

**The Employees' Retirement System  
for the City of Norfolk**

**Actuarial Valuation  
as of June 30, 2014**

**The Seventy-First Actuarial Valuation**

**Produced by [Cheiron](#)**

**October 2014**

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November 4, 2014

Board of Trustees  
Employees' Retirement System  
City of Norfolk  
Norfolk, Virginia 23510

***Re: The Employees' Retirement System for the City of Norfolk -  
Actuarial Valuation as of June 30, 2014***

Dear Members of the Board:

At your request, we have conducted an annual actuarial valuation of the Employees' Retirement System for the City of Norfolk as of June 30, 2014. The results of the valuation are contained in this report. The results reflect updated financial information recently provided to us by the City and thus replace the June 30, 2014 valuation report sent on September 29, 2014. The purpose of the valuation is discussed in the Foreword.

The actuarial assumptions used in performing this valuation have been recommended by the actuary and adopted by the Board of Trustees based on the actuary's most recent review of the System's experience completed in October 2012. We believe the assumptions used, in the aggregate, reflect our best estimate of anticipated future experience of the Plan. The results of this report are only applicable to the contribution for fiscal year ending 2016 and rely on future plan experience conforming to the underlying assumptions. To the extent that actual plan experience deviates from the underlying assumptions, the results would vary accordingly.

The purpose of this report is to present the annual actuarial valuation of the Employees' Retirement System for the City of Norfolk. The report also provides information regarding employer contribution levels and certain required disclosures for financial statements. This report is for the use of the Board and its auditors in preparing financial reports in accordance with applicable law and accounting requirements.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.



Board of Trustees  
November 4, 2014  
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This actuarial report was prepared exclusively for City of Norfolk for the purpose described herein. This valuation report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

Sincerely,  
Cheiron



Fiona E. Liston, FSA, EA, MAAA  
Principal Consulting Actuary



Kevin J. Woodrich, FSA, EA, MAAA  
Principal Consulting Actuary

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK  
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**FOREWORD**

Cheiron has performed the actuarial valuation of the Employees' Retirement System for the City of Norfolk as of June 30, 2014. The purpose of this report is to:

- 1) **Measure and disclose**, as of the valuation date, the financial condition of the System;
- 2) **Indicate trends** in the financial progress of the System;
- 3) **Determine the contribution rate** to be paid by the City for fiscal year 2016; and
- 4) **Provide specific information** and documentation required by the Governmental Accounting Standards Board (GASB).

An actuarial valuation establishes and analyzes the System's assets and liabilities on a consistent basis, and traces the progress of both from one year to the next. It includes measurement of the System's investment performance as well as an analysis of actuarial liability gains and losses.

**Section I** presents a summary containing our findings and discloses important trends experienced by the System in recent years.

**Section II** contains details on various asset measures, together with pertinent performance measurements.

**Section III** shows similar information on System liabilities, measured for actuarial, accounting, and government reporting purposes.

**Section IV** develops the employer contribution rate to be paid by the City effective July 1, 2015.

**Section V** includes certain required disclosures for financial statements.

The appendices to this report contain a summary of the System's membership at the valuation date, a summary of the major provisions of the System, and the actuarial methods and assumptions used in the valuation.

In preparing our 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, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice #23 Data Quality.

The actuarial assumptions reflect our understanding of the likely future experience of the System, and the assumptions as a whole represent our best estimate for the future experience of the System. The results of this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the System could vary from our results.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK  
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION I  
BOARD SUMMARY**

**General Comments**

In this section, we will first discuss the trends of the System over the past decade and then show projections of the contribution rate and funding status. Please remember that these projections make certain assumptions about future investment returns, future salary increases, future inflation, and future behavior of plan participants. We cannot know what will actually happen, but these projections should provide the Board with a better understanding of the sensitivity of the System's funding to future market performances.

The City Code states that each year the Board must certify to the City Manager the amount of appropriation required for the ensuing year to meet the normal and accrued liability contributions payable by the City. The results of this valuation determine the contribution rate for the fiscal year beginning July 1, 2015. The contribution rate for General Employees is determined to be 12.52%. The contribution rate for Firefighters and Police is determined to be 26.91%. The composite rate is equal to 17.51% of annual payroll. This is a decrease from the composite rate of 21.44% determined in last year's valuation which is applicable to the current fiscal year. The decrease is primarily attributable to the liability gain experienced by the System and requiring that all participants pay a 5% member contribution, except City Council members hired before October 5, 2010. Prior to this change, only those participants hired after October 5, 2010 were required to pay member contributions.

Forecasts show that, should all assumptions be realized including the 7.0% assumed annual investment return, the System's funded status would increase from 84% to 98% over the next 15 years. Please note that this projection does **not** recognize the City's tendency to offer ad hoc COLAs. If the assumptions were changed to recognize future COLAs up front, the System's funded ratio would be significantly lower, but the System would no longer experience losses each time a COLA is granted.

**Recent Experience**

The financial markets performed above expectation during the fiscal year ending June 30, 2014. The System also experienced a gain on the actuarial value of assets. The actual return on a market value basis was approximately 17.11%. On an actuarial value basis, the assets returned 10.51% compared with an assumed rate of return of 7.0%. The gain recognized for funding purposes was \$30.0 million.

On the liability side, the System's experience resulted in an actuarial gain of \$10.7 million (roughly 0.9% of the liabilities). There were several Plan changes that occurred in the prior year. These included offering a Voluntary Retirement Incentive Program in Fall 2013, amending the City Code to require all active employees, with exception to City Council members hired before October 5, 2010, to contribute 5% of salary effective January 8, 2015, amending the Plan to establish a Deferred Retirement Option Program for eligible policemen and firemen effective January 1, 2015 and awarding 787 in-pay participants a one-time lump sum payment of \$300 on July 1, 2014. The combined impact of these changes was an increase in liabilities of \$20.7 million.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION I**  
**BOARD SUMMARY**

Despite the additional liability attributable to these Plan changes, the combination of liability and investment experience produced an increase in the System's funding ratio (actuarial value of assets over actuarial liability) from 82.3% at June 30, 2013 to 84.5% at June 30, 2014.

### Trends

It is important to take a step back from the latest results and view them in the context of the System's recent history. Here we present a series of graphs which display key factors in the valuations over the last twelve years. After the historical review, we present a few projection graphs showing the possible condition of the System over the next 15 years under various market return scenarios.

#### Growth in Assets

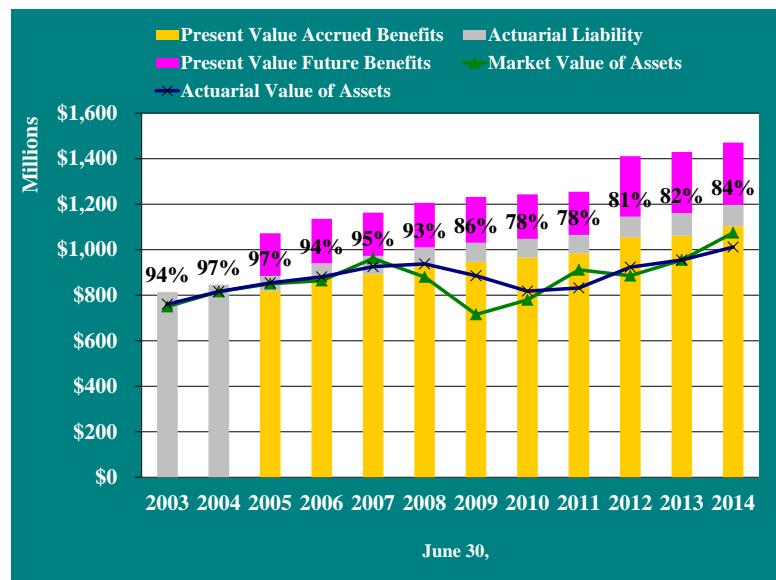


The market value of assets (MVA) experienced a return of 17.1% this year. Due to the asset smoothing method in place, the actuarial value of assets (AVA) increased as a result of the market value gain experienced this year, albeit that only a portion of this gain is being recognized this year. As a result, the return on the AVA was 10.5%.

#### Assets and Liabilities

The three colored bars represent the three different measures of liability mentioned in this report. For funding purposes, the target amount is represented by the top of the gray bar. We compare the actuarial value of assets to this measure of liability in developing the funded percent. These are the percentages shown in the graph labels.

The amount represented by the top of the pink bars, the present value of future benefits, is the amount needed to provide all benefits for the current participants and their beneficiaries. The top of the yellow bars measures the benefits accrued to date.

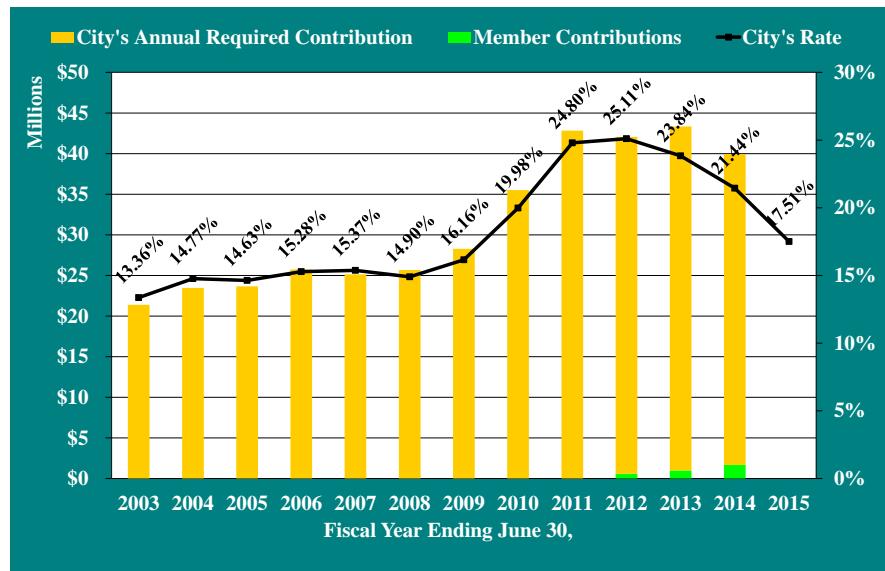


June 30,

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION I**  
**BOARD SUMMARY**

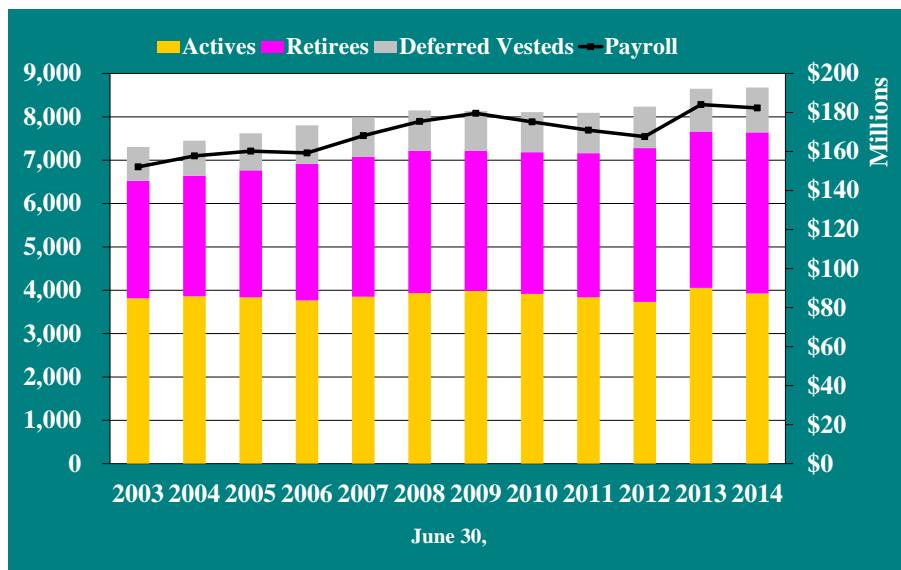
Contribution Rates



July 1, 2013 to June 30, 2014. While this amount was booked in FY 2014, it is actually being contributed in FY 2015.

