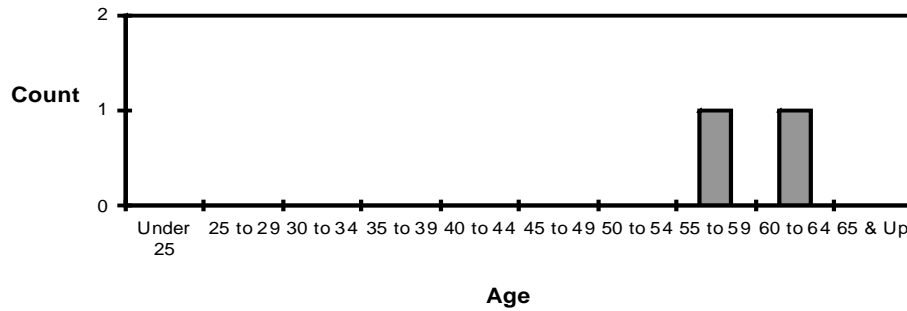
Service Distribution
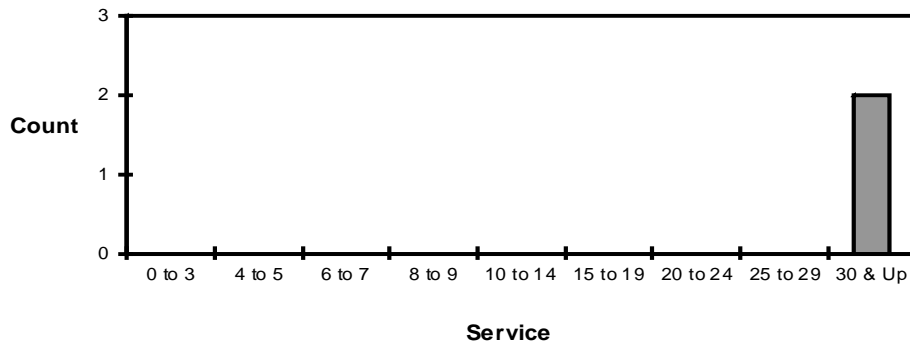
Service

Average age: 59.0   Average service: 36.5

Milliman

Distribution of Active Members
(Excluding DROP Members)
as of December 31, 2011

Plan 2

Years of Service

Age	0 to 3	4 to 5	6 to 7	8 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	Total
Under 25	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	1	1	1	0	0	0	0	3
30 to 34	0	0	5	12	11	1	0	0	0	29
35 to 39	0	0	8	6	31	10	0	0	0	55
40 to 44	0	0	7	13	40	30	8	1	0	99
45 to 49	0	0	9	17	47	30	35	21	4	163
50 to 54	0	0	11	16	48	48	54	35	9	221
55 to 59	0	0	2	13	58	49	39	40	31	232
60 to 64	0	0	5	10	26	17	14	10	8	90
65 & Up	0	0	1	0	5	2	0	1	0	9
Total	0	0	49	88	267	187	150	108	52	901

Age Distribution
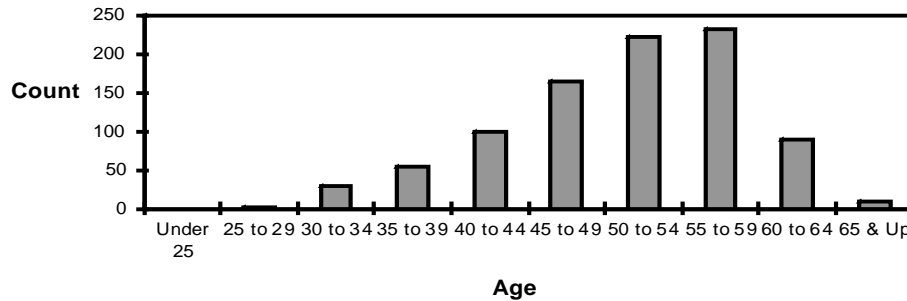
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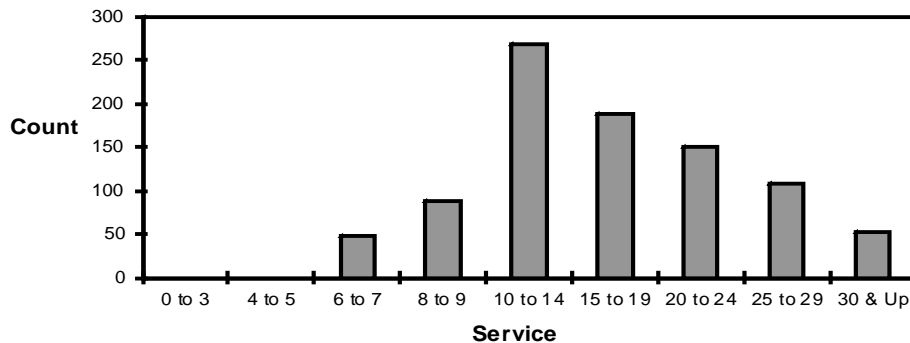
Average age: 50.8   Average service: 17.3

Milliman

Distribution of Active Members
as of December 31, 2011

Plan 3

Years of Service

Age	0 to 3	4 to 5	6 to 7	8 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	Total
Under 25	15	4	0	0	0	0	0	0	0	19
25 to 29	47	27	10	0	0	0	0	0	0	84
30 to 34	42	41	20	0	0	0	0	0	0	103
35 to 39	35	34	17	0	0	0	0	0	0	86
40 to 44	33	27	13	0	0	0	0	0	0	73
45 to 49	30	26	18	0	0	0	0	0	0	74
50 to 54	29	36	9	0	0	0	0	0	0	74
55 to 59	29	19	11	0	0	0	0	0	0	59
60 to 64	5	15	6	0	0	0	0	0	0	26
65 & Up	7	3	3	0	0	0	0	0	0	13
Total	272	232	107	0	0	0	0	0	0	611

