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City of Lincoln Police and Fire Pension Fund

**Actuarial Valuation Report
as of August 31, 2015**





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January 7, 2016

The City Council
City of Lincoln
555 South 10th Street, Room 201
Lincoln, NE 68508

Re: City of Lincoln Police and Fire Pension Fund

Dear Council Members:

At your request, we have performed an actuarial valuation of the City of Lincoln Police and Fire Pension Fund as of August 31, 2015 for determining the actuarial contribution rate for fiscal year 2017. The major findings of the valuation are contained in this report. This report reflects the benefit provisions in effect as of August 31, 2015 which did not change from the prior valuation. However, there was one change to the actuarial assumptions from the prior valuation. The investment return assumption was lowered from 6.75% to 6.40% to better reflect the expected impact of the transfers to the COLA Pool fund. This change is discussed in more detail in the Executive Summary section of our report.

This is the first actuarial valuation report prepared by Cavanaugh Macdonald Consulting, LLC (CMC). As part of our transition work, we replicated the August 31, 2014 actuarial valuation. Results were within acceptable limits, but as is typical in a takeover situation, there were some differences in the key valuation measurements. Based on our experience, these differences are neither unusual nor significant. The details of the replication results were reported to the Plan Administrator in our letter dated November 30, 2015.

In preparing this report, we relied, without audit, on information (some oral and some written) supplied by the Plan's staff. This information includes, but is not limited to, plan provisions, member data and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

3906 Raynor Pkwy, Suite 106, Bellevue, NE 68123

Phone (402) 905-4461 • Fax (402) 905-4464

www.CavMacConsulting.com

Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE



All costs, liabilities, rates of interest, and other factors for the Plan have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Plan and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the Plan.

Future actuarial results may differ significantly from the current results 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 plan's funded status); and changes in the plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not present herein.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the Plan. The calculations in the enclosed report have been made on a basis consistent with our understanding of the Plan's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the plan provisions described in Appendix B of this report. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes. Actuarial computations for purposes of fulfilling financial accounting requirements for the Plan under Governmental Account Standard No. 67 are provided in a separate report addressed to the City Interim Finance Director.

This is to certify that the independent consulting actuaries have experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement plan and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the Plan. We, Patrice A. Beckham, FSA and Bryan K. Hoge, FSA, are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. We are available to answer any questions on the material contained in this report or to provide explanations or further details as may be appropriate.

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

Respectfully Submitted,

A handwritten signature in blue ink that reads 'Patrice Beckham'.

Patrice A. Beckham, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

A handwritten signature in blue ink that reads 'Bryan Hoge'.

Bryan K. Hoge, FSA, EA, FCA, MAAA
Senior Actuary



SECTION I – EXECUTIVE SUMMARY

OVERVIEW

This report presents the results of the August 31, 2015 actuarial valuation of the City of Lincoln Police and Fire Pension Fund (Plan). The primary purposes of performing a valuation are to:

- determine the employer contribution rate required to fund the Plan on an actuarial basis,
- disclose asset and liability measures as of the valuation date,
- determine the experience of the Plan since the last valuation date, and
- analyze and report on trends in contributions, assets, and liabilities over the past several years.

This is the first actuarial valuation report prepared by Cavanaugh Macdonald Consulting, LLC (CMC). As part of our transition work, we independently replicated the August 31, 2014 actuarial valuation. Results were within acceptable limits, but as is typical in a takeover situation, there were some differences in the key valuation measurements. In addition, during the replication process we identified several changes that we believe will result in a better estimate of future liabilities and costs. As a result, our liability measurements and normal cost rate were slightly different than those in the formal 2014 valuation. Based on our experience, these differences are neither unusual nor significant. For additional information on the replication of the 2014 valuation, please refer to our letter to the City dated November 30, 2015. A summary of the key actuarial measurements in the replication is shown in the following table:

	August 31, 2014 Valuation Results (\$M)		
	CMC	Milliman	CMC/Milliman
Present Value of Future Benefits	\$329.9	\$330.1	99.9%
Actuarial Accrued Liability	\$256.5	\$262.9	97.5%
Normal Cost Rate	19.16%	18.32%	104.6%
UAAL Contribution Rate	<u>11.93%</u>	<u>12.86%</u>	92.8%
Actuarial Contribution Rate	31.09%	31.18%	99.7%

Under Actuarial Standards of Practice (ASOP), the actuary must review all of the assumptions used in the actuarial valuation to ensure they are reasonable, as defined by the applicable ASOPs. Our review and analysis of the current investment return assumption of 6.75% indicated that, given the impact of the transfers to the COLA Pool when the rate of return exceeds the assumed rate of return, the assumption was not our “best estimate” as defined in ASOP 27, *Selection of Economic Assumptions for Measuring Pension Obligations*. As a result, we recommended that the assumed rate of return be lowered to 6.40% which increased liabilities and costs as shown in the following table:



SECTION I – EXECUTIVE SUMMARY

	August 31, 2015 Valuation Results		
	6.40% Return	6.75% Return	Difference
Present Value of Future Benefits	\$380.7	\$359.4	\$21.3M
Actuarial Accrued Liability	286.5	274.8	11.7M
Actuarial Value of Assets	183.0	183.0	0.0M
Unfunded Actuarial Accrued Liability	\$103.5	\$ 91.8	\$11.7M
Normal Cost Rate	21.11%	19.48%	1.63%
UAAL Contribution Rate	<u>13.19%</u>	<u>11.70%</u>	1.49%
Actuarial Contribution Rate	34.30%	31.18%	3.12%
Employee Contribution	<u>(6.88%)</u>	<u>(6.88%)</u>	0.00%
Employer Contribution	27.42%	24.30%	3.12%

The valuation results provide a “snapshot” view of the Plan’s financial condition on August 31, 2015. The unfunded actuarial accrued liability (UAAL) increased from \$88.3 million last year to \$103.5 million in this year’s valuation. The funded ratio (actuarial assets divided by actuarial accrued liability) declined from 66% in last year’s valuation to 64% in the current valuation. In addition, the employer actuarial contribution rate increased by 2.98% from 24.44% in last year’s valuation to 27.42% in the 2015 valuation.

The valuation results reflect net unfavorable experience for the past plan year as demonstrated by an UAAL that was higher than expected, after taking into account adjustments for the changes resulting from the replication valuation and the lower investment return assumption. The unfavorable experience was due to the combined impact of an experience loss on both assets and liabilities. The rate of return on the market value of assets for the prior year was -2.76%, but the asset smoothing method only recognizes some of the shortfall between the assumed and actual returns. Due to the smoothing of experience in FY 2015 and the recognition of some of the unrecognized investment gains from prior years, the return on the actuarial value of assets (smoothed value) was 6.32%. This generated an experience loss of \$0.8 million on the actuarial valuation of assets. There was also an experience loss of \$7.2 million on liabilities, largely as the result of a correction in how the reported salary in the census data is used in the valuation process. The prior actuary used the salary amounts reported as if they represented rates of pay for the 12 months following the valuation date. Based on information provided by the City, the reported salary amounts are the actual salary amounts for the year ending on the valuation date. As a result of the change in how reported salaries were used, the actuarial accrued liability increased \$5.3 million. The remaining experience loss from all other demographic experience was \$1.9 million. A detailed analysis of the change in the unfunded actuarial accrued liability from August 31, 2014 to August 31, 2015 is shown on page 5.

Effective October 1992, the Pension Fund Ordinance provides for cost of living (COLA) benefits to pensioners. The source of funding for the COLA benefits is not guaranteed. The City has indicated that the payment of a COLA is not guaranteed and has chosen not to pre-fund this benefit.



SECTION I – EXECUTIVE SUMMARY

Therefore, COLA benefits and the corresponding pool of assets were not included in this valuation of the Pension Fund or in the determination of the employer contribution.

ASSETS

In September of each year, eligible retired members will receive a “13th Check” payable from funds set aside referred to in this report as the “COLA Pool”. The 13th Check payments are made from the COLA Pool, which is invested with other pension assets. The COLA Pool is funded by the earnings differential between the pension fund’s market value rate of return and the actuarially assumed rate of return, multiplied by a ratio of retirant and beneficiary liability over total liability. All such annual additions to the pool plus earnings applicable to the amount allocated to the pool constitute the pool. The net effect of these transfers from the Pension Fund to the COLA Pool is effectively a reduction in the realized rate of return on Pension Fund Assets.

As of August 31, 2015, the Plan had total assets (excluding the COLA Pool assets) of \$176.8 million, when measured on a market value basis. This is a decrease of \$8.0 million from the August 31, 2014 amount of \$184.8 million. The market value of assets is not used directly in the actuarial valuation. 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”). Differences between the actual return on the market value of assets and the assumed return on the actuarial value of assets are phased-in equally over a five-year period.

See Table 4 on page 15 for a detailed development of the actuarial value of assets. The components of the change in the market and actuarial value of assets for the Retirement Plan (in millions) are set forth in the following table.

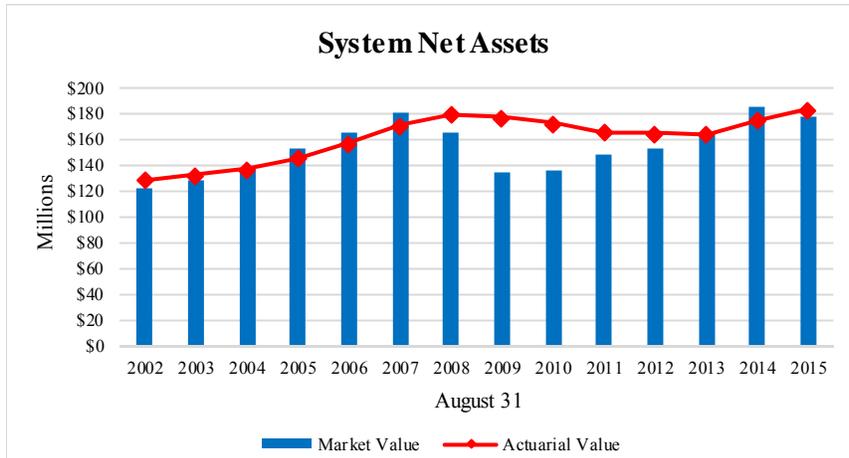
	Market Value (\$M)	Actuarial Value (\$M)
Assets, August 31, 2014	\$184.8	\$174.6
• City and Member Contributions	10.6	10.6
• Benefit Payments and Refunds	(13.2)	(13.2)
• Administrative Expenses	(0.4)	(0.4)
• Investment Income, Net of Expenses	(5.0)	11.4
Assets, August 31, 2015	\$176.8	\$183.0

The annualized dollar-weighted rate of return, measured on the actuarial value of assets, was 6.32% and, measured on the market value of assets, was -2.76%. The actuarial value of assets as of August 31, 2015 was \$183.0 million, which reflects an actuarial loss of \$0.8 million resulting from the phase-in of investment returns from the current and preceding four years. Due to the asset smoothing method, the actuarial value of assets is now \$6.2 million higher than the market



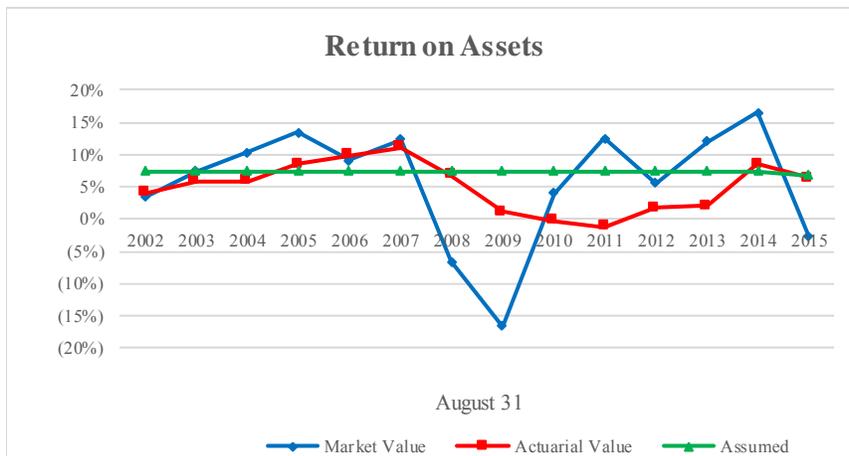
SECTION I – EXECUTIVE SUMMARY

value of assets, a change from the 2014 valuation when the market value exceeded the actuarial value of assets by \$10.2 million.