Participant Trends

This graph shows the number of actives, retirees and deferred vested members in the System as of each valuation date. The black line shows historic growth in the total covered payroll of the System.



The yellow bars in this graph show the actual contribution amounts that have been booked by the City. The black line shows this contribution as a percent of payroll (right hand scale). The City contribution rate is set by the actuarial process. Please note there is a lag in the rate. For example, the June 30, 2013 valuation determined the annual required contribution for the period

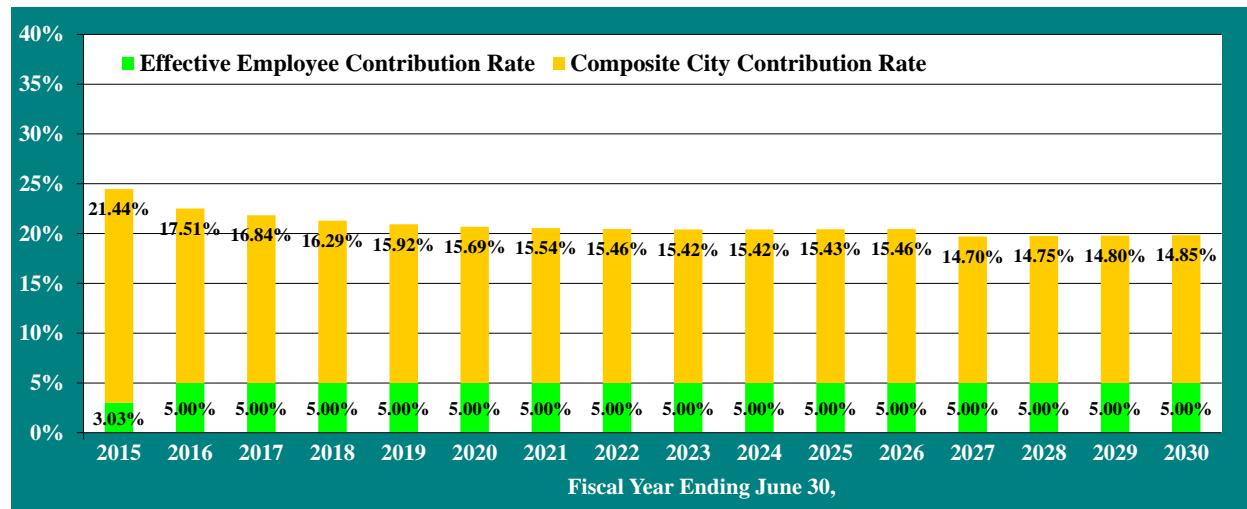
**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
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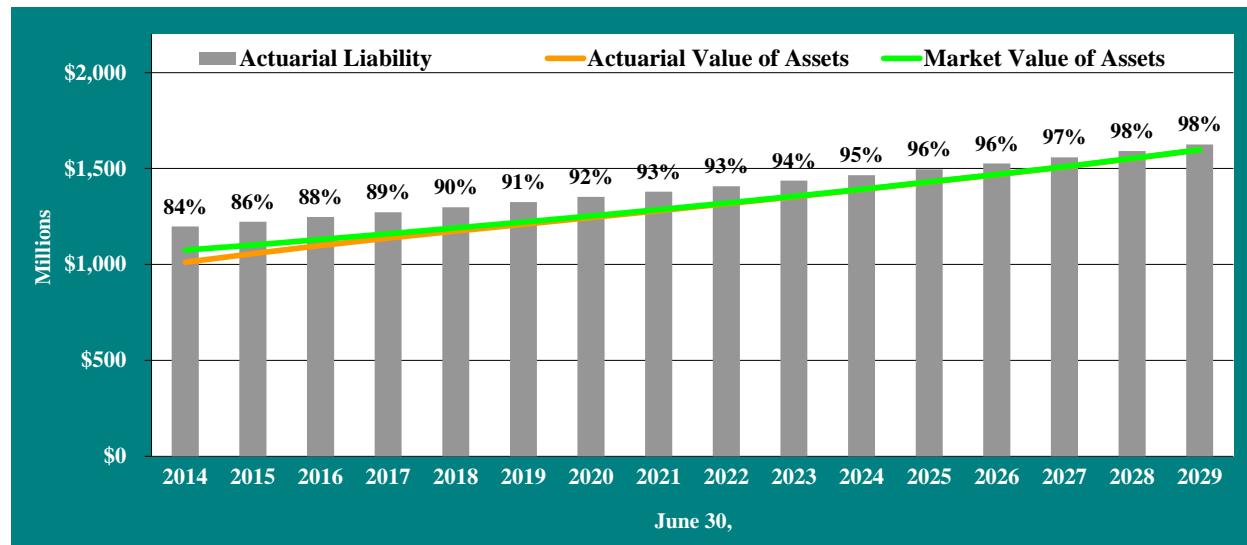
**Future Outlook**

**Base Line Projections**

The two graphs below show the expected progress of the Plan over the next 15 years, assuming the System's assets earn 7.0% of their *market value*. The first graph shows that the City's contribution rate is projected to decrease as a percentage of payroll, if all actuarial assumptions are met, including the 7.0% interest rate. This is due to continued recognition of the stored asset gains. It also shows the implementation of 5% employee contribution for all actives effective January 8, 2015.



The graph below shows the projected funding status over the next 15 years. As you can see, the System's funded status is projected to increase, as stored investment losses are brought into the smoothing equation. Funding then improves to reach 98% by the end of the period shown as contributions pay down the existing unfunded liability. These projections do not include any assumption for future ad hoc COLAs.

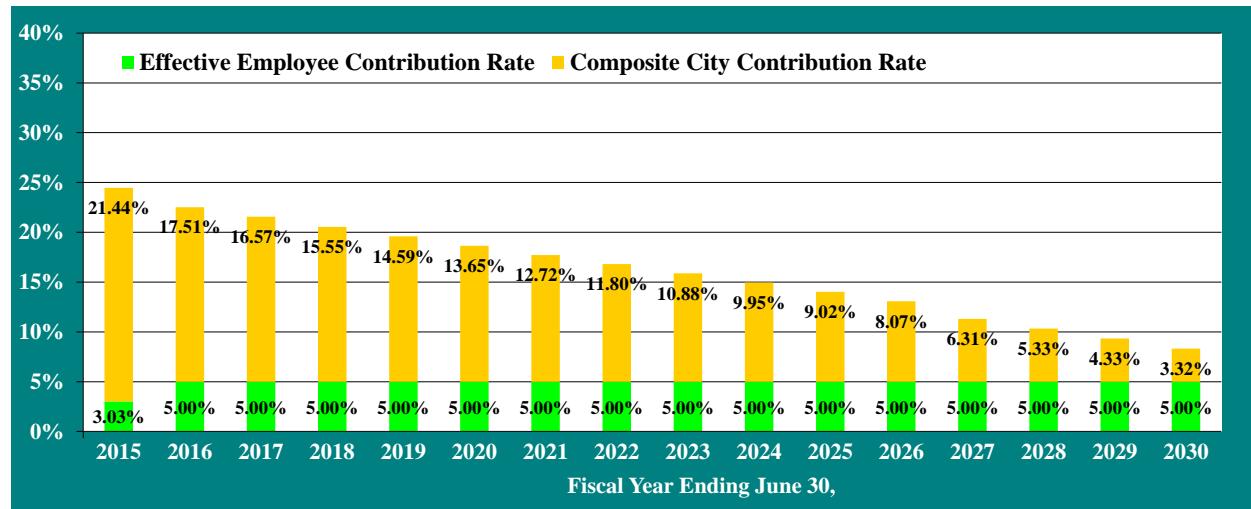


**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

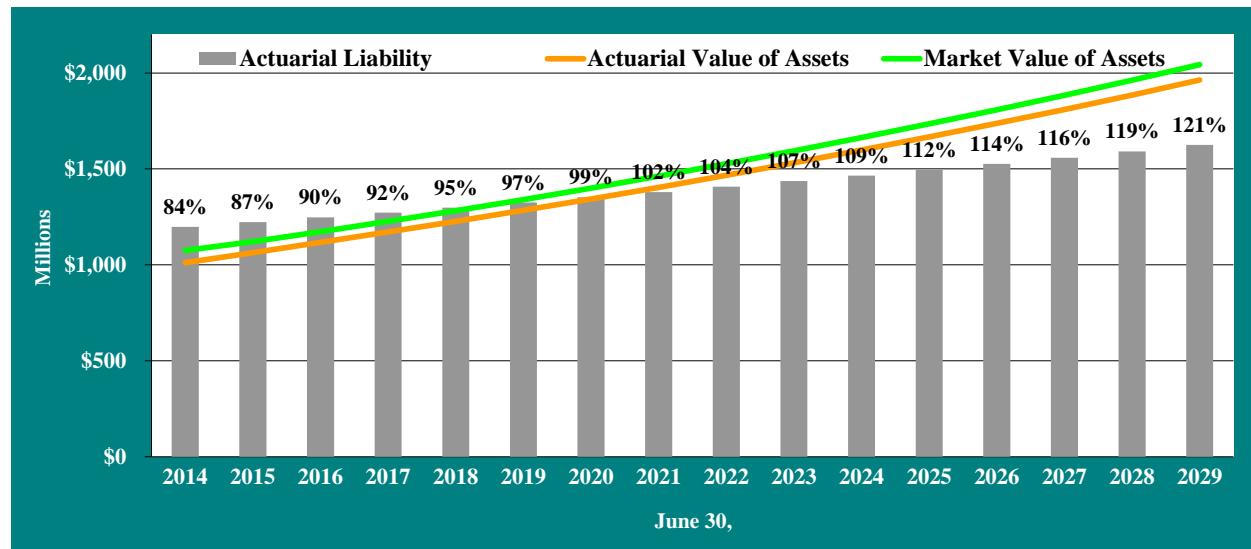
**SECTION I**  
**BOARD SUMMARY**

Projections With Asset Returns of 9.0%

The future funding status of this System will be largely driven by the investment earnings. Due to the relatively well funded status of this Plan, the System is in a leveraged position. This means that relatively minor changes in the market returns can have significant effects on the System's status. The next two graphs show what the next 15 years would look like with a 9% annual return.



As you can see, the City's composite contribution rate would drop from its current level of 21.44% of payroll down to 3.32% of payroll by the end of the 15-year period. In addition to the positive impact of the favorable assumed returns, the City's contribution rate is also mitigated as all participants will be required to pay a 5% employee contribution rate effective January 8, 2015. The System would reach a fully funded position by 2021. Again, these projections are absent any additional ad hoc COLAs.