Age Distribution
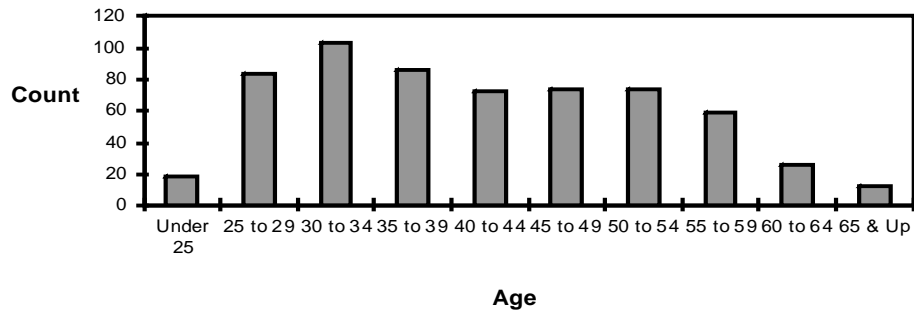
Service Distribution
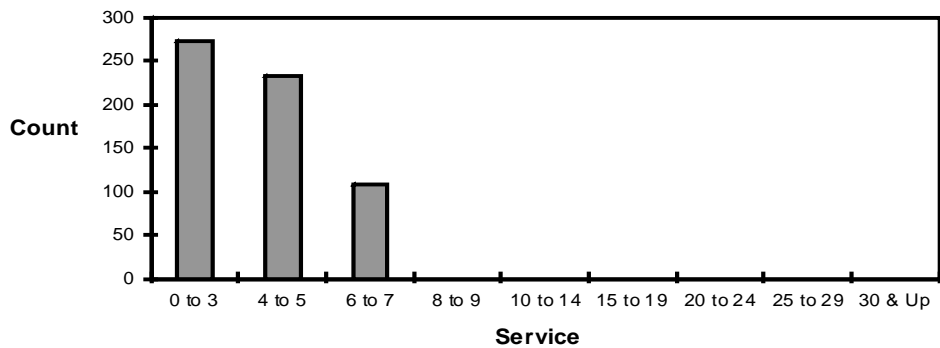
Average age: 41.6   Average service: 4.3

Milliman

Distribution of Active Members
(Excluding DROP Members)
as of December 31, 2011

All Plans

Years of Service

Age	0 to 3	4 to 5	6 to 7	8 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	Total
Under 25	15	4	0	0	0	0	0	0	0	19
25 to 29	47	27	11	1	1	0	0	0	0	87
30 to 34	42	41	25	12	11	1	0	0	0	132
35 to 39	35	34	25	6	31	10	0	0	0	141
40 to 44	33	27	20	13	40	30	8	1	0	172
45 to 49	30	26	27	17	47	30	35	21	4	237
50 to 54	29	36	20	16	48	48	54	35	9	295
55 to 59	29	19	13	13	58	49	39	40	32	292
60 to 64	5	15	11	10	26	17	14	10	9	117
65 & Up	7	3	4	0	5	2	0	1	0	22
Total	272	232	156	88	267	187	150	108	54	1,514

Age Distribution
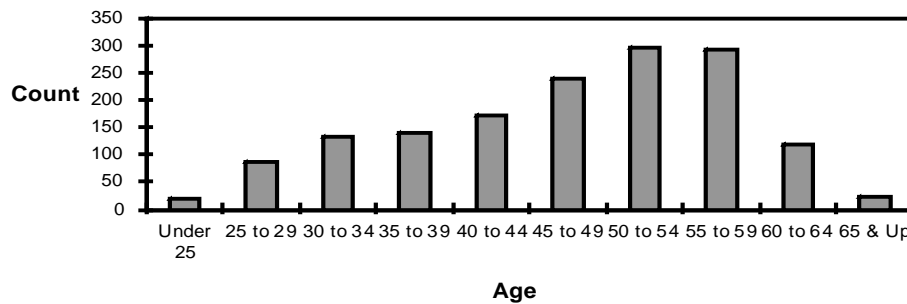
Service Distribution
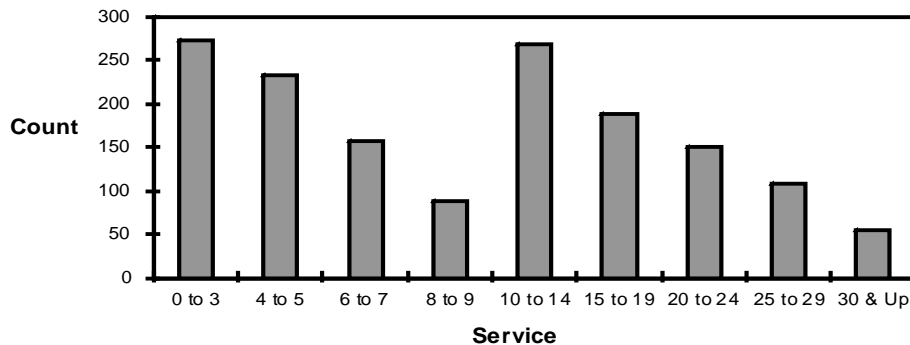
Average age: 47.2   Average service: 12.5

Distribution of Drop Members
as of December 31, 2011

Plan 1

Service

Age	Under 20	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 50	0	0	0	0	0	0
50-54	0	0	11	0	0	11
55-59	0	0	9	3	0	12
60-64	0	0	4	0	0	4
65 & Up	0	0	0	2	0	2
Total	0	0	24	5	0	29

DROP Duration Elected (months)

Age	1 to 12	13 to 24	25 to 36	37 to 48	49 to 60	Total
Under 50	0	0	0	0	0	0
50-54	0	0	1	0	10	11
55-59	0	0	0	0	12	12
60-64	0	0	0	0	4	4
65 & Up	0	0	0	0	2	2
Total	0	0	1	0	28	29