The actuarial value of assets has been both above and below the market value during this period. This is to be expected when using an asset smoothing method.

Note: Results for years before 2015 were prepared by prior actuaries.



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 accrued 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 the asset value at the same date is referred to as the unfunded actuarial accrued liability (UAAL), or surplus if the asset value exceeds the actuarial accrued liability. The unfunded actuarial accrued 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 accrued liability. Benefit improvements, experience gains and losses, and changes in actuarial assumptions and procedures will also impact the total actuarial accrued liability and the unfunded portion thereof.



SECTION I – EXECUTIVE SUMMARY

The Unfunded Actuarial Accrued Liability for the Plan as of August 31, 2015 is:

Actuarial Accrued Liability	\$286,493,673
Actuarial Value of Assets	183,011,274
Unfunded Actuarial Accrued Liability	<u>\$103,482,399</u>

Between August 31, 2014 and August 31, 2015, the components of the change in the unfunded actuarial accrued liability (UAAL) for the Plan are shown in the following table:

	<u>\$ millions</u>
Unfunded Actuarial Accrued Liability, September 1, 2014	\$88.3
• Effect of contributions below the actuarial rate	0.0
• Expected increase due to amortization method	1.3
• Investment experience	0.8
• Liability experience*	1.9
• Change in use of "reported salary"	5.3
• Change to assumed investment return of 6.40%	12.0
• Change due to replication valuation	(6.4)
• Other experience	0.3
Unfunded Actuarial Accrued Liability, September 1, 2015	\$103.5

* Liability loss is about 0.7% of total actuarial accrued liability.

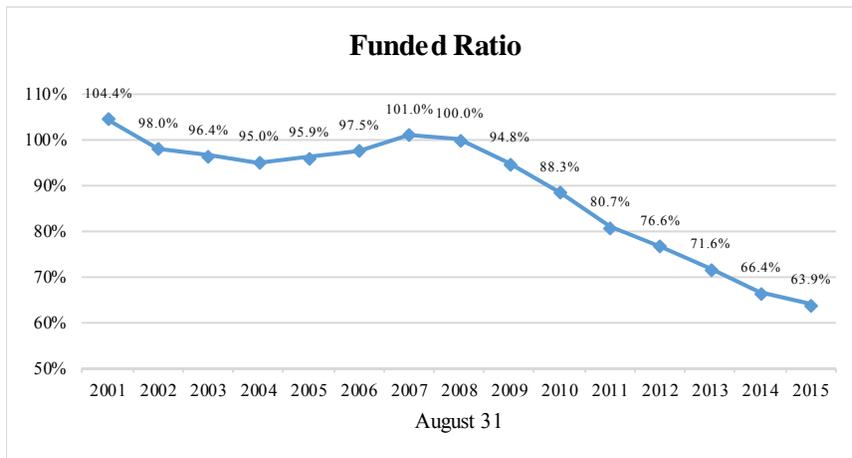
The overall experience loss for the last plan year of \$8.0 million was the result of an actuarial loss of \$0.8 million on Plan assets (actuarial value) and a \$7.2 million actuarial loss on Plan liabilities. The unfavorable experience on the Plan liabilities was due primarily due to a correction in the way reported salaries were being treated in the valuation process. The prior actuary used the salary amounts reported by the City in the census data as if they represented pay rates for the 12 months immediately following the valuation date. After confirming with the City that the reported salaries in the census data represent the salary amounts actually received during the 12 months immediately preceding the valuation date, we programmed our valuation software in a consistent manner. As a result of the adjustment, Plan liabilities increased by \$5.3 million. The experience loss from all other demographic experience was \$1.9 million.

Analysis of the unfunded actuarial accrued liability strictly as a dollar amount can be misleading. Another way to evaluate the unfunded actuarial accrued 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 accrued liability. This information for recent years is shown in the following table (in millions). Historical information from the five most recent valuations is shown in the graph following the chart:



SECTION I – EXECUTIVE SUMMARY

	8/31/11	8/31/12	8/31/13	8/31/14	8/31/15
Actuarial Value of Assets (\$M)	\$165.4	\$164.5	\$164.2	\$174.6	\$183.0
Actuarial Accrued Liability (\$M)	\$205.0	\$214.9	\$229.2	\$262.9	\$286.5
Funded Ratio (Actuarial Assets/AAL)	81%	77%	72%	66%	64%
Market Value of Assets (\$M)	\$148.3	\$153.5	\$164.6	\$184.8	\$176.8
Actuarial Accrued Liability (\$M)	\$205.0	\$214.9	\$229.9	\$262.9	\$286.5
Funded Ratio (MVA/AAL)	72%	71%	72%	70%	62%



Over the past decade, the funded ratio steadily declined due to changes in assumptions, market returns less than expected, and contributions less than the full actuarial rate.

Note: Results for years prior to 2015 were prepared by prior actuaries.

As mentioned earlier in this report, due to the asset smoothing method there is about \$6.2 million difference between the actuarial and market value of assets. This deferred investment loss will flow through the asset smoothing method over the next four years. If all actuarial assumptions are met in the future and favorable investment experience does not occur, the funded ratio will decrease as the asset smoothing method recognizes the deferred investment loss. The Plan's funded status will continue to be heavily dependent on future investment returns.

CONTRIBUTION RATES

Generally, contributions to the Plan consist of:

- a “normal cost” for the portion of projected liabilities allocated by the actuarial cost method to service of members during the current year; and
- an “unfunded actuarial accrued liability 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 the fiscal year 2017 is computed based on the August 31, 2015 valuation.



SECTION I – EXECUTIVE SUMMARY

By ordinance, the City is required to contribute no less than the employer normal cost plus administrative expenses. However, sound funding of a retirement system requires consistent funding of the full actuarial contribution rate. Given the Plan’s funded status and the unrecognized losses, we recommend the City contribute the full actuarial employer contribution rate of 27.42% of covered payroll. Due to a number of factors including actual versus expected Plan experience, the change in the investment return assumption, and changes made during the replication process, the employer contribution rate increased by 2.98% from the 2014 to the 2015 valuation, as shown in the following table:

Actuarial Contribution Rate	Actuarial Valuation	
	8/31/2015	8/31/2014
1) a. Total Normal Cost	21.11%	18.33%
b. Member Financed	<u>6.88%</u>	<u>6.75%</u>
c. Employer Portion	14.23%	11.58%
(1a) - (1b)		
2) UAAL/(Surplus) Contribution	<u>13.19%</u>	<u>12.86%</u>
3) Employer Contribution Rate	27.42%	24.44%
4) Projected Covered Payroll	\$42,381,059	\$37,887,505
5) Recommended Employer Contribution*	12,065,465	9,666,852

* Includes administrative expenses. See Table 12 for details.

Note: The 2014 valuation results were prepared by the prior actuary.

COMMENTS

As of August 31, 2015, the actuarial accrued liability was \$286.5 million and the actuarial value of assets was \$183.0 million, resulting in a funded ratio of 64%, down from the funded ratio of 66% last year. Using the market value of assets, the funded ratio is 62%. These results were impacted by several items other than the actual experience of the Plan compared to that expected including: (1) lowering the investment return assumption from 6.75% to 6.40%, (2) adjusting how the reported salary amounts are used in the valuation, and (3) adjustments from the replication valuation. Overall, these changes increased the UAAL by \$10.9 Million and increased the City contribution rate by 3.47% of payroll (1.29% for UAAL payment and 2.18% for Normal Cost).

Retirement plans use several mechanisms to provide more stability in the contribution levels. These include an asset smoothing method, which smoothes out the volatility in the investment returns, and amortization of any actuarial gains or losses over a period of years. The Plan utilizes an asset smoothing method that spreads the difference between expected and actual return over a five-year period. The rate of return on the actuarial value of assets for the plan year ending in 2015 was 6.32% as compared to -2.76% return on the pure market value of assets. The increase in the unfunded actuarial accrued liability from the experience loss in FY 2015 is amortized over a 29-year period, which mitigates the impact of the unfavorable experience on the actuarial contribution rate.



SECTION I – EXECUTIVE SUMMARY

As of August 31, 2015, the deferred investment loss (actuarial value less market value of assets) is \$6.2 million. Absent investment gains in future years, the deferred investment loss of \$6.2 million will eventually be reflected in the actuarial value of assets in future years. 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 investment experience. This is accomplished by comparing the key valuation results from the August 31, 2015 actuarial valuation using both the actuarial and market value of assets.

	Using Actuarial Value of Assets	Using Market Value of Assets
Actuarial Accrued Liability (AAL)	\$286,493,673	\$286,493,673
Asset Value	183,011,274	176,828,083
Unfunded Actuarial Accrued Liability (UAAL)	\$103,482,399	\$109,665,590
Funded Ratio	64%	62%
Normal Cost Rate	21.11%	21.11%
UAAL Contribution Rate	<u>13.19%</u>	<u>13.98%</u>
Total Actuarial Contribution Rate	34.30%	35.09%
Member Contribution Rate	<u>6.88%</u>	<u>6.88%</u>
Employer Actuarial Contribution Rate	27.42%	28.21%

A summary of key data elements and valuation results as of August 31, 2015 and August 31, 2014 are presented on the following page. More detail on each of these elements can be found in the following sections of this report.



SECTION I – EXECUTIVE SUMMARY

	<u>8/31/2015</u> <u>Valuation</u>	<u>8/31/2014</u> <u>Valuation</u>	<u>%</u> <u>Change</u>
1. PARTICIPANT DATA			
Number of:			
Active Members	576	555	3.8%
DROP Members	42	52	(19.2)%
Retirees, Disabled Members and Beneficiaries	486	465	4.5%
Inactive Vested Members	28	27	3.7%
Total Members	<u>1,132</u>	<u>1,099</u>	3.0%
Projected Valuation Salaries of Active Members**	\$ 42,381,059	\$ 37,887,505	11.9%
Annual Retirement Payments for DROP Members, Disabled Members, Retirees and Beneficiaries	\$ 12,890,462	\$ 12,354,404	4.3%
2. ASSETS AND LIABILITIES			
a. Total Actuarial Accrued Liability	\$286,493,673	\$262,918,401	9.0%
b. Market Value of Assets*	176,828,083	184,834,762	(4.3)%
c. Actuarial Value of Assets*	183,011,274	174,569,411	4.8%
d. Unfunded Actuarial Accrued Liability (a) - (c)	\$103,482,399	\$ 88,348,990	17.1%
e. Funded Ratio - Actuarial Value (c) / (a)	64%	66%	(3.0)%
f. Funded Ratio - Market Value (b) / (a)	62%	70%	(11.4)%
3. ACTUARIAL CONTRIBUTION RATE			
a. Normal Cost	21.11%	18.33%	15.2%
b. UAAL Amortization	<u>13.19%</u>	<u>12.86%</u>	2.6%
c. Total Actuarial Contribution Rate (a) + (b)	34.30%	31.19%	10.0%
d. Effective Employee Contribution Rate	<u>(6.88%)</u>	<u>(6.75%)</u>	1.9%
e. Employer Actuarial Contribution Rate (c) - (d)	27.42%	24.44%	12.2%

* Excludes the COLA Pool Fund

** For the 8/31/2014 valuation, these were actual FY 2013-2014 salaries, not projected.



SECTION II – SCOPE OF THE REPORT

This report presents the results of the actuarial valuation of the City of Lincoln Police and Fire Pension Fund as of August 31, 2015. This valuation was prepared at the request of the City.

Please pay particular attention to our actuarial certification 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 which result from this valuation is presented in the previous section. Section 3 describes the assets and investment experience of the Plan. Section 4 and 5 describe how the obligations of the Plan are to be met under the actuarial cost method in use. Section 6 includes some historical funding and other information.

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 August 31, 2015.
- 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.



SECTION III– ASSETS

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 August 31, 2015. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the Plan, which are generally in excess of assets. The actuarial process then leads to a method of determining the contributions needed by members and the employer in the future to balance the Plan assets and liabilities.

Market Value of Assets

The current market value represents the “snapshot” or “cash-out” value of Plan assets as of the valuation date. In addition, the market value of assets provides a basis for measuring investment performance from time to time. Table 1 is a comparison, at market values, of Plan assets as of August 31, 2015, and August 31, 2014, in total and by investment category. Table 2 summarizes the change in the market value of assets from August 31, 2014 to August 31, 2015.