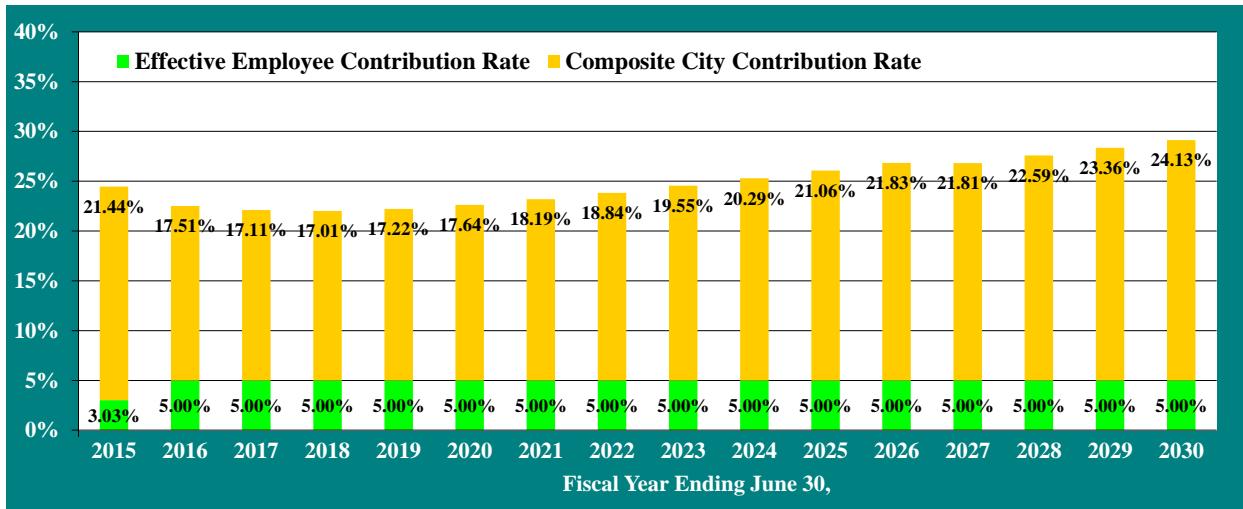
**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
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**SECTION I**  
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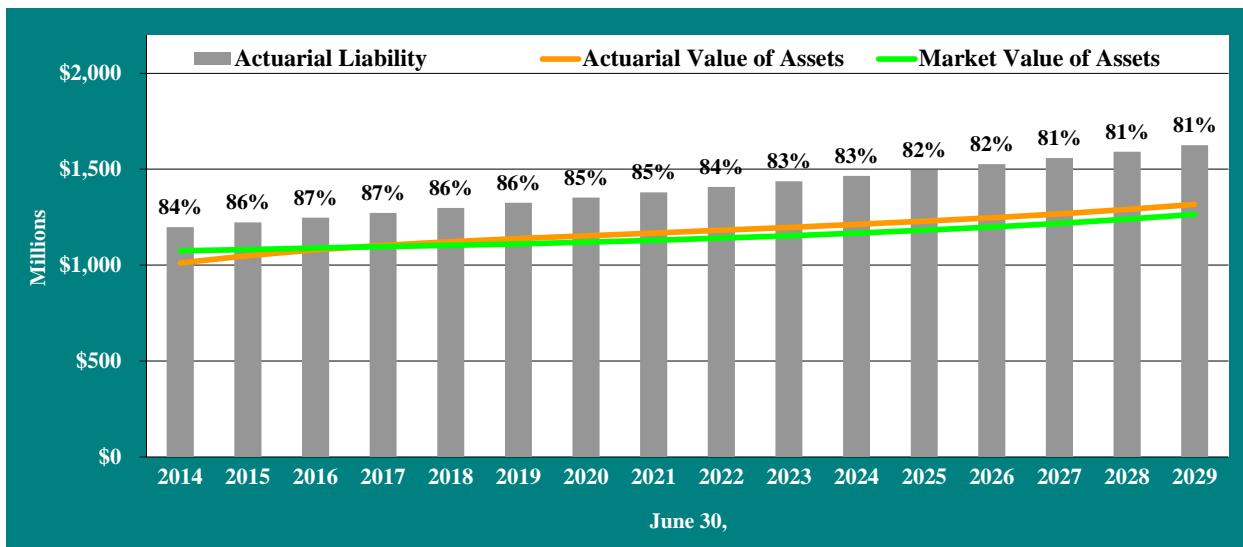
Projections With Asset Returns of 5.0%

The next two graphs show what the next 15 years would look like with a 5% annual return.

After an initial drop in contributions, due to phasing in stored gains, the City's composite contribution rate then increases for the remainder of the period.



The System's funded level would ultimately decrease to 81%. There would still be no danger of benefit commitments going unmet as the Fund would have over one billion dollars. Again, these projections are absent any additional ad hoc COLAs.



**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION I**  
**BOARD SUMMARY**

**Summary of Principal Plan Results**  
**Combined**

<b>Valuation as of:</b>	<b>6/30/2013</b>	<b>6/30/2014</b>	<b>% Change</b>
<b><u>Participant Counts</u></b>			
Actives	4,055	3,925	(3.2%)
Leave of Absence <sup>1</sup>	22	28	27.3%
Terminated Vesteds	988	1,035	4.8%
Participants Due Account Balance	9	8	(11.1%)
In Pay Status	<u>3,605</u>	<u>3,718</u>	3.1%
Total	8,679	8,714	0.4%
Annual Salaries of Active Members	\$ 184,061,572	\$ 182,298,248	(1.0%)
Annual Retirement Allowances	\$ 73,997,729	\$ 77,321,000	4.5%
<b><u>Assets and Liabilities</u></b>			
Actuarial Liability	\$ 1,159,713,871	\$ 1,197,466,212	3.3%
Assets for Valuation Purposes	<u>954,499,184</u>	<u>1,011,523,185</u>	6.0%
Unfunded Actuarial Liability	\$ 205,214,687	\$ 185,943,027	
Funding Ratio	82.30%	84.47%	
Present Value of Accrued Benefits	\$ 1,061,425,847	\$ 1,102,840,649	3.9%
Market Value of Assets	<u>954,693,667</u>	<u>1,074,442,460</u>	12.5%
Unfunded Accrued Benefit Liability	\$ 106,732,180	\$ 28,398,189	
Accrued Benefit Funding Ratio	89.94%	97.42%	
Total Pension Liability	\$ 1,159,713,871	\$ 1,197,466,212	3.3%
Plan Fiduciary Net Position <sup>2</sup>	<u>912,363,175</u>	<u>1,036,178,960</u>	13.6%
Net Pension Liability	\$ 247,350,696	\$ 161,287,252	
GASB 67 Funding Ratio	78.67%	86.53%	
<b><u>City Contributions as a % of Payroll</u></b>		<b>Fiscal Year 2014</b>	<b>Fiscal Year 2015</b>
Normal Cost Contribution		12.54%	8.97%
Unfunded Actuarial Liability Contribution		<u>8.90%</u>	<u>8.54%</u>
Total Contribution		21.44%	17.51%

<sup>1</sup> 9 and 17 participants on Leave of Absence as of June 30, 2013 and June 30, 2014 respectively are entitled to a vested benefit.

<sup>2</sup> Receivable City contributions are recognized for purposes of funding but are excluded for purposes of reporting under GASB Statement No. 67.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION I**  
**BOARD SUMMARY**

**Summary of Principal Plan Results**  
**General Employees**

<b>Valuation as of:</b>	<b>6/30/2013</b>	<b>6/30/2014</b>	<b>% Change</b>
<b><u>Participant Counts</u></b>			
Actives	2,787	2,709	(2.8%)
Leave of Absence <sup>1</sup>	14	16	14.3%
Terminated Vesteds	785	816	3.9%
Participants Due Account Balance	8	7	(12.5%)
In Pay Status	<u>2,443</u>	<u>2,537</u>	3.8%
Total	6,037	6,085	0.8%
Annual Salaries of Active Members	\$ 120,324,357	\$ 119,079,236	(1.0%)
Annual Retirement Allowances	\$ 39,924,239	\$ 42,081,629	5.4%
<b><u>Assets and Liabilities</u></b>			
Actuarial Liability	\$ 630,570,663	\$ 651,005,057	3.2%
Assets for Valuation Purposes	<u>533,470,479</u>	<u>563,980,166</u>	5.7%
Unfunded Actuarial Liability	\$ 97,100,184	\$ 87,024,891	
Funding Ratio	84.60%	86.63%	
Present Value of Accrued Benefits	\$ 575,303,808	\$ 592,690,625	3.0%
Market Value of Assets	<u>533,579,176</u>	<u>599,061,145</u>	12.3%
Unfunded Accrued Benefit Liability	\$ 41,724,632	\$ (6,370,520)	
Accrued Benefit Funding Ratio	92.75%	101.07%	
Total Pension Liability	\$ 630,570,663	\$ 651,005,057	3.2%
Plan Fiduciary Net Position <sup>2</sup>	<u>511,677,244</u>	<u>580,797,553</u>	13.5%
Net Pension Liability	\$ 118,893,419	\$ 70,207,504	
GASB 67 Funding Ratio	81.15%	89.22%	
<b><u>City Contributions as a % of Payroll</u></b>		<b>Fiscal Year 2014</b>	<b>Fiscal Year 2015</b>
Normal Cost Contribution	10.15%	6.56%	
Unfunded Actuarial Liability Contribution	<u>6.30%</u>	<u>5.96%</u>	
Total Contribution	16.45%	12.52%	

<sup>1</sup> 3 and 7 participants on Leave of Absence as of June 30, 2013 and June 30, 2014 respectively are entitled to a vested benefit.

<sup>2</sup> Receivable City contributions are recognized for purposes of funding but are excluded for purposes of reporting under GASB Statement No. 67.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION I**  
**BOARD SUMMARY**

**Summary of Principal Plan Results**  
**Firefighters and Police**

<b>Valuation as of:</b>	<b>6/30/2013</b>	<b>6/30/2014</b>	<b>% Change</b>
<b><u>Participant Counts</u></b>			
Actives	1,268	1,216	(4.1%)
Leave of Absence <sup>1</sup>	8	12	50.0%
Terminated Vesteds	203	219	7.9%
Participants Due Account Balance	1	1	0.0%
In Pay Status	<u>1,162</u>	<u>1,181</u>	1.6%
Total	2,642	2,629	(0.5%)
Annual Salaries of Active Members	\$ 63,737,215	\$ 63,219,012	(0.8%)
Annual Retirement Allowances	\$ 34,073,490	\$ 35,239,371	3.4%
<b><u>Assets and Liabilities</u></b>			
Actuarial Liability	\$ 529,143,208	\$ 546,461,155	3.3%
Assets for Valuation Purposes	<u>421,028,705</u>	<u>447,543,019</u>	6.3%
Unfunded Actuarial Liability	\$ 108,114,503	\$ 98,918,136	
Funding Ratio	79.57%	81.90%	
Present Value of Accrued Benefits	\$ 486,122,039	\$ 510,150,024	4.9%
Market Value of Assets	<u>421,114,491</u>	<u>475,381,315</u>	12.9%
Unfunded Accrued Benefit Liability	\$ 65,007,548	\$ 34,768,709	
Accrued Benefit Funding Ratio	86.63%	93.18%	
Total Pension Liability	\$ 529,143,208	\$ 546,461,155	3.3%
Plan Fiduciary Net Position <sup>2</sup>	<u>400,685,931</u>	<u>455,381,407</u>	13.7%
Net Pension Liability	\$ 128,457,277	\$ 91,079,748	
GASB 67 Funding Ratio	75.72%	83.33%	
<b><u>City Contributions as a % of Payroll</u></b>		<b>Fiscal Year 2014</b>	<b>Fiscal Year 2015</b>
Normal Cost Contribution		17.04%	13.51%
Unfunded Actuarial Liability Contribution		<u>13.81%</u>	<u>13.40%</u>
Total Contribution		30.85%	26.91%

<sup>1</sup> 6 and 10 participants on Leave of Absence as of June 30, 2013 and June 30, 2014 respectively are entitled to a vested benefit.

<sup>2</sup> Receivable City contributions are recognized for purposes of funding but are excluded for purposes of reporting under GASB Statement No. 67.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION II**  
**ASSETS**

Pension plan assets play a key role in the financial operation of the System and in the decisions the Trustees may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact upon benefit levels, City contributions, and the ultimate security of participants' benefits.

In this section, we present detailed information on System assets including:

- **Disclosure** of system assets at June 30, 2013 and June 30, 2014;
- Statement of the **changes** in market values during the year;
- Development of the **actuarial value of assets**;
- An assessment of **investment performance**; and
- A projection of the System's expected **cashflows** for the next ten years.

### **Disclosure**

The market value of assets represents "snap-shot" or "cash-out" values which provide the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. As a result, market values are usually not suitable for long-range planning.

The actuarial value, or "carrying values," is market values which have been smoothed based on actuarial methods used to estimate long-term asset values. They are used for evaluating the System's ongoing liability to meet its obligations.

Current methods employed by this System determine the actuarial value of assets by first calculating the expected actuarial value of assets based on last year's valuation interest rate, last year's actuarial value of assets, and the net cash flow (contributions less benefit payments) of the System over the year prior to the valuation. One-third of the difference between market value of assets and the expected actuarial value of assets is then added to the expected actuarial value of assets to determine the valuation assets.

