

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

**Actuarial Valuation
as of June 30, 2011**

The Sixty-Eighth Actuarial Valuation

Produced by **Cheiron**

January 2012

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January 30, 2012

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, 2011***

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, 2011. The results of the valuation are contained in this report. 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 2007. 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 2013 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 assumptions and methods used in determining the assets, liabilities, and the annual required contributions of the employer as defined by the Governmental Accounting Standards Board (GASB) meet the parameters set by GASB Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*.

In preparing our report, we relied, without audit, on information supplied by the Retirement System. This information includes, but is not limited to, plan provisions, employee data, and financial information. We have reviewed the census data provided to us for reasonableness.

This report was prepared exclusively for the City of Norfolk for a specific and limited purpose. The report is not for the use or benefit of any third party for any purpose. Any third party recipient of Cheiron's work product (other than the System's auditor, attorney or other professional when providing professional services to the System) who desires professional guidance should not rely upon Cheiron's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

We hereby certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board, and that as



Board of Trustees

January 30, 2011

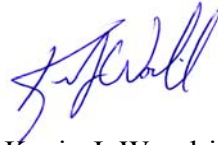
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members of the American Academy of Actuaries, we meet the Qualification Standards to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

Sincerely,
Cheiron



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



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

FOREWORD

Cheiron has performed the actuarial valuation of the Employees' Retirement System for the City of Norfolk as of June 30, 2011. 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 2013; and
- 4) **Provide specific information** and documentation required by the Governmental Accounting Standards Board (GASB).

An actuarial valuation establishes and analyzes System 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, 2012.

Section V includes the required disclosures under GASB Statement No. 25.

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.

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.

Finally, in preparing this report, we have conformed to generally 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.

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, 2012. The contribution rate for General employees is determined to be 19.69%. The contribution rate for Firefighters and Police is determined to be 34.82%. The composite rate is equal to 25.11% of annual payroll.

Forecasts show that, should all assumptions be realized including the 7.5% assumed annual investment return, the System's funded status would increase from 78% to 94% over the next 15 years. Please note that this projection does **not** recognize the City's tendency to offer ad hoc COLAs. If that were recognized, the funded ratio would decline rapidly.

Recent Experience

The financial markets performed above expectation during the fiscal year ending June 30, 2011. However, the System experienced a loss on the actuarial value of assets. The actual return on a market value basis was approximately 20.2%. On an actuarial value basis, the assets returned 4.6% compared with an assumed rate of return of 7.5%. The loss recognized for funding purposes was \$21.7 million.

On the liability side, the System's experience resulted in an actuarial gain of \$12.9 million (roughly 1.2% of the liabilities). The liability gain was primarily due to actual salaries being less than anticipated. In addition, the City amended the plan to change the mandatory retirement age for public safety personnel from age 62 to 65 and any new hires on or after October 5, 2010 must make member contributions in the amount of 5% per pay. These plan changes decreased the liability by \$3.2 million.

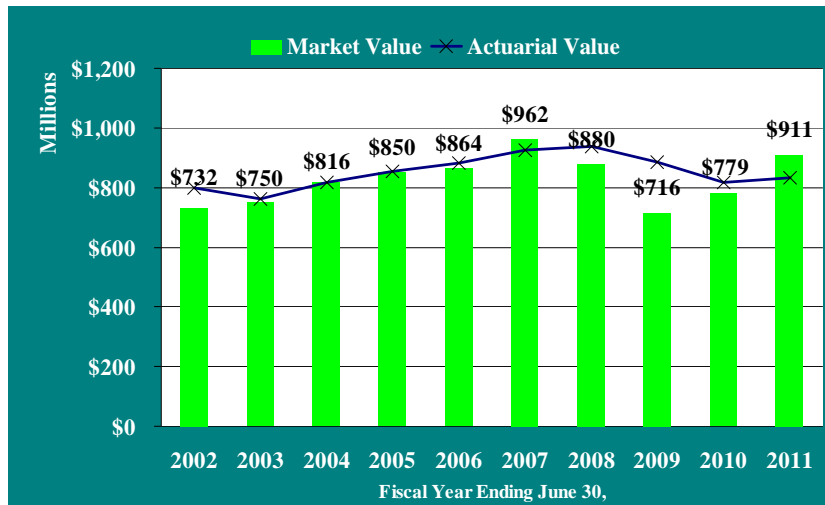
The combination of liability and investment experience produced a slight increase in the System's funding ratio (actuarial value of assets over actuarial accrued liability) from 78.1% at June 30, 2010 to 78.2% at June 30, 2011.

SECTION I
BOARD SUMMARY

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. On the next page we present a series of graphs which display key factors in the valuations over the last eleven 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



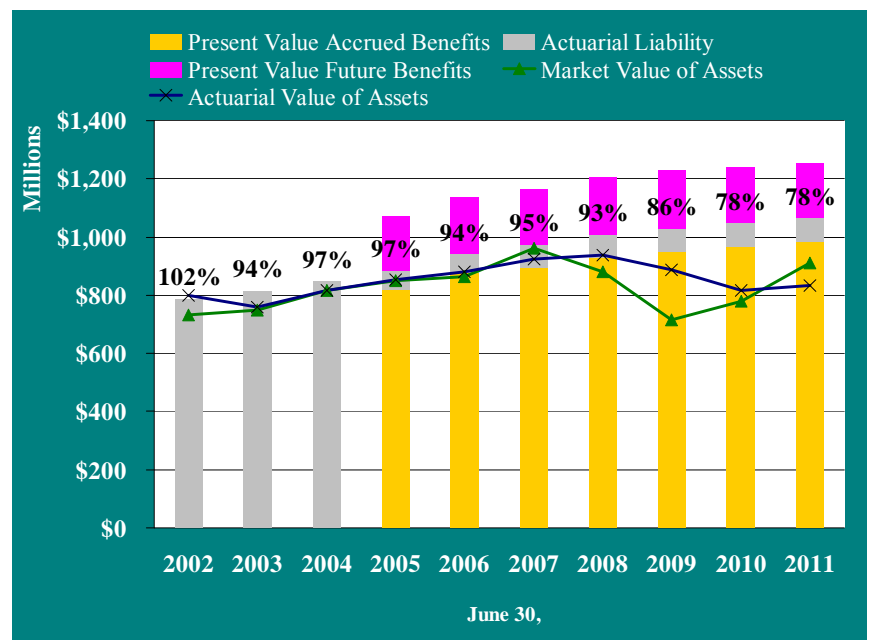
The market value of assets (MVA) experienced a return of 20.2% this year. Due to the asset smoothing method in place, the actuarial value of assets (AVA) slightly increased as a result of the market value gains experienced over the prior 2 years counterbalancing the poor investment return experienced in FY 2009. As a result, the return on the AVA was 4.6%.

Over the period July 1, 2001 to June 30, 2011 the System's assets returned approximately 4.3% per year measured at market value, compared to a valuation assumption of 7.5% per year.

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.

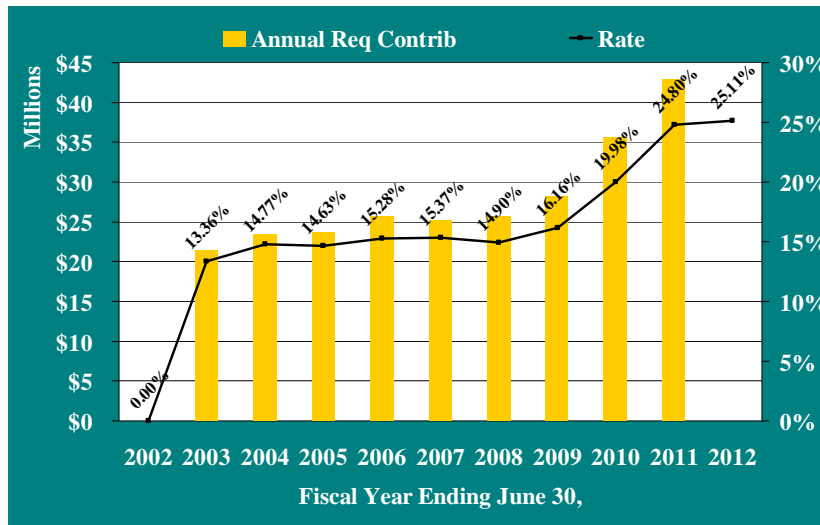
The amount represented by the top of the pink bars, the present value of future benefits (PVFB), is the amount needed to provide all benefits for the current participants and their beneficiaries. The top of the yellow bars measures the benefits accrued to date.



