

# City of Marathon Firefighters' Pension Plan and Trust Fund

October 1, 2015
Actuarial Valuation Report

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At the request of the plan sponsor, this report summarizes the City of Marathon Firefighters' Pension Plan and Trust Fund as of October 1, 2015. The purpose of this report is to communicate the following results of the valuation:

- Determine Funded Status: and
- Determine Recommended Contribution for the fiscal year October 1, 2016 through September 30, 2017

This report has been prepared in accordance with the applicable Federal and State laws. Consequently, it may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The results in this report were prepared using information provided to us by other parties. The census information has been provided to us by the employer. Asset information has been provided to us by the employer. We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we have made assumptions we believe to be reasonable. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report. A summary of the data used in the valuation is included in this report.

The actuarial assumptions and methods were chosen by the Board. In our opinion, all actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- plan experience differing from that anticipated by the economic or demographic assumptions;
- · changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- changes in plan provisions or applicable law. We did not perform an analysis of the potential range of future measurements due to the limited scope of our
  engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

This actuarial valuation and/or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.



With respect to reporting standards for defined benefit retirement plans or systems contained in Section 112.664(1), F.S., the actuarial disclosures required under this section were prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, meet the requirements of Section 112.664 (1), Florida Statutes, and Rule 60T-1.0035, Florida Administrative Code.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report. To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States and are available for any questions.

Nyhart

David D. Harris, ASA, EA, MAAA Enrolled Actuary No. 14-5609

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Kimberly Lovingood, FSA, EA, MAAA Enrolled Actuary No. 14-7899

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April 1, 2016 Date

Copies of this Report are to be furnished to the Division of Retirement within 60 days of receipt from the actuary at the following addresses:

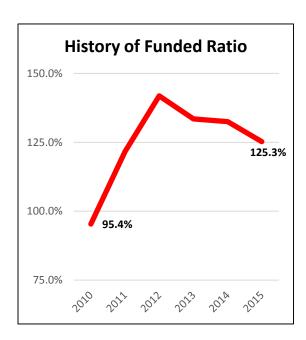
Ms. Sarah Carr Benefits Administrator Municipal Police Officers' & Firefighters' Trust Funds Division of Retirement Post Office Box 3010 Tallahassee, FL 32315-3010 Mr. Keith Brinkman
Bureau Chief, Bureau of Local Retirement Systems
Florida Department of Management Services
Division of Retirement
Department of Management Services
P. O. Box 9000
Tallahassee, FL 32315-9000



# **Summary Results**

The actuarial valuation's primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level percentage of pay.

	October 1, 2014	October 1, 2015
Funded Status Measures		
Accrued Liability	\$3,481,081	\$4,193,170
Actuarial Value of Assets	4,612,861	5,252,172
Unfunded Accrued Liability	\$(1,131,780)	\$(1,059,002)
Funded Percentage (AVA)	132.5%	125.3%
Funded percentage (MVA)	161.4%	138.2%
Cost Measures		
Recommended Contribution For Next Fiscal Year	\$123,894	\$186,183
Recommended Contribution (as a percentage of payroll)	8.8%	11.9%
Asset Performance		
Market Value of Assets (MVA)	\$5,451,245	\$5,796,422
Actuarial Value of Assets (AVA)	\$4,612,861	\$5,252,172
Actuarial Value/Market Value	82.1%	90.6%
Participant Information		
Active Members	24	25
Terminated Vested Members	2	2
Retirees, Beneficiaries, and Disabled Members	0	0
Inactive Due a Refund	1	4
Total	27	31
Expected Payroll	\$1,412,755	\$1,562,642
Total Payroll	\$1,358,418	\$1,502,540





## **Changes Since Prior Valuation and Key Notes**

There have been no plan provision changes or assumption changes since the prior year.

The City should plan to make the following contributions for the fiscal year starting October 1, 2016:

On or Before	Amount (1)
January 1, 2017	\$47,733
April 1, 2017	\$47,733
July 1, 2017	\$47,733
September 30, 2017	\$47,733

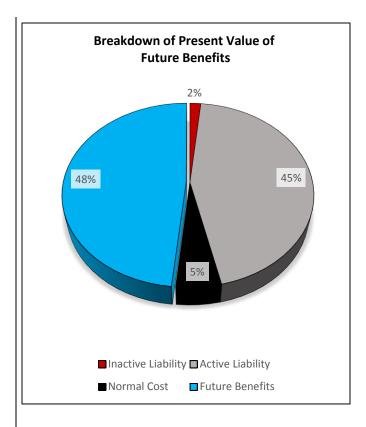
<sup>&</sup>lt;sup>(1)</sup> These amounts assume that State Premium Tax Revenues received during the fiscal year is at least \$176,093. Any shortage in State Premium Tax Revenues will need to be made up for by additional contributions from the City.