Actuarial Value of Assets

Neither the market value of assets, representing a “cash-out” value of Plan assets, nor the book value of assets, representing the cost of investments, may be the best measure of the Plan’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. Under the asset smoothing methodology, the difference between the actual investment return on the market value of assets and assumed investment return on the actuarial value of assets is recognized evenly over a five-year period.

Table 4 shows the development of the actuarial value of assets (AVA) as of the valuation date.

Cost-of-Living Adjustments

In September of each year, eligible retired members will receive a “13th Check” payable from funds set aside referred to in this report as the “COLA Pool”. The 13th Check payments are made from the COLA Pool, which is invested with other pension assets. The COLA Pool is funded by the earnings differential between the pension fund’s market value rate of return and the actuarially assumed rate of return, multiplied by a ratio of retirant and beneficiary liability over total liability. All such annual additions to the pool plus earnings applicable to the amount allocated to the pool constitute the pool. The net effect of these transfers from the Pension Fund to the COLA Pool is effectively a reduction in the realized rate of return on Pension Fund Assets.

The source of funding for the COLA benefits is not guaranteed. The City has indicated that the payment of a COLA is not guaranteed and has chosen not to pre-fund this benefit. Therefore, neither the liabilities associated with the COLA benefits nor the corresponding pool of assets were included in this valuation of the Pension Fund which was prepared to address the funding of the Plan.



SECTION III— ASSETS

TABLE 1

STATEMENT OF NET PLAN ASSETS AT MARKET VALUE

	Market Value	
	August 31, 2015	August 31, 2014
Cash & Equivalents	\$ 4,345,821	\$ 9,668,120
Accrued Interest & Dividends	26	71,140
Receivables	0	0
Alternative Investments*	0	46,141,565
Fixed Income	43,067,668	33,197,625
Equity	111,725,895	124,264,365
Hedge Funds*	10,663,198	0
Private Equity*	765,515	0
Real Estate*	33,427,148	0
Total Assets	\$ 203,995,271	\$ 213,342,815
Accounts Payable	0	0
Interim Plan Assets	203,995,271	213,342,815
COLA Pool	(27,167,188)	(28,508,053)
Net Assets Available for Benefits	\$ 176,828,083	\$ 184,834,762

* Hedge Funds, Private Equity and Real Estate were included in Alternative Investments for the August 31, 2014 valuation.



SECTION III— ASSETS

TABLE 2

STATEMENT OF CHANGES IN NET ASSETS*
DURING YEAR ENDED AUGUST 31, 2015
(Market value)

1. Market Value of Assets as of August 31, 2014	\$ 213,342,815
2. Contributions:	
a. Members	\$ 2,604,101
b. City	8,045,293
c. Total	\$ 10,649,394
(2a) + (2b)	
3. Investment Income	
a. Interest and Dividends	\$ 6,530,618
b. Realized Gains/(Losses)	9,180,972
c. Investment Expenses	(186,535)
d. Short and Long Term Capital Gains	4,669,987
e. Unrealized Gains/(Losses)	(26,038,597)
f. Total	\$ (5,843,555)
(3a) + (3b) + (3c) + (3d) + (3e)	
4. Expenditures	
a. Refunds of Member Contributions	\$ 571,018
b. Benefits Paid:	
(1) Base Pension and Compensation Payments	\$ 10,642,340
(2) DROP Payments	1,941,896
(3) Temporary Total Disability	0
(4) COLA Pool Payments	553,551
c. Administrative Expenses	444,578
d. Total	\$ 14,153,383
(4a) + (4b) + (4c)	
5. Changes and Adjustments	\$ 0
6. Net Change	\$ (9,347,544)
(2d) + (3f) - (4d) + (5)	
7. Market Value of Assets as of August 31, 2015	\$ 203,995,271
8. Net Return on Market Value of Assets	(2.76%)

* Includes COLA pool assets of \$27,167,188



SECTION III— ASSETS

TABLE 3

**STATEMENT OF CHANGES IN COLA POOL ASSETS
FOR THE YEAR ENDED AUGUST 31, 2015
(Market Value)**

1. Market Value of COLA Pool as of August 31, 2014	\$ 28,508,053
2. Additions to COLA Pool	\$ 0
3. Investment Income on COLA Pool	\$ (787,314)
4. COLA Pool Payments	
a. Retirants and Beneficiaries	\$ 510,453
b. DROP Members	43,098
c. Total	\$ <u>553,551</u>
5. Net Change (2) + (3) - (4c)	\$ (1,340,865)
6. Market Value of COLA Pool as of August 31, 2015	\$ 27,167,188

Cost-of-Living Adjustments

In September of each year, eligible retired members will receive a “13th Check” payable from funds set aside referred to in this report as the “COLA Pool”. The 13th Check payments are made from the COLA Pool, which is invested with other pension assets. The COLA Pool is funded by the earnings differential between the pension fund’s market value rate of return and the actuarially assumed rate of return, multiplied by a ratio of retirant and beneficiary liability over total liability. All such annual additions to the pool plus earnings applicable to the amount allocated to the pool constitute the pool. The net effect of these transfers from the Pension Fund to the COLA Pool is effectively a reduction in the realized rate of return on Pension Fund Assets.

The source of funding for the COLA benefits is not guaranteed. The City has indicated that the payment of a COLA is not guaranteed and has chosen not to pre-fund this benefit. Therefore, neither the liabilities associated with the COLA benefits nor the corresponding pool of assets were included in this valuation of the Pension Fund which was prepared to address the funding of the Plan.



SECTION III— ASSETS

TABLE 4
DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS

	Year End			
	8/31/2012	8/31/2013	8/31/2014	8/31/2015
1. Actuarial Value of Assets, Beginning of Year	\$ 165,436,361	\$ 164,500,414	\$ 164,189,914	\$ 174,569,411
2. Contributions During Year				
(a) Member	\$ 2,418,690	\$ 2,540,604	\$ 2,613,971	\$ 2,604,101
(b) City	6,052,020	6,446,472	7,865,929	8,045,293
(c) Total	\$ 8,470,710	\$ 8,987,076	\$ 10,479,900	\$ 10,649,394
3. Benefit Payments and Expenses	\$ 12,332,500	\$ 12,670,201	\$ 13,837,309	\$ 13,599,832
4. Expected Investment Income on (1), (2) and (3)	\$ 12,265,528	\$ 12,201,911	\$ 12,190,617	\$ 11,685,484
5. Actual Return on Market Value, Net of Investment Expenses	\$ 9,061,098	\$ 14,753,906	\$ 23,574,412	\$ (5,056,241)
6. Return to be Spread, End of Year (5) - (4)	\$ (3,204,430)	\$ 2,551,995	\$ 11,383,795	\$ (16,741,725)

* COLA Pool payments were included in Benefit Payments and Expenses for years prior to 2015.
Note: Information prior to 2015 was produced by the prior actuary.



SECTION III— ASSETS

**TABLE 4
(continued)**

7. Return to be Spread

<u>Plan Year</u> <u>Ending</u>	<u>Return to be</u> <u>Spread</u>	<u>Unrecognized</u> <u>Percent</u>	<u>Unrecognized</u> <u>Return</u>
2015	(\$16,741,725)	80%	(\$13,393,380)
2014	11,383,795	60%	6,830,277
2013	2,551,995	40%	1,020,798
2012	(3,204,430)	20%	(640,886)
			<hr/>
			(\$6,183,191)
8. Total Market Value of Assets as of September 1, 2015			\$176,828,083
9. Total Actuarial Value of Assets as of September 1, 2015 (8) - (7)			\$183,011,274
10. Asset Ratios			
(a) Actuarial Value to Market Value (9) / (8)			103.50%
(b) Market Value to Actuarial Value (8) / (9)			96.62%
11. Return on Actuarial Value of Assets, Net of Expenses			6.32%



SECTION IV—PLAN 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 City as of the valuation date, August 31, 2015. In this section, the discussion will focus on the commitments (future benefit payments) of the Plan, which are referred to as its liabilities.

Table 5 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 5 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 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 August 31, 2015. No liabilities have been included in this valuation for any future COLA payments to be made from the COLA pool.

Actuarial Accrued 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 accrued 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 7 contains the calculation of actuarial accrued liability for the Plan. The Entry Age Normal actuarial cost method is used to develop the actuarial accrued liability.



SECTION IV—PLAN LIABILITIES

TABLE 5

**PRESENT VALUE OF FUTURE BENEFITS (PVFB)
AS OF AUGUST 31, 2015**

1. Active Employees	
a. Retirement Benefits	\$ 210,298,627
b. Pre-Retirement Death Benefits	4,046,324
c. Termination Benefits	10,350,937
d. Disability Benefits	4,593,466
e. Total	<u>\$ 229,289,354</u>
2. Inactive Vested Members	\$ 3,935,494
3. In Pay Members	
a. Retirees	\$ 101,884,784
b. Disabled Members	13,842,209
c. DROP Members	24,482,711
d. Beneficiaries	7,268,559
e. Total	<u>\$ 147,478,263</u>
4. Total Present Value of Future Benefits (1e) + (2) + (3e)	\$ 380,703,111



SECTION IV—PLAN LIABILITIES

TABLE 6

**ACTUARIAL ACCRUED LIABILITY
AS OF AUGUST 31, 2015**

1. Active Employees	
a. Present Value of Future Benefits	\$ 229,289,354
b. Present Value of Future Normal Costs	94,209,438
c. Actuarial Accrued Liability	<u>\$ 135,079,916</u>
(1a) - (1b)	
2. Inactive Vested Members	\$ 3,935,494
3. In Pay Members	
a. Retirees	\$ 101,884,784
b. Disabled Members	13,842,209
c. DROP Members	24,482,711
d. Beneficiaries	7,268,559
e. Total	<u>\$ 147,478,263</u>
(3a) + (3b) + (3c) + (3d)	
4. Total Actuarial Accrued Liability	\$ 286,493,673
(1c) + (2) + (3e)	
5. Actuarial Value of Assets	\$ 183,011,274
6. Unfunded Actuarial Accrued Liability	\$ 103,482,399
(4) - (5)	



SECTION IV—PLAN LIABILITIES

TABLE 7

ACTUARIAL BALANCE SHEET
AS OF AUGUST 31, 2015

ASSETS

Actuarial Value of Assets	\$ 183,011,274
Present Value of Future Normal Costs	\$ 94,209,438
Present Value of Future Payments on the Unfunded Actuarial Accrued Liability	<u>\$ 103,482,399</u>
Total Assets	<u><u>\$ 380,703,111</u></u>

LIABILITIES

Active Employees:		
a. Retirement Benefits	\$ 210,298,627	
b. Pre-Retirement Death Benefits	4,046,324	
c. Termination Benefits	10,350,937	
d. Disability Benefits	<u>4,593,466</u>	
e. Total		\$ 229,289,354
Inactive Vested Members		\$ 3,935,494
In Pay Members		
a. Retirees	\$ 101,884,784	
b. Disabled Members	13,842,209	
c. DROP Members	24,482,711	
d. Beneficiaries	<u>7,268,559</u>	
e. Total		<u>\$ 147,478,263</u>
Total Liabilities		<u><u>\$ 380,703,111</u></u>

**SECTION IV—PLAN LIABILITIES****TABLE 8****ACTUARIAL GAIN/(LOSS)****Liabilities**

1. Actuarial Accrued Liability as of September 1, 2014	\$	262,918,401
2. Normal Cost for Plan Year Ending August 31, 2015		6,895,359
3. Benefit Payments During Plan Year Ending August 31, 2015		13,155,254
4. Change due to Replication Valuation		(6,442,226)
5. Interest at 6.75%		17,340,838
6. Change in use of "reported salary"		5,336,001
7. Change to Assumed Investment Return of 6.40%		11,661,875
8. Expected Actuarial Accrued Liability as of August 31, 2015 (1) + (2) - (3) + (4) + (5) + (6) + (7)	\$	284,554,994
9. Actuarial Accrued Liability as of August 31, 2015	\$	286,493,673

Assets

10. Actuarial Value of Assets as of September 1, 2014	\$	174,569,411
11. Contributions During Plan Year Ending August 31, 2015		10,649,394
12. Benefit Payments During Plan Year Ending August 31, 2015		13,155,254
13. Interest on Items (9), (10) and (11)		11,700,243
14. Expected Actuarial Value of Assets as of August 31, 2015 (10) + (11) - (12) + (13)	\$	183,763,794
15. Actuarial Value of Assets as of August 31, 2015	\$	183,011,274

Gain / (Loss)

16. Expected Unfunded Actuarial Accrued Liability (8) - (14)	\$	100,791,200
17. Unfunded Actuarial Accrued Liability (9) - (15)	\$	103,482,399
18. Actuarial Gain / (Loss) (16) - (17)	\$	(2,691,199)
19. Actuarial Gain / (Loss) on Actuarial Value of Assets (15) - (14)	\$	(752,520)
20. Actuarial Gain / (Loss) on Actuarial Accrued Liability (8) - (9)	\$	(1,938,679)



SECTION IV—PLAN LIABILITIES

TABLE 9

PROJECTED BENEFIT PAYMENTS

The chart below shows estimated benefits expected to be paid over the next twenty years, based on the assumptions used in this valuation. The “In-Pay” column shows benefits expected to be paid to members currently receiving benefit payments as of August 31, 2015. The “Not In-Pay” column shows benefits expected to be paid to all other members. This included those who, as of August 31, 2015, are active or have terminated employment and are entitled to a deferred vested benefit. No future members are reflected.