**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION I
BOARD SUMMARY**

Contribution Rates



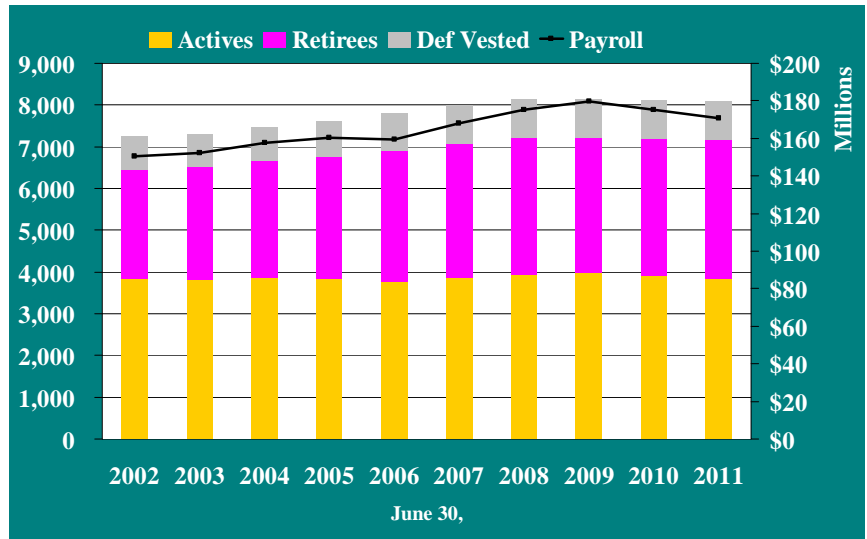
The yellow bars in this graph show the annual required contribution amounts that have been booked by the City. The black line shows this contribution as a percent of payroll (right hand scale). The City contribution rate is set by the actuarial process. Please note there is a lag in the rate. For example, the June 30, 2010 valuation determined the annual required contribution for the period July 1, 2010 to

June 30, 2011. While this amount was booked in FY 2011, it is actually being contributed in FY 2012.

Participant Trends

As with many funds in this country, there has been a steady growth in the number of retired members as the System has matured.

The graph also shows that the number of actives covered by the System has remained fairly stable. The black line shows historic growth in the total covered payroll of the System. Total payroll has gone down in each of the past two fiscal years primarily due to decreases in both the number of actives and average compensation.



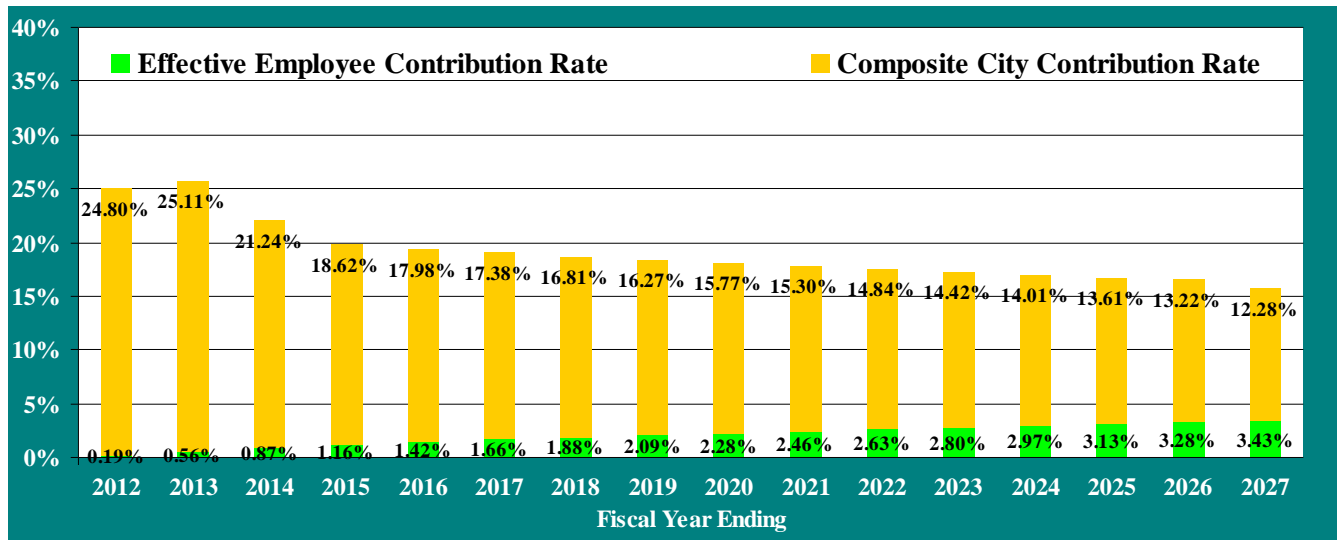
**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION I
BOARD SUMMARY**

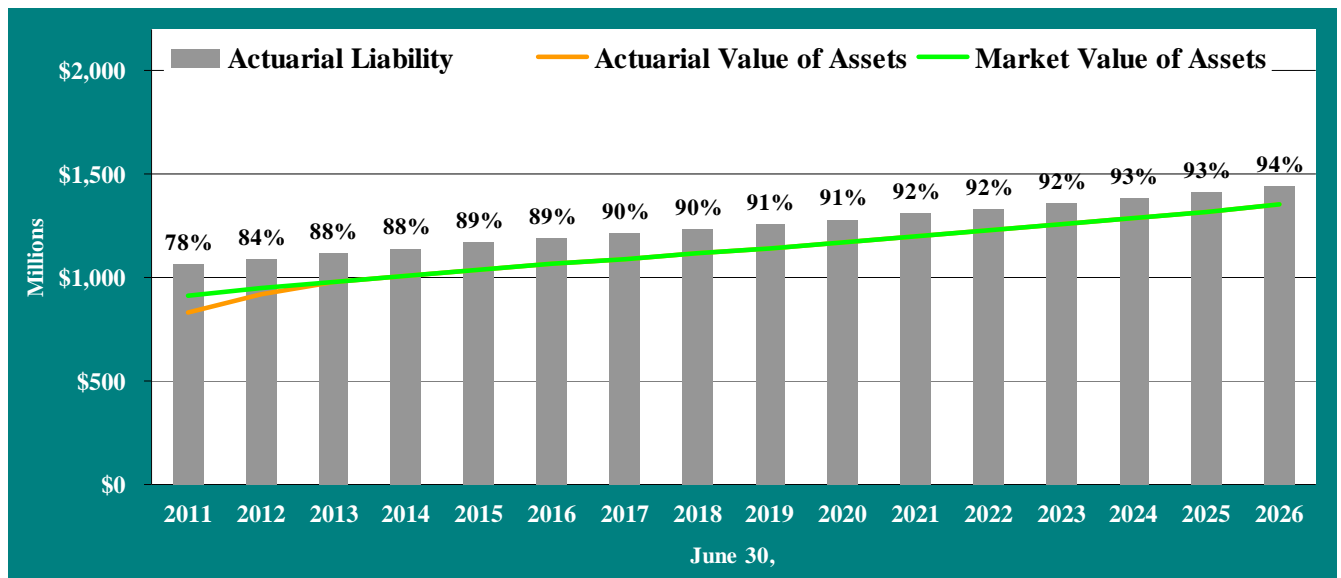
Future Outlook

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 7.5% of their *market value*. The first graph shows that the City contribution rate is projected to decline as a percentage of payroll, if all actuarial assumptions are met, including the 7.5% interest rate. It also shows the anticipated growth in the number of post October 5, 2010 hires who will be paying the 5% member contribution.



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 to 94%, as the Public Safety Retirement Enhancement Program (PSREP) is paid off over the next 14 years.