## **Present Value of Future Benefits**

The Present Value of Future Benefits represents the current future benefits payable to the participant.

	October 1, 2015
Present Value of Future Benefits	
Active members	
Retirement	\$8,884,268
Disability	0
Death	0
Termination	0
Refund of contributions	0
Total active	\$8,884,268
nactive members	
Retired members	\$0
DROP members	0
Beneficiaries	0
Disabled members	0
Terminated vested members	146,760
Total inactive	\$146,760
Fotal	\$9,031,028
Present value of future payrolls	\$15,075,428

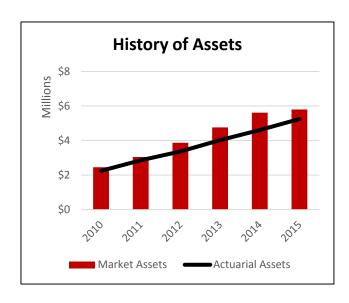




## **Asset Information**

The amount of assets backing the pension promise is the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

	October 1, 2015
Market Value Reconciliation	
Market value of assets, beginning of prior year	\$5,619,680
Employer contributions (incl. discounted accrued items)	143,206
Member contributions	79,753
Non-employer contributions	176,093
Investment income, net expenses	(10,345)
Benefit payments and refunds	(16,003)
Administrative expenses	(27,473)
Other expenses	0
Market value of asset, beginning of current year	\$5,964,911
Return on Market Value	(0.2%)
Accumulated Reserve	\$(165,909)
Prepaid Reserve	\$(2,580)
Market value of asset available	\$5,796,422
Actuarial value of assets	
Value at beginning of current year	\$5,252,172





# **Asset Information (continued)**

Plan Assets are used to develop funded percentages and contribution requirements

- I an interest and about to develop randou personages and contribution requirements	October 1, 2015
Actuarial value of assets beginning of prior year	\$4,612,861
2. Market value of assets, beginning of current year	\$5,964,911
3. Investment return on market value	\$(10,345)
<ul> <li>4. Phase in of investment return</li> <li>(a) Current year [(80% x (\$10,345)]</li> <li>(b) First prior year [60% x \$417,331]</li> <li>(c) Second prior year [40% x \$490,533]</li> <li>(d) Third prior year [20% x 529,568]</li> <li>(e) Total phase-in</li> </ul>	(\$8,276) 250,399 196,213 105,914 \$544,250
5. Preliminary actuarial value of assets, beginning of current year [(2) - (5e)]	\$5,420,661
6. 80% Market value of assets	\$4,771,929
7. 120% Market value of assets	\$7,157,893
8. Adjusted actuarial value of assets	\$5,420,661
9. Reserved assets	(\$168,489)
10. Final actuarial value of assets [(8) + (9)]	\$5,252,172
11. Return on actuarial value of assets	6.1%



## **Reconciliation of Gain/Loss**

	October 1, 2015
Liability (gain)/loss	
Present value of future benefits	\$8,080,633
Present value of employee contributions	(683,637)
Expected employee contribution	62,564
Benefit payments	(16,003)
Interest	558,878
Expected liability	\$8,002,435
Actual liability	\$8,304,027
Liability (gain)/loss	\$301,592
Asset (gain)/loss	
Actuarial value of assets, beginning of prior year	\$4,612,861
Contributions	399,052
Benefit payments and expenses	(43,476)
Expected investment return	350,794_
Expected actuarial value of assets, beginning of current year	\$5,319,231
Actual actuarial value of assets, beginning of current year	\$5,252,172
Asset (gain)/loss	\$67,059
Total (gain)/loss	\$368,651