Age	Monthly Benefits	Current Balance
Under 50	$ 0	$ 0
50-54	35,084	1,278,273
55-59	39,178	1,816,540
60-64	12,770	749,355
65 & Up	10,447	752,744
Total	$ 97,479	$ 4,596,912
Covered Payroll:	$1,679,583	

December 31, 2011 Actuarial Valuation　　　　　　　　**Wichita Employees' Retirement System**

Milliman

Distribution of Drop Members
as of December 31, 2011

Plan 2

Service

Age	Under 10	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Up	Total
Under 50	0	0	0	0	0	0	0	0
50-55	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0
60-64	0	1	2	3	3	1	2	12
65 & Up	0	1	1	0	1	0	0	3
Total	0	2	3	3	4	1	2	15

DROP Duration Elected (months)

Age	1 to 12	13 to 24	25 to 36	37 to 48	49 to 60	Total
Under 50	0	0	0	0	0	0
50-55	0	0	0	0	0	0
55-59	0	0	0	0	0	0
60-64	0	2	4	2	4	12
65 & Up	0	2	1	0	0	3
Total	0	4	5	2	4	15

Age	Monthly Benefits	Current Balance
Under 50	$ 0	$ 0
50-54	0	0
55-59	0	0
60-64	33,786	349,422
65 & Up	4,604	74,047
Total	$ 38,390	$ 423,469

Covered Payroll: $829,665

Milliman

Summary of Deferred Vested Members
as of December 31, 2011

Plan 1

Age	Number			Current Monthly Benefit at Retirement		
	Male	Female	Total	Male	Female	Total
Under 25	0	0	0	$ 0	$ 0	$ 0
25 to 29	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0
45 to 49	0	0	0	0	0	0
50 to 54	0	0	0	0	0	0
55 to 59	1	0	1	1,991	0	1,991
60 to 64	0	0	0	0	0	0
65 & Up	0	0	0	0	0	0
Total	1	0	1	$ 1,991	$ 0	$ 1,991

Age Distribution

December 31, 2011 Actuarial Valuation   **Wichita Employees' Retirement System**

Summary of Deferred Vested Members
as of December 31, 2011

Plan 2

Age	Number			Current Monthly Benefit at Retirement		
	Male	Female	Total	Male	Female	Total
Under 25	0	0	0	$ 0	$ 0	$ 0
25 to 29	0	0	0	0	0	0
30 to 34	2	0	2	913	0	913
35 to 39	6	1	7	6,511	1,000	7,511
40 to 44	5	5	10	3,486	5,934	9,420
45 to 49	7	12	19	8,609	17,729	26,338
50 to 54	22	24	46	34,959	36,636	71,595
55 to 59	21	20	41	37,199	28,899	66,098
60 to 64	9	11	20	14,026	20,106	34,132
65 & Up	0	0	0	0	0	0
Total	72	73	145	$ 105,703	$ 110,304	$ 216,007

Age Distribution

Age

Milliman

Summary of Deferred Vested Members
as of December 31, 2011

All Plans

Age	Number			Current Monthly Benefit at Retirement		
	Male	Female	Total	Male	Female	Total
Under 25	0	0	0	$ 0	$ 0	$ 0
25 to 29	0	0	0	0	0	0
30 to 34	2	0	2	913	0	913
35 to 39	6	1	7	6,511	1,000	7,511
40 to 44	5	5	10	3,486	5,934	9,420
45 to 49	7	12	19	8,609	17,729	26,338
50 to 54	22	24	46	34,959	36,636	71,595
55 to 59	22	20	42	39,190	28,899	68,089
60 to 64	9	11	20	14,026	20,106	34,132
65 & Up	0	0	0	0	0	0
Total	73	73	146	$ 107,694	$ 110,304	$ 217,998

Age Distribution
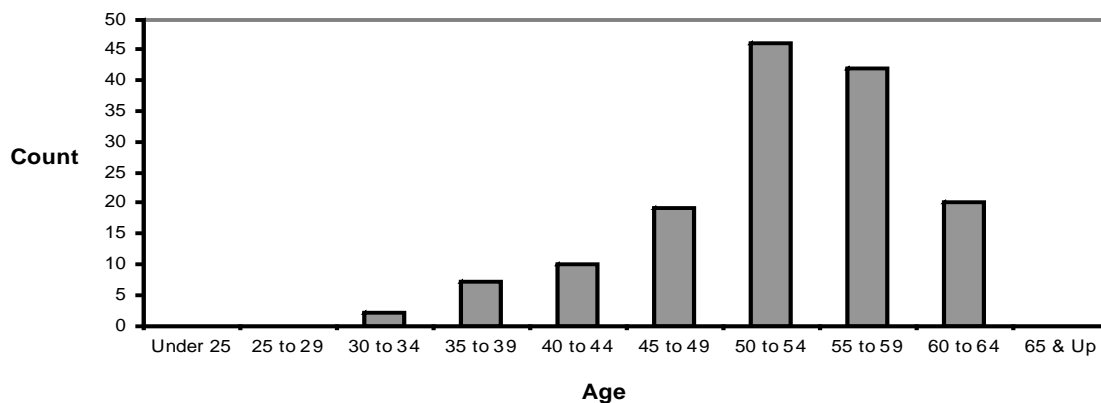
Milliman

Summary of Retired Members*
as of December 31, 2011

Plan 1

	Number			Monthly Benefit		
Age	Male	Female	Total	Male	Female	Total
Under 50	1	0	1	$ 3,986	$ 0	$ 3,986
50 to 54	26	13	39	90,246	34,303	124,549
55 to 59	47	25	72	178,118	82,637	260,755
60 to 64	66	26	92	261,103	79,027	340,130
65 to 69	69	30	99	262,332	78,696	341,028
70 to 74	55	24	79	173,841	49,939	223,780
75 to 79	62	47	109	161,726	103,589	265,315
80 to 84	48	35	83	115,770	51,296	167,066
85 to 89	27	34	61	66,571	39,676	106,247
90 & Up	7	22	29	8,015	16,751	24,766
Total	408	256	664	$ 1,321,708	$ 535,914	$ 1,857,622