The actuarial value of assets is then allocated between the General Employees' portion of the System and that covering Firefighters and Police. The allocation is performed annually based on the actual contribution and benefit payments made on behalf of each type of employee. The investment returns for the year are allocated based on the starting balance and the cashflow of each portion of the Fund.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION II**  
**ASSETS**

<b>Statement of Assets at Market Value</b>			
	<b>June 30, 2013</b>	<b>June 30, 2014</b>	
<b>Assets</b>			
Cash and Short-Term Investments	\$ 21,963,319	\$ 28,920,780	
Receivables			
Contributions from the City of Norfolk <sup>1</sup>	\$ 42,330,492	\$ 38,263,500	
Accrued Investment Income	667,737	1,340,328	
Accounts Receivable	198	198	
Due from Broker for Securities Sold	<u>59,442,775</u>	<u>5,491,241</u>	
Total	<u>\$ 102,441,202</u>	<u>\$ 45,095,267</u>	
Investments, at Fair Value			
United States Treasury Securities	\$ 55,013,497	\$ 18,904,914	
Fixed Income Securities	113,792,915	128,679,128	
Equity Securities	47,929,052	64,711,522	
Balanced Comingled Funds	708,588,424	810,305,825	
Other	<u>199,476</u>	<u>0</u>	
Total	<u>\$ 925,523,364</u>	<u>\$ 1,022,601,389</u>	
Total Assets	\$ 1,049,927,885	\$ 1,096,617,436	
<b>Liabilities</b>			
Accounts Payable	\$ 541,418	\$ 597,275	
Due to Broker for Securities Purchased	<u>94,692,800</u>	<u>21,577,701</u>	
Total Liabilities	<u>\$ 95,234,218</u>	<u>\$ 22,174,976</u>	
<b>Net Assets Available for Benefits</b>	<b>\$ 954,693,667</b>	<b>\$ 1,074,442,460</b>	

<sup>1</sup> *Receivable City contributions are recognized for purposes of funding but are excluded for purposes of reporting under GASB Statement No. 67.*

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION II**  
**ASSETS**

<b>Changes in Market Values</b>		
<b>Value of Assets - June 30, 2013</b>		<b>\$ 954,693,667</b>
<b>Additions</b>		
Contributions		
Employer Contributions	\$ 38,263,500	
Employee Contributions	<u>1,671,644</u>	
Total	\$ 39,935,144	
Investment Income:		
Net Appreciation (Depreciation) in Fair Value of Investments	\$ 148,150,903	
Interest	7,579,027	
Dividends	3,125,472	
Other	<u>338,366</u>	
Total Investment Income	\$ 159,193,768	
Investment Expenses		
Net Income from Investing Activities	<u>(1,901,934)</u>	
Total Additions	\$ 157,291,834	
	\$ 197,226,978	
<b>Deductions</b>		
Benefits Paid directly to Participants	\$ (72,886,248)	
Return of Contributions	<u>(4,144)</u>	
Beneficiary Payments	(4,174,984)	
Administrative Fees	<u>(412,809)</u>	
Total Deductions	\$ (77,478,185)	
<b>Total</b>		
Net Increase/(Decrease)	\$ 119,748,793	
<b>Value of Assets - June 30, 2014</b>		<b>\$ 1,074,442,460<sup>1</sup></b>

<sup>1</sup> For GASB 67 disclosures, the System will report \$1,036,178,960, which excludes the receivable City contribution.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION II**  
**ASSETS**

## **Actuarial Value of Assets**

The actuarial value of assets represents a “smoothed” value developed by the actuary to reduce, or eliminate, erratic results which could develop from short-term fluctuations in the market value of assets. For this System, the actuarial value has been calculated by first calculating the expected actuarial value of assets based on last year’s valuation interest rate, last year’s actuarial value of assets, and the net cash flow (contributions less benefit payments) of the System over the year prior to the valuation. One-third of the market value of assets less the expected actuarial value of assets is then added to the expected actuarial value of assets to determine the valuation assets.

<b>Development of the Actuarial Value of Assets</b>		
1.	Actuarial Value of Assets - June 30, 2013	\$ 954,499,184
	Employer Contributions	38,263,500
	Employee Contributions	1,671,644
	Benefit Payments	(77,065,376)
	Expected Return at 7.0%	<u>62,694,595</u>
2.	Expected Value at June 30, 2014 (EV)	\$ 980,063,547
3.	Actual Market Value at June 30, 2013 (AV)	1,074,442,460
4.	One-Third of AV less EV	<u>31,459,638</u>
5.	Actuarial Value of Assets - June 30, 2014 [2. + 4.]	<b>\$ 1,011,523,185</b>

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK  
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION II  
ASSETS**

**Allocation of Actuarial Value of Assets  
As of June 30, 2014**

	<b>General Employees</b>	<b>Firefighters and Police</b>	<b>Total</b>
1. Actuarial Value of Assets at June 30, 2013	\$ 533,470,479	\$ 421,028,705	\$ 954,499,184
2. Contributions			
2a. Receivable City Contributions	\$ 18,263,592	\$ 19,999,908	\$ 38,263,500
2b. Member Contributions	<u>1,125,831</u>	<u>545,813</u>	<u>1,671,644</u>
2c. Total Contributions	\$ 19,389,423	\$ 20,545,721	\$ 39,935,144
3. Benefit Payments (allocated on the basis of FY 2014 expected payments)	(41,579,337)	(35,486,039)	(77,065,376)
4. Investment Earnings (based on 10.51% return)	<u>52,699,601</u>	<u>41,454,632</u>	<u>94,154,233</u>
5. Actuarial Value of Assets at June 30, 2014	\$ 563,980,166	\$ 447,543,019	\$1,011,523,185
6. Market Value of Assets at June 30, 2014 (used only for comparison to the Present Value of Accrued Benefits)	\$ 599,061,145	\$ 475,381,315	\$1,074,442,460
7. Market Value of Assets less Receivable City Contributions [6. – 2a.] ((used only for GASB 67 Plan Fiduciary Net Position])	\$ 580,797,553	\$ 455,381,407	\$1,036,178,960

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION II**  
**ASSETS**

## **Investment Performance**

The market value of assets (MVA) returned 17.1% during fiscal year 2014, which is greater than the expected 7.0% return (assumption in prior year's valuation) by 10.1%.

A return of 10.5% on the actuarial value of assets (AVA) is primarily the result of the asset smoothing method being utilized for the calculation of the actuarial value of assets. Since only a portion of the gain or loss from the performance of the System is recognized in a given year, in periods of very good performance, the AVA can lag significantly behind the MVA. In a period of negative returns, the AVA does not decline as rapidly as the MVA.

<b>Annual Rates of Return</b>		
<b>Year Ending June 30,</b>	<b>Market Value</b>	<b>Actuarial Value</b>
1999	9.9%	14.7%
2000	8.8%	11.9%
2001	(2.3%)	5.4%
2002	(7.6%)	(0.9%)
2003	5.4%	(2.5%)
2004	11.1%	9.5%
2005	6.7%	7.2%
2006	4.7%	6.2%
2007	15.1%	8.7%
2008	(5.2%)	4.9%
2009	(15.3%)	(2.1%)
2010	13.1%	(4.6%)
2011	20.2%	4.6%
2012	0.4%	11.2%
2013	11.8%	7.0%
2014	17.1%	10.5%

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION II**  
**ASSETS**

<b>Projection of System's Benefit Payments and Contributions</b>			
<b>Fiscal Year Ending</b>	<b>Expected Benefit Payments</b>	<b>Expected City Contributions*</b>	<b>Expected Employee Contributions*</b>
2015	\$ 82,514,000	\$ 38,264,000	\$ 5,515,000
2016	84,761,000	31,939,000	9,387,000
2017	86,993,000	31,620,000	9,669,000
2018	88,921,000	31,505,000	9,959,000
2019	90,992,000	31,713,000	10,258,000
2020	93,058,000	32,192,000	10,565,000
2021	95,012,000	32,841,000	10,882,000
2022	97,073,000	33,652,000	11,209,000
2023	99,839,000	34,572,000	11,545,000
2024	102,316,000	35,609,000	11,891,000

\* Assumes contributions are made uniformly throughout the year.

Expected benefit payments are projected for the closed group valued at June 30, 2014. Projecting any further than 10 years using a closed-group would not yield reliable predictions due to the omission of new hires. These projections do not include additional ad hoc COLAs which may be granted by the City Council in future years.

Expected City contributions are shown on a cash basis. That is, while the FY 2015 contribution amount was already booked for accounting purposes in FY 2014, it is being contributed in FY 2015. The FY 2016 contribution is based on a 2014 valuation rate of 17.51%. Expected contributions for FY 2016 and beyond are projected based on an employer normal cost rate of 8.97%. The employer contribution also uses a closed 20-year amortization of the 2012 unfunded liability balance and 20-year bases for all changes and gains or losses arising since. In addition, the PSREP has 11 years remaining. Future gains and losses are amortized over 20 years from the valuation in which they are first recognized. In all cases, the amortization assumes that annual payments will increase by 3% per year. Since the Plan requires a 5% employee contribution rate for all employees effective January 8, 2015, we have included the anticipated employee contribution amount over the period as well. The projections assume the market value of assets will earn 7.0% per year and that any previous investment losses or gains not yet recognized in the asset smoothing method through the June 30, 2014 valuation date, will be picked up throughout the period shown.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION III**  
**LIABILITIES**

In this section, we present detailed information on System liabilities including:

- **Disclosure** of System liabilities at June 30, 2013 and June 30, 2014; and
- Statement of **changes** in these liabilities during the year.

### **Disclosure**

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the people ultimately using the figures and the purpose for which they are using them.

- **Present Value of Future Benefits:** Used for analyzing the financial outlook of the System, this represents the amount of money needed today to fully pay off all future benefits and expenses of the System, assuming participants continue to accrue benefits.
- **Actuarial Liability:** Used for funding calculations, this liability is calculated taking the Present Value of Benefits above and subtracting the present value of future Employer Normal Costs under an acceptable actuarial funding method. This method is referred to as the **Entry Age Normal** funding method.
- **Present Value of Accrued Benefits:** Used for communicating the current level of liabilities, this liability represents the total amount of money needed today to fully pay off the current accrued obligations of the System, assuming no future accruals of benefits. These liabilities are also required for accounting purposes (FASB ASC Topic No. 960) and used to assess whether the Plan can meet its current benefit commitments.