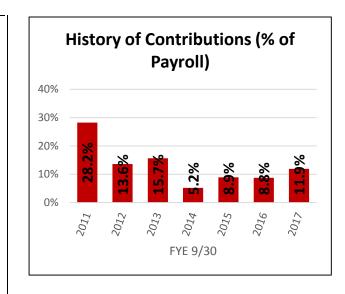


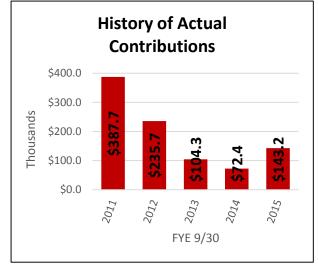
## **Development of Recommended Contribution**

The actuarial determined contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

## October 1, 2015

Present value of future benefits	\$9,031,028
2. Actuarial value of assets	5,252,172
Present value of future member contributions	727,002
4. Present value of future normal Cost [(1)-(2)-(3)]	\$3,051,854
5. Present value of future payroll	\$15,075,428
6. Normal cost actual rate [(4)/(5)]	20.24%
7. Administrative expenses	\$18,002
8. Expected payroll	\$1,502,540
9. Applicable interest	7.50%
10. Normal cost [(6)x(8)+(7)]	\$322,175
11. Interest to estimated payment date	\$24,163
12. Adjustment for quarterly contributions	\$15,938
13. Total recommended contribution as of end of year [(10)+(11)]	\$362,276
14. Expected State Contribution	\$176,093
15. City recommended contribution [(13)-(14)]	\$186,183
16. As a percentage of expected payroll	11.91%
17. As a percentage of total payroll	12.39%



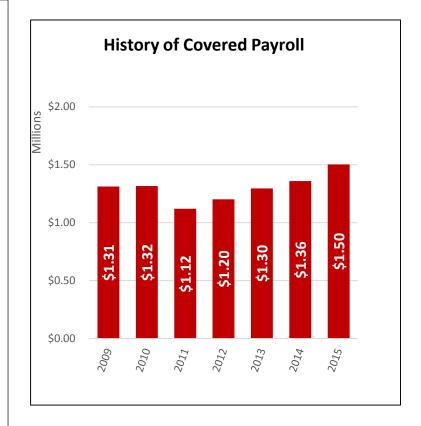




## **Demographic Information**

The foundation of a reliable actuarial report is the member information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

	October 1, 2015	
Member Counts		
Active Members	25	
Retired Members	0	
Beneficiaries	0	
Disabled Members	0	
Terminated Vested Members	2	
Inactive Members Due A Refund	4	
Total	31	
Active Participant Demographics		
Average Age	35.65	
Average Service	6.32	
Average Compensation	\$60,102	
Payroll	\$1,502,540	





# **Demographic Information (continued)**

	October 1, 2015
Retired Member Statistics	
Average Age	0.00
Average Monthly Benefit	\$0
Beneficiary Statistics	
Average Age	0.00
Average Monthly Benefit	\$0
Disabled Member Statistics	
Average Age	0.00
Average Monthly Benefit	\$0
Terminated Member Statistics	
Average Age	39.37
Total Benefit	\$1,197
Inactive Due A Refund Statistics	
Average Age	31.34
Total Refunds Due	\$27,693



# **Participant Reconciliation**

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Totals
Prior Year	24	3	0	0	0	27
Active To Refund Due To Refund	(4) (1)	4 (1)				0 (2)
Additions	6					6
Current Year	25	6 <sup>1</sup>	0	0	0	31



<sup>&</sup>lt;sup>1</sup> 4 of the terminated vested reported are due an employee contribution refund

# **Active Participant Schedule**

Active participant information grouped based on age and service.

		Years of Service									
Age Group	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	Tot
Under 25											l '
25 to 29	3	1	3								
30 to 34	1	2	3								(
35 to 39			5	1							(
40 to 44	1			2							:
45 to 49				1							1
50 to 54		1									
55 to 59				1							_ ′
60 to 64											(
65 to 69											(
70 & up											(
Total	5	4	11	5	0	0	0	0	0	0	2



#### **Plan Status**

Established October 1, 2005

## **Eligibility for Participation**

Any full time firefighter. Fire Chief may elect to participate within 10 days of employment.

#### **Accrual of Benefits**

The accrued benefit is determined as 3.50% of Average Final Compensation multiplied by Credited Service as of date of determination.

#### **Benefits**

### **Normal Retirement**

Eligibility Attainment of age 55 and 6 Years of Credited Service, or 20 Years of Credited Service.

Benefit Unreduced Accrued Benefit payable immediately.