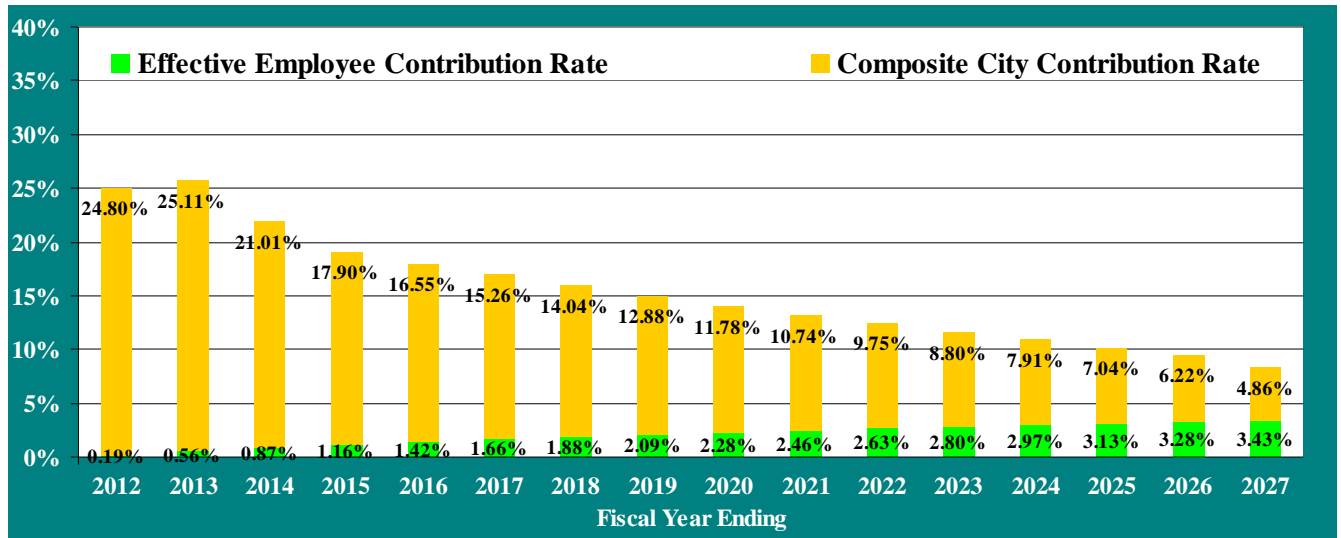


**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

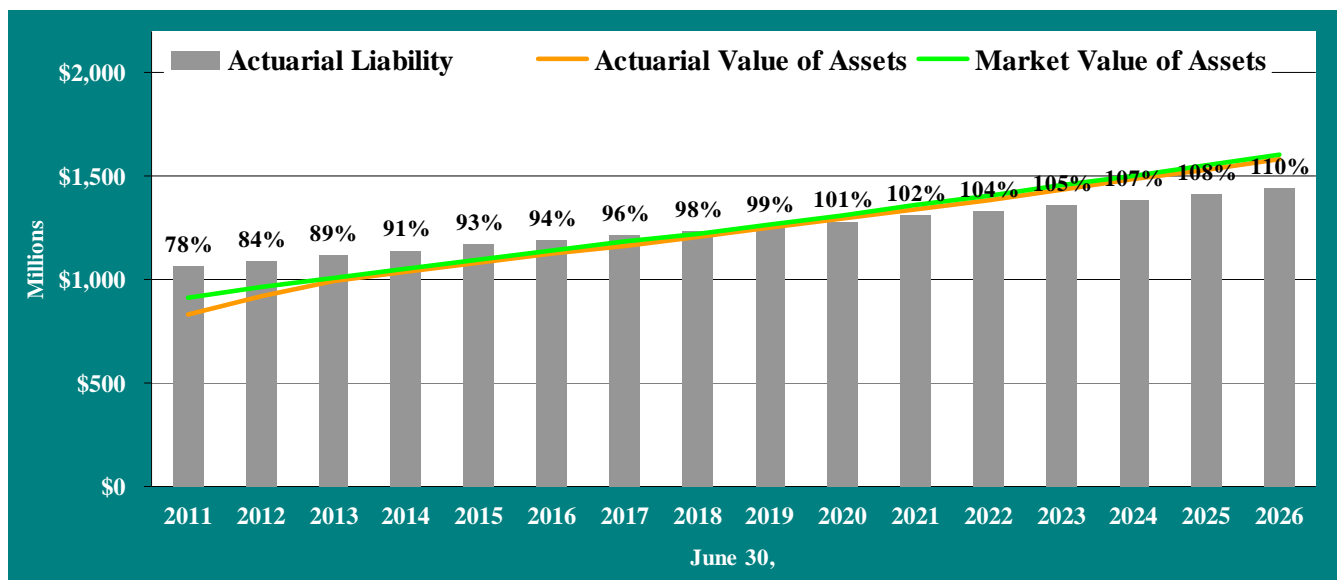
**SECTION I
BOARD SUMMARY**

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 25.11% of payroll down to 4.86% of payroll. In addition to the positive impact of the favorable assumed returns, the City's contribution rate is also mitigated as new participants are hired and obligated to pay a 5% employee contribution rate. The System would reach a fully funded position by 2020. Again, these projections are absent any additional ad hoc COLAs.



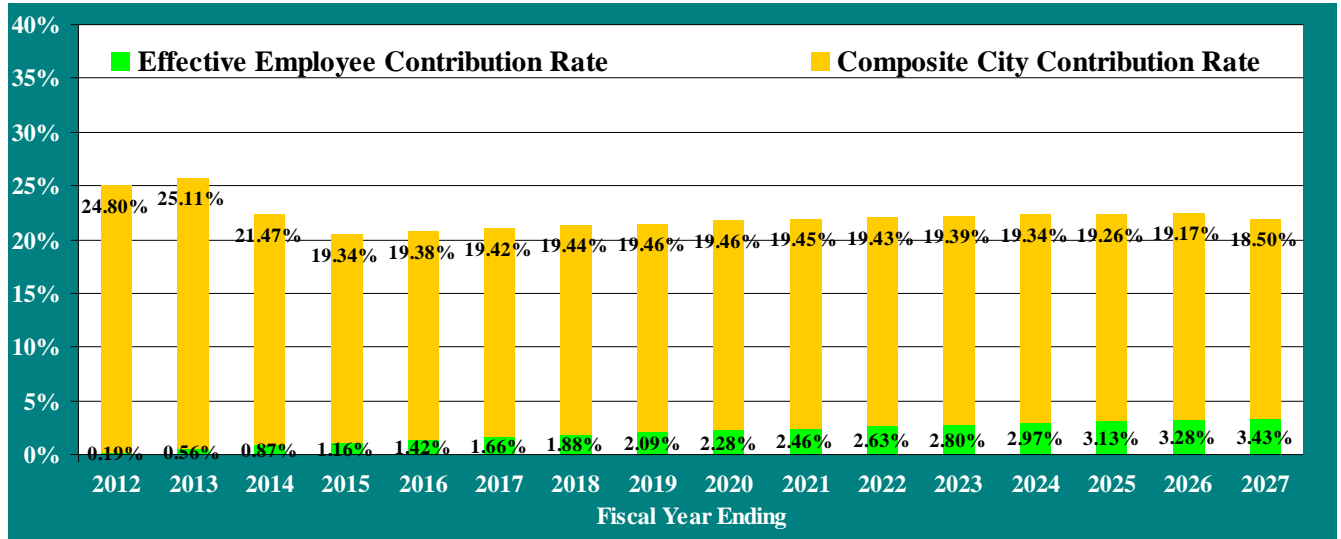
**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION I
BOARD SUMMARY**

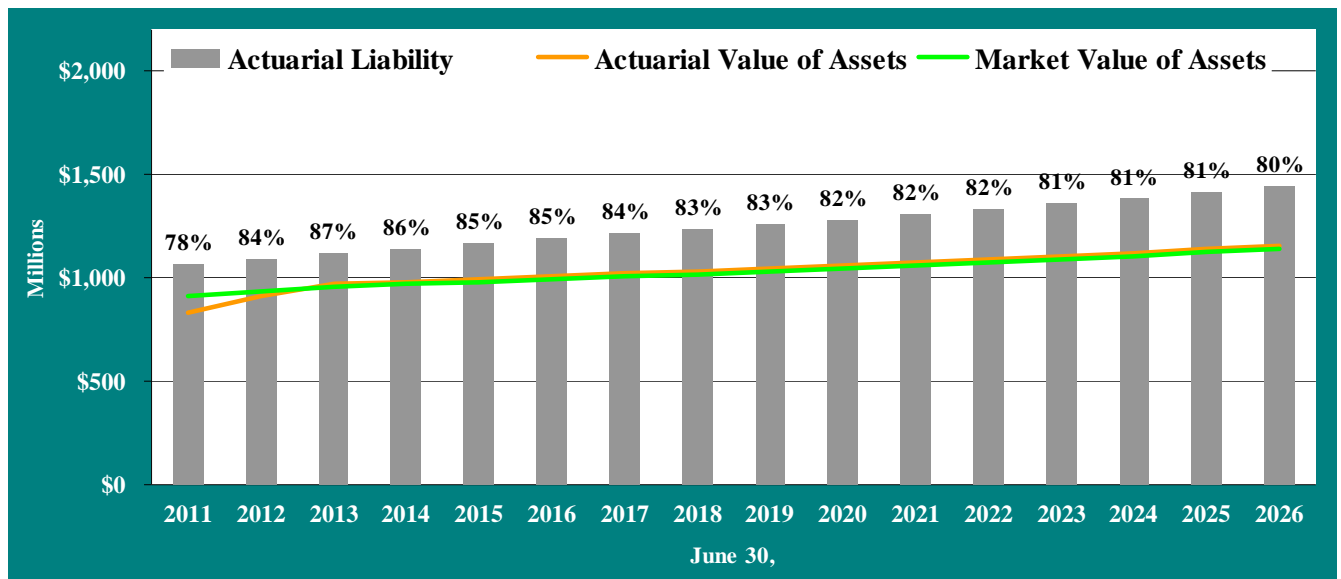
Projections With Asset Returns of 6.0%

The next two graphs show what the next 15 years would look like with a 6% annual return.