The following table discloses each of these liabilities for the current and prior valuations. With respect to each disclosure, a subtraction of the appropriate value of System assets yields, for each respective type, a **net surplus** or an **unfunded liability**.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION III**  
**LIABILITIES**

<b>Liabilities/Net (Surplus)/Unfunded Combined</b>			
	<b>June 30, 2013</b>	<b>June 30, 2014</b>	
<b>Present Value of Future Benefits</b>			
Active Participant Benefits	\$ 645,736,422	\$ 653,359,737	
Retiree Benefits	741,761,117	772,800,764	
Terminated Vested and Inactive Members	<u>41,098,693</u>	<u>43,487,160</u>	
<b>Present Value of Future Benefits (PVFB)</b>	<b>\$ 1,428,596,232</b>	<b>\$ 1,469,647,661</b>	
 Market Value of Assets (MVA)	\$ 954,693,667	\$ 1,074,442,460	
Future Member Contributions	18,867,394	95,756,780	
Future City Contributions	<u>455,035,171</u>	<u>299,448,421</u>	
<b>Total Resources</b>	<b>\$ 1,428,596,232</b>	<b>\$ 1,469,647,661</b>	
 Employer Normal Cost <sup>1</sup>	\$ 23,073,744	\$ 16,352,486	
 Actuarial Liability			
Active Participant Benefits	\$ 376,854,061	\$ 381,178,288	
Retiree Benefits	741,761,117	772,800,764	
Terminated Vested and Inactive Members	<u>41,098,693</u>	<u>43,487,160</u>	
<b>Actuarial Liability (AAL)</b>	<b>\$ 1,159,713,871</b>	<b>\$ 1,197,466,212</b>	
Actuarial Value of Assets (AVA)	<u>954,499,184</u>	<u>1,011,523,185</u>	
<b>Net (Surplus)/Unfunded (AAL – AVA)</b>	<b>\$ 205,214,687</b>	<b>\$ 185,943,027</b>	
 Present Value of Accrued Benefits			
<b>Present Value of Accrued Benefits (PVAB)</b>	<b>\$ 1,061,425,847</b>	<b>\$ 1,102,840,649</b>	
Market Value of Assets (MVA)	<u>954,693,667</u>	<u>1,074,442,460</u>	
<b>Net (Surplus)/Unfunded (PVAB – MVA)</b>	<b>\$ 106,732,180</b>	<b>\$ 28,398,189</b>	

<sup>1</sup> Net of employee contributions

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION III**  
**LIABILITIES**

<b>Liabilities/Net (Surplus)/Unfunded General Employees</b>		
	<b>June 30, 2013</b>	<b>June 30, 2014</b>
Present Value of Future Benefits		
Active Participant Benefits	\$ 335,959,113	\$ 337,338,989
Retiree Benefits	386,330,192	406,289,785
Terminated Vested and Inactive Members	<u>29,413,885</u>	<u>30,308,969</u>
<b>    Present Value of Future Benefits (PVFB)</b>	<b>\$ 751,703,190</b>	<b>\$ 773,937,743</b>
Employer Normal Cost <sup>1</sup>	\$ 12,212,923	\$ 7,811,598
Actuarial Liability		
Active Participant Benefits	\$ 214,826,586	\$ 214,406,303
Retiree Benefits	386,330,192	406,097,785
Terminated Vested and Inactive Members	<u>29,413,885</u>	<u>30,308,969</u>
<b>    Actuarial Liability (AAL)</b>	<b>\$ 630,570,663</b>	<b>\$ 651,005,057</b>
Actuarial Value of Assets (AVA)	<u>533,470,479</u>	<u>563,980,166</u>
<b>    Net (Surplus)/Unfunded (AAL – AVA)</b>	<b>\$ 97,100,184</b>	<b>\$ 87,024,891</b>
Present Value of Accrued Benefits		
<b>    Present Value of Accrued Benefits (PVAB)</b>	<b>\$ 575,303,808</b>	<b>\$ 592,690,625</b>

<sup>1</sup> Net of employee contributions

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION III**  
**LIABILITIES**

<b>Liabilities/Net (Surplus)/Unfunded Firefighters and Police</b>		<b>June 30, 2013</b>	<b>June 30, 2014</b>
Present Value of Future Benefits			
Active Participant Benefits	\$ 309,777,309	\$ 316,020,748	
Retiree Benefits	355,430,925	366,510,979	
Terminated Vested and Inactive Members	<u>11,684,808</u>	<u>13,178,191</u>	
<b>    Present Value of Future Benefits (PVFB)</b>	<b>\$ 676,893,042</b>	<b>\$ 695,709,918</b>	
Employer Normal Cost <sup>1</sup>	\$ 10,860,821	\$ 8,540,888	
Actuarial Liability			
Active Participant Benefits	\$ 162,027,475	\$ 166,771,985	
Retiree Benefits	355,430,925	366,466,879	
Terminated Vested and Inactive Members	<u>11,684,808</u>	<u>13,178,191</u>	
<b>    Actuarial Liability (AAL)</b>	<b>\$ 529,143,208</b>	<b>\$ 546,461,155</b>	
Actuarial Value of Assets (AVA)	<u>421,028,705</u>	<u>447,543,019</u>	
<b>    Net (Surplus)/Unfunded (AAL – AVA)</b>	<b>\$ 108,114,503</b>	<b>\$ 98,918,136</b>	
Present Value of Accrued Benefits			
<b>    Present Value of Accrued Benefits (PVAB)</b>	<b>\$ 486,122,039</b>	<b>\$ 510,150,024</b>	

<sup>1</sup> Net of employee contributions

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION III**  
**LIABILITIES**

## **Changes in Liabilities**

Each of the liabilities disclosed in the prior tables are expected to change at each valuation. The components of that change, depending upon which liability is analyzed, can include:

- New hires since the last valuation
- Benefits accrued since the last valuation
- Plan amendments increasing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial or investment assumptions
- A change in the actuarial funding method

Unfunded liabilities will change because of all of the above, and also due to changes in System assets resulting from:

- Employer contributions different than expected
- Investment earnings different than expected
- A change in the method used to measure plan assets

In each valuation, we report on those elements of change which are of particular significance, potentially affecting the long-term financial outlook of the System. Below we present key changes in liabilities since the last valuation.

	<b>Present Value of Benefits</b>	<b>Actuarial Liability</b>	<b>Present Value of Accrued Benefits</b>
Liabilities as of 6/30/2013	\$1,428,596,232	\$1,159,713,871	\$1,061,425,847
Liabilities as of 6/30/2014	\$1,469,647,661	\$1,197,466,212	\$1,102,840,649
Liability Increase/(Decrease)	\$ 41,051,429	\$ 37,752,341	\$ 41,414,803
Change Due to:			
Plan Amendments	\$ 26,552,176	\$ 20,689,842	\$ 23,312,998
Assumption and Method Change	0	0	0
Actuarial (Gain)/Loss	NC*	(10,654,079)	NC*
Benefits Accumulated and Other Sources	14,499,254	27,716,579	18,101,804

\* NC = not calculated

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to properly maintain the funding status of the System. Typically, the actuarial process will use a funding scheme that will result in a pattern of contributions that are both stable and predictable.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK  
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION IV  
CONTRIBUTIONS**

For this System, the funding scheme employed is the **Entry Age Actuarial Cost Method**. Under this method, there are two components to the total contribution: the **normal cost rate** and the **unfunded actuarial liability rate** (UAL rate). The normal cost rate is determined by taking the value, as of entry age into the Plan, of each member's projected future benefits. This value is then divided by the value, also at entry age, of the member's expected future salary.

The second part is an amortization payment to pay off the unfunded actuarial liability (UAL). The unfunded actuarial liability is the difference between the actuarial assets of the System at the valuation date and the assets the System should hold as determined by the actuarial cost method. This also includes the fixed 20-year amortization of the Public Safety Retirement Enhancement Program (PSREP) beginning June 30, 2005, the fixed 20-year amortization of the Voluntary Retirement Incentive Program (VRIP) beginning June 30, 2012 and additional 20-year amortization layers recognized each year. Please see the table on page 24 for details.

**Actuarially Determined Rate**

The employer's normal cost rate for General Employees is 6.56% and 13.51% for Firefighters and Police for the fiscal year beginning July 1, 2014. The composite rate is shown in the table below.

The UAL rate is the level percent of member payroll which, when applied to each year's payroll, is sufficient to amortize the various layers of unfunded actuarial liability over their respective 20-year periods.

The table below presents and compares the actuarially determined contributions for the System for this valuation and the prior one.

<b>Actuarially Determined Rate</b>		
	<b>June 30, 2013</b>	<b>June 30, 2014</b>
Normal Cost Rate	12.54%	8.97%
UAL Rate	<u>8.90%</u>	<u>8.54%</u>
Total City Rate	21.44%	17.51%

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION IV**  
**CONTRIBUTIONS**

The net decrease in the contribution rate was due to the following:

More employees paying 5% Member Rate	(4.18%)
Actuarial liability gain	(0.44%)
Asset gain on actuarial basis	(1.23%)
Impact of salary changes	0.44%
Plan changes	0.85%
Change in Employer normal cost	0.62%
Other miscellaneous experience	<u>0.01%</u>
Total net change in City Rate	(3.93%)

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK  
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION IV  
CONTRIBUTIONS**

<b>Schedule of Amortization Bases As of June 30, 2014</b>						
<b>Type of Base</b>	<b>Date Established</b>	<b>Initial Amount</b>	<b>Initial Amortization Years</b>	<b>6/30/2014 Outstanding Balance</b>	<b>Remaining Amortization Years</b>	<b>Current Year Amortization Payment</b>
<b>GENERAL EMPLOYEES</b>						
1. 2012 Initial Unfunded Base	7/1/2012	\$103,418,782	20	\$102,113,665	18	\$8,229,805
2. VRIP	7/1/2012	6,333,733	20	6,253,803	18	504,022
3. 2013 Gain Base	7/1/2013	(12,102,537)	20	(12,041,911)	19	(935,038)
4. 2014 Plan Changes	7/1/2014	14,317,179	20	14,317,179	20	1,073,923
5. 2014 Gain Base	7/1/2014	(23,617,845)	20	<u>(23,617,845)</u>	20	<u>(1,771,560)</u>
General Employees Total				\$87,024,891		\$7,101,152
<b>FIREFIGHTERS AND POLICE</b>						
1. PSREP	1/1/2005	\$16,691,568	20	\$12,371,254	11	\$1,445,407
2. 2012 Initial Unfunded Base	7/1/2012	111,455,557	20	95,443,384	18	7,692,216
3. VRIP	7/1/2012	1,487,770	20	1,468,995	18	118,393
4. 2013 Gain Base	7/1/2013	(2,418,261)	20	(2,406,147)	19	(186,834)
5. 2014 Plan Changes	7/1/2014	6,372,663	20	6,372,663	20	478,010
6. 2014 Gain Base	7/1/2014	(14,332,013)	20	<u>(14,332,013)</u>	20	<u>(1,075,036)</u>
Firefighters and Police Total				\$98,918,136		\$8,472,156
Combined Total				\$185,943,027		\$15,573,308

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION IV**  
**CONTRIBUTIONS**

**Development of Actuarially Determined Contribution Rate**

**Composite Rate**

	<b>June 30, 2013</b> (expensed FY 2014) (paid FY 2015)	<b>June 30, 2014</b> (expensed FY 2015) (paid FY 2016)
<b>1. Actuarial Liability</b>		
a. Active Employees	\$ 376,854,061	\$ 381,178,288
b. Retired Members	741,761,117	772,564,664
c. Vested Terminated Members	<u>41,098,693</u>	<u>43,487,160</u>
d. Total Actuarial Liability	<u>\$ 1,159,713,871</u>	<u>\$ 1,197,466,212</u>
<b>2. Actuarial Value of Assets</b>	<u>954,499,184</u>	<u>1,011,523,185</u>
<b>3. Unfunded Actuarial Liability (UAL) (1) – (2)</b>	\$ 205,214,687	\$ 185,943,027
<b>4. UAL Amortizations</b>	\$ 16,376,671	\$ 15,573,308
<b>5. Active Member Payroll</b>	\$ 184,061,572	\$ 182,298,248
<b>6. Employer Contribution Results</b>		
a. Employer Normal Cost Rate	12.54%	8.97%
b. Amortization of UAL (4) ÷ (5)	<u>8.90%</u>	<u>8.54%</u>
c. Total Employer Contribution Rate June 30	<u>21.44%</u>	<u>17.51%</u>

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION IV**  
**CONTRIBUTIONS**

**Development of Actuarially Determined Contribution Rate**

**General Employees**

	June 30, 2013 (expensed FY 2014) (paid FY 2015)	June 30, 2014 (expensed FY 2015) (paid FY 2016)
<b>1. Actuarial Liability</b>		
a. Active Employees	\$ 214,826,586	\$ 214,406,303
b. Retired Members	386,330,192	406,097,785
c. Vested Terminated Members	<u>29,413,885</u>	<u>30,308,969</u>
d. Total Actuarial Liability	\$ 630,570,663	\$ 651,005,057
<b>2. Actuarial Value of Assets</b>	<u>533,470,479</u>	<u>563,980,166</u>
<b>3. Unfunded Actuarial Liability (UAL) (1) – (2)</b>	\$ 97,100,184	\$ 87,024,891
<b>4. UAL Amortizations</b>	\$ 7,571,640	\$ 7,101,152
<b>5. Active Member Payroll</b>	\$ 120,324,357	\$ 119,079,236
<b>6. Employer Contribution Results</b>		
a. Employer Normal Cost Rate	10.15%	6.56%
b. Amortization of UAL (4) ÷ (5)	<u>6.30%</u>	<u>5.96%</u>
c. Total Employer Contribution Rate June 30	16.45%	12.52%