## **Early Retirement**

Eligibility Attainment of Age 50 and 6 years of Credited Service.

Benefit Accrued Benefit reduced 3% for each year by which the member's early retirement date precedes normal retirement.

#### Late Retirement

Eligibility Participation continues after normal retirement date.

Benefit Accrued retirement benefit

## Death before Retirement In Line of Duty

Eligibility Death during performance of duties.

Benefit Beneficiary receives a pension equal to 50% of the member's monthly compensation. If member is vested, beneficiary receives not less

than Accrued Benefit reduced for timing of receipt.



## Death before Retirement Not In Line of Duty

Eligibility Death not during performance of duties.

Benefit Beneficiary receives the Accrued Benefit payable to the member beginning on the participant's Early or Normal Retirement Date; If not

vested, beneficiary receives refund of member's accumulated contributions.

#### **Termination Benefit**

Eligibility Fully vested after completion of 6 years of Credited Service.

Benefit Accrued Benefit payable at the participants Early or Normal Retirement Date. For termination prior to 6 years of credited service, refund

of accumulated contributions.

#### **Disability Benefit In Line of Duty**

Eligibility Immediately upon permanent disability

Benefit Accrued retirement benefit based on Average Compensation and Credited Service at disability or 65% of Average Final Compensation

if larger. Reduced by 100% Social Security disability benefit and workers' compensation benefits, not reduced below Average Final

Compensation. Benefit terminates upon the earlier of death, recovery, or Normal Retirement eligibility.

## **Disability Benefit Not In Line of Duty**

Eligibility Completion of 8 years of Credited Service.

Benefit Accrued retirement benefit determined as of disability date offset by 100% of Social Security disability benefits and workers'

compensation, but not reduced below 25% of Average Final Compensation. If permanently disabled prior to eligibility, refund of

accumulated employee contributions.

## Compensation

Compensation

An employees' base pay, including pick-up contributions

Average Final Compensation

Average Compensation during the highest 5 years of credited service



#### **Credited Service**

For Vesting and Benefit Accrual

Continuous full-time service credited, from most recent date of employment, during which the required Contributions were made. Participant may purchase up to 5 additional years of governmental service, which cannot be used for eligibility or vesting, at full actuarial cost. Purchased service other than military service must be for employment as a firefighter, and the participant must not be eligible to receive benefits from another plan based on such service.

## **Employee Contributions**

5% of Compensation

#### **DROP**

Eligibility Retiree eligible for Normal Retirement

Benefit Deferred Retirement Option Plan for up to 84 months with 6.5% annual interest credited.

#### **COLA**

Eligibility Participant or Beneficiary

Benefit 1.5% adjustment on October 1

## **Payment Forms**

Normal Form 10 years Certain and Life

Optional Forms 50%, 66 2/3%, 75%, and 100% Joint and Survivor Annuity Lump Sum

## **Actuarial Equivalence**

7.00%; 1994 Group Annuity Reserving Table projected to 2002 using Scale AA

#### **Plan Provisions Not Included**

We are not aware of any plan provisions not included in the valuation.

## **Adjustments Made for Subsequent Events**

We are not aware of any event following the measurement date and prior to the date of this report that would materially impact the results.

## **Changes Since Prior Valuation**

None



Cost Method (CO) Aggregate Cost Method

Asset Valuation Method (CO) Equal to the market value of assets, adjusted by a five-year phase-in of investment return.

A characteristic of this method is that over time, it is more likely to produce an actuarial

value of assets that is less than the market value of assets.

The result cannot be greater than 120% of market value or less than 80% of market value.

Interest Rates (CO) 7.50% net of investment expenses

Annual Pay Increases (FE) 4.00% per annum.

**Expense and/or Contingency Loading (FE)**2% of the present value of projected benefits

**Mortality Rates (CO)** 

Disabled

Healthy 1994 group annuity table projected to 2002 using scale AA

1994 group annuity table projected to 2002 using scale AA

No pre-retirement mortality is assumed

Retirement Rates (FE) 100% at Normal Retirement Age (Age 55 and 6 years of credited service or 20 years

of credited service.

Disability Rates (FE)

None assumed

Withdrawal Rates (FE) None assumed

Marital Status and Ages 100% of Members are assumed to be married. Female spouses assumed to be the same

age as male spouses.