As you can see, the City's composite contribution rate would still decrease, but not to the same extent as in the previous two examples.



The System's funded level would increase to around 87% by 2013 due to the further recognition of the stored gains for fiscal years ending June 30, 2010 and June 30, 2011 and then slowly decrease to 80% funded over the long term. 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, 2011**

**SECTION I
BOARD SUMMARY**

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

**Summary of Principal Plan Results
Combined**

Valuation as of:	6/30/2010	6/30/2011	% Change
<u>Participant Counts</u>			
Actives	3,915	3,837	(2.0%)
Leave of Absence	35	30	(14.3%)
Terminated Vesteds	924	932	0.9%
In Pay Status	<u>3,271</u>	<u>3,325</u>	1.7%
Total	8,145	8,124	(0.3%)
Annual Salaries of Active Members	\$ 175,178,794	\$ 170,921,920	(2.4%)
Annual Retirement Allowances	\$ 63,375,884	\$ 65,346,171	3.1%
<u>Assets and Liabilities</u>			
Actuarial Accrued Liability	\$ 1,046,761,544	\$ 1,063,973,994	1.6%
Assets for Valuation Purposes	<u>817,698,124</u>	<u>831,975,004</u>	1.7%
Unfunded Actuarial Liability	\$ 229,063,420	\$ 231,998,990	
Funding Ratio	78.12%	78.20%	
Present Value of Accrued Benefits	\$ 965,415,826	\$ 984,526,304	2.0%
Market Value of Assets	<u>779,403,651</u>	<u>911,278,371</u>	16.9%
Unfunded FASB Accrued Liability	\$ 186,012,175	\$ 73,247,933	
Accrued Benefit Funding Ratio	80.73%	92.56%	
<u>City Contributions as a % of Payroll</u>			
	Fiscal Year 2011	Fiscal Year 2012	
Normal Cost Contribution	12.28%	12.07%	
Unfunded Actuarial Liability Contribution	<u>12.52%</u>	<u>13.04%</u>	
Total Contribution	24.80%	25.11%	

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION I
BOARD SUMMARY**

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

**Summary of Principal Plan Results
General Employees**

Valuation as of:	6/30/2010	6/30/2011	% Change
<u>Participant Counts</u>			
Actives	2,683	2,613	(2.6%)
Leave of Absence	12	14	16.7%
Terminated Vesteds	756	750	(0.8%)
In Pay Status	<u>2,194</u>	<u>2,228</u>	1.5%
Total	5,645	5,605	(0.7%)
Annual Salaries of Active Members	\$ 112,857,502	\$ 109,766,481	(2.7%)
Annual Retirement Allowances	\$ 33,386,845	\$ 34,438,093	3.1%
<u>Assets and Liabilities</u>			
Actuarial Accrued Liability	\$ 565,719,687	\$ 574,699,888	1.6%
Assets for Valuation Purposes	<u>458,026,387</u>	<u>465,839,301</u>	1.7%
Unfunded Actuarial Liability	\$ 107,693,300	\$ 108,860,587	
Funding Ratio	80.96%	81.06%	
Present Value of Accrued Benefits	\$ 520,093,719	\$ 530,138,847	1.9%
Market Value of Assets	<u>436,576,076</u>	<u>510,242,829</u>	16.9%
Unfunded FASB Accrued Liability	\$ 83,517,643	\$ 19,896,018	
Accrued Benefit Funding Ratio	83.94%	96.25%	
<u>City Contributions as a % of Payroll</u>			
	Fiscal Year 2011	Fiscal Year 2012	
Normal Cost Contribution	10.50%	10.28%	
Unfunded Actuarial Liability Contribution	<u>9.05%</u>	<u>9.41%</u>	
Total Contribution	19.55%	19.69%	

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
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**SECTION I
BOARD SUMMARY**

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

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

Valuation as of:	6/30/2010	6/30/2011	% Change
<u>Participant Counts</u>			
Actives	1,232	1,224	(0.6%)
Leave of Absence	23	16	(30.4%)
Terminated Vesteds	168	182	8.3%
In Pay Status	<u>1,077</u>	<u>1,097</u>	1.9%
Total	2,500	2,519	0.8%
Annual Salaries of Active Members	\$ 62,321,292	\$ 61,155,439	(1.9%)
Annual Retirement Allowances	\$ 29,989,040	\$ 30,908,078	3.1%
<u>Assets and Liabilities</u>			
Actuarial Accrued Liability	\$ 481,041,857	\$ 489,274,106	1.7%
Assets for Valuation Purposes	<u>359,671,737</u>	<u>366,135,703</u>	1.8%
Unfunded Actuarial Liability	\$ 121,370,120	\$ 123,138,403	
Funding Ratio	74.77%	74.83%	
Present Value of Accrued Benefits	\$ 445,322,107	\$ 454,387,457	2.0%
Market Value of Assets	<u>342,827,575</u>	<u>401,035,542</u>	17.0%
Unfunded FASB Accrued Liability	\$ 102,494,532	\$ 53,351,915	
Accrued Benefit Funding Ratio	76.98%	88.26%	
<u>City Contributions as a % of Payroll</u>			
	Fiscal Year 2011	Fiscal Year 2012	
Normal Cost Contribution	15.50%	15.28%	
Unfunded Actuarial Liability Contribution	<u>18.82%</u>	<u>19.54%</u>	
Total Contribution	34.32%	34.82%	

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, 2010 and June 30, 2011;
- 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 and are the actuary's best estimate of long-term asset values. They are used for evaluating the System's ongoing liability to meet its obligations.

Current methods employed by this System set the actuarial value equal to the market value of assets less 66 $\frac{2}{3}$ % of the investment gain/(loss) during the preceding year, less 33 $\frac{1}{3}$ % of the investment gain/(loss) during the second preceding year.

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, 2011

SECTION II
ASSETS

Statement of Assets at Market Value		
	June 30, 2010¹	June 30, 2011
<u>Assets</u>		
Cash and Short-Term Investments	\$ 5,181,457	\$ 7,362,617
Receivables		
Contributions from the City of Norfolk	\$ 35,515,472	\$ 42,828,228
Accrued Investment Income	1,271,622	1,313,684
Accounts Receivable	67,061	4,378
Due from Broker for Securities Sold	5,167,617	1,529,938
Total	<u>\$ 42,021,772</u>	<u>\$ 45,676,228</u>
Investments, at Fair Value		
United States Treasury securities	\$ 23,895,431	\$ 4,794,384
Fixed Income Securities	104,434,295	103,412,599
Equity Securities	5,028,797	2,866,084
Balanced Comingled Funds	624,959,879	752,679,135
Total	<u>\$ 758,318,402</u>	<u>\$ 863,752,202</u>
Total Assets	\$ 805,521,631	\$ 916,791,047
<u>Liabilities</u>		
Accounts Payable	\$ 358,349	\$ 369,131
Due to Broker for Securities Purchased	25,759,631	5,143,545
Total Liabilities	<u>\$ 26,117,980</u>	<u>\$ 5,512,676</u>
Net Assets Available for Benefits	\$ 779,403,651	\$ 911,278,371

¹ Assets as of June 30, 2010 were recategorized as shown in the June 30, 2011 financial statement.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION II
ASSETS**

Changes in Market Values	
Value of Assets - June 30, 2010	\$ 779,403,651
<u>Additions</u>	
Contributions	
Employer Contributions	\$ 42,828,229
Employee Contributions	140,524
Total	\$ 42,968,753
Investment Income:	
Net Appreciation (Depreciation) in Fair Value of Investments	\$ 145,260,269
Interest	6,614,336
Dividends	4,568,353
Other	247,216
Total Investment Income	\$ 156,690,174
Investment Expenses	\$ (1,361,453)
Net Income from Investing Activities	\$ 155,328,721
Total Additions	\$ 198,297,474
<u>Deductions</u>	
Benefits Paid directly to Participants	\$ (62,207,210)
Return of Contributions	(16,685)
Beneficiary Payments	(3,632,400)
Administrative Fees	(566,459)
Total Deductions	\$ (66,422,754)
<u>Total</u>	
Net Increase/(Decrease)	\$ 131,874,720
Total	\$ 911,278,371

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**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 taking the market value of assets less 66 2/3% of the investment gain (loss) during the preceding year, less 33 1/3% of the investment gain (loss) during the second preceding year. The table below illustrates the calculation of actuarial value of assets for the June 30, 2011 valuation. The allocation of the actuarial value of assets to the two plans can be seen on the following page.