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION IV**  
**CONTRIBUTIONS**

**Development of Actuarially Determined Contribution Rate**

**Firefighters and Police**

	<b>June 30, 2013</b> (expensed FY 2014) (paid FY 2015)	<b>June 30, 2014</b> (expensed FY 2015) (paid FY 2016)
<b>1. Actuarial Liability</b>		
a. Active Employees	\$ 162,027,475	\$ 166,771,985
b. Retired Members	355,430,925	366,466,879
c. Vested Terminated Members	<u>11,684,808</u>	<u>13,178,191</u>
d. Total Actuarial Liability	\$ 529,143,208	\$ 546,461,155
<b>2. Actuarial Value of Assets</b>	<u>421,028,705</u>	<u>447,543,019</u>
<b>3. Unfunded Actuarial Liability (UAL) (1) – (2)</b>	\$ 108,114,503	\$ 98,918,136
<b>4. UAL Amortizations</b>	\$ 8,805,031	\$ 8,472,156
<b>5. Active Member Payroll</b>	\$ 63,737,215	\$ 63,219,012
<b>6. Employer Contribution Results</b>		
a. Employer Normal Cost Rate	17.04%	13.51%
b. Amortization of UAL (4) ÷ (5)	<u>13.81%</u>	<u>13.40%</u>
c. Total Employer Contribution Rate June 30	30.85%	26.91%

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK  
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION V  
FINANCIAL STATEMENT INFORMATION**

Prior to the current plan year, Statement No. 25 of the Governmental Accounting Standards Board (GASB) established standards for disclosure of pension information by public employee retirement systems (PERS) and governmental employers in notes to financial statements and supplementary information. While GASB-25 is no longer applicable for this System, the requirements of GASB Statement No. 27 remain in effect for the employer(s) who contribute(s) to the System. Therefore, the GASB-25 information is provided similarly as in prior years. The GASB-25 actuarial liability is the same as the actuarial liability amount calculated for funding purposes.

GASB-25 was replaced by GASB-67 effective June 30, 2014 for plan disclosures. We have prepared the following exhibits for inclusion in the Financial Section of the System's CAFR.

- Table V-1: Schedule of Changes in Net Pension Liability and Related Ratios
- Table V-2: Sensitivity of Net Pension Liability to Changes in Discount Rate; and
- Table V-3: Notes to the Schedule of Employer Contributions

For employers with June 30 fiscal years, GASB-68 will replace GASB-27 effective for the fiscal year ending June 30, 2015.

Accounting Standard Codification Topic No. 960 of the Financial Accounting Standards Board specifies certain information for a plan to disclose regarding its funded status. FASB ASC Topic No. 960 disclosures provide a quasi "snap shot" view of how the Plan's assets compare to its liabilities if contributions stopped and accrued benefit claims had to be satisfied. However, due to potential legal requirements and the possibility that alternative interest rates would have to be used to determine the liabilities, these values may not be a good indication of the amount of money it would take to buy the benefits for all members if the Plan were to terminate.

Both the present value of accrued benefits (FASB ASC Topic No. 960) and the actuarial liability (GASB-25/27) are determined assuming that the System is on-going and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities are discounted at the assumed valuation interest rate of 7.0% per annum.

FASB ASC Topic No. 960 specifies that a comparison of the present value of accrued (accumulated) benefits with the market value of the assets as of the valuation date must be provided. GASB Statement No. 25/27 required the actuarial liability be compared with the actuarial value of assets for funding purposes. The relevant amounts as of June 30, 2014 are exhibited in Table V-4. Then, Table V-5 reconciles the FASB ASC Topic No. 960 liabilities determined as of the prior valuation, June 30, 2013, to the liabilities as of June 30, 2014.

Tables V-6 can be used with the City's CAFR. Table V-6 is the Solvency Test which shows the portion of Accrued Liability covered by Assets.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION V**  
**FINANCIAL STATEMENT INFORMATION**

**Table V-1**  
**Schedule of Changes in Net Pension Liability and Related Ratios**  
**Employees' Retirement System**  
**for the City of Norfolk**

	<b>FYE June 30, 2014</b>
<b><u>Total Pension Liability</u></b>	
Service Cost	\$ 24,578,759
Interest	80,203,196
Change in Benefits	20,689,842
Change in Assumptions	0
Differences between Expected and Actual Experience	(10,654,079)
Benefit Payments	<u>(77,065,376)</u>
Net Change in Total Pension Liability	\$ 37,752,341
Total Pension Liability – Beginning	\$ 1,159,713,871
Total Pension Liability – Ending	\$ 1,197,466,212
<b><u>Plan Fiduciary Net Position</u></b>	
Contributions – Employer <sup>1</sup>	\$ 42,330,492
Contributions – Employees	1,671,644
Net Investment Income	157,291,834
Benefit Payments	(77,065,376)
Administrative Expenses	<u>(412,809)</u>
Net Change in Plan Fiduciary Net Position	\$ 123,815,785
Plan Fiduciary Net Position – Beginning <sup>1</sup>	\$ 912,363,175
Plan Fiduciary Net Position – Ending <sup>1</sup>	\$1,036,178,960
Net Pension Liability - Ending	\$ 161,287,252
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	86.53%
Covered Employee Payroll	\$ 182,298,248
Net Pension Liability as a Percentage of Covered Employee Payroll	88.47%

<sup>1</sup> For the Retirement System's financial disclosures, amounts contributed by the City are recognized in the period in which they are actually paid.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK  
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION V  
FINANCIAL STATEMENT INFORMATION**

**Table V-2  
Sensitivity of Net Pension Liability to Changes in Discount Rate  
Employees' Retirement System  
for the City of Norfolk**

	<b>1% Decrease 6.00%</b>	<b>Discount Rate 7.00%</b>	<b>1% Increase 8.00%</b>
Total Pension Liability	\$1,321,681,028	\$1,197,466,212	\$1,090,894,550
Plan Fiduciary Net Position <sup>1</sup>	<u>1,036,178,960</u>	<u>1,036,178,960</u>	<u>1,036,178,960</u>
Net Pension Liability	\$285,502,068	\$161,287,252	\$54,715,590
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	78.40%	86.53%	94.98%

<sup>1</sup> For the Retirement System's financial disclosures, amounts contributed by the City are recognized in the period in which they are actually paid.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION V**  
**FINANCIAL STATEMENT INFORMATION**

**Table V-3**  
**Schedule of Employer Contributions**  
**Employees' Retirement System**  
**for the City of Norfolk**

	<b>FYE June 30, 2014</b>
Actuarially Determined Contribution	\$ 42,330,492
City Contributions in Relation to the Actuarially Determined Contribution	<u>42,330,492</u>
Contribution Deficiency / (Excess)	\$ 0
Covered Employee Payroll	\$ 177,560,789
Contributions as a Percentage of Covered Employee Payroll	23.84%

Notes to Schedule

Valuation Date	June 30, 2012
Timing	Actuarially determined contribution rates are calculated based on the actuarial valuation at the beginning of the prior plan year. The contribution amount is booked as a receivable as of the end of the plan year and paid monthly the following year.

Key Methods and Assumptions Used to Determine Contribution Rates

Actuarial Cost Method	Entry Age Normal Cost Method
Asset Valuation Method	3-year Smoothed Value
Amortization Method	Level Percent Closed, 20-Year Layers
Discount Rate	7.0%
Amortization Growth Rate	3.0%
Inflation	3.0%
Salary Increases	Average annual salary increases of 5.64% for General Employees over a 30-year career and 6.68% for Public Safety employees over a 30-year career. Based on rates which vary by year of service and are compounded annually
Mortality	RP-2000 Combined Healthy Mortality projected to 2010 by Scale AA for healthy lives; RP-2000 Disabled Mortality projected to 2010 by Scale AA for disabled lives

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK  
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**SECTION V  
FINANCIAL STATEMENT INFORMATION**

**Table V-4  
Accounting Statement Information  
Employees' Retirement System  
for the City of Norfolk**

	<b>June 30, 2013</b>	<b>June 30, 2014</b>
<b>FASB ASC Topic No. 960</b>		
1. Present Value of Benefits Accrued and Vested to Date		
a. Members Currently Receiving Payments	\$ 741,761,117	\$ 772,800,764
b. Vested Terminated Members	41,098,693	43,487,160
c. Active Members	<u>265,930,749</u>	<u>277,184,700</u>
d. Total PVVB	<u>\$ 1,048,790,559</u>	<u>\$ 1,093,472,624</u>
2. Present Value of Non-Vested Accrued Benefits for Active Members	<u>12,635,288</u>	<u>9,368,026</u>
3. Total Present Value of Accrued Benefits	<u>\$ 1,061,425,847</u>	<u>\$ 1,102,840,649</u>
4. Assets at Market Value	<u>954,693,667</u>	<u>1,074,442,460</u>
5. Unfunded Present Value of Accrued Benefits, But Not Less Than Zero	\$ 106,732,180	\$ 28,398,189
6. Ratio of Assets to Value of Benefits (4) / (3)	89.9%	97.4%

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK  
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION V  
FINANCIAL STATEMENT INFORMATION**

**Table V-5  
Statement of Changes in Total Actuarial  
Present Value of All Accrued Benefits**

		<b>Accumulated Benefit Obligation (FASB ASC Topic No. 960)</b>
Actuarial Present Value of Accrued Benefits as of June 30, 2013		\$ 1,061,425,847
Increase/(Decrease) During Years Attributable to:		
Passage of Time	\$ 71,602,521	
Benefit Paid – FY 2013-2014	(77,065,376)	
Change in Assumptions	0	
Plan Changes	23,312,998	
Benefits Accrued, Other Gains/Losses	23,564,659	
Net Increase/(Decrease)	<hr/> \$ 41,414,803	
Actuarial Present Value of Accrued Benefits as of June 30, 2014		\$ 1,102,840,649

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK  
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**SECTION V  
FINANCIAL STATEMENT INFORMATION**

**Table V-6  
SOLVENCY TEST  
Aggregate Accrued Liabilities For**

<b>Valuation Date July 1,</b>	<b>(1) Active Member Contributions</b>	<b>(2) Retirees Vested Terms, Beneficiaries</b>	<b>(3) Active Members (Employer Financed Portion)</b>	<b>Reported Assets</b>	<b>Portion of Accrued Liabilities Covered by Reported Assets</b>		
					<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
2001	N/A	\$ 351,458,128	\$ 391,145,346	\$ 838,073,790	100%	100%	100%
2002	N/A	372,747,805	411,904,507	798,070,877	100%	100%	100%
2003	N/A	397,310,521	415,925,946	760,502,908	100%	100%	94%
2004	\$ 215,208	421,470,962	423,984,074	816,120,329	100%	100%	93%
2005	198,018	469,436,407	414,295,992	854,146,038	100%	100%	93%
2006	84,360	566,232,610	372,779,959	881,035,790	100%	100%	84%
2007	83,376	585,584,308	386,563,802	925,821,257	100%	100%	88%
2008	78,685	605,567,032	403,409,400	937,766,796	100%	100%	82%
2009	72,008	617,813,260	411,732,258	885,609,003	100%	100%	65%
2010	54,808	637,488,648	409,218,088	817,698,124	100%	100%	44%
2011	196,733	658,831,846	404,945,415	831,975,004	100%	100%	43%
2012	629,200	768,508,092	375,269,338	923,198,558	100%	100%	41%
2013	1,044,830	782,859,810	375,809,231	954,499,184	100%	100%	45%
2014	1,707,965	816,287,924	379,470,323	1,011,523,185	100%	100%	51%

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK  
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**APPENDIX A  
MEMBERSHIP INFORMATION**