**State Contributions** Premium tax revenues are assumed to be the same as in prior year.



Withdrawal of Employee Contributions

It is assumed that employees withdraw their contribution balances upon employment termination at the end of the current fiscal year.

**DROP Participation** 

No distinction is made between retirement and DROP entry

**Changes Since Prior Report** 

None.

FE indicates an assumption representing an estimate of future experience.

MO indicates an assumption representing an observation of estimates inherit to market data.

CO indicates an assumption representing a combination of an estimate of future experience and observations of market data.



Other Measurements

The actuarial report also shows the necessary items required for plan reporting and any state requirements.

- ✓ Statement of Changes on Value of Assets
- ✓ Distribution of Assets
- ✓ Florida State Requirements

Comparative Summary of Principal Valuation Results
Comparison of payroll growth, salary increases and investment returns
Requirements under Florida Statute 112.664 and F.A.C. 60T-1.0035
Reserve amount for benefit improvements under F.L. 99-1



# **Statement of Changes in Plan Net Assets**

	September 30, 2014	September 30, 2015
1. Additions		
(a) Contributions:		
(i) Employer	\$69,826	\$143,152
(ii) Member	58,208	79,753
(iii) Nonemployer contributing entity	193,515	176,093
(iv) Total	\$321,549	\$398,998
(b) Investment income		
(i) Net increase in fair value of investments	\$417,331	\$(10,345)
(ii) Interest and dividends	0	0
(iii) Investment expense, other than from securities lending	0	0
(iv) Securities lending income	0	0
(v) Securities lending expense	0	0
(vi) Total	\$417,331	\$(10,345)
(c) Other	0	0
(d) Total additions [(a)+(b)+(c)]	\$738,880	\$388,653
2. Deductions		
(a) Benefit payments, including refunds of member contributions	\$17,052	\$16,003
(b) Administrative expense	35,373	27,473
(c) Other	0	0
(d) Total deductions	\$52,425	\$43,476
3. Net increase [(1d)-(2d)]	\$686,455	\$345,177
4. Net assets held in trust for pension benefits, beginning of year	4,764,790	5,451,245
5. Net assets held in trust for pension benefits, end of year [(3)+(4)]	\$5,451,245	\$5,796,422



## **Distribution of Assets**

Cash and deposits Securities lending cash collateral Total cash	\$33,103 0 \$33,103	\$46,901 0
-		
Total cash	\$33,103	
i Otal Cash		\$46,901
Receivables		
Contributions	\$99,974	\$99,730
Other	0	0
Total receivables	\$99,974	\$99,730
Investments		
Core Bonds	\$882,749	\$984,917
Multi-Sector	1,291,020	1,348,398
U.S. Large Cap Equity	2,184,803	2,245,376
U.S. Small Cap Equity	601,373	685,924
Non-U.S. Equity	524,132	551,085
Total investments	\$5,484,077	\$5,815,700
Payables		
Investment management fees	\$0	\$0
Due to broker for investments purchased	0	0
Collateral payable for securities lending	0	0
Other	0	0
Total liabilities	\$0	\$0
Reserved Assets		
Accumulated Reserve	\$(165,909)	\$(165,909)
Assets available for benefits	\$5,451,245	\$5,796,422



Comparative Summary Of Principal Valuation Results	10/1/2015 7.50%	10/1/2014 7.50%
Participant Data Active members Total annual payroll	25 \$1,502,540	24 \$1,358,418
Retired members and beneficiaries Total annualized benefit	0 \$0	0 \$0
Disabled members receiving benefits Total annualized benefit	0 \$0	0 \$0
Terminated vested members Total annualized benefit	6 \$28,726	2 \$28,734
Assets Actuarial value of assets Market value of assets	\$5,252,172 \$5,796,422	\$4,612,861 \$5,617,154



Comparative Summary Of Principal Valuation Results (continued)	10/1/2015 7.50%	10/1/2014 7.50%
Liabilities, present value of all future expected benefit payments		
Active members Retirement benefits Vesting benefits	\$8,884,268 0	\$7,953,839 0
Disability benefits Death benefits Return of contribution	0 0 0	0 0 0
Total	\$8,884,268	\$7,953,839
Terminated vested members	\$146,760	\$126,794
Retired members and beneficiaries	\$0	\$0
Disabled members	\$0	\$0
Total	\$9,031,028	\$8,080,633
Liabilities due and unpaid	\$0	\$0
Actuarial accrued liability	N/A	N/A
Unfunded actuarial accrued liability	N/A	N/A