Market Value Gain/(Loss)	
Value of Assets - June 30, 2010	\$ 779,403,651
Employer Contributions	42,828,229
Employee Contributions	140,524
Benefit Payments	(65,856,295)
Expected Return at 7.5%	<u>55,990,932</u>
Expected Value at June 30, 2011	\$ 812,507,041
Actual Value at June 30, 2011	911,278,371
Investment Gain/(Loss)	\$ 98,771,330

Develop Excluded Gain/(Loss)		
	Total Gain/(Loss)	Excluded Portion
Exclude 66-2/3% of 2010 Gain/(Loss)	\$ 98,771,330	\$ 65,847,553
Exclude 33-1/3% of 2009 Gain/(Loss)	\$ 40,367,443	<u>\$ 13,455,814</u>
Total Excluded Gain/(Loss) for AVA Calculation		\$ 79,303,367

Actuarial Value of Assets	
1. Market Value of Assets - June 30, 2011	\$ 911,278,371
2. Total Gain/(Loss) excluded	\$ 79,303,367
3. Actuarial Value of Assets - June 30, 2011 (1) – (2)	\$ 831,975,004

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION II
ASSETS**

Allocation of Actuarial Value of Assets As of June 30, 2011			
	General Employees	Firefighters and Police	Total
1. Actuarial Value of Assets at June 30, 2010	\$ 458,026,387	\$ 359,671,737	\$ 817,698,124
2. Contributions (per financial statements)	21,637,151	21,331,601	42,968,752
3. Benefit Payments (allocated on the basis of FY 2011-expected payments)	(34,693,542)	(31,162,753)	(65,856,295)
4. Investment Earnings (based on 4.6% return)	<u>20,869,305</u>	<u>16,295,118</u>	<u>37,164,423</u>
5. Actuarial Value of Assets at June 30, 2011	\$ 465,839,301	\$ 366,135,703	\$ 831,975,004
6. Market Value of Assets at June 30, 2011 (used only for disclosure purposes)	\$ 510,242,829	\$ 401,035,542	\$ 911,278,371

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION II
ASSETS**

Investment Performance

The market value of assets (MVA) returned 20.2% during fiscal year 2011, which is more than the expected 7.5% return by 12.7%.

A return of 4.6% 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.

Annual Rates of Return		
Year Ending June 30,	Market Value	Actuarial Value
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%

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
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**SECTION II
ASSETS**

Projection of System's Benefit Payments and Contributions			
Fiscal Year Ending	Expected Benefit Payments	Expected City Contributions*	Expected Employee Contributions*
2012	\$ 71,113,000	\$ 42,828,000	\$ 327,000
2013	74,962,000	43,576,000	999,000
2014	78,618,000	38,175,000	1,617,000
2015	81,967,000	34,599,000	2,220,000
2016	85,109,000	34,543,000	2,812,000
2017	87,943,000	34,527,000	3,410,000
2018	90,429,000	34,534,000	3,998,000
2019	92,762,000	34,567,000	4,585,000
2020	95,027,000	34,653,000	5,184,000
2021	97,051,000	34,773,000	5,790,000

* Assumes contributions are made uniformly throughout the year.

Expected benefit payments are projected for the closed group valued at June 30, 2011. Projecting any further than 10 years using a closed-group would not yield reliable predictions due to the omission of new hires.

Expected City contributions are shown on a cash basis. That is, while the FY 2012 contribution amount was already booked for accounting purposes in FY 2011, it is being contributed in FY 2012. The FY 2013 contribution is based on a 2011 valuation rate of 25.11%. Expected contributions for FY 2013 and beyond are projected based on an assumed normal cost of 12.07%, a 20-year amortization of the unfunded, a closed 15-year amortization of the PSREP, and a 3.5% annual increase in the total covered payroll. Since the plan requires a 5% employee contribution rate for employees hired after October 5, 2010, we have included the anticipated employee contribution amount over the period as well. These projections do not include additional ad hoc COLAs which may be granted by the City Council in future years. The projections include the recognized portion of asset gains and losses incurred through the June 30, 2011 valuation date. The reduction in contributions anticipated for FY 2014 and FY 2015 are due to the asset smoothing method making further recognition of recent investment experience.

SECTION III LIABILITIES

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

- **Disclosure** of System liabilities at June 30, 2010 and June 30, 2011;
- Statement of **changes** in these liabilities during the year; and
- A **projection** of future liabilities.

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 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 Accrued Liability:** Used for funding calculations and GASB disclosures, 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
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**SECTION III
LIABILITIES**

Liabilities/Net (Surplus)/Unfunded Combined		
	June 30, 2010	June 30, 2011
Present Value of Benefits		
Active Participant Benefits	\$ 604,606,809	\$ 595,233,730
Retiree Benefits	604,069,773	623,405,690
Terminated Vested and Inactive Members	<u>33,418,875</u>	<u>35,426,156</u>
Present Value of Benefits (PVB)	\$ 1,242,095,457	\$ 1,254,065,576
Market Value of Assets (MVA)	\$ 779,403,651	\$ 911,278,371
Future Member contributions	0	3,580,225
Future City contributions	<u>462,691,806</u>	<u>339,206,980</u>
Total Resources	\$ 1,242,095,457	\$ 1,254,065,576
Employer Normal Cost ¹	\$ 21,509,838	\$ 20,627,795
Actuarial Accrued Liability		
Active Participant Benefits	\$ 409,272,896	\$ 405,142,148
Retiree Benefits	604,069,773	623,405,690
Terminated Vested and Inactive Members	<u>33,418,875</u>	<u>35,426,156</u>
Actuarial Accrued Liability (AAL)	\$ 1,046,761,544	\$ 1,063,973,994
Actuarial Value of Assets (AVA)	<u>817,698,124</u>	<u>831,975,004</u>
Net (Surplus)/Unfunded (AAL – AVA)	\$ 229,063,420	\$ 231,998,990
Present Value of Accrued Benefits		
Present Value of Accrued Benefits (PVAB)	\$ 965,415,826	\$ 984,526,304
Market Value of Assets (MVA)	<u>779,403,651</u>	<u>911,278,371</u>
Net (Surplus)/Unfunded (PVAB – MVA)	\$ 186,012,175	\$ 73,247,933

¹ Net of 5% mandatory employee contributions for new hires on or after October 5, 2010

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION III
LIABILITIES**

Liabilities/Net (Surplus)/Unfunded General Employees		
	June 30, 2010	June 30, 2011
Present Value of Benefits		
Active Participant Benefits	\$ 334,029,646	\$ 328,719,970
Retiree Benefits	306,739,311	316,114,760
Terminated Vested and Inactive Members	<u>25,888,228</u>	<u>26,856,824</u>
Present Value of Benefits (PVB)	\$ 666,657,185	\$ 671,691,554
Normal Cost ¹	\$ 11,850,038	\$ 11,285,065
Actuarial Accrued Liability		
Active Participant Benefits	\$ 233,092,148	\$ 231,728,304
Retiree Benefits	306,739,311	316,114,760
Terminated Vested and Inactive Members	<u>25,888,228</u>	<u>26,856,824</u>
Actuarial Accrued Liability (AAL)	\$ 565,719,687	\$ 574,699,888
Actuarial Value of Assets (AVA)	<u>458,026,387</u>	<u>465,839,301</u>
Net (Surplus)/Unfunded (AAL – AVA)	\$ 107,693,300	\$ 108,860,587
Present Value of Accrued Benefits		
Present Value of Accrued Benefits (PVAB)	\$ 520,093,719	\$ 530,138,847

¹ Net of 5% mandatory employee contributions for new hires on or after October 5, 2010

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION III
LIABILITIES**

Liabilities/Net (Surplus)/Unfunded Firefighters and Police		
	June 30, 2010	June 30, 2011
Present Value of Benefits		
Active Participant Benefits	\$ 270,577,163	\$ 266,513,760
Retiree Benefits	297,330,462	307,290,930
Terminated Vested and Inactive Members	<u>7,530,647</u>	<u>8,569,332</u>
Present Value of Benefits (PVB)	\$ 575,438,272	\$ 582,374,022
Normal Cost ¹	\$ 9,659,800	\$ 9,342,730
Actuarial Accrued Liability		
Active Participant Benefits	\$ 176,180,748	\$ 173,413,844
Retiree Benefits	297,330,462	307,290,930
Terminated Vested and Inactive Members	<u>7,530,647</u>	<u>8,569,332</u>
Actuarial Accrued Liability (AAL)	\$ 481,041,857	\$ 489,274,106
Actuarial Value of Assets (AVA)	<u>359,671,737</u>	<u>366,135,703</u>
Net (Surplus)/Unfunded (AAL – AVA)	\$ 121,370,120	\$ 123,138,403
Present Value of Accrued Benefits		
Present Value of Accrued Benefits (PVAB)	\$ 445,322,107	\$ 454,387,457

¹ Net of 5% mandatory employee contributions for new hires on or after October 5, 2010

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION III
LIABILITIES**

Changes in Liabilities

Each of the liabilities disclosed in the prior table 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.