Year Ending August 31	Not In-Pay	In-Pay	Total
2016	\$ 692,000	\$ 13,102,000	\$ 13,794,000
2017	1,397,000	12,942,000	14,339,000
2018	2,283,000	12,834,000	15,117,000
2019	3,098,000	12,686,000	15,784,000
2020	3,972,000	12,565,000	16,537,000
2021	4,999,000	12,370,000	17,369,000
2022	6,073,000	12,214,000	18,287,000
2023	7,261,000	12,056,000	19,317,000
2024	8,433,000	11,889,000	20,322,000
2025	9,661,000	11,648,000	21,309,000
2026	10,935,000	11,423,000	22,358,000
2027	12,396,000	11,142,000	23,538,000
2028	13,829,000	10,886,000	24,715,000
2029	15,307,000	10,600,000	25,907,000
2030	16,799,000	10,283,000	27,082,000
2031	18,336,000	9,954,000	28,290,000
2032	19,866,000	9,611,000	29,477,000
2033	21,329,000	9,262,000	30,591,000
2034	22,830,000	8,901,000	31,731,000
2035	24,458,000	8,530,000	32,988,000

Note: Cash flows are the expected future non-discounted payments to current members. These numbers exclude refund payouts to current nonvested inactive and assume future retirees elect the normal form of payment and future withdrawals elect refunds according to valuation assumptions.



SECTION V—EMPLOYER CONTRIBUTIONS

The previous two sections were devoted to a discussion of the assets and liabilities of the Plan. A comparison of Tables 4 and 5 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 Plan, 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 accrued liability contribution rate.

The term “fully funded” is often applied to a Plan 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, Plans 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 accrued liability (UAAL) exists. Likewise, when the actuarial value of assets is greater than the actuarial accrued liability, a surplus exists.

Description of Contribution Rate Components

The Entry Age Normal (EAN) actuarial cost method is used for the valuation. Under that 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 in the actuarial accrued liability. The unfunded actuarial accrued liability/(surplus) represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. The unfunded actuarial accrued 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 rate developed in the August 31, 2015 actuarial valuation will be used to determine the actuarial required employer contribution rate to the City of Lincoln Police and Fire Pension Fund for fiscal year end 2017. 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 August 31, 2015 the actuarial accrued liability was greater than the valuation assets so an unfunded actuarial accrued liability (UAAL) exists. The UAAL is amortized, as a level percent of payroll, over a closed 30-year period that began on August 31, 2014. There are 29 years remaining as of the August 31, 2015 valuation.



SECTION V—EMPLOYER CONTRIBUTIONS

Contribution Rate Summary

In Table 10, the amortization payment related to the unfunded actuarial accrued liability, as of August 31, 2015, is developed. Table 11 develops the actuarial contribution rate for the employer.

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



SECTION V—EMPLOYER CONTRIBUTIONS

TABLE 10

**DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITY
CONTRIBUTION RATE**

1. Actuarial Accrued Liability	\$ 286,493,673
2. Actuarial Value of Assets	\$ 183,011,274
3. Unfunded Actuarial Accrued Liability	\$ 103,482,399
4. Amortization Factor (29 years remaining)*	19.0920
5. Amortization Payment (3) / (4) x (1.064) ⁵	\$ 5,590,953
6. Total Projected Payroll for FY 2015-16	\$ 42,381,059
7. UAAL Amortization Payment as a Percent of Payroll (5) / (6)	13.19%

* Based on level percentage of payroll, assuming payroll increases 3.0% per year in the future.



SECTION V—EMPLOYER CONTRIBUTIONS

TABLE 11

EMPLOYER ACTUARIAL CONTRIBUTION RATE

	Valuation Date	
	8/31/2015	8/31/2014
Normal Cost		
Retirement benefits	17.75%	14.24%
Pre-retirement death benefits	0.61%	0.88%
Termination benefits	2.02%	2.70%
Disability benefits	0.73%	0.50%
Total Normal Cost	<u>21.11%</u>	<u>18.33%</u>
Total UAAL Amortization Payment	13.19%	12.86%
Total Actuarial Contribution Rate	34.30%	31.19%
Member portion	<u>6.88%</u>	<u>6.75%</u>
City portion	<u>27.42%</u>	<u>24.44%</u>

Note: The 2015 valuation results reflect an investment return assumption of 6.40% while the 2014 valuation reflects an assumed rate of return of 6.75%.



SECTION V—EMPLOYER CONTRIBUTIONS

TABLE 12

FIVE-YEAR BUDGET REQUEST ESTIMATE

The Mandated City Contribution, per City Ordinance 18732, requires the City’s normal cost contributions inclusive of administrative expenses be contributed to the Plan. The calculation of the Employer Normal Cost Contribution and Administrative Expenses follow historical calculation procedures and are being performed at the City’s direction. We believe these calculation methodologies should be reviewed before the 2016 funding valuation (FY 2017-18 budget estimate) is performed.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Fiscal Year	Total Payroll*	Employer Normal Cost Percent	Employer Normal Cost Contribution (1) * (2)	Admin. Expenses**	Mandated City Contribution (3) + (4)	Recommended UAAL Contribution Percent	Recommended UAAL Contribution (1) * (6)	Budget Request (5) + (7)
2016-17	42,381,059	14.23%	6,030,825	444,578	6,475,403	13.19%	5,590,062	12,065,465
2017-18	43,652,491	14.13%	6,168,097	455,692	6,623,789	13.58%	5,928,008	12,551,797
2018-19	44,962,066	14.03%	6,308,178	467,084	6,775,262	13.73%	6,173,292	12,948,554
2019-20	46,310,928	13.93%	6,451,112	478,761	6,929,873	13.94%	6,455,743	13,385,616
2020-21	47,700,256	13.83%	6,596,945	490,730	7,087,675	14.42%	6,878,377	13,966,052

Note: Assumes all actuarial assumptions are met in future years, including a 6.40% net return on the market value of assets.

* Total payroll projected for FY 2015-16 is used for the FY 2016-17 budget estimate. Total payroll is projected to increase at 3.00% per year for future years.

** Administrative expenses incurred for FY 2014-15 are used for the FY 2016-17 budget estimate. These are assumed to increase with price inflation of 2.50% per year.



SECTION VI— OTHER INFORMATION

HISTORICAL FUNDING AND OTHER INFORMATION

This section of the report provides a historical perspective on the Plan’s funding and contribution practices, along with other information that may be of interest.

In the past, Governmental Accounting Standards Board (GASB) Statements No. 25, *Financial Reporting for Defined Benefit Pension Plans*, and Statement No. 27, *Accounting for Pensions by State and Local Governmental Employers*, applied to the preparation of financial reports of pension plans for state and local governments and sponsoring employers.

GASB 67, which is effective for plan years ending on or after June 15, 2014, replaced GASB 25 and represents a significant departure from the requirements of that older statement. GASB 25 was issued as a “funding friendly” statement that required pension plans to report items consistent with the results of the plan’s actuarial valuations, as long as those valuations met certain parameters. GASB 67 basically separates accounting from funding by creating disclosure and reporting requirements that may or may not be consistent with the basis used for funding the Plan. A separate report that contains all of the information and exhibits of an actuarial nature that are necessary for the Plan’s financial reporting under GASB 67 will be issued.

GASB Statement No. 27 established standards for the measurement, recognition, and display of pension expense and related liabilities. GASB 68 replaced GASB 27, and is effective for fiscal year end 2016 for the City of Lincoln. A separate report containing all of the pertinent information will also be prepared for GASB 68 reporting.



TABLE 13

SCHEDULE OF FUNDING PROGRESS

Two tests of funding progress based on the relationship between valuation assets and actuarial accrued liabilities are shown on the following pages. These tests are based upon the actuarial cost method used in the valuation.

The Ratio of Valuation Assets to Actuarial Accrued Liabilities is a traditional measure of a Plan's funding progress. Except in years when the benefit provisions are amended or actuarial assumptions are revised, the ratio can be expected to gradually tend toward 100%, assuming recommended contribution amounts are received by the plan.

The Ratio of Unfunded Actuarial Accrued Liabilities to Valuation Payroll is another relative index of condition. In an inflationary economy, the value of dollars is decreasing. This environment results in employee salaries increasing in dollar amounts, retirement benefits increasing in dollar amounts, and then, unfunded actuarial accrued liabilities increasing in dollar amounts – all at a time when the actual substance of these items may be decreasing. When looking at dollar amounts, the effects of inflation can hide the actual funding progress from year to year. Unfunded actuarial accrued liability dollars divided by active employee payroll dollars provides an index which attempts to eliminate the misleading effects of inflation. The smaller the ratio of unfunded liabilities to active member payroll, the stronger the Plan. Observation of this relative index over a period of years will provide an indication of whether the Plan is becoming financially stronger or weaker.



SECTION VI— OTHER INFORMATION

TABLE 13 (continued)

Actuarial Valuation Date	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL)	(3) Percent Funded (1) / (2)	(4) Unfunded AAL (2) - (1)	(5) Total Payroll*	(6) Unfunded AAL as a Percentage of Payroll (4) / (5)
8/31/1991	\$68,390,000	\$59,149,000	116.00%	(\$9,241,000)	\$15,157,000	(61.00%)
8/31/1992	77,980,000	63,407,000	123.00%	(14,573,000)	15,365,000	(95.00%)
8/31/1993	86,583,000	67,910,000	127.00%	(18,673,000)	16,722,000	(112.00%)
8/31/1994	83,307,827	70,517,314	118.14%	(12,790,513)	17,698,377	(72.27%)
8/31/1995	92,235,349	79,202,449	116.46%	(13,032,900)	18,561,302	(70.22%)
8/31/1996	94,347,990	81,583,068	115.65%	(12,764,922)	19,224,719	(66.40%)
8/31/1997	101,475,648	91,022,617	111.48%	(10,453,031)	20,908,549	(49.99%)
8/31/1998	109,213,474	94,847,667	115.15%	(14,365,807)	21,860,493	(65.72%)
8/31/1999	113,902,477	104,691,766	108.80%	(9,210,711)	23,611,284	(39.01%)
8/31/2000	121,404,314	115,671,249	104.96%	(5,733,065)	25,808,088	(22.21%)
8/31/2001	128,069,831	122,660,542	104.41%	(5,409,289)	28,215,685	(19.17%)
8/31/2002	128,319,145	130,875,473	98.05%	2,556,328	26,606,881	9.61%
8/31/2003	132,577,506	137,507,824	96.41%	4,930,318	27,415,330	17.98%
8/31/2004	136,973,679	144,178,758	95.00%	7,205,079	28,124,862	25.62%
8/31/2005	145,730,474	151,978,408	95.89%	6,247,934	29,029,309	21.52%
8/31/2006	157,527,392	161,583,285	97.49%	4,055,893	30,724,333	13.20%
8/31/2007	171,263,791	169,587,458	100.99%	(1,676,333)	30,546,235	(5.49%)
8/31/2008	179,390,472	179,376,149	100.01%	(14,323)	32,265,715	(0.04%)
8/31/2009	177,526,641	187,292,374	94.79%	9,765,733	33,449,977	29.20%
8/31/2010	172,317,463	195,206,353	88.27%	22,888,890	34,233,197	66.86%
8/31/2011	165,436,361	204,990,324	80.70%	39,553,963	35,763,446	110.60%
8/31/2012	164,500,414	214,878,992	76.55%	50,378,578	36,310,880	138.74%
8/31/2013	164,189,914	229,192,937	71.64%	65,003,023	38,107,652	170.58%
8/31/2014	174,569,411	262,918,401	66.40%	88,348,990	37,887,505	233.19%
8/31/2015	183,011,274	286,493,673	63.88%	103,482,399	42,381,059	244.17%

Note: For valuation dates prior to 2015, information shown is from the prior actuary's report.