Comparative Summary Of Principal Valuation Results (continued)		
	10/1/2015 7.50%	10/1/2014 7.50%
Actuarial present value of accrued benefits		
Statement of actuarial present value of all accrued benefits		
Vested accrued benefits		
Inactive members and beneficiaries	\$146,760	\$126,794
Active members	1,412,351	1,126,378
Total value of all vested accrued benefits	\$1,559,111	\$1,253,172
Non-vested accrued benefits	897,649	841,758
Total actuarial present value of all accrued benefits	\$2,456,760	\$2,094,930
Statement of changes in total actuarial present value of all accrued benefits (ASC 960)		
Actuarial present value of accrued benefits, beginning of year	\$2,094,930	\$1,759,310
Increase (decrease) during year		
Benefits accumulated	\$221,303	\$221,363
Plan amendment	0	0
Changes in actuarial assumptions	0	0
Interest	156,530	131,309
Benefits paid	(16,003)	(17,052)
Other changes	Ó	0
Net increase (decrease)	\$361,830	\$335,620
Actuarial present value of accrued benefits, end of year	\$2,456,760	\$2,094,930



Comparative Summary Of Principal Valuation Results (continued)		
	10/1/2015 7.50%	10/1/2014 7.50%
Pension cost		
Normal Cost	\$440,408	\$388,047
Member contributions	\$78,132	\$70,638
Expected plan sponsor contribution	\$186,183	\$123,894
As % of payroll	11.91%	8.77%
Member Contributions as % of payroll	5.00%	5.00%
Past contributions	9/30/2015	9/30/2014
Required plan sponsor contribution	\$120,564	\$67,494
Required member contribution	\$67,367	\$60,546
Actual contributions made by:		
Plan's sponsor	\$143,206	\$72,352
Members	\$79,753	\$58,208
Other	\$176,093	\$237,046
Other disclosures		
Present value of active member		
Future salaries at attained age	\$15,075,428	\$14,176,200
Future contributions at attained age	\$727,002	\$683,637



# Historical Salary Increases and Asset Performance<sup>1</sup>

Year Ending	Payroll Growth	Salary Growth	Expected Salary Growth	Asset Return (Market)	Asset Return (Actuarial)	Asset Return (Expected)
9/30/2015	10.61%	13.04%	4.00%	(0.18%)	6.08%	7.50%
9/30/2014	4.85%	0.88%	4.00%	8.27%	7.68%	7.50%
9/30/2013	11.27%	7.30%	4.00%	11.62%	9.38%	7.50%
9/30/2012	(14.95%)	(7.00%)	5.00%	16.33%	4.00%	7.50%
9/30/2011	0.29%	0.29%	5.00%	(0.30%)	0.64%	7.50%
9/30/2010	N/A	0.12%	5.00%	7.98%	3.04%	7.50%
9/30/2009	N/A	N/A	5.00%	5.25%	(3.70%)	7.50%
9/30/2008	N/A	13.82%	5.00%	(11.83%)	(2.60%)	8.00%
9/30/2007	N/A	N/A	5.00%	8.83%	9.30%	8.00%
9/30/2006	N/A	N/A	5.00%	5.45%	5.48%	8.00%
Averages						
3-year				6.45%	7.70%	
5-year				6.95%	5.51%	
10-year				4.87%	3.84%	



<sup>&</sup>lt;sup>1</sup> Numbers for years prior to 9/30/2011 are from Southern Actuarial Services