	Present Value of Benefits	Actuarial Accrued Liability	Present Value of Accrued Benefits
Liabilities as of 6/30/2010	\$ 1,242,095,457	\$ 1,046,761,544	\$ 965,415,826
Liabilities as of 6/30/2011	\$ 1,254,065,576	\$ 1,063,973,994	\$ 984,526,304
Liability Increase/(Decrease)	\$ 11,970,119	\$ 17,212,450	\$ 19,110,478
Change Due to:			
Plan Amendments	\$ (1,624,482)	\$ (3,202,603)	\$ (1,596,933)
Assumption Change	-	-	-
Actuarial (Gain)/Loss	NC*	(12,889,233)	NC*
Benefits Accumulated and Other Sources	13,594,601	33,304,286	20,707,411

* NC = not calculated

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
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**SECTION IV
CONTRIBUTIONS**

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.

For this System, the funding scheme employed is the **Entry Age Actuarial Cost Method**. Under the 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 as follows. First, for a typical new entrant an individual 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 PSREP beginning June 30, 2005.

Actuarially Determined Rate (for GASB Disclosure)

The employer's normal cost rate for General employees is 10.28% and 15.28% for Firefighters and Police for the fiscal year beginning July 1, 2012. 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 unfunded actuarial liability net of the PSREP over 20 years.

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

Actuarially Determined Rate (For GASB Disclosure)		
	June 30, 2010	June 30, 2011
Normal Cost Rate	12.28%	12.07%
UAL Rate	<u>12.52%</u>	<u>13.04%</u>
Total City Rate	24.80%	25.11%

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

Rolling 20 and Payroll Growth	0.01%
Plan Changes	(0.18%)
Investment return (actuarial basis) less than assumed 7.5%	1.20%
Actuarial liability gains or losses	<u>(0.72%)</u>
Total City Rate net change	0.31%

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION IV
CONTRIBUTIONS**

Employees' Retirement System for the City of Norfolk		
Development of Actuarially Determined Contribution Rate Composite Rate		
	June 30, 2010 (expensed FY 2011) (paid FY 2012)	June 30, 2011 (expensed FY 2012) (paid FY 2013)
1. Actuarial Accrued Liability		
a. Active Employees	\$ 409,272,896	\$ 405,142,148
b. Retired Members	604,069,773	623,405,690
c. Vested Terminated Members	<u>33,418,875</u>	<u>35,426,156</u>
d. Total Present Value	\$ 1,046,761,544	\$ 1,063,973,994
2. Actuarial Value of Assets	<u>\$ 817,698,124</u>	<u>\$ 831,975,004</u>
3. Unfunded Actuarial Liability (UAL) (1) – (2)	\$ 229,063,420	\$ 231,998,990
4. Remaining UAL for PSREP	<u>\$ 14,452,750</u>	<u>\$ 13,899,394</u>
5. Remaining UAL for rolling amortization (3) – (4)	\$ 214,610,670	\$ 218,099,596
6. Active Member Payroll	\$ 175,178,794	\$ 170,921,920
7. Unfunded Liability Amortization Factor	10.5404	10.5404
8. Rolling component of UAL amortization (5) / (7) / (6)	11.62%	12.11%
9. Additional amortization for PSREP	0.90%	0.93%
10. Employer Contribution Results (GASB)		
a. Employer Normal Cost Rate	12.28%	12.07%
b. Amortization of UAL and PSREP (8) + (9)	<u>12.52%</u>	<u>13.04%</u>
c. Total Employer Contribution Rate June 30	24.80%	25.11%

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011

SECTION IV
CONTRIBUTIONS

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

**Development of Actuarially Determined Contribution Rate
General Employees**

	June 30, 2010 (expensed FY 2011) (paid FY 2012)	June 30, 2011 (expensed FY 2012) (paid FY 2013)
1. Actuarial Accrued Liability		
a. Active Employees	\$ 233,092,148	\$ 231,728,304
b. Retired Members	306,739,311	316,114,760
c. Vested Terminated Members	<u>25,888,228</u>	<u>26,856,824</u>
d. Total Present Value	\$ 565,719,687	\$ 574,699,888
2. Actuarial Value of Assets	<u>\$ 458,026,387</u>	<u>\$ 465,839,301</u>
3. Unfunded Actuarial Liability (UAL) (1) – (2)	\$ 107,693,300	\$ 108,860,587
4. Remaining UAL for PSREP	<u>NA</u>	<u>NA</u>
5. Remaining UAL for rolling amortization (3) – (4)	\$ 107,693,300	\$ 108,860,587
6. Active Member Payroll	\$ 112,857,502	\$ 109,766,481
7. Unfunded Liability Amortization Factor	10.5404	10.5404
8. Rolling component of UAL amortization (5) / (7) / (6)	9.05%	9.41%
9. Additional amortization for PSREP	NA	NA
10. Employer Contribution Results (GASB)		
a. Employer Normal Cost Rate	10.50%	10.28%
b. Amortization of UAL and PSREP (8) + (9)	<u>9.05%</u>	<u>9.41%</u>
c. Total Employer Contribution Rate June 30	19.55%	19.69%

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011

SECTION IV
CONTRIBUTIONS

**Employees' Retirement System
for the City of Norfolk
Development of Actuarially Determined Contribution Rate
Firefighters and Police**

	June 30, 2010 (expensed FY 2011) (paid FY 2012)	June 30, 2011 (expensed FY 2012) (paid FY 2013)
1. Actuarial Accrued Liability		
a. Active Employees	\$ 176,180,748	\$ 173,413,844
b. Retired Members	297,330,462	307,290,930
c. Vested Terminated Members	<u>7,530,647</u>	<u>8,569,332</u>
d. Total Present Value	\$ 481,041,857	\$ 489,274,106
2. Actuarial Value of Assets	<u>\$ 359,671,737</u>	<u>\$ 366,135,703</u>
3. Unfunded Actuarial Liability (UAL) (1) – (2)	\$ 121,370,120	\$ 123,138,403
4. Remaining UAL for PSREP	<u>\$ 14,452,750</u>	<u>\$ 13,899,394</u>
5. Remaining UAL for rolling amortization (3) – (4)	\$ 106,917,371	\$ 109,239,009
6. Active Member Payroll	\$ 62,321,292	\$ 61,155,439
7. Unfunded Liability Amortization Factor	10.5404	10.5404
8. Rolling component of UAL amortization (5) / (7) / (6)	16.28%	16.95%
9. Additional amortization for PSREP	2.54%	2.59%
10. Employer Contribution Results (GASB)		
a. Employer Normal Cost Rate	15.50%	15.28%
b. Amortization of UAL and PSREP (8) + (9)	<u>18.82%</u>	<u>19.54%</u>
c. Total Employer Contribution Rate June 30	34.32%	34.82%

SECTION V
ACCOUNTING STATEMENT INFORMATION

FASB ASC Topic No. 960 of the Financial Accounting Standards Board requires the System to disclose certain information regarding its funded status. Statement No. 25 of the Governmental Accounting Standards Board (GASB) establishes standards for disclosure of pension information by Public Employee Retirement Systems (PERS) and governmental employers in notes to financial statements and supplementary information.

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.

The GASB-25 actuarial accrued liability is the same as the actuarial liability amount calculated for funding purposes.

Both the present value of accrued benefits (FASB ASC Topic No. 960) and the actuarial accrued liability (GASB-25) are determined assuming that the Plan is ongoing and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities are discounted at the assumed valuation interest rate of 7.5% 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 requires the actuarial accrued liability be compared with the actuarial value of assets for funding purposes. The relevant amounts as of June 30, 2011 are exhibited in Table V-1. Then, Table V-2 reconciles the FASB ASC Topic No. 960 liabilities determined as of the prior valuation, June 30, 2010, to the liabilities as of June 30, 2011.