** Non-DROP Payroll in 2002 and later.*



SECTION VI— OTHER INFORMATION

TABLE 14
SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Beginning September 1	Actuarial Valuation Date	Annual Required Contribution*
2003	8/31/2002	\$3,297,577
2004	8/31/2003	3,684,264
2005	8/31/2004	4,077,037
2006	8/31/2005	4,056,195
2007	8/31/2006	4,076,536
2008	8/31/2007	3,316,464
2009	8/31/2008	3,752,124
2010	8/31/2009	4,651,872
2011	8/31/2010	5,574,482
2012	8/31/2011	6,718,467
2013	8/31/2012	7,377,763
2014	8/31/2013	8,418,199
2015	8/31/2014	9,537,497
2016	8/31/2015	11,969,513

* Annual required contribution is equal to the contribution percent times the total payroll projected to the appropriate fiscal year. Administrative expenses are not included. The employer contribution rate from 8/31/02 to 8/31/08 is based on a 10-year amortization of the UAAL/(Surplus). The UAAL is amortized over 30 years effective 8/31/09. The UAAL is amortized over a closed 30 year period effective 8/31/14.

Note: For valuation dates prior to 2015, information shown is from the prior actuary's report.



APPENDIX A – SUMMARY OF MEMBERSHIP DATA

APPENDIX A

SUMMARY OF MEMBERSHIP DATA

MEMBER DATA RECONCILIATION

August 31, 2014 to August 31, 2015

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

	Active Participants	DROP Members	Service Retirees	Disabled Retirees	Beneficiaries	Inactive Vested	Total
Members as of 08/31/14	555	52	365	49	51	27	1,099
New Members	45	0	0	0	0	0	45
Terminations							
Refunded	(9)	0	0	0	0	0	(9)
Deferred Vested	(3)	0	0	0	0	3	0
Retirements							
Service	(4)	(17)	23	0	0	(2)	0
Disability	(1)	0	0	1	0	0	0
DROP	(7)	7	0	0	0	0	0
Deaths							
Cashed Out	0	0	0	0	0	0	0
With Beneficiary	0	0	0	(1)	1	0	0
Without Beneficiary	0	0	(3)	0	(2)	0	(5)
Data Adjustments	0	0	(1)	1	2	0	2
Members as of 08/31/15	576	42	384	50	52	28	1,132



APPENDIX A – SUMMARY OF MEMBERSHIP DATA

RETIRANTS AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS

Year Ended	Added to Rolls			Removed from Rolls		Rolls End of Year		% Incr. Annual Benefits	Average Annual Benefit
	No.*	Annual Benefits	Post-Ret. Increases	No.	Annual Benefits	No.	Annual Benefits		
Aug. 31, 1991	22#	308,940	42,470	2	7,200	142	1,460,670	30.8%	10,286
Aug. 31, 1992	16	221,944	0	1	3,816	157	1,678,798	14.9%	10,693
Aug. 31, 1993	17	219,974	0	1	10,698	173	1,888,074	12.5%	10,914
Aug. 31, 1994	16	218,777	0	4	17,829	185	2,089,022	10.6%	11,292
Aug. 31, 1995	16	211,219	0	4	37,158	197	2,263,083	8.3%	11,488
Aug. 31, 1996	8	149,099	0	2	16,566	203	2,395,616	5.9%	11,801
Aug. 31, 1997	73##	590,041	0	4	56,890	272	3,042,547	27.0%	11,186
Aug. 31, 1998	10	155,262	0	11	71,670	271	3,126,139	2.7%	11,536
Aug. 31, 1999	23	414,130	0	1	22,889	293	3,517,380	12.5%	12,005
Aug. 31, 2000	17	335,244	0	7	62,014	303	3,790,610	7.8%	12,510
Aug. 31, 2001	14	225,737	0	16	105,022	301	3,911,325	3.2%	12,994
Aug. 31, 2002	18	278,160	0	14	115,340	305	4,074,145	4.2%	13,358
Aug. 31, 2003	15	219,569	0	11	119,499	309	4,174,215	2.5%	13,509
Aug. 31, 2004	12	175,551	0	5	74,835	316	4,274,931	2.4%	13,528
Aug. 31, 2005	30	702,721	0	12	73,072	334	4,904,580	14.7%	14,684
Aug. 31, 2006	10	262,420	0	4	36,362	340	5,130,638	4.6%	15,090
Aug. 31, 2007	38	1,101,713	0	8	55,280	370	6,177,071	20.4%	16,695
Aug. 31, 2008	24	621,708	0	10	128,736	384	6,670,043	8.0%	17,370
Aug. 31, 2009	20	560,105	0	2	28,641	402	7,185,166	7.7%	17,874
Aug. 31, 2010	14	408,351	0	8	66,170	408	7,477,874	4.1%	18,328
Aug. 31, 2011	15	455,866	0	8	84,553	415	7,846,879	4.9%	18,908
Aug. 31, 2012	30	1,083,442	0	7	101,972	438	8,828,349	12.5%	20,156
Aug. 31, 2013	21	700,308	0	11	165,739	448	9,362,919	6.1%	20,899
Aug. 31, 2014	20	771,356	0	3	21,973	465	10,112,391	8.0%	21,747
Aug. 31, 2015	27	1,045,339	0	6	106,230	486	11,051,500	9.3%	22,740

* Includes Retirements from DROP

Includes one member not previously reported

Includes the addition of "Old Plan" members

Note: For valuation dates prior to 2015, information shown is from the prior actuary's report.



APPENDIX A – SUMMARY OF MEMBERSHIP DATA

SUMMARY OF ACTIVE MEMBERS

NOT IN-PAY MEMBERS INCLUDED IN VALUATION

Valuation Date	Active Members	Inactive Vested Members	Total Payroll**	Average			% Increase
				Age	Service	Pay	
Aug. 31, 1991	490	36	15,157,150	39.3	14.4	30,933	5.1%
Aug. 31, 1992	471	37	15,364,976	40.0	15.0	32,622	5.5%
Aug. 31, 1993	516	38	16,721,658	39.3	14.5	32,406	(0.7%)
Aug. 31, 1994	521	42	17,698,377	39.0	13.4	33,970	4.8%
Aug. 31, 1995	526	41	18,561,302	39.1	14.5	35,288	3.9%
Aug. 31, 1996	545	42	19,224,719	39.1	14.3	35,275	0.0%
Aug. 31, 1997	549	43	20,908,549	38.9	13.3	38,085	8.0%
Aug. 31, 1998	561	47	21,860,493	38.8	13.2	38,967	2.3%
Aug. 31, 1999	545	48	23,611,284	39.1	13.5	43,323	11.2%
Aug. 31, 2000	543	45	25,808,088	39.5	13.8	47,529	9.7%
Aug. 31, 2001	584	41	28,215,685	39.3	13.3	48,315	1.7%
Aug. 31, 2002	536	36	26,606,881	38.4	12.3	49,640	2.7%
Aug. 31, 2003	535	31	27,415,330	38.7	12.5	51,244	3.2%
Aug. 31, 2004	533	25	28,124,862	38.8	12.5	52,767	3.0%
Aug. 31, 2005	533	25	29,029,309	39.1	12.9	54,464	3.2%
Aug. 31, 2006	558	25	30,724,333	39.2	12.8	55,062	1.1%
Aug. 31, 2007	531	28	30,546,235	39.5	13.0	57,526	4.5%
Aug. 31, 2008	549	30	32,265,715	39.3	12.7	58,772	2.2%
Aug. 31, 2009	553	27	33,449,977	39.3	12.6	60,488	2.9%
Aug. 31, 2010	561	26	34,233,197	39.4	12.4	61,022	0.9%
Aug. 31, 2011	562	28	35,763,446	39.6	12.7	63,636	4.3%
Aug. 31, 2012	559	26	36,310,880	39.5	12.6	64,957	2.1%
Aug. 31, 2013	573	24	38,107,652	39.4	12.4	66,506	2.4%
Aug. 31, 2014	555	27	37,887,505	39.6	12.5	68,266	2.6%
Aug. 31, 2015	576	28	42,381,059	39.4	12.3	73,578	7.8%

* Reflects Non-DROP projected payroll in 2002 and later

Note: For valuation dates prior to 2015, information shown is from the prior actuary's report.



APPENDIX A – SUMMARY OF MEMBERSHIP DATA

MEMBERSHIP DATA – AUGUST 31, 2015

Active Members (Not Participating in DROP)

Group	Count	Employee Contribution Rate	Effective Employee Contribution Percentage	Projected Annual Payroll	Average		
					Age	Service	Salary
Police							
- Old Plan	2	7.60%	7.60%	\$ 146,113	46.8	22.6	\$ 73,057
- Plan A	270	8.00%	8.00%	18,361,889	36.6	10.6	68,007
- Plan B*	23	7.60%	0.02%	1,935,370	48.5	24.6	84,147
- Plan C*	6	7.00%	0.00%	523,282	62.3	40.2	87,214
Fire							
- Plan A	237	8.00%	8.00%	17,933,573	39.2	10.0	75,669
- Plan B*	38	7.60%	0.00%	3,480,832	51.5	26.3	91,601
Total	576	7.94%	6.88%	\$ 42,381,059	39.4	12.3	\$ 73,578

**Employee contributions stop after 21 years of service for this group, therefore the total employee contribution rate will be reduced because not all employees are contributing.*



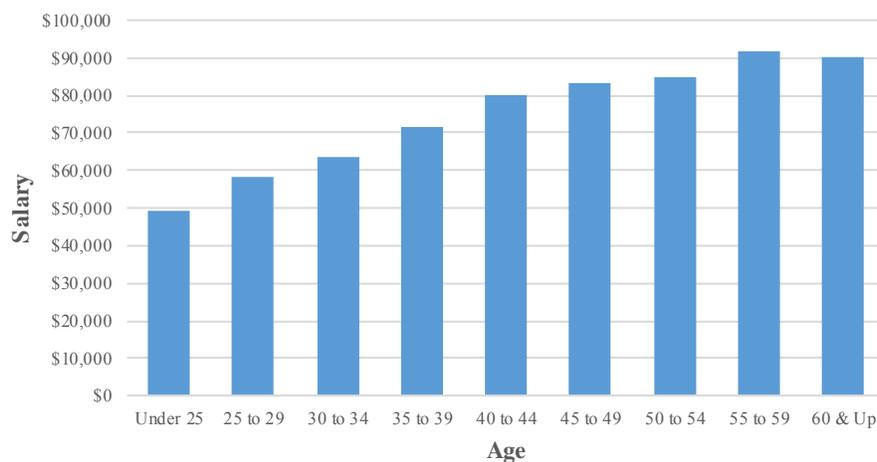
APPENDIX A – SUMMARY OF MEMBERSHIP DATA

**SUMMARY OF ACTIVE MEMBERS
As of August 31, 2015**

Fire

Age	Number			Annual Reported Compensation		
	Male	Female	Total	Male	Female	Total
Under 25	8	1	9	\$ 396,418	\$ 47,098	\$ 443,516
25 to 29	20	1	21	1,169,047	55,629	1,224,676
30 to 34	44	7	51	2,768,828	474,054	3,242,882
35 to 39	49	1	50	3,512,554	67,873	3,580,427
40 to 44	47	4	51	3,785,819	289,762	4,075,581
45 to 49	41	2	43	3,421,026	155,913	3,576,939
50 to 54	37	2	39	3,115,930	187,880	3,303,810
55 to 59	7	0	7	642,944	0	642,944
60 & Up	4	0	4	359,853	0	359,853
Total	257	18	275	\$ 19,172,419	\$ 1,278,209	\$ 20,450,628