**Summary of Membership Data as of June 30, 2014**

<b>Plan</b>	<b>Active Members (excluding those on Leave of Absence)</b>			
	<b>Count</b>	<b>Average Age</b>	<b>Average Service</b>	<b>Average Salary</b>
General	2,709	47.4	10.8	\$43,957
Firefighters and Police	<u>1,216</u>	<u>39.9</u>	<u>11.9</u>	<u>51,989</u>
<b>Total System</b>	<b>3,925</b>	<b>45.0</b>	<b>11.2</b>	<b>\$46,445</b>

<b>Inactive Members (Excludes Participants Due Account Balance)</b>			
	<b>Count</b>	<b>Annual Benefit</b>	<b>Average Annual Benefit</b>
Service Retirements			
General	2,002	\$36,642,566	\$18,303
Firefighters and Police	<u>880</u>	<u>30,346,107</u>	<u>34,484</u>
Total	2,882	\$66,988,673	\$23,244
Contingent Annuitants			
General	330	\$2,650,682	\$8,032
Firefighters and Police	<u>170</u>	<u>1,944,113</u>	<u>11,436</u>
Total	500	\$4,594,795	\$9,190
Disableds			
General	205	\$2,788,382	\$13,602
Firefighters and Police	<u>131</u>	<u>2,949,151</u>	<u>22,513</u>
Total	336	\$5,737,533	\$17,076
Vested Former Members <sup>1</sup>			
General	823	\$4,459,131	\$5,418
Firefighters and Police	<u>229</u>	<u>2,089,423</u>	<u>9,124</u>
Total	1,052	\$6,548,554	\$6,225

<sup>1</sup> Benefits are payable at age 60 for General Employees and age 55 for Firefighters and Police. Includes 17 participants on leave of absence (7 General employees and 10 Firefighters and Police) that are currently vested.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK  
ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**APPENDIX A  
MEMBERSHIP INFORMATION**

<b>Data Reconciliation</b>						
	Actives	Vested Former Members	Service Retirements	Contingent Annuitants	Disableds	Total
Count as of June 30, 2013	4,055	997	2,751	510	344	8,657
New Entrants	323	2	1	4	0	330
Terminations/Retirements						
- Vested	(274)	112	162	0	0	0
- Non-Vested	(178)	0	0	0	0	(178)
Disablements	(4)	0	0	0	4	0
Vested						
- that Retired	N/A	(49)	49	0	0	0
- that Returned to work	4	(4)	0	0	0	0
Deaths						
- With a Beneficiary	(1)	0	(20)	22	(1)	0
- Without a Beneficiary	NC	0	(61)	(36)22	(11)	(114)
Count as of June 30, 2014	3,925	1,052	2,882	500	336	8,695

NC = Not Calculated. Any participants who died during the plan year are included in the non-vested terminations.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**APPENDIX A**  
**MEMBERSHIP INFORMATION**

**The Employees' Retirement System for the City of Norfolk**  
**Distribution of Active Participants - General Employees**

**COUNTS BY AGE/SERVICE**

Age	Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	20	38	1	0	0	0	0	0	0	0	59
25 to 29	39	108	46	2	0	0	0	0	0	0	195
30 to 34	55	106	68	19	0	0	0	0	0	0	248
35 to 39	34	105	78	43	9	0	0	0	0	0	269
40 to 44	32	81	81	67	36	17	0	0	0	0	314
45 to 49	21	83	78	74	44	26	19	1	0	0	346
50 to 54	24	68	99	79	70	36	69	22	2	0	469
55 to 59	16	54	75	66	73	36	47	44	25	4	440
60 to 64	6	44	41	36	30	21	29	28	26	12	273
65 to 69	0	11	9	6	12	9	11	5	4	7	74
70 & up	1	3	2	5	2	3	2	1	0	3	22
Total	248	701	578	397	276	148	177	101	57	26	2,709

**TOTAL SALARY BY AGE/SERVICE**

Age	Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	535,993	1,013,555	24,881	0	0	0	0	0	0	0	1,574,429
25 to 29	1,246,718	3,409,646	1,458,349	70,172	0	0	0	0	0	0	6,184,885
30 to 34	1,967,601	3,927,012	2,725,912	648,327	0	0	0	0	0	0	9,268,852
35 to 39	1,399,012	4,136,058	2,996,784	1,733,940	389,428	0	0	0	0	0	10,655,222
40 to 44	1,170,803	3,661,378	3,210,588	3,154,498	1,714,712	784,490	0	0	0	0	13,696,469
45 to 49	782,645	3,316,997	3,548,231	3,020,573	2,051,992	1,263,577	849,618	55,293	0	0	14,888,926
50 to 54	1,057,573	3,268,105	4,069,875	3,426,181	3,578,212	1,775,124	3,599,774	1,168,389	137,371	0	22,080,604
55 to 59	634,069	2,895,066	3,126,996	2,755,591	3,395,922	1,865,138	2,505,443	2,464,874	1,293,480	265,221	21,201,800
60 to 64	209,355	2,261,351	1,839,150	1,673,488	1,426,128	1,061,446	1,713,030	1,877,196	1,625,486	782,754	14,469,384
65 to 69	0	584,119	376,770	261,631	688,803	661,038	659,636	284,936	180,635	430,409	4,127,977
70 & up	25,770	91,099	36,004	187,096	68,534	208,141	83,439	47,688	0	182,917	930,688
Total	9,029,539	28,564,386	23,413,540	16,931,497	13,313,731	7,618,954	9,410,940	5,898,376	3,236,972	1,661,301	119,079,236

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**APPENDIX A**  
**MEMBERSHIP INFORMATION**

**The Employees' Retirement System for the City of Norfolk**  
**Distribution of Active Participants - Firefighters & Police Employees**

**COUNTS BY AGE/SERVICE**

Age	Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	15	40	0	0	0	0	0	0	0	0	55
25 to 29	8	132	60	1	0	0	0	0	0	0	201
30 to 34	3	52	105	28	0	0	0	0	0	0	188
35 to 39	4	16	66	67	21	0	0	0	0	0	174
40 to 44	0	18	39	65	64	15	0	0	0	0	201
45 to 49	1	7	34	25	65	38	22	0	0	0	192
50 to 54	0	1	2	11	22	25	39	16	2	0	118
55 to 59	0	0	2	3	4	7	15	15	13	0	59
60 to 64	0	0	0	0	3	2	3	3	8	6	25
65 to 69	0	0	1	1	0	1	0	0	0	0	3
70 & up	0	0	0	0	0	0	0	0	0	0	0
Total	31	266	309	201	179	88	79	34	23	6	1,216

**TOTAL SALARY BY AGE/SERVICE**

Age	Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	622,696	1,674,813	0	0	0	0	0	0	0	0	2,297,509
25 to 29	337,348	5,509,244	2,622,950	54,829	0	0	0	0	0	0	8,524,371
30 to 34	130,280	2,158,638	4,829,915	1,439,263	0	0	0	0	0	0	8,558,096
35 to 39	176,083	648,601	3,014,161	3,625,989	1,222,384	0	0	0	0	0	8,687,218
40 to 44	0	715,353	1,783,894	3,496,206	3,814,066	993,077	0	0	0	0	10,802,596
45 to 49	33,010	295,364	1,527,511	1,285,076	3,742,158	2,417,569	1,602,399	0	0	0	10,903,087
50 to 54	0	39,674	89,007	554,193	1,223,443	1,559,246	2,769,950	1,241,181	158,491	0	7,635,185
55 to 59	0	0	89,316	156,879	216,414	450,260	1,026,682	973,549	1,062,789	0	3,975,889
60 to 64	0	0	0	0	178,177	117,848	143,757	194,882	668,283	456,364	1,759,311
65 to 69	0	0	25,250	25,250	0	25,250	0	0	0	0	75,750
70 & up	0	0	0	0	0	0	0	0	0	0	0
Total	1,299,417	11,041,687	13,982,004	10,637,685	10,396,642	5,563,250	5,542,788	2,409,612	1,889,563	456,364	63,219,012

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**APPENDIX B**  
**ACTUARIAL ASSUMPTIONS AND METHODS**

**A. Actuarial Assumptions**

**Interest Rate**

7.0% per annum, compounded annually (adopted as of June 30, 2012).

**Mortality**

*Pre-Retirement:* RP-2000 Combined Health Mortality projected to 2010 by Scale AA\*

*Health Annuitants:* RP-2000 Combined Health Mortality projected to 2010 by Scale AA

*Disableds:* RP-2000 Disability Mortality projected to 2010 by Scale AA

\* *5% of deaths are assumed to be accidental for general employees;  
50% of deaths are assumed to be accidental for firefighters and police.*

Margin for Future Mortality Improvement – Mortality experience for the period 2006-2012 was most closely approximated by the RP-2000 table without projection, therefore the projection to 2010 should provide for improvement through the 2018 valuation date.

**Salary Increase**

Representative values are as follows:

Service	Annual Rate of Salary Increase	
	General	Firefighters and Police
0	7.12 %	11.24%
1	6.97	8.15
2	6.81	7.63
3	6.66	7.63
4	6.50	7.63
5	6.35	7.63
10	5.85	7.63
15	5.70	7.33
20	5.26	5.78
25	4.74	4.55
30	4.23	4.55

The table above includes an annual inflation rate of 3.00%.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**APPENDIX B**  
**ACTUARIAL ASSUMPTIONS AND METHODS**

**Withdrawal**

<b>Service</b>	<b>General</b>	<b>Firefighters and Police</b>
0	15.00 %	10.00 %
1	13.00	9.00
2	11.00	8.00
3	9.00	7.00
4	9.00	6.00
5	7.50	5.00
10	2.50	2.80
15	2.50	1.00
20	2.50	1.00
25	1.00	1.00
30	1.00	1.00

**Disability**

<b>Age</b>	<b>General*</b>		<b>Firefighters and Police**</b>
	<b>Male</b>	<b>Female</b>	<b>Unisex</b>
20	0.07%	0.05%	0.04%
25	0.08	0.05	0.06
30	0.09	0.06	0.08
35	0.14	0.10	0.11
40	0.22	0.15	0.22
45	0.34	0.23	0.40
50	0.51	0.35	0.67
54	0.66	0.45	0.90
55	0.70	0.48	0.96
59	1.02	0.70	1.26

\* 20% of General disabilities are assumed to be accidental

\*\*70% of Police & Fire disabilities are assumed to be accidental

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK  
ACTUARIAL VALUATION AS OF JUNE 30, 2014

APPENDIX B  
ACTUARIAL ASSUMPTIONS AND METHODS

**Retirement**

*General:*

Age	Early Retirement	Normal Service Retirement
45	5.00 %	7.50 %
50	7.50	7.50
51	5.00	7.50
52	5.00	7.50
53	5.00	7.50
54	5.00	7.50
55	5.00	7.50
56	5.00	7.50
57	5.00	7.50
58	5.00	7.50
59	5.00	7.50
60		12.50
61		12.50
62		12.50
63		12.50
64		12.50
65		25.00
66		15.00
67		15.00
68		15.00
69		15.00
70		100.00

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK**  
**ACTUARIAL VALUATION AS OF JUNE 30, 2014**

**APPENDIX B**  
**ACTUARIAL ASSUMPTIONS AND METHODS**

*Firefighters and Police:*

For those eligible for the Deferred Retirement Option Program (DROP):

<b>Service</b>	<b>Rate of Retirement*</b>
20	2.50 %
21	3.00
22	3.50
23	4.00
24	5.00
25	35.00
26	35.00
27 and up	35.00

For those not eligible for the Deferred Retirement Option Program (DROP):

<b>Service</b>	<b>Rate of Retirement*</b>
20	2.50 %
21	3.00
22	3.50
23	4.00
24	5.00
25	10.00
26	25.00
27 and up	10.00

\*In lieu of the rates above, any active participant at least age 65 are assumed to retire immediately.

NOTE: Rates apply to each member based on eligibility requirements as defined in the Summary of Benefit and Contribution Provisions.

### **Future Expenses**

The assumed interest rate is net of the anticipated future administrative expenses of the Fund.