Tables V-3 through V-5 are exhibits to be used with the City CAFR report. Table V-3 are the Notes to Required Supplementary Information, Table V-4 is a history of gains and losses in Accrued Liability, and Table V-5 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, 2011**

**SECTION V
ACCOUNTING STATEMENT INFORMATION**

Table V-1 Accounting Statement Information Employees' Retirement System for the City of Norfolk		
	June 30, 2010	June 30, 2011
A. FASB ASC Topic No. 960		
1. Present Value of Benefits Accrued and Vested to Date		
a. Members Currently Receiving Payments	\$ 604,069,773	\$ 623,405,690
b. Vested Terminated Members	33,418,875	35,426,156
c. Active Members	<u>309,553,976</u>	<u>308,748,234</u>
d. Total PVVB	\$ 947,042,624	\$ 967,580,080
2. Present Value of Non-Vested Accrued Benefits for Active Members	18,373,202	16,946,224
3. Total Present Value of Accrued Benefits	\$ 965,415,826	\$ 984,526,304
4. Assets at Market Value	<u>779,403,651</u>	<u>911,278,371</u>
5. Unfunded Present Value of Accrued Benefits, But Not Less Than Zero	\$ 186,012,175	\$ 73,247,933
6. Ratio of Assets to Value of Benefits (4) / (3)	80.7%	92.6%
B. GASB No. 25 Basis		
1. Actuarial Liabilities		
a. Members Currently Receiving Payments	\$ 604,069,773	\$ 623,405,690
b. Vested Terminated Members	33,418,875	35,426,156
c. Active Members	<u>409,272,896</u>	<u>405,142,148</u>
d. Total PVVB	\$ 1,046,761,544	\$ 1,063,973,994
2. Actuarial Value of Assets	817,698,124	831,975,004
3. Unfunded Actuarial Liability	\$ 229,063,420	\$ 231,998,990
4. Ratio of Actuarial Value of Assets to Actuarial Liability	78.1%	78.2%

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION V
ACCOUNTING STATEMENT INFORMATION**

Table V-2 Statement of Changes in Total Actuarial Present Value of All Accrued Benefits	
	Accumulated Benefit Obligation (FASB ASC Topic No. 960)
Actuarial Present Value of Accrued Benefits as of June 30, 2010	\$ 965,415,826
Increase/(Decrease) During Years Attributable to:	
Passage of Time	69,936,576
Benefit Paid – FY 2011	(65,856,295)
Plan Amendments	(1,596,933)
Benefits Accrued, Other Gains/Losses	<u>16,627,130</u>
Net Increase/(Decrease)	19,110,478
Actuarial Present Value of Accrued Benefits as of June 30, 2011	\$ 984,526,304

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION V
ACCOUNTING STATEMENT INFORMATION**

**Table V-3
NOTES TO REQUIRED SUPPLEMENTARY INFORMATION**

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.

Valuation date	June 30, 2011
Actuarial cost method	Entry Age Normal Cost Method
Amortization method	Level Dollar Open, except for PSREP which is amortized over a closed 20-year period Commencing July 1, 2005
Amortization period	19.5 Years
Asset valuation method	3-Year Smoothed Market
Actuarial assumptions:	
Investment rate of return*	7.5%
Projected salary increases*	Average salary increases of 5.24% for general employees and 5.67% for public safety employees. Based on rates which vary by year-of-service and are compounded annually.
*Includes inflation at	3.5%

The actuarial assumptions used have been recommended by the actuary and adopted by the System's Board of Trustees based on the most recent review of the System's experience, completed in 2007. However, retirement rates for Firefighters and Police were modified to reflect the change in mandatory retirement age from age 62 to 65.

The rate of City contributions to the System is composed of the normal cost and amortization of the unfunded actuarial accrued liability. The normal cost is a level percent of payroll cost which will pay for projected benefits at retirement for the average plan participant. The actuarial accrued liability is that portion of the present value of projected benefits that will not be paid for by future employer normal costs. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial accrued liability.

THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-4
ANALYSIS OF FINANCIAL EXPERIENCE
Gain and Losses in Accrued Liability During Years Ended June 30
Resulting from Differences Between Assumed Experience and Actual Experience
Gain (or Loss) for Year ending June 30,

Type of Activity	2006	2007	2008	2009	2010	2011
Investment Experience	\$ (9,559,180)	\$11,169,481	\$(22,682,482)	\$(87,432,722)	\$(104,166,163)	\$(21,698,596)
Combined Liability Experience	<u>7,185,050</u>	<u>2,559,923</u>	<u>8,284,079</u>	<u>14,859,619</u>	<u>18,097,499</u>	<u>12,889,233</u>
Gain (or Loss) During Year from Financial Experience	\$(2,414,130)	\$13,729,404	\$(14,398,403)	\$(72,573,103)	\$(86,068,664)	\$(8,809,363)
Non-Recurring Items	<u>(27,774,121)</u>	<u>(1,450,971)</u>	<u>(10,545,384)</u>	<u>-</u>	<u>-</u>	<u>3,202,603</u>
Composite Gain (or Loss) During Year	\$(30,188,251)	\$12,278,433	\$(24,943,787)	\$(72,573,103)	\$(86,068,664)	\$(5,606,760)

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**SECTION V
ACCOUNTING STATEMENT INFORMATION**

**Table V-5
SOLVENCY TEST
Aggregate Accrued Liabilities For**

Valuation Date July 1,	(1) Active Member Contributions	(2) Retirees Vested Terms, Beneficiaries	(3) Active Members (Employer Financed Portion)	Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets		
					(1)	(2)	(3)
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%

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**APPENDIX A
MEMBERSHIP INFORMATION**

Summary of Membership Data as of June 30, 2011

Plan	Active Members (excluding those on Leave of Absence)			
	Count	Average Age	Average Service	Average Salary
General	2,613	48.0	12.6	\$42,008
Firefighters and Police	<u>1,224</u>		<u>11.9</u>	<u>49,964</u>
Total System	3,837	<u>39.7</u> 45.3	12.4	\$44,546

	Inactive Members		Average Annual Benefit
	Count	Annual Benefit	
Service Retirements			
General	1,696	\$29,349,184	\$17,305
Firefighters and Police	<u>805</u>	<u>26,547,231</u>	<u>32,978</u>
Total	2,501	\$55,896,415	\$22,350
Contingent Annuitants			
General	320	\$2,312,565	\$7,227
Firefighters and Police	<u>157</u>	<u>1,553,968</u>	<u>9,898</u>
Total	477	\$3,866,533	\$8,106
Disableds			
General	212	\$2,776,345	\$13,096
Firefighters and Police	<u>135</u>	<u>2,806,879</u>	<u>20,792</u>
Total	347	\$5,583,224	\$16,090
Vested Former Members ¹			
General	750	\$4,171,440	\$5,562
Firefighters and Police	<u>182</u>	<u>1,541,204</u>	<u>8,468</u>
Total	932	\$5,712,644	\$6,129

¹ Benefits are payable at age 60 for General employees and age 55 for Firefighters and Police.

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**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	31	1	0	0	0	0	0	0	0	0	52
25 to 29	31	123	26	1	0	0	0	0	0	0	0	181
30 to 34	18	87	62	16	0	0	0	0	0	0	0	183
35 to 39	12	83	80	46	6	0	0	0	0	0	0	227
41 to 44	20	78	90	63	29	14	4	0	0	0	0	298
45 to 49	15	99	81	78	51	54	37	2	0	0	0	417
50 to 54	13	57	89	102	42	53	63	41	2	0	0	462
55 to 59	5	42	59	53	51	48	63	64	38	5	5	428
60 to 64	2	30	34	36	26	39	26	33	38	9	9	273
65 to 69	1	4	10	13	11	6	11	5	3	8	8	72
70 & up	0	1	1	5	2	2	4	1	1	3	3	20
Total	137	635	533	413	218	216	208	146	82	25	25	2,613