Average Salary by Age





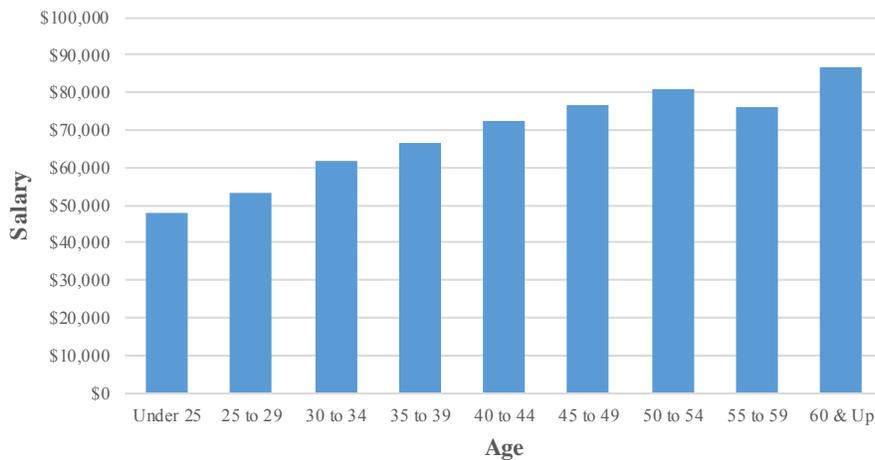
APPENDIX A – SUMMARY OF MEMBERSHIP DATA

**SUMMARY OF ACTIVE MEMBERS
As of August 31, 2015**

Police

Age	Number			Annual Reported Compensation		
	Male	Female	Total	Male	Female	Total
Under 25	9	2	11	\$ 428,231	\$ 98,662	\$ 526,893
25 to 29	44	10	54	2,341,801	521,372	2,863,173
30 to 34	51	8	59	3,148,288	500,315	3,648,603
35 to 39	42	8	50	2,796,950	541,742	3,338,692
40 to 44	46	9	55	3,291,581	679,514	3,971,095
45 to 49	47	5	52	3,632,321	350,546	3,982,867
50 to 54	11	1	12	899,104	70,211	969,315
55 to 59	1	2	3	71,914	155,666	227,580
60 & Up	4	1	5	319,137	114,537	433,674
Total	255	46	301	\$ 16,929,327	\$ 3,032,565	\$ 19,961,892

Average Salary by Age





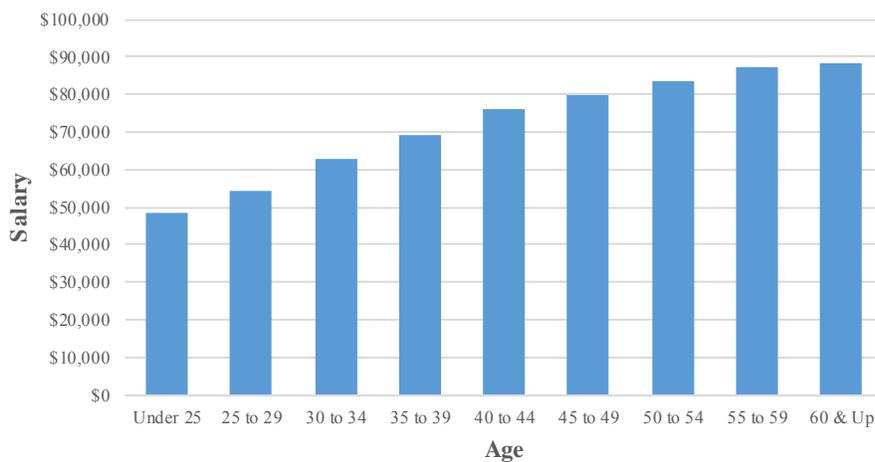
APPENDIX A – SUMMARY OF MEMBERSHIP DATA

**SUMMARY OF ACTIVE MEMBERS
As of August 31, 2015**

Total

Age	Number			Annual Reported Compensation		
	Male	Female	Total	Male	Female	Total
Under 25	17	3	20	\$ 824,649	\$ 145,760	\$ 970,409
25 to 29	64	11	75	3,510,848	577,001	4,087,849
30 to 34	95	15	110	5,917,116	974,369	6,891,485
35 to 39	91	9	100	6,309,504	609,615	6,919,119
40 to 44	93	13	106	7,077,400	969,276	8,046,676
45 to 49	88	7	95	7,053,347	506,459	7,559,806
50 to 54	48	3	51	4,015,034	258,091	4,273,125
55 to 59	8	2	10	714,858	155,666	870,524
60 & Up	8	1	9	678,990	114,537	793,527
Total	512	64	576	\$ 36,101,746	\$ 4,310,774	\$ 40,412,520

Average Salary by Age





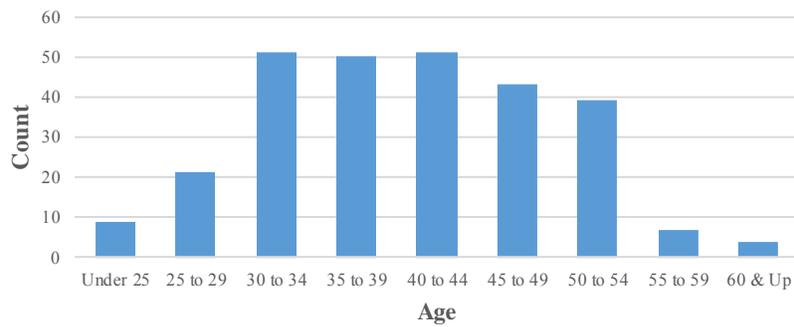
APPENDIX A – SUMMARY OF MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
As of August 31, 2015**

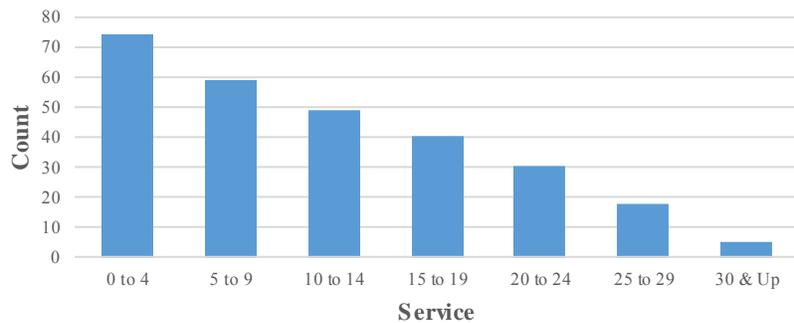
Fire

Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	Total
Under 25	9	0	0	0	0	0	0	9
25 to 29	19	2	0	0	0	0	0	21
30 to 34	28	21	2	0	0	0	0	51
35 to 39	14	17	18	1	0	0	0	50
40 to 44	2	14	15	17	3	0	0	51
45 to 49	2	3	6	12	14	6	0	43
50 to 54	0	1	7	6	12	12	1	39
55 to 59	0	1	1	3	1	0	1	7
60 & Up	0	0	0	1	0	0	3	4
Total	74	59	49	40	30	18	5	275

Age Distribution



Service Distribution





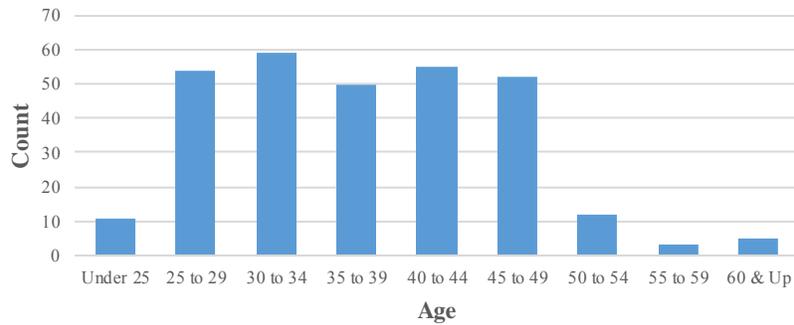
APPENDIX A – SUMMARY OF MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
As of August 31, 2015**

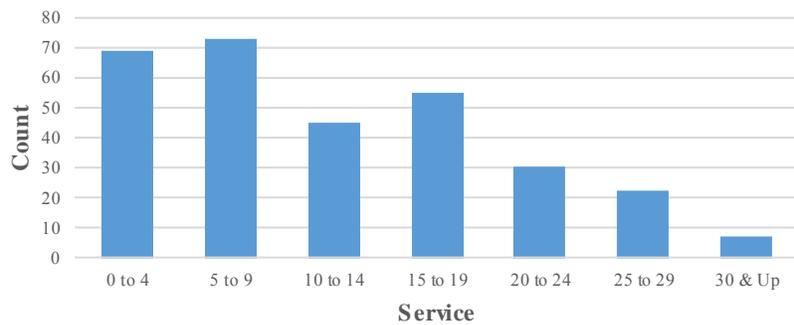
Police

Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	Total
Under 25	11	0	0	0	0	0	0	11
25 to 29	44	10	0	0	0	0	0	54
30 to 34	9	43	7	0	0	0	0	59
35 to 39	5	17	18	10	0	0	0	50
40 to 44	0	2	17	32	4	0	0	55
45 to 49	0	1	2	11	23	15	0	52
50 to 54	0	0	1	2	2	7	0	12
55 to 59	0	0	0	0	1	0	2	3
60 & Up	0	0	0	0	0	0	5	5
Total	69	73	45	55	30	22	7	301

Age Distribution



Service Distribution





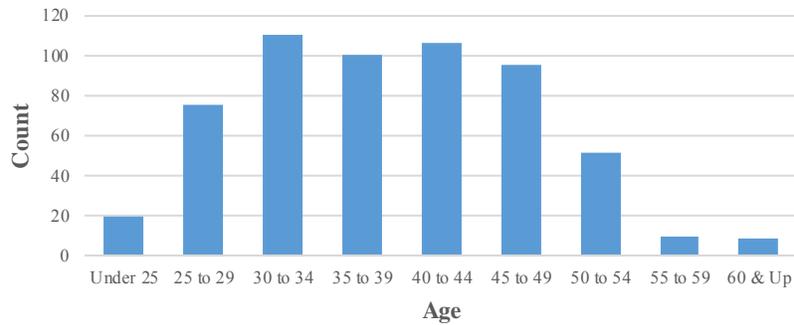
APPENDIX A – SUMMARY OF MEMBERSHIP DATA

**DISTRIBUTION OF ACTIVE MEMBERS
As of August 31, 2015**

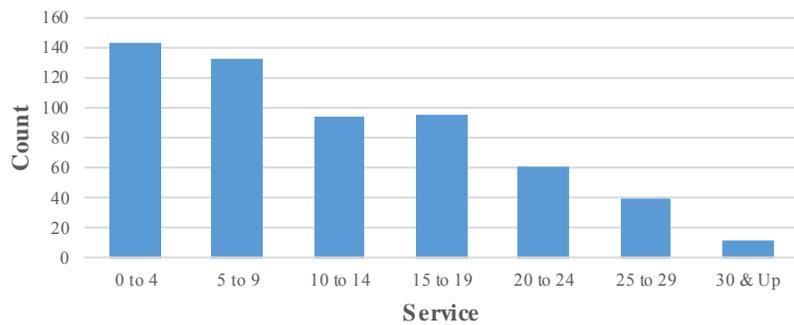
Total

Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	Total
Under 25	20	0	0	0	0	0	0	20
25 to 29	63	12	0	0	0	0	0	75
30 to 34	37	64	9	0	0	0	0	110
35 to 39	19	34	36	11	0	0	0	100
40 to 44	2	16	32	49	7	0	0	106
45 to 49	2	4	8	23	37	21	0	95
50 to 54	0	1	8	8	14	19	1	51
55 to 59	0	1	1	3	2	0	3	10
60 & Up	0	0	0	1	0	0	8	9
Total	143	132	94	95	60	40	12	576