Age Distribution
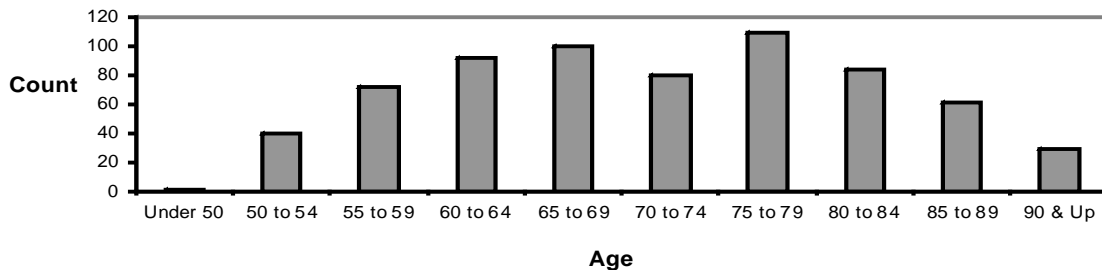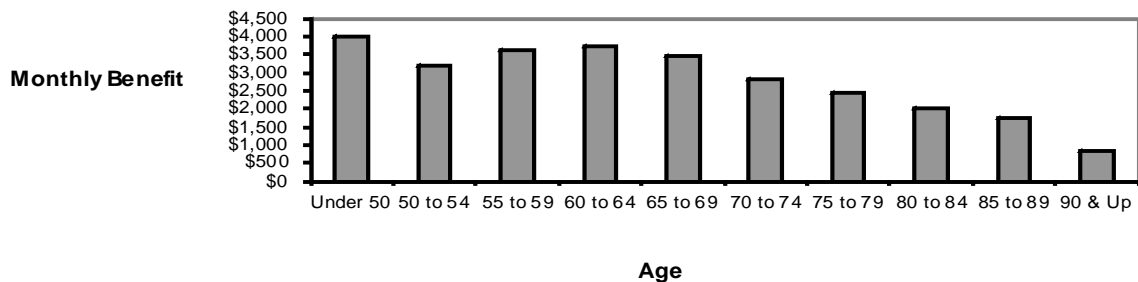
Average Benefit

* Includes DROP members.

Milliman

Summary of Retired Members*
as of December 31, 2011

Plan 2

	Number			Monthly Benefit		
Age	Male	Female	Total	Male	Female	Total
Under 50	0	1	1	$ 0	$ 802	$ 802
50 to 54	3	1	4	3,693	1,512	5,205
55 to 59	15	8	23	22,612	9,465	32,077
60 to 64	83	47	130	159,092	87,130	246,222
65 to 69	72	64	136	127,256	104,565	231,821
70 to 74	35	36	71	50,916	41,017	91,933
75 to 79	23	18	41	21,059	17,171	38,230
80 to 84	9	9	18	6,420	4,923	11,343
85 to 89	2	3	5	1,322	718	2,040
90 & Up	0	0	0	0	0	0
Total	242	187	429	$ 392,370	$ 267,303	$ 659,673

Age Distribution

Average Benefit

* Includes DROP members.

Milliman

Summary of Retired Members*
as of December 31, 2011

All Plans

	Number			Monthly Benefit		
Age	Male	Female	Total	Male	Female	Total
Under 50	1	1	2	$ 3,986	$ 802	$ 4,788
50 to 54	29	14	43	93,939	35,815	129,754
55 to 59	62	33	95	200,730	92,102	292,832
60 to 64	149	73	222	420,195	166,157	586,352
65 to 69	141	94	235	389,588	183,261	572,849
70 to 74	90	60	150	224,757	90,956	315,713
75 to 79	85	65	150	182,785	120,760	303,545
80 to 84	57	44	101	122,190	56,219	178,409
85 to 89	29	37	66	67,893	40,394	108,287
90 & Up	7	22	29	8,015	16,751	24,766
Total	650	443	1,093	$ 1,714,078	$ 803,217	$ 2,517,295

Age Distribution
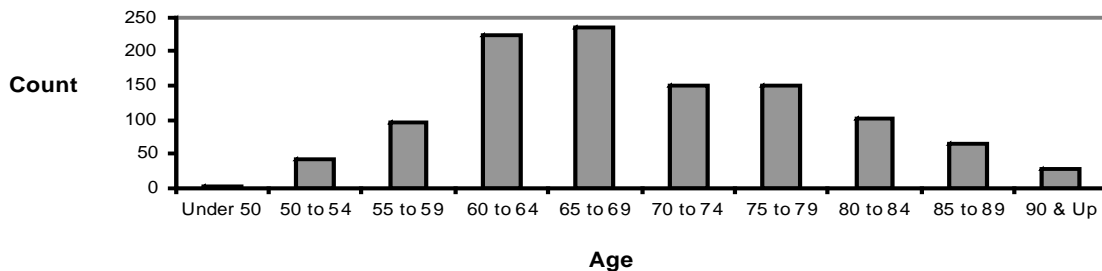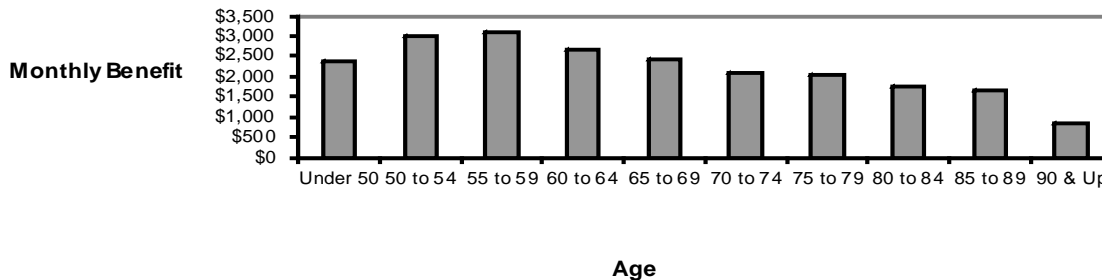
Average Benefit

* Includes DROP members.