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	460,725	803,054	21,965	0	0	0	0	0	0	0	0	1,285,744
25 to 29	986,464	3,918,530	790,737	24,246	0	0	0	0	0	0	0	5,719,977
30 to 34	578,353	2,944,327	2,296,292	505,519	0	0	0	0	0	0	0	6,324,491
35 to 39	460,449	2,946,458	3,196,797	1,832,684	216,390	0	0	0	0	0	0	8,652,777
41 to 44	836,840	2,910,826	3,556,317	2,720,463	1,354,531	594,005	190,636	0	0	0	0	12,163,618
45 to 49	625,962	3,879,207	2,975,694	3,271,707	2,213,551	2,548,311	1,668,735	78,888	0	0	0	17,262,054
50 to 54	460,127	2,069,098	3,349,778	4,266,247	1,847,956	2,540,287	3,095,565	2,131,137	141,030	0	0	19,901,226
55 to 59	211,172	1,804,276	2,313,801	2,618,303	2,146,537	2,483,661	3,542,486	3,500,348	1,988,842	286,930	0	20,896,356
60 to 64	88,190	1,062,509	1,483,758	1,773,574	1,296,047	1,977,610	1,238,951	1,585,417	2,214,068	492,263	0	13,212,387
65 to 69	37,237	207,868	500,809	522,248	666,269	304,086	499,025	217,015	169,827	459,864	0	3,584,248
70 & up	0	29,099	34,951	127,510	84,118	60,580	161,028	87,227	47,912	131,178	0	763,602
Total	4,745,519	22,575,252	20,520,899	17,662,502	9,825,398	10,508,541	10,396,426	7,600,032	4,561,678	1,370,235	1,370,235	109,766,481

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**APPENDIX A
MEMBERSHIP INFORMATION**

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

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	36	0	0	0	0	0	0	0	0	0	51
25 to 29	20	125	54	0	0	0	0	0	0	0	0	199
30 to 34	11	51	93	19	0	0	0	0	0	0	0	174
35 to 39	4	38	65	54	27	1	0	0	0	0	0	189
41 to 44	5	23	46	52	68	26	1	0	0	0	0	221
45 to 49	1	11	18	25	37	63	49	2	0	0	0	206
50 to 54	0	1	6	8	11	27	29	27	1	0	0	110
55 to 59	0	0	0	2	4	11	19	12	12	0	0	60
60 to 64	0	0	1	1	2	1	3	2	4	0	0	14
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0	0
Total	56	285	283	161	149	129	101	43	17	0	0	1,224

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	555,142	1,418,217	0	0	0	0	0	0	0	0	0	1,973,359
25 to 29	714,749	4,980,290	2,322,318	0	0	0	0	0	0	0	0	8,017,357
30 to 34	398,144	2,076,395	4,184,711	988,891	0	0	0	0	0	0	0	7,648,140
35 to 39	138,976	1,533,220	2,954,633	2,832,239	1,437,341	45,892	0	0	0	0	0	8,942,301
41 to 44	181,473	900,195	2,022,477	2,771,437	3,775,555	1,669,170	65,964	0	0	0	0	11,386,271
45 to 49	39,894	443,002	809,224	1,232,633	1,987,043	3,883,940	3,275,250	138,584	0	0	0	11,809,570
50 to 54	0	39,390	267,041	389,823	556,896	1,684,499	1,773,578	1,792,094	94,040	0	0	6,597,360
55 to 59	0	0	0	102,836	216,475	657,006	1,133,480	962,890	852,454	0	0	3,925,141
60 to 64	0	0	25,000	25,000	80,850	49,419	163,866	148,108	363,699	0	0	855,941
65 to 69	0	0	0	0	0	0	0	0	0	0	0	0
70 & up	0	0	0	0	0	0	0	0	0	0	0	0
Total	2,028,377	11,390,708	12,585,404	8,342,858	8,054,160	7,989,926	6,412,137	3,041,675	1,310,193	0	0	61,155,439

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS**

A. Actuarial Assumptions

Interest Rate

7-1/2% per annum, compounded annually.

Mortality

Pre-Retirement RP-2000 Employee Mortality
Health Annuitants: RP-2000 Healthy Annuitant Mortality
Disableds: RP-2000 Disability Mortality

The extent of mortality improvement included in these tables is not certain. We are scheduled to perform a period experience review in the coming year and will provide information on the mortality improvement both prior to the valuation date and the margin for continued mortality improvement once we have finalized this review.

Salary Increase

Representative values are as follows:

Service	Annual Rate of Salary Increase	
	General	Firefighters and Police
0	7.25 %	12.50 %
1	7.00	10.00
2	6.75	7.50
3	6.50	7.00
4	6.25	6.50
5	6.20	6.45
10	5.88	6.12
15	5.29	5.46
20	4.69	4.81
25	4.10	4.15
30	3.50	3.50

Withdrawal

Service	General	Firefighters and Police
0	15.00 %	8.25 %
1	13.00	7.75
2	11.00	7.00
3	9.00	6.00
4	7.00	5.00
5	5.00	4.25
10	3.00	2.80
15	2.00	1.00
20	1.70	1.00
25	1.00	1.00
30	1.00	1.00

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS**

Disability

Age	General*		Firefighters and Police	
	Male	Female	Accidental	Ordinary
20	0.13%	0.09%	0.03%	0.04%
25	0.15	0.11	0.05	0.06
30	0.18	0.12	0.07	0.09
35	0.29	0.20	0.10	0.12
40	0.44	0.30	0.25	0.18
45	0.68	0.47	0.47	0.32
50	1.01	0.69	0.79	0.55
54	1.32	0.90	1.06	0.74
55	1.41	0.96	1.13	0.79
59	2.05	1.40	1.49	1.03

* 7.5% of disabilities are assumed to be accidental

Retirement

General:

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

**THE EMPLOYEES' RETIREMENT SYSTEM FOR THE CITY OF NORFOLK
ACTUARIAL VALUATION AS OF JUNE 30, 2011**

**APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS**

Firefighters and Police:

Age	Early Retirement	Normal Service Retirement
35	5.00%	0.00%
40	5.00	20.00
45	5.00	20.00
50	3.00	20.00
51		20.00
52		20.00
53		20.00
54		20.00
55		25.00
56		25.00
57		25.00
58		25.00
59		25.00
60		25.00
61		25.00
62		25.00
63		25.00
64		25.00
65		100.00

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 0.90% for General employees and 1.10% for Firefighters and Police is applied to retirement benefits for active employees to account for unused sick leave balances at time of retirement.

Marital Status

65% of the general employees and 80% of the firefighters and police are assumed to be married, with males three years older than females.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

Changes in Assumptions

Retirement rates for Firefighters and Police were modified to reflect the change in mandatory retirement age from age 62 to 65.

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 remaining UAL is being amortized over an open period of 20 years. Both rates are developed using a level dollar amortization method.

Asset Valuation Method

The valuation assets are determined as the market value less (1) 66-2/3% of investment gain/(loss) during the preceding year, less (2) 33-1/3% of investment gain/(loss) during the second preceding year. For the purpose of this calculation, the gain/(loss) is defined as the difference between the actual and the expected return (based on the valuation interest rate) on the market value of assets during the year. This method was adopted as of June 30, 2004. To transition into this method, the valuation assets as of June 30, 2004 were set equal to the market value. The valuation assets on June 30, 2005 reflected the market value on that date less 66-2/3% of investment gain/(loss) during the preceding 12 months. The transition was complete as of June 30, 2006, when the valuation assets were equal to the market value on that date less 66-2/3% of investment gain/(loss) during the preceding year, less 33-1/3% of investment gain/(loss) during the second preceding year.

Changes in Actuarial Methods

None.

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 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 paramedic employees.

Paramedic employees, 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.

2. Normal Service Retirement

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

1/50 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.

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

1.75% of average final compensation for each year of creditable service up to a maximum of 35 years for general employees.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

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 1/4 of 1% for each month commencement date precedes the normal retirement date for general employees and 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 his contributions made prior to July 1, 1972 with interest, if any, in the System until normal service retirement date.

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.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

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

66-2/3% 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 his earnable compensation during the year immediately preceding his death is payable. If a member dies in service after the earlier of completion of ten 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

APPENDIX C
SUMMARY OF PLAN PROVISIONS

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

50% 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 his designated recipient or estate. If there is not a spouse, a lump sum benefit equal to 50% of his earnable compensation during the year immediately preceding his 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 System.

9. Death Benefit After Retirement

Eligibility

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

APPENDIX C
SUMMARY OF PLAN PROVISIONS

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 his 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, his contributions, if any, with not less than one-half of the interest credited. The member may elect, prior to the commencement of his or her retirement allowance, to receive an annuity which is the actuarial equivalent of his or her accumulated contributions.

11. Normal and Optional Forms of Benefits

Normal Life

Life Annuity

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 will be payable.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

12. Contributions

By Members	Employees hired after October 5, 2010 have a contribution rate of 5% of pay.
By City	Annual contributions actuarially computed to be required to cover the cost of benefits of the System, less member contributions.

13. Changes in Plan Provisions

The mandatory retirement age for Firefighters and Police was increased from age 62 to 65. Members hired after October 5, 2010 are required to contribute 5% of pay.