Age Distribution



Service Distribution



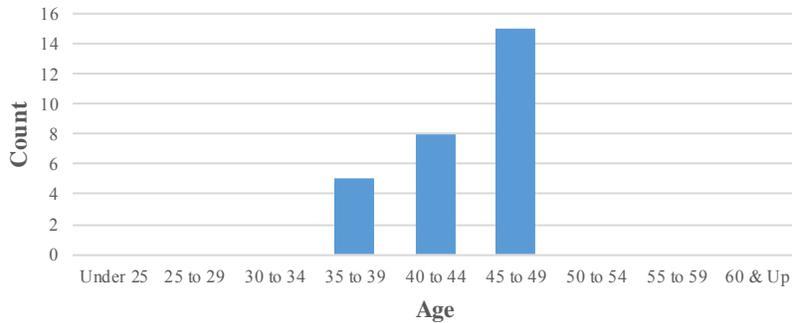


APPENDIX A – SUMMARY OF MEMBERSHIP DATA

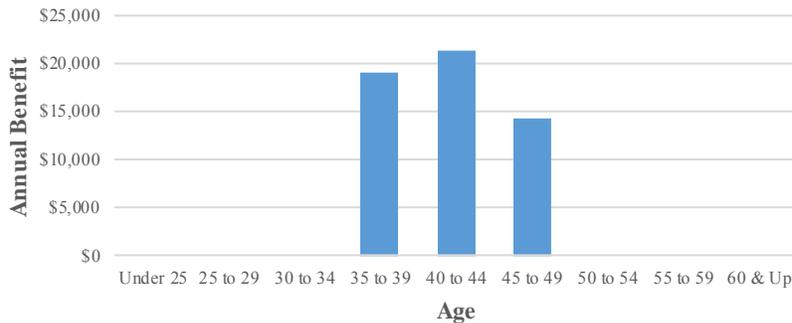
**SUMMARY OF INACTIVE VESTED MEMBERS
As of August 31, 2015**

Age	Number			Annual 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	4	1	5	75,521	19,521	95,042
40 to 44	7	1	8	155,780	15,225	171,005
45 to 49	8	7	15	115,623	97,171	212,794
50 to 54	0	0	0	0	0	0
55 to 59	0	0	0	0	0	0
60 & Up	0	0	0	0	0	0
Total	19	9	28	\$ 346,924	\$ 131,917	\$ 478,841

Age Distribution



Average Benefit





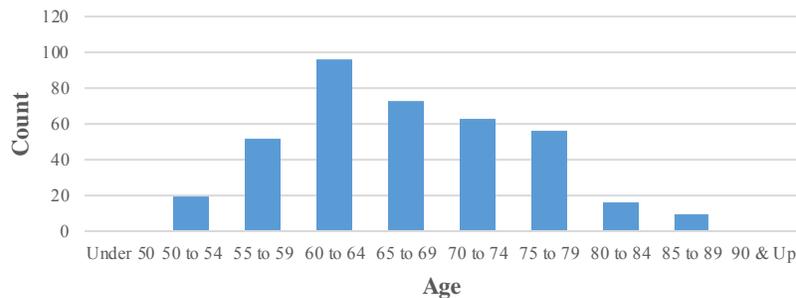
APPENDIX A – SUMMARY OF MEMBERSHIP DATA

**SUMMARY OF RETIRED MEMBERS
As of August 31, 2015**

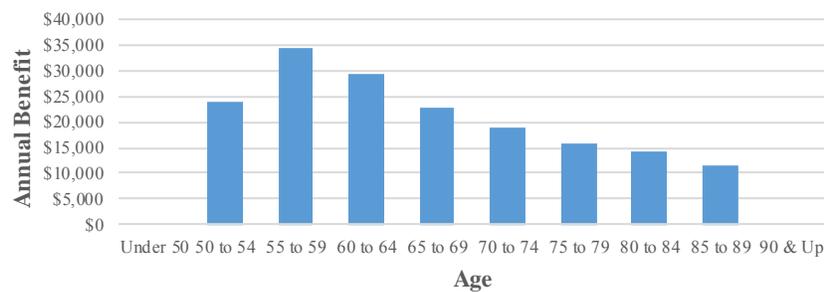
Service Retirees

Age	Number			Annual Benefit		
	Male	Female	Total	Male	Female	Total
Under 50	0	0	0	\$ 0	\$ 0	\$ 0
50 to 54	14	5	19	367,062	85,373	452,435
55 to 59	46	6	52	1,576,855	215,867	1,792,722
60 to 64	93	3	96	2,730,418	83,062	2,813,480
65 to 69	72	1	73	1,649,568	16,250	1,665,818
70 to 74	62	1	63	1,169,536	18,178	1,187,714
75 to 79	54	2	56	868,146	24,359	892,505
80 to 84	16	0	16	230,344	0	230,344
85 to 89	9	0	9	104,463	0	104,463
90 & Up	0	0	0	0	0	0
Total	366	18	384	\$ 8,696,392	\$ 443,089	\$ 9,139,481

Age Distribution



Average Benefit





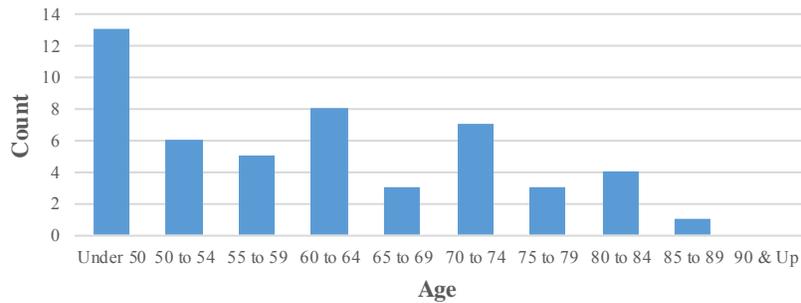
APPENDIX A – SUMMARY OF MEMBERSHIP DATA

**SUMMARY OF RETIRED MEMBERS
As of August 31, 2015**

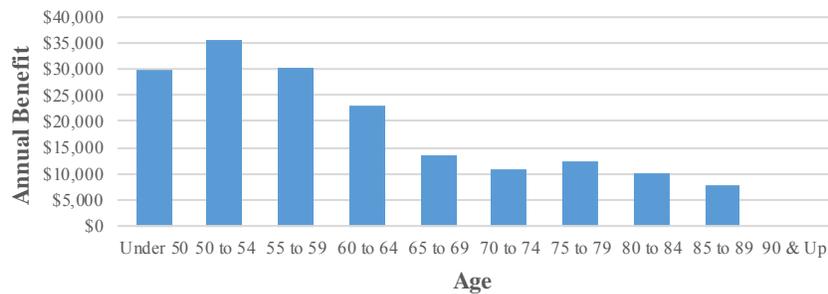
Disabled Retirees

Age	Number			Annual Benefit		
	Male	Female	Total	Male	Female	Total
Under 50	10	3	13	\$ 318,954	\$ 70,227	\$ 389,181
50 to 54	5	1	6	195,821	18,177	213,998
55 to 59	5	0	5	151,221	0	151,221
60 to 64	7	1	8	174,809	9,812	184,621
65 to 69	3	0	3	40,408	0	40,408
70 to 74	7	0	7	76,217	0	76,217
75 to 79	3	0	3	36,772	0	36,772
80 to 84	4	0	4	41,008	0	41,008
85 to 89	1	0	1	7,983	0	7,983
90 & Up	0	0	0	0	0	0
Total	45	5	50	\$ 1,043,193	\$ 98,216	\$ 1,141,409

Age Distribution



Average Benefit





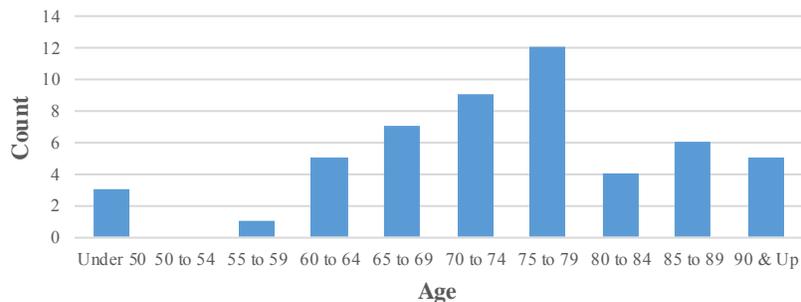
APPENDIX A – SUMMARY OF MEMBERSHIP DATA

**SUMMARY OF RETIRED MEMBERS
As of August 31, 2015**

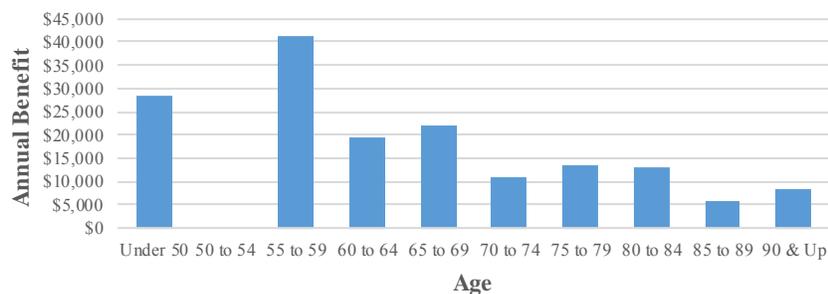
Beneficiaries

Age	Number			Annual Benefit		
	Male	Female	Total	Male	Female	Total
Under 50	1	2	3	\$ 33,266	\$ 52,028	\$ 85,294
50 to 54	0	0	0	0	0	0
55 to 59	0	1	1	0	41,387	41,387
60 to 64	0	5	5	0	97,880	97,880
65 to 69	1	6	7	9,206	146,418	155,624
70 to 74	1	8	9	4,014	94,181	98,195
75 to 79	2	10	12	26,644	136,575	163,219
80 to 84	0	4	4	0	52,699	52,699
85 to 89	1	5	6	4,104	31,302	35,406
90 & Up	1	4	5	3,870	37,036	40,906
Total	7	45	52	\$ 81,104	\$ 689,506	\$ 770,610

Age Distribution



Average Benefit





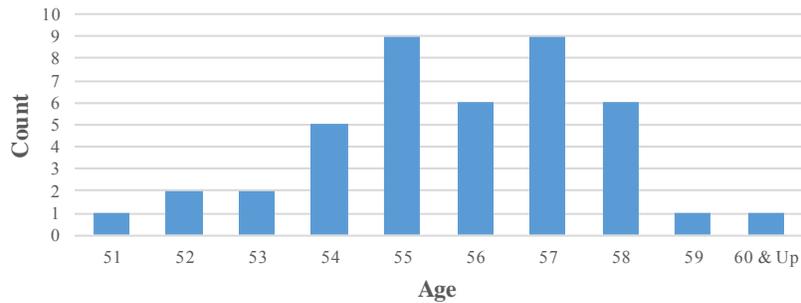
APPENDIX A – SUMMARY OF MEMBERSHIP DATA

**SUMMARY OF RETIRED MEMBERS
As of August 31, 2015**

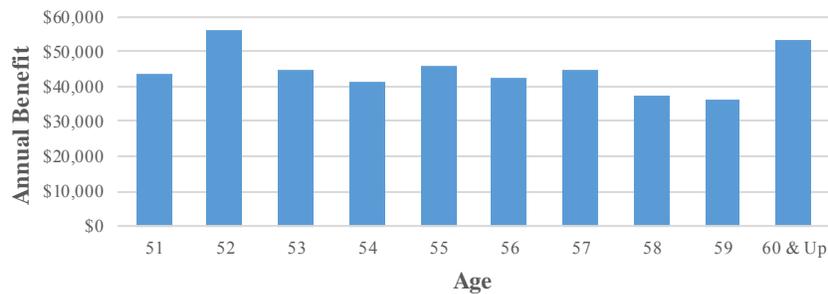
DROP Members

Age	Number			Annual Benefit		
	Male	Female	Total	Male	Female	Total
51	0	1	1	\$ 0	\$ 43,811	\$ 43,811
52	2	0	2	112,585	0	112,585
53	2	0	2	89,807	0	89,807
54	4	1	5	158,655	48,209	206,864
55	9	0	9	414,857	0	414,857
56	5	1	6	205,741	48,087	253,828
57	8	1	9	337,472	65,933	403,405
58	6	0	6	224,335	0	224,335
59	1	0	1	36,128	0	36,128
60 & Up	1	0	1	53,342	0	53,342
Total	38	4	42	\$ 1,632,922	\$ 206,040	\$ 1,838,962

Age Distribution



Average Benefit





APPENDIX B – SUMMARY OF BENEFIT PROVISIONS

APPENDIX B

SUMMARY OF BENEFIT PROVISIONS

Plan A is applicable to members who were hired on/after April 1, 1995 or who were hired prior to that date, but elected Plan A coverage.