Milliman

43

Summary of Beneficiaries
as of December 31, 2011

Plan 1

	Number			Monthly Benefit		
Age	Male	Female	Total	Male	Female	Total
Under 50	0	1	1	$ 0	$ 253	$ 253
50 to 54	0	0	0	0	0	0
55 to 59	0	6	6	0	9,130	9,130
60 to 64	2	7	9	2,035	7,487	9,522
65 to 69	2	11	13	1,423	15,264	16,687
70 to 74	3	17	20	2,445	22,154	24,599
75 to 79	2	22	24	1,785	22,621	24,406
80 to 84	8	42	50	4,525	46,566	51,091
85 to 89	6	37	43	2,500	28,458	30,958
90 & Up	2	33	35	1,085	21,715	22,800
Total	25	176	201	$ 15,798	$ 173,648	$ 189,446

Age Distribution
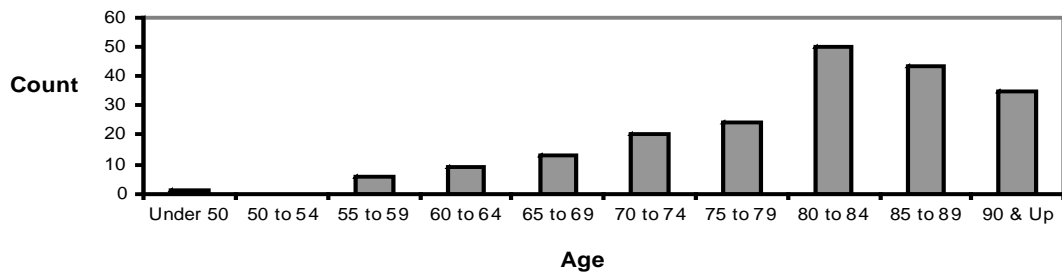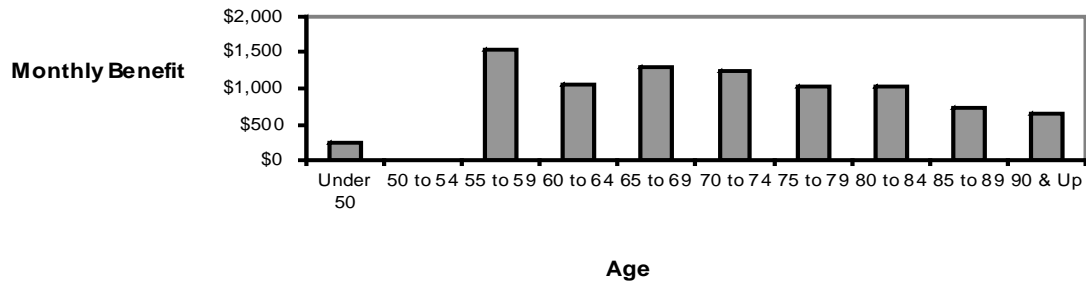
Average Benefit

Milliman

Summary of Beneficiaries
as of December 31, 2011

Plan 2

Age	Number			Monthly Benefit		
	Male	Female	Total	Male	Female	Total
Under 50	2	5	7	$ 684	$ 1,964	$ 2,648
50 to 54	2	2	4	2,075	1,494	3,569
55 to 59	0	9	9	0	8,484	8,484
60 to 64	0	7	7	0	3,934	3,934
65 to 69	2	10	12	948	5,656	6,604
70 to 74	2	7	9	733	2,586	3,319
75 to 79	1	9	10	332	4,637	4,969
80 to 84	1	1	2	125	63	188
85 to 89	0	0	0	0	0	0
90 & Up	0	0	0	0	0	0
Total	10	50	60	$ 4,897	$ 28,818	$ 33,715

Age Distribution

Average Benefit

Milliman

Summary of Beneficiaries
as of December 31, 2011

All Plans

	Number			Monthly Benefit				
Age	Male	Female	Total	Male		Female		Total
Under 50	2	6	8	$ 684	$	2,217	$	2,901
50 to 54	2	2	4	2,075		1,494		3,569
55 to 59	0	15	15	0		17,614		17,614
60 to 64	2	14	16	2,035		11,421		13,456
65 to 69	4	21	25	2,371		20,920		23,291
70 to 74	5	24	29	3,178		24,740		27,918
75 to 79	3	31	34	2,117		27,258		29,375
80 to 84	9	43	52	4,650		46,629		51,279
85 to 89	6	37	43	2,500		28,458		30,958
90 & Up	2	33	35	1,085		21,715		22,800
Total	35	226	261	$ 20,695	$	202,466	$	223,161