				October 1, 2015
	Valuation	- 200 bp <sup>1</sup>	Funding Rate <sup>1</sup>	+ 200 bp <sup>1</sup>
	7.50%	5.50%	7.50%	9.50%
Total pension liability				
Service Cost	\$465,383	\$465,383	\$465,383	\$465,383
Interest	295,396	295,396	295,396	295,396
Benefit changes	0	0	0	0
Difference between expected and actual experience	(32,687)	(32,687)	(32,687)	(32,687)
Changes in assumptions	0	2,056,864	170,516	(1,031,994)
Benefit payments	0	0	0	0
Contribution refunds	(16,003)	(16,003)	(16,003)	(16,003)
Net change in pension liability	\$712,089	\$2,768,953	\$882,605	(\$319,905)
Total pension liability, beginning of year	\$3,481,081	\$3,481,081	\$3,481,081	\$3,481,081
Total pension liability, end of year	\$4,193,170	\$6,250,034	\$4,363,686	\$3,161,176
Plan fiduciary net position				
Contributions - Employer	\$143,152	\$143,152	\$143,152	\$143,152
Contributions - State	79,753	79,753	79,753	79,753
Contributions - Member	176,093	176,093	176,093	176,093
Net investment income	(10,345)	(10,345)	(10,345)	(10,345)
Benefit payments	0	0	0	0
Contribution refunds	(16,003)	(16,003)	(16,003)	(16,003)
Administrative expense	(27,473)	(27,473)	(27,473)	(27,473)
Other	0	0	0	0
Net change in plan fiduciary net position	\$345,177	\$345,177	\$345,177	\$345,177
Plan fiduciary net position, beginning of year	\$5,451,245	\$5,451,245	\$5,451,245	\$5,451,245
Plan fiduciary net position, end of year	\$5,796,422	\$5,796,422	\$5,796,422	\$5,796,422
Net pension liability/(asset)	(\$1,603,252)	\$453,612	(\$1,432,736)	(\$2,635,246)
Funded ratio	138.23%	92.74%	132.83%	183.36%
Years that Assets support expected benefit payments	26	21	25	42
Estimated city contribution				
Annual dollar value	\$186,183	\$745,811	\$230,587	\$0
Percentage of payroll	11.9%	47.73%	14.76%	0.00%

<sup>&</sup>lt;sup>1</sup>Based on valuation assumption with the following changes



<sup>-</sup>interest rate (as noted)

<sup>-</sup>mortality table of RP 2000 with generational projection using Scale AA

October 1, 2015

# **Sustainment of Expected Benefit Payments**

Mortality	Valuation
Interest	7.50%

Vaar	Modust Value of Assets	In contract Date and	Dan efit Daymanta
<u>Year</u>	Market Value of Assets	Investment Return	Benefit Payments
1	\$5,796,422	\$433,982	\$20,365
2	6,210,039	463,972	48,364
3	6,625,647	496,151	20,981
4	7,100,817	531,777	21,296
5	7,611,298	570,051	21,615
6	8,159,734	610,510	39,935
7	8,730,309	653,281	40,534
8	9,343,056	699,214	41,142
9	10,001,128	741,036	245,729
10	10,496,435	775,294	324,225
11	10,947,504	809,026	326,884
12	11,429,646	839,554	479,857
13	11,789,343	856,260	758,812
14	11,886,791	854,673	1,000,397
15	11,741,067	837,917	1,158,638
16	11,420,346	813,300	1,173,914
17	11,059,732	785,638	1,190,641
18	10,654,729	754,042	1,223,786
19	10,184,985	712,833	1,386,140
20	9,511,678	658,871	1,480,223
21	8,690,326	587,558	1,743,972
22	7,533,912	500,291	1,758,517
23	6,275,686	405,508	1,769,832
24	4,911,362	302,898	1,777,578
25	3,436,682	191,846	1,789,814
26	1,838,714	71,490	1,803,621
27	106,583		1,816,194



October 1, 2015

# **Sustainment of Expected Benefit Payments**

Mortality RP-2000 Generational with Scale AA

Interest 5.50%

<u>Year</u>	Market Value of Assets	Investment Return	Benefit Payments
1	\$5,796,422	\$318,251	\$20,365
2	6,094,308	333,875	48,364
3	6,379,819	350,321	20,981
4	6,709,159	368,426	21,296
5	7,056,289	387,509	21,615
6	7,422,183	407,137	39,935
7	7,789,385	427,316	40,534
8	8,176,167	448,573	41,142
9	8,583,598	465,431	245,729
10	8,803,300	475,385	324,225
11	8,954,460	483,610	327,479
12	9,110,591	488,044	480,563
13	9,118,072	480,883	759,640
14	8,839,315	458,994	1,001,359
15	8,296,950	424,863	1,159,858
16	7,561,955	384,005	1,175,840
17	6,770,120	339,992	1,192,860
18	5,917,252	292,176	1,226,353
19	4,983,075	236,315	1,391,515
20	3,827,875	170,152	1,488,310
21	2,509,717	90,463	1,753,353
22	846,827		1,772,544