### **Loading or Contingency Reserves**

A load of 0.85% for General Employees and 1.05% for Firefighters and Police is applied to retirement benefits for active employees to account for unused sick leave balances at time of retirement.

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**APPENDIX B  
ACTUARIAL ASSUMPTIONS AND METHODS**

**Marital Status**

65% of the General Employees and 75% of the Firefighters and Police are assumed to be married, with males three-years older than females.

**Changes in Assumptions**

The rates of retirement were modified to reflect an expected change in behavior for those eligible to elect the new Deferred Retirement Option Program for policemen and firemen.

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**APPENDIX B  
ACTUARIAL ASSUMPTIONS AND METHODS**

**B. Actuarial Methods**

**Actuarial Cost Method:** Entry Age Normal Cost Method. The unfunded actuarial liability (UAL) that arose from the offering of the Public Safety Retirement Enhancement Program is being amortized over a closed 20-year period commencing as of July 1, 2005. The UAL as of June 30, 2012 was amortized over a closed period of 20 years. Future annual changes in the UAL due to Plan changes and gains or losses will be amortized over its own closed 20-year period. All rates are developed using a level-percent of pay amortization method with a 3% per annum increase in the payments.

**Asset Valuation Method:** The actuarial value of assets are determined by first calculating the expected actuarial value of assets based on last year's valuation interest rate, last year's actuarial value of assets, and the net cash flow (contributions less benefit payments and administrative expenses) of the System over the year prior to the valuation. One-third of the difference between market value of assets and the expected actuarial value of assets is then added to the expected actuarial value of assets to determine the valuation assets. Since this is the first year this method is being used, the expected actuarial value of assets is based on last year's market value of assets in lieu of the prior year's actuarial value of assets.

**Changes in Actuarial Methods**

None.

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**APPENDIX C  
SUMMARY OF PLAN PROVISIONS**

The following is intended to summarize the key benefits valued in this valuation. Members of the System and other parties should not rely on this summary as a substitute for or interpretation of the laws and ordinances of the Norfolk City Code covering this retirement plan.

**1. Membership**

Any permanent regular full-time employee entering the service of the City of Norfolk is required to become a member of the Retirement System. Upon entering the System, members are classified according to their occupational group, either as General Employees, Firefighters, Police Officers, or Paramedics.

Paramedics, formerly members of the General Employees Group, were reclassified as members of firefighters and police effective June 9, 1992. City Council members on or after July 1, 2001 are classified as members of firefighters and police.

For each full calendar year beginning on or after January 1, 1997, any permanent part-time employees shall be members of and entitled to benefits in proportion to which their annual hours bear to that of full-time employees.

A member, who was a Norfolk Community Services Board employee on June 30, 2012, who became a City employee on July 1, 2012 began participating in this retirement plan on such date. Prior service for these employees was credited towards benefit eligibility only. Lastly, these employees are exempt from the member's mandatory contributions applicable to anyone hired on or after October 5, 2010.

**2. Normal Service Retirement Allowance**

**Eligibility**

The earlier of age 60 or 30 years of creditable service for General Employees. The earlier of age 55 or 25 years of creditable service for Firefighters, Police Officers, and Paramedics. Mandatory retirement is age 65 for Firefighters and Police Officers.

**Amount**

**Employees Hired Before July 1, 1980**

For General Employees, the pension earned is 2% of average final compensation for each year of creditable service.

Effective January 1, 1997 for General Employees, the maximum number of years of creditable service is the greater of 35 years or the number of years of service as of December 31, 1996.

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For Firefighters, Police Officers, and Paramedics, the pension earned is 2.5% of average final compensation for each year of creditable service up to a maximum of 65% of average final compensation.

**Employees Hired on or After July 1, 1980**

For General Employees, the pension earned is 1.75% of average final compensation for each year of creditable service up to a maximum of 35 years.

For Firefighters, Police Officers, and Paramedics, the pension earned is 2.5% of average final compensation for each year of creditable service up to a maximum of 65% of average final compensation.

“Average Final Compensation” means the average annual earnable compensation for the three years of creditable service which produces the highest average. Creditable service consists of membership service plus 100% of accumulated unused sick leave for all employees except Firefighters. For Firefighters, 46% of unused sick leave accumulated prior to July 1, 1985 and 100% of unused sick leave accumulated on and after July 1, 1985 is included.

**3. Early Service Retirement Allowance**

**Eligibility**

Within five years of eligibility for normal service retirement.

**Amount**

Accrued service retirement allowance deferred to normal service retirement age. A member may elect to receive an immediate benefit equal to the accrued service retirement allowance reduced by  $\frac{1}{4}$  of 1% for each month commencement date precedes the normal retirement date for General Employees, and  $\frac{1}{2}$  of 1% for each month commencement date precedes the normal retirement date for firefighters, police officers, and paramedics.

**4. Vested Allowance**

**Eligibility**

Five years of creditable service.

**Amount**

Accrued service retirement allowance deferred to normal retirement age. If not eligible for retirement, a member may elect to leave their contributions made prior to July 1, 1972 with interest, if any, in the System until normal service retirement date.

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**5. Ordinary Disability Retirement Allowance**

**Eligibility**

Five years of creditable service and total and permanent disability not due to an accident in the performance of duty.

**Amount**

Accrued service retirement allowance with a minimum of 25% of average final compensation. The minimum cannot exceed the normal service retirement allowance based on average final compensation and creditable service projected to normal service retirement date.

**6. Accidental Disability Retirement Allowance**

**Eligibility**

Total and permanent disability as a result of an accident in the performance of duty, regardless of length of service. Applications must be filed within six years from date of accident.

The disability of a firefighter, police officer, sheriff, or deputy sheriff caused by hypertension, heart disease, or respiratory disease is presumed to have been suffered in the line of duty unless the contrary is shown by medical evidence.

**Amount**

The amount payable is 66 $\frac{2}{3}$ % of average final compensation.

**7. Ordinary Death Benefit**

**Eligibility**

Death in active service due to causes not the result of an accident in the performance of duty. Benefits are paid to a designated beneficiary or estate.

**Amount**

All contributions, if any, made by the member with not less than one-half of the interest credited are paid. In addition, if the member had one year of creditable service if he became a member prior to July 1, 1979 and five years of creditable service if he became a member on or after July 1, 1979, an additional lump-sum benefit equal to 50% of their earnable compensation during the year immediately preceding their death is payable. If a member

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dies in service after the earlier of completion of 10 years of service or early service retirement eligibility and if the designated beneficiary for the lump-sum death benefit is the spouse, the spouse may elect to receive, in lieu of the lump sum death benefit, a monthly pension payable until death or remarriage. If the member was eligible for early or normal service retirement, the spouse's benefit is equal to one-half of the retirement allowance that would have been payable to the member had the member retired and immediately commenced payment. If the member was not eligible for early or normal service retirement, the spouse's benefit is equal to one-half of the normal service retirement allowance, which would have been payable to the member if he or she had been vested, such benefit to commence at the same time as the vested benefit would have been paid to the member. If the spouse dies or remarries before the youngest unmarried child attains age 18, the pension shall continue to the date that all the children have died, married, or attained age 18, whichever occurs first. If the spouse was receiving benefits on or before June 30, 1978, payments shall continue after remarriage with no further payments after death.

**8. Accidental Death Benefit**

**Eligibility**

Death in active service resulting from an accident in the performance of duty within six years from the date of the accident. The death of a firefighter, police officer, sheriff, or deputy sheriff caused by hypertension, heart disease, or respiratory disease in the case of firefighters is presumed to have been suffered in the line of duty, unless the contrary is shown by medical evidence.

**Amount**

Fifty percent of average final compensation is payable to spouse until death or remarriage. If there is no spouse or if spouse dies or remarries, benefit is payable to children under age 18 or dependent parents. In addition, all contributions, if any, made by the member with not less than one-half of the interest credited are paid to their designated recipient or estate. If there is no spouse, a lump-sum benefit equal to 50% of their earnable compensation during the year immediately preceding their death is payable.

**Offset on Account of Workers' Compensation**

All benefits paid under the provisions of any workers' compensation act or any similar law to any member or beneficiary, or to the dependents of any member or beneficiary on account of any disability or death are in such manner as the Board determines, offset against any benefits provided from City contributions to the Employees' Retirement System.

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SUMMARY OF PLAN PROVISIONS**

**9. Death Benefit After Retirement**

**Eligibility**

Death of a retired member receiving retirement allowance payments and who completed five years of creditable service, if they became a member after July 1, 1979, or of a spouse receiving an accidental death benefit.

**Amount**

Lump sum equal to one-half of the average final compensation on which the retirement allowance of the deceased retired member or spouse was based. The lump sum is payable to the surviving spouse, to unmarried children under age 18, or unmarried children over age 18 who are physically or mentally unable to make a living.

In the case of a retired member who dies and leaves a surviving spouse, the spouse may elect to receive, in lieu of the lump-sum death benefit, a monthly benefit payable until death or remarriage, which is equal to one-half of the retirement allowance, which the deceased member was receiving at the time of their death, provided the member had not made an optional election. If the spouse dies or remarries before the youngest unmarried child attains age 18, the pension will continue to the date that all the children have died, married, or attained age 18, whichever occurs first. If the spouse was receiving payments on or before June 30, 1978, payments shall continue after remarriage with no further payments after death.

**10. Return of Contributions**

**Eligibility**

Termination of membership prior to death.

**Amount**

If not eligible for a retirement allowance, all contributions with not less than one-half of interest credited. If eligible for normal or early service, ordinary disability, accidental disability, or vested retirement allowance, their contributions, if any, is not less than one-half of the interest credited. The member may elect, prior to the commencement of their retirement allowance, to receive an annuity which is the actuarial equivalent of their accumulated contributions.

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**11. Normal and Optional Forms of Benefits**

<b>Normal Life</b>	<b>Life Annuity</b>
Option A	A reduced pension with the provision that at death the reduced pension will be continued throughout the life of the designated beneficiary.
Option B	A reduced pension with the provision that at death, one-half of the reduced pension will be continued throughout the life of the designated beneficiary.
Option C	A reduced pension with the provision that at death some other benefit approved by the Board of Trustees will be payable.

**12. Contributions**

By Members	5% of pay for anyone hired on or after October 5, 2010. Effective January 8, 2015, all members (except City Council members hired before October 5, 2010) will be required to contribute 5% of pay.
By City	Annual contributions actuarially computed to be required to cover the cost of benefits of the System.

Both member and City contributions will continue to be made throughout the DROP period for any eligible participant who has elected to participate in DROP.

**13. Deferred Retirement Option Program (DROP)**

**Eligibility**

Any police officer or fireman member in service who attains his or her Normal Retirement Age may elect to participate.

**Amount**

The DROP period may be elected by the police officer or fireman member but shall not exceed four years. During the DROP period, 70% of the participant's monthly retirement allowance shall be paid to the DROP account. No interest shall accrue on this account during the DROP period. At the end of the DROP period, the participant will receive a lump sum of the DROP account and shall begin receiving his or her full monthly benefit payment as a retired member.

Both member and City contributions will continue to be made throughout the DROP period.

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**14. Changes in Plan Provisions**

Effective July 1, 2014, the City gave the Board the authority to change the interest rate applicable to member contributions. Subsequently, the Board changed the rate to be the national 12-month CD rate.

Effective July 1, 2014, 787 pay participants received a one-time supplemental payment of \$300. Eligible participants were those receiving retirement benefits for a year (retired on or before June 30, 2013) with 15 or more years of creditable service or disability retirement who receive less than \$15,730 in annual retirement benefits and workers' compensation benefits.

Effective January 8, 2015, all members will be required to contribute 5% of pay, with exception to City Council members hired before October 5, 2010. To mitigate the impact of this change, affected participants will receive a one-time increase of 5% in pay at such time.

Effective January 1, 2015, any police officer or fireman member in service who has attained Normal Retirement Age may elect to participate in the Deferred Retirement Option Program (DROP) described above.