Plan B is applicable to members who were employed on/after April 11, 1984 or who, prior to April 11, 1984, elected Plan B coverage.

Plan C is applicable to members who were employed before April 11, 1984 and did not elect to move to Plan B or A.

Regular Pay

All plans: Member’s base pay and City’s contributions to the Post-Employment Health Plan for the last consecutive 26 bi-weekly pay periods. In case of a demotion, or out of class pay, it shall mean the highest consecutive 26 bi-weekly pay periods.

Normal Retirement Age

Plan A: Age 50
Plans B and C: Age 53

Normal Retirement

Eligibility – Plan A: Normal retirement age and 25 years of service.
Plans B and C: Normal retirement age and 21 years of service.

Amount of Pension – Plan A: 2.56% of regular pay times years of service to a maximum of 64% of regular pay.

Plan B: 58% of regular pay with 21 years of service plus 2% of regular pay for each year of service rendered after becoming eligible for retirement to a maximum increase of 10%.

Plan C: 54% of regular pay with 21 years of service plus 2% of regular pay for each year of service rendered after becoming eligible for retirement to a maximum increase of 10%.



APPENDIX B – SUMMARY OF BENEFIT PROVISIONS

Early Retirement

Eligibility – All Plans: Age 50 and 21 years of service.

Amount of Pension – Plan A: 2.56% of regular pay times years of service up to a maximum of 64% of regular pay.

Plan B: 52% of regular pay plus 2% of regular pay for each year of service rendered after becoming eligible to a maximum increase of 6%.

Plan C: 48% of regular pay plus 2% of regular pay for each year of service rendered after becoming eligible to a maximum increase of 6%.

Partial Annuity

Eligibility – all plans: Normal Retirement Age and 10 years of service until eligible for early retirement.

Amount of Pension – Plan A: 2.56% of regular pay times years of service.

Plan B: 58% of regular pay with 21 years of service. Members with less than 21 years of service receive a ratio of years of service to 21 years of 58% of regular pay.

Plan C: 54% of regular pay with 21 years of service. Members with less than 21 years of service receive a ratio of years of service to 21 years of 54% of regular pay.

Deferred Annuity (Vested Termination)

Eligibility – all plans: 10 years of service.

Amount of Pension – Plan A: 2.56% of regular pay times years of service.

Plan B: 58% of regular pay with 21 years of service. Members with less than 21 years of service receive a ratio of years of service to 21 years of 58% of regular pay.

Plan C: 54% of regular pay with 21 years of service. Members with less than 21 years of service receive a ratio of years of service to 21 years of 54% of regular pay.



APPENDIX B – SUMMARY OF BENEFIT PROVISIONS

Duty-Related Disability

Eligibility – all plans: Permanent inability to perform the duties of position from a cause occurring while in line of duty.

Amount of Pension – Plan A: 58% of regular pay.

Plan B and C: A pension equal to 58% or 54% of regular pay respectively, plus 2% of regular pay for each year of service rendered after becoming eligible for retirement, to a maximum increase of 10% of regular pay.

Such pension shall continue after the member’s death to the member’s surviving spouse, until death or remarriage, minor children or designated Option A beneficiary (a reduced amount in this case). The above amounts are subject to deduction of the amount received from worker’s compensation.

Non-Duty Disability

Eligibility – all plans: Permanent inability to perform duties of position from a cause not occurring in the line of duty

Amount of Pension: A pension equal to the following percent of regular pay:

Years of Service (YOS)	Plan A	Plan B	Plan C
5 ≤ YOS < 10	23%	23%	21%
10 ≤ YOS < 15	39%	39%	36%
YOS ≥ 15	53%	53%	49%

Duty-Related Death

Eligibility – all plans: Active member dies in the line of duty or as a result of injuries received while in the line of duty.

Amount of Pension: Spouse beneficiary paid at Duty Related Disability rate until remarriage or death. Upon spouse’s remarriage or death, dependent children paid prorata at the same rate until age 19. Non-spouse beneficiary paid at 100% survivor rate for lifetime.

The above amounts are subject to deduction of the amount received from worker’s compensation.



APPENDIX B – SUMMARY OF BENEFIT PROVISIONS

Non-Duty Death

Eligibility – All Plans: 5 years of service.

Amount of Pension: Pension which would have been payable as a Non-Duty Disability awarded the day prior to death and elected Option A (joint & 100% survivor).

Death After Retirement – Remainder Refund

Eligibility – all plans: Employed on January 1, 1992 or hired between January 1, 1992 and March 31, 2010.

Amount of Benefit: Upon retirement, the member's balance of contributions plus accrued interest is reduced each month by a level amount equal to the member's balance divided by the expected number of payments. Once both the member and, if applicable, their joint annuitant have died, the remaining balance is paid as a lump sum to a designated beneficiary.

The expected number of monthly payments is established in the Internal Revenue Code in effect April 1, 2010 and depends on the age of the retiree at retirement, or the combined ages of the retiree and joint annuitant.

Non-Vested Termination

Eligibility – all plans: Termination of employment and no pension is or will become payable.

Amount of Benefit: Refund of member's contributions plus annual interest.

Employee Contributions

Plan A: 8.0% of pay.
Plan B: 7.6% of pay.
Plan C: 7.0% of pay.

Upon reaching 21 years of service, member contributions are discontinued for Plan B and Plan C members. Members participating in Old Plan B or Old Plan C contribute until reaching 26 years of service.



APPENDIX B – SUMMARY OF BENEFIT PROVISIONS

Deferred Retirement Option Plan (DROP)

Eligibility for the DROP:

Members of Plan B and C may join the DROP within 1 year of becoming eligible for normal retirement benefits as described earlier in this section.

Grandfather provision allows members of Plan B and C who were eligible to retire on the date of DROP implementation, a one-time opportunity to join the DROP.

Members of Plan A may join the DROP at any time after meeting the eligibility conditions for normal retirement.

DROP benefits:

100% of the member's accrued benefit at the time of DROP will be contributed to the member's DROP account.

If the member elects annuity withdrawal (available to members of Plans B and C) the lump sum payment and corresponding reduced annuity will be credited to the member's DROP account.

DROP funding Period:

Both the City and the employee will contribute (in accordance with the provisions of each Plan) until the employee enters the DROP. No contributions are made on the payroll of DROP members.

DROP Period:

Maximum of 5 years.



APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

APPENDIX C

ACTUARIAL ASSUMPTIONS AND METHODS

Investment Return: 6.40% compounded annually, net of investment expenses.
(effective August 31, 2015)

Inflation Rate: 2.50% compounded annually

Salary Increases: These assumptions are used to project current salaries to those upon which benefits will be based.

Sample Ages	Annual Rate of Pay Increase for Sample		
	Base (Economic)	Merit and Longevity	Total
20	3.0%	4.3%	7.3%
25	3.0%	3.6%	6.6%
30	3.0%	3.1%	6.1%
35	3.0%	2.8%	5.8%
40	3.0%	1.5%	4.5%
45	3.0%	1.1%	4.1%
50	3.0%	0.5%	3.5%
55	3.0%	0.5%	3.5%

Payroll Growth: 3.0% per year

Mortality:

Actives and Inactive

Vested Members: RP-2000 Employees mortality table with generational mortality improvement using Scale AA.

Healthy Retirees

and Beneficiaries: RP-2000 Healthy Annuitant mortality table with generational mortality improvement using Scale AA.

Disabled Retirees:

RP-2000 Disabled Retiree mortality table with generational mortality improvement using Scale AA.



APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

Termination:

Sample Ages	Years of Service	% Separating within Next Year	
		Police	Fire
ALL	0	12.00%	8.00%
	1	8.00%	6.00%
	2	7.00%	4.50%
	3	6.00%	3.00%
	4	5.00%	2.00%
25	5 & Over	4.50%	2.00%
30		4.35%	1.40%
35		3.50%	1.00%
40		2.10%	0.80%
45		1.00%	0.60%
50		0.62%	0.10%
55		0.50%	0.10%

Disability:

Sample Ages	% Becoming Disabled Within Next Year
20	0.05%
25	0.05%
30	0.06%
35	0.09%
40	0.14%
45	0.23%
50	0.40%
55	0.60%
60	0.80%

50% of assumed liabilities were assumed to be duty related and 50% were assumed to be non-duty related.



APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

Retirement and DROP Entry:

Ages	Old Plan	Rates of Retirement and/or DROP Entry			
		Plan A		Plan B & C	
		Police	Fire	Police	Fire
50	35%	15%	10%	5%	6%
51	15%	15%	10%	5%	6%
52	15%	15%	10%	5%	6%
53	15%	25%	20%	25%	24%
54	15%	35%	20%	35%	35%
55	40%	35%	20%	35%	35%
56	15%	25%	20%	25%	18%
57	15%	10%	20%	10%	30%
58	15%	10%	20%	10%	42%
59	15%	10%	15%	10%	15%
60	100%	10%	15%	10%	15%
61	100%	10%	15%	10%	15%
62	100%	35%	35%	35%	35%
63	100%	20%	25%	20%	15%
64	100%	20%	25%	20%	15%
65	100%	100%	100%	100%	100%



APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

- Marriage Assumption:** 100% of both males and females are assumed to be married for purposes of death-in-service benefits.
- Decrement Timing:** All decrements are assumed to occur mid-year.
- Eligibility Testing:** Eligibility for benefits is determined based upon the age nearest birthday and years of service on the date the decrement is assumed to occur.
- Benefit Service:** Exact fractional service on the decrement date is used to determine the amount of benefit payable.
- Decrement Operation:** Disability decrements do not operate during the first five years of service. They also do not operate during retirement eligibility.
- Normal Form of Benefit:** The assumed normal form of benefit is the straight life form.
- Incidence of Contributions:** Contributions are assumed to be received continuously throughout the applicable fiscal year based upon the contribution rate shown in this report, and the actual payroll at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.
- Funding Period:** Both the City and employee contribute (in accordance with the provisions of each plan) until the employee enters the DROP or otherwise exits the Plan.



APPENDIX C – ACTUARIAL ASSUMPTIONS AND METHODS

ACTUARIAL METHODS

Funding Method

Under the Entry Age Normal (EAN) cost method, the actuarial present value of each member's projected benefits is allocated 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 actuarial present value of benefits allocated to prior years of service is called the actuarial accrued liability. The unfunded actuarial accrued liability (UAAL) represents the difference between the actuarial accrued liability and the actuarial value of assets as of the valuation date. The unfunded actuarial accrued liability is calculated each year and reflects experience gains/losses.

The UAAL is amortized as a level percentage of payroll. The payroll growth assumption is 3.00% so the annual amortization payments are expected to increase 3.00% each year because the UAAL is amortized over a closed 30-year period. There are 29 years remaining as of the August 31, 2015 valuation.

Asset Valuation Method

The actuarial value of assets is based on a five-year smoothing method and is determined by spreading the effect of each year's investment return in excess of or below the expected return. The Market Value of assets as of the valuation date is reduced by the sum of the following:

- i. 80% of the return to be spread during the first year preceding the valuation date,
- ii. 60% of the return to be spread during the second year preceding the valuation date,
- iii. 40% of the return to be spread during the third year preceding the valuation date, and
- iv. 20% of the return to be spread during the fourth year preceding the valuation date.

The return to be spread is the difference between (1) the actual investment return on Market Value and (2) the expected return on Actuarial Value.



APPENDIX D

GLOSSARY OF TERMS

Actuarial Accrued Liability	The difference between the actuarial present value of Plan 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 Plan 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 Plan benefit between future normal cost and actuarial accrued 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 a lump sum payment.



APPENDIX D – GLOSSARY OF TERMS

Normal Cost

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

**Unfunded Actuarial
Accrued Liability**

The difference between actuarial accrued liability and the valuation assets. Sometimes referred to as “unfunded actuarial liability” or “unfunded accrued liability”.

Most retirement Plans have an unfunded actuarial accrued liability. They arise each time new benefits are added and each time an actuarial loss is realized.