Age Distribution

Average Benefit

Milliman
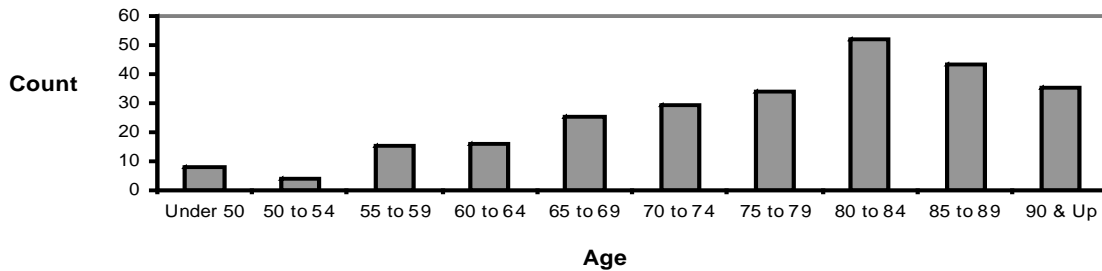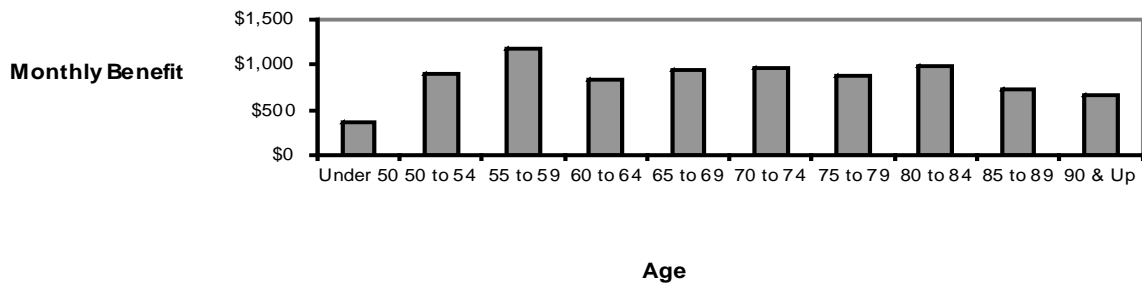
Appendix B

Summary of Benefit Provisions

DEFINED BENEFIT PLANS 1 AND 2

Plan 1 is applicable to members employed prior to July 18, 1981 who have not elected to be covered by Plan 2.

Plan 2 is applicable to members employed or re-employed on or after July 18, 1981 and before January 1, 1994 and to other employees who have elected Plan 2 coverage.

Normal Retirement (no reduction factor)

Eligibility – Plan 1: Age 60 with 7 or more years of service, or any age with 30 or more years of service.
Plan 2: Age 62 with 7 or more years of service (effective August 1, 1990).

Annual Amount – Plan 1: Service times 2.5% of Final Average Salary to a maximum of 75% of Final Average Salary.
Plan 2: Service times 2.25% of Final Average Salary, to a maximum of 75% of Final Average Salary (effective January 1, 2000).

Final Average Salary – all plans: Average for the 3 consecutive years of service which produce the highest average and which are within the last 10 years of service.

Early Retirement (with reduction factor)

Eligibility – Plan 1: Age 55 with 7 or more years of service.
Plan 2: Age 55 with 7 or more years of service.

Annual Amount – An amount computed as for normal retirement but reduced for each month retirement precedes age 60 under Plan 1 and age 62 under Plan 2. The amount of reduction per month of early retirement is:

Plan 1	Plan 2
A service graduated percentage for each month retirement precedes age 60. The percentage is .05 of 1% if service is 29 years but less than 30 years, increasing by .05 of 1% for each additional year service is less than 30 years, to a maximum of .50 of 1% if service is less than 20 years.	An age graduated percentage for each month retirement precedes age 62. The percentage is 0.6% for each month that the member's age precedes age 62, up to maximum of 50.4% at age 55.

Deferred Retirement (Vested Termination)

Eligibility – 7 or more years of service. A terminated employee may apply for a reduced pension upon meeting the applicable age requirement for early retirement or an unreduced pension upon meeting the applicable age requirement for normal retirement. A terminated employee may elect a refund of employee contributions, plus applicable interest, in lieu of a deferred retirement benefit.

Annual Amount – An amount computed as for normal retirement. Vested deferred pensions are adjusted during the deferral period based on changes in National Average Earnings, up to 5.5% annual adjustments.

Deferred Retirement Option Plan (DROP)

Eligibility – Member must be eligible to retire under early reduced or normal age and/or service requirements and elect to participate in DROP for up to 5 years.

Amount – Benefit computed based on years of service, final average salary as of the DROP election date, and length of DROP period. Benefit is paid into member's notional DROP account during the deferral period. Member continues to make required employee contributions during the deferral period. Interest at an annual rate of 5%, compounded monthly, is credited to the notional DROP account. Voluntary termination of employment during the DROP period results in loss of accrued interest. Balance of DROP account is payable within 90 days of actual termination of employment.

Service-Connected Disability

Eligibility **–** No age or service requirement. Requires total and permanent disability, as defined in State worker's compensation act, for employment by the City in a position commensurate with the employee's training, experience and education.

Annual Amount **–** Plan 1: 60% of final rate of salary.
Plan 2: 50% of final rate of salary.

Non Service-Connected Disability

Eligibility **–** 7 or more years of service. Requires total and permanent disability for employment by the City in a position commensurate with the employee's training, experience and education.

Annual Amount **–** Plan 1: 30% of Final Average Salary plus 1% of Final Average Salary for each year of service in excess of 7 years. Maximum is 50% of Final Average Salary.
Plan 2: 25% of final rate of salary.

Post-Retirement Survivor Benefits

Eligibility: Surviving Spouse - must have been married to retired employee for one year or more, at time of death if retired after January 1, 2000. If retired prior to January 1, 2000, must have been married to retired employee at retirement.

Minor Children – under age 18.

Annual Amount: Surviving Spouse - 50% of amount that was being paid to retiree.

Minor Child with Surviving Spouse - 10% of the member's Final Average Salary for each child under age 18. Maximum, including surviving spouse benefit, is 75% of Final Average Salary.

Minor Child without Surviving Spouse - 20% of the member's Final Average Salary for each child under age 18. Maximum benefit is 60% of Final Average Salary.