October 1, 2015

# **Sustainment of Expected Benefit Payments**

Mortality RP-2000 Generational with Scale AA

Interest 7.50%

<u>Year</u>	Market Value of Assets	Investment Return	Benefit Payments
1	\$5,796,422	\$433,982	\$20,365
2	6,210,039	463,972	48,364
3	6,625,647	496,151	20,981
4	7,100,817	531,777	21,296
5	7,611,298	570,051	21,615
6	8,159,734	610,510	39,935
7	8,730,309	653,281	40,534
8	9,343,056	699,214	41,142
9	10,001,128	741,036	245,729
10	10,496,435	775,294	324,225
11	10,947,504	809,004	327,479
12	11,429,029	839,482	480,563
13	11,787,948	856,125	759,640
14	11,884,433	854,460	1,001,359
15	11,737,534	837,607	1,159,858
16	11,415,283	812,849	1,175,840
17	11,052,292	784,998	1,192,860
18	10,644,430	753,175	1,226,353
19	10,171,252	711,605	1,391,515
20	9,491,342	657,048	1,488,310
21	8,660,080	584,944	1,753,353
22	7,491,671	496,607	1,772,544
23	6,215,734	400,271	1,789,934
24	4,826,071	295,483	1,805,244
25	3,316,310	181,587	1,823,257
26	1,674,640		1,842,228



Investment Return

\$1,352,062

1,298,996

1,239,860

1,174,037

1,101,047

1,020,385

931,521

833,908

726,977

610,140

482,799

344,337

194,103

Market Value of Assets

\$15,163,571

14,609,714

13,993,106

13,305,349

12,541,293

11,695,533

10,762,332

9,735,743

8,609,661

7,377,663

6,033,193

4,569,641

2,980,035

1,256,953

Year 30

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37 38

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41 42

43

## Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035

October 1, 2015

**Benefit Payments** 

\$1,905,919

1,915,604

1,927,617

1,938,093

1,946,807

1,953,586

1,958,110

1,959,990

1,958,975

1,954,610

1,946,351

1,933,943

1,917,185 1,895,725

## **Sustainment of Expected Benefit Payments**

Mortality RP-2000 Generational with Scale AA

Interest 9.50%

<u>Year</u>	Market Value of Assets	Investment Return	Benefit Payments
1	\$5,796,422	\$549,715	\$20,365
2	6,325,772	598,703	48,364
3	6,876,111	652,257	20,981
4	7,507,387	712,213	21,296
5	8,198,304	777,835	21,615
6	8,954,524	848,826	39,935
7	9,763,415	925,643	40,534
8	10,648,524	1,009,700	41,142
9	11,617,082	1,092,215	245,729
10	12,463,568	1,168,988	324,225
11	13,308,331	1,249,089	327,479
12	14,229,941	1,329,535	480,563
13	15,078,913	1,397,232	759,640
14	15,716,505	1,446,582	1,001,359
15	16,161,728	1,481,521	1,159,858
16	16,483,391	1,511,337	1,175,840
17	16,818,888	1,542,419	1,192,860
18	17,168,447	1,574,072	1,226,353
19	17,516,166	1,599,438	1,391,515
20	17,724,089	1,614,697	1,488,310
21	17,850,476	1,614,400	1,753,353
22	17,711,523	1,600,309	1,772,544
23	17,539,288	1,583,139	1,789,934
24	17,332,493	1,562,783	1,805,244
25	17,090,032	1,538,913	1,823,257
26	16,805,688	1,511,020	1,842,228
27	16,474,480	1,478,703	1,860,575
28	16,092,608	1,441,608	1,878,179
29	15,656,037	1,399,494	1,891,960



## Reserve Amount for Benefit Improvement Under F.L. 99-1

# Adjusted Base Amount at 10/1/2015

Year Established	<u>Description</u>	Ch. 175 Fire		Suppl. Fire		Total	
1998	Base Year Premium Tax Distribution	\$	0	\$	0	\$	0
2005	Ordinance 2005-21						195,515
	Adjusted Base Amount					\$	195,515
Reserve Account fo	or 2014/2015						
					Total		
1. Reserve Account at September 30, 2014						\$	165,909
2. Increase in Rese	rve Account						
(a) Premium Ta						176,093	
(b) Adjusted Ba						193,515	
(c) Increase in Reserve Distribution							0
3. Reserve Account at September 30, 2015 [(1)+ (2c)]				\$	165,909		