Post-Retirement Funeral Benefit

Eligibility: Designated Beneficiary – must have been designated by the retired employee.

Amount - Plan 1: $1,500 funeral benefit.
Plan 2: No funeral benefit provided.

Pre-Retirement Survivor Benefits

Eligibility: Surviving Spouse – Plan 1: Death of employee with 7 or more years of credited service.
Plan 2: Death of employee with 7 or more years of credited service.

Annual Amount - 50% of amount that the deceased employee would have been entitled to had he/she been on an unreduced retirement at time of death.

Eligibility: Designated Beneficiary – The beneficiary designated by an unmarried member or by a member who fails to meet the 7 year service requirement for the surviving spouse benefit.

Amount – The deceased employee's contributions, plus applicable interest, plus one month's salary for each full year of service up to a maximum of 6 years.

Other Termination Benefits

Eligibility – Termination of employment without eligibility for any other benefit.

Amount – Accumulated employee contributions with interest at 5% per year compounded monthly are refunded.

Post-Retirement Adjustment of Benefits

Eligibility –   Plan 1: Completion of 12 months of retirement and annually thereafter.
                    Plan 2: If retired on or after January 1, 2000: Completion of 12 months of retirement.
                         If retired before January 1, 2000: Benefit not provided (effective 2/19/2000).

Annual Amount – Plan 1: 3.0% of the base amount of benefit (increases are not compounded).
                    Plan 2: 2.0% of the base amount of benefit (increases are not compounded).

Employee Contributions

Plan 1: 6.4% of total compensation.
Plan 2: 4.7% of base salary and longevity pay (effective February 19, 2000).

City Contributions

Actuarially determined amount which together with employee contributions and investment earnings will fund the obligations of the Plan in accordance with accepted actuarial principles.

Unused Sick Leave

Each bi-weekly service credit of accumulated unused sick leave is converted to a service credit for the purpose of computing annual benefit amounts.

Plan 3 is applicable to members employed after January 1, 1994 who have not become covered by Plan 2. Plan 3 members are automatically transferred to Plan 2 at the time they acquire 7 years of service unless they file an irrevocable election to remain in Plan 3.

Employee Contributions

4.7% of compensation (effective 2/19/2000).

City Contributions

4.7% of compensation, less forfeitures from non-vested terminations (effective 2/19/2000).

Vesting of Contributions

Member contributions and investment earnings thereon are 100% vested.

City contributions and investment earnings thereon are 25% vested after 3 years of service, 50% vested after 5 years of service, and 100% vested after 7 years of service.

Distribution of Vested Accounts

Vested accounts are payable upon termination of City employment or death. Available forms of payment are prescribed by the Board.

Disability Retirement

Service and non-service connected disability benefits are the same as those of Plan 2.

Plan 3 members may alternatively elect to receive a refund of their Plan 3 account balance.

Actuarial Cost Method and Assumptions

Actuarial Cost Method

The actuarial cost method is a procedure for allocating the actuarial present value of pension benefits and expenses to time periods. The method used for the valuation is known as the Entry Age Normal actuarial cost method, and has the following characteristics.

(i)   The annual normal costs for each individual active member 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 covered compensation.

The Entry Age Normal actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's assumed pensionable compensation rates 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 actuarial liability. Deducting actuarial assets from the actuarial liability determines the unfunded actuarial liability or (surplus). The unfunded actuarial liability/(surplus) is financed as a level percent of member payroll over an open 20 year period.

Actuarial Assumptions

Retirement System contribution requirements and actuarial present values are calculated by applying experience assumptions to the benefit provisions and people information of the Retirement System, using the actuarial cost method.

The principal areas of risk which require experience assumptions about future activities of the Retirement System 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, retirants and beneficiaries

(iv)   rates of withdrawal of active members

(v)   rates of disability among active members

(vi)   the age patterns of actual retirements.

In making a valuation, the monetary effect of each assumption is calculated for as long as a present covered person survives - a period of time which can be as long as a century.

Actual experience of the Retirement System will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experiences. The result is a continual series of adjustments (usually small) to the computed contribution rate.

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). A complete review of the actuarial assumptions was completed in 2009. The use of updated assumptions was effective with the December 31, 2009 valuation.

Investment Return Rate (net of administrative expenses). This assumption is 7.75% a year, compounded annually and consists of 3.50% long-term price inflation and a 4.25% real rate of return over price inflation. This assumption, used to equate the value of payments due at different points in time, was adopted by the Board and was first used for the December 31, 1981 valuation, although the allocation between inflation and real return has changed periodically, most recently in 2009.

Salary Increase Rates. These rates are used to project current pay amounts to those upon which a benefit will be based and were first used for the December 31, 2009 valuation.

Years of Service	Annual Rate of Salary Increase for Sample Ages			
	Inflation Component	Productivity Component	Merit and Longevity	Total
1	3.50%	0.50%	3.20%	7.20%
2	3.50	0.50	3.00	7.00
3	3.50	0.50	2.80	6.80
4	3.50	0.50	2.60	6.60
5	3.50	0.50	2.40	6.40
6	3.50	0.50	2.20	6.20
7	3.50	0.50	2.00	6.00
8	3.50	0.50	1.80	5.80
9	3.50	0.50	1.70	5.70
10	3.50	0.50	1.60	5.60
11	3.50	0.50	1.50	5.50
12	3.50	0.50	1.40	5.40
13	3.50	0.50	1.30	5.30
14	3.50	0.50	1.20	5.20
15	3.50	0.50	1.06	5.06
16	3.50	0.50	0.92	4.92
17	3.50	0.50	0.78	4.78
18	3.50	0.50	0.64	4.64
19	3.50	0.50	0.50	4.50
20	3.50	0.50	0.50	4.50
21	3.50	0.50	0.50	4.50
22	3.50	0.50	0.50	4.50
23	3.50	0.50	0.50	4.50
24	3.50	0.50	0.50	4.50
25	3.50	0.50	0.50	4.50
Over 25	3.50	0.50	0.25	4.25

The salary increase assumptions will produce 4.00% annual increases in active member payroll (the inflation and productivity base rate) given a constant active member group size. This is the same payroll growth assumption used to amortize the unfunded actuarial liability. The real rate of return over assumed wage growth is 3.75% per year.

Changes actually experienced in average pay and total payroll have been as follows:

	Year Ended					5 Year (Average) Compounded Annual Increase
	12/31/11	12/30/10	12/31/09	12/31/08	12/31/07	
Average pay	(1.1)%	1.1%	5.5%	2.2%	3.0%	2.1%
Total payroll	(10.0)%	(4.3)%	0.8%	3.1%	3.7%	(1.5)%

Mortality Table. This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each pension payment being made after retirement.

Healthy Retirees
and Beneficiaries: RP-2000 Healthy Annuitant Tables (ages set forward 2 years for males, 0 for females)

Disabled Retirees: RP-2000 Disabled Table

Active Members: RP-2000 Employee Table (ages set forward 2 years for males, 0 for females)

The RP-2000 Tables are used with generational mortality for all except Disabled Retirees (no projection).

Sample Ages(1)	Present Value of $1 Monthly for Life		Future Life Expectancy (Years)	
	Men	Women	Men	Women
50	$136.27	$141.98	30.4	34.6
55	128.67	135.41	25.7	29.7
60	118.41	127.04	21.2	25.1
65	150.86	116.91	16.9	20.7
70	91.20	104.80	13.0	16.7
75	75.12	90.90	9.7	13.0
80	58.98	75.76	6.9	9.8
85	44.42	60.20	4.8	7.1

(1) Ages in 2000

This table was first used for the December 31, 2004 actuarial valuation.

December 31, 2011 Actuarial Valuation   **Wichita Employees' Retirement System**

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Rates of Retirement and Deferred Retirement Option Plan (DROP) Elections. These rates are used to measure the probability of eligible members retiring under either the regular retirement provisions or from the Deferred Retirement Option Plan.

Percent Retiring During Year

Retirement Age	Plan 1	Plan 2
55	15%	5%
56	15	5
57	15	5
58	15	5
59	15	5
60	40	5
61	40	5
62	20	30
63	20	30
64	20	40
65	100	40
66	N/A	30
67	N/A	30
68	N/A	30
69	N/A	30
70	N/A	100

In addition, the following assumptions would apply to members in this category:

Plan 1: 70% of members with 30 or more years of service will elect the DROP with an average DROP period of 48 months. The remaining 30% are assumed to retire immediately.

Plan 2: 70% of members with 33.33 or more years of service and are at least age 62 will elect the DROP with an average DROP period of 36 months.

All members of the retirement system were assumed to retire on or before age 70.

This assumption was first used in the December 31, 2009 actuarial valuation.

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 Ages	Years of Service	Probability of Terminating During Year
Any	0	25.00%
	1	19.00
	2	14.00
	3	11.00
	4	9.00
25	Over 4	9.00
30		7.00
35		5.25
40		4.00
45		3.50
50		2.50
55		1.50
60		1.50

This assumption was first used for the December 31, 2009 valuation.

Administrative Expenses. Assumed to be paid from investment earnings.

Forfeiture of Vested Benefits. The assumption is that a percentage of the actuarial present value of vested termination benefits will be forfeited by a withdrawal of accumulated contributions.

Years of Service	Percent Forfeiting
Under 15	60%
15 – 19	40%
20 – 24	20%
25 or more	0%

This table was first used for the December 31, 2004 actuarial valuation.

Rates of Disability. This assumption measures the probabilities of a member becoming disabled.

Sample Ages	% of Active Members Becoming Disabled During Next Year
25	0.02%
30	0.03
35	0.04
40	0.07
45	0.10
50	0.18
55	0.32
60	0.53

These rates were first used for the December 31, 2009 valuation.

Disabilities are assumed to be non-duty related.

Active Member Group Size. The number of active members was assumed to remain constant.

Vested Deferred Pensions. Amounts are assumed to increase during the deferral period at 4.0% per year. This assumption was first used for the December 31, 2009 valuation.

Miscellaneous and Technical Assumptions

Marriage Assumption:	70% of non-retired participants are assumed to be married for purposes of death benefits. In each case, the male was assumed to be 3 years older than the female.
Pay Increase Timing:	Assumed to occur mid-year.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year at the start of the year in which the decrement is assumed to occur.
Benefit Service:	Service calculated to the nearest month as of the decrement date is used to determine the amount of benefit payable.
Other:	The turnover decrement does not operate during retirement eligibility.
Miscellaneous Loading Factors:	The calculated normal retirement benefits were increased by 4% to account for the inclusion of unused sick leave in the calculation of Service Credit. This assumption was changed with the December 31, 2004 valuation.
Plan 3 Transfer Assumption:	For purposes of the valuation, Plan 3 members are assumed to transfer to Plan 2 if they acquire 7 years of service. An additional reserve is held for the difference between the market and actuarial value of assets. This assumption was changed with the December 31, 2004 valuation.

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Glossary of Terms

Actuarial 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 assumptions.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement system benefit between future normal cost and actuarial liability. Sometimes referred to as the "actuarial funding method."
Experience Gain (Loss)	The difference between actual experience and actuarial assumptions 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.
Normal Cost	The actuarial present value of retirement system benefits allocated to the current year by the actuarial cost method.
Unfunded Actuarial Liability	The difference between actuarial liability and the valuation assets.
	Most retirement systems have unfunded actuarial liability. They arise each time new benefits are added and each time an actuarial loss is realized.
	The existence of unfunded actuarial liability is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial liability does not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial liability and the trend in its amount.

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