

CITY OF TAMARAC  
ELECTED AND APPOINTED OFFICERS  
AND NON-REPRESENTED EMPLOYEES  
RETIREMENT PLAN

ACTUARIAL VALUATION  
AS OF OCTOBER 1, 2016

DETERMINES THE CONTRIBUTION  
FOR THE 2016/17 FISCAL YEAR



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December 18, 2016

## Introduction

This report presents the results of the October 1, 2016 actuarial valuation of the City of Tamarac Elected and Appointed Officers and Non-Represented Employees Retirement Plan. The report is based on the participant data and asset information provided by the pension plan administrator and, except for a cursory review for reasonableness including a comparison to the data provided for the previous valuation, we have not attempted to verify the accuracy of this information.

The primary purpose of this report is to provide a summary of the funded status of the plan as of October 1, 2016 and to determine the minimum required contribution under Chapter 112, Florida Statutes, for the 2016/17 plan year. In addition, this report provides a projection of the long-term funding requirements of the plan, statistical information concerning the assets held in the trust, statistical information concerning the participant population, and a summary of any recent plan changes.

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an *estimate* of the true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table IV-A. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, if any of the assumptions is not completely realized, then the cost shown in this report will change in the future.

Certain assumptions play a bigger role than others in determining the cost of the post-employment pension benefits. In some cases, relatively small changes in a particular assumption can have a dramatic impact on the anticipated cost of benefits. Although a thorough analysis of the impact of such changes is beyond the scope of this report, Table I-B illustrates the impact that alternative long-term investment returns would have on the minimum required contribution rate.

## Minimum Required Contribution

Table I-A shows the development of the minimum required contribution for the 2016/17 plan year. The minimum required contribution rate is 35.15% of covered payroll, which represents an increase of 5.57% of payroll from the prior valuation.

Table I-C provides a breakdown of the sources of change in the contribution rate. Significantly, the rate increased by 1.39% of payroll due to investment losses, decreased by 0.83% of payroll due to demographic experience, and increased by another 5.01% due to the assumption change that is described below. Although the market value of



assets earned 8.04% during the 2015/16 plan year, the actuarial value of assets is based on the market value adjusted to reflect a five-year phase-in of the net investment earnings that occur after September 30, 2013. On this basis, the actuarial value of assets only earned 3.16% during the 2015/16 plan year, whereas a 7.00% annual investment return was required to maintain a stable contribution rate.

Chapter 112, Florida Statutes, sets forth the rules concerning the minimum required contribution for public pension plans within the state. Essentially, the City must contribute an amount equal to the annual normal cost of the plan plus an amortization payment towards the unfunded liability, where the amortization period is no longer than 30 years and where both amounts are adjusted as necessary for administrative expenses and to reflect interest on any delayed payment of the contribution beyond the valuation date. On this basis, the City's 2016/17 minimum required contribution will be equal to 35.15% multiplied by the total pensionable earnings for the 2016/17 fiscal year for the active employees who are covered by the plan.

Based on the current assets, participant data, and actuarial assumptions and methods that are used to value the plan, the present-day value of the total long-term funding requirement is \$56,786,313. As illustrated in Table I-A, current assets are sufficient to cover \$33,820,614 of this amount, the employer's 2016/17 expected contribution will cover \$2,368,660 of this amount, and future employee contributions are expected to cover \$4,103,183 of this amount, leaving \$16,493,856 to be covered by future employer funding beyond the 2016/17 fiscal year. Again, demographic and investment experience that differs from that assumed will either increase or decrease the future employer funding requirement.

#### Amortization of the Unfunded Liability

This plan uses the entry age normal cost method to develop an unfunded liability each year. The unfunded liability is then amortized or "paid off" over a period of time. The period over which the unfunded liability is amortized is often referred to as the "funding period" of the plan. Under Chapter 112 the maximum allowable funding period is 30 years and this is the funding period that is used for new components of the unfunded liability. In addition, the annual payment towards the outstanding balance of the unfunded liability is calculated as a level dollar amount. Table I-I shows the various components of the unfunded liability and the respective funding period for each component.

#### Advance Employer Contribution

The City has made contributions to the plan in excess of the minimum amount that was required to be contributed pursuant to Chapter 112. In this report, the excess contributions are referred to as an "advance employer contribution." As of October 1, 2016, the advance employer contribution is \$1,316,618, which reflects the advance employer contribution of \$874,126 as of October 1, 2015 plus \$442,492 that was contributed in excess of the minimum required contribution for the 2015/16 plan year as shown in Table II-F.

The City may apply all or any portion of the advance employer contribution towards the minimum required contribution for the 2016/17 plan year or for any later plan year. The minimum required contribution for that plan year will be reduced dollar-for-dollar by the amount of the advance employer contribution that is applied in this manner.



Alternatively, at any time, the City may apply all or any portion of the advance employer contribution as an extra contribution in excess of the minimum required contribution. In this case, the immediate application of the entire balance of the advance employer contribution as of October 1, 2016 would reduce the minimum required contribution for the 2016/17 plan year to 33.68% of payroll.

### Contents of the Report

Tables I-D through I-H provide a detailed breakdown of various liability amounts by type of benefit and by participant group. Tables II-A through II-F provide information concerning the assets of the trust fund. Specifically, Table II-A shows the development of the actuarial value of assets, which is based on a five-year phase-in of the net investment earnings that occur after September 30, 2013 in order to provide a more stable and predictable contribution rate for the employer. Tables III-A through III-G provide statistical information concerning the plan's participant population. In particular, Table III-G gives a 10-year projection of the cash that is expected to be required from the trust fund in order to pay benefits to the current group of participants. Finally, Tables IV-A through V-B provide a summary of the actuarial assumptions and methods that are used to value the plan's benefits and of the relevant plan provisions as of October 1, 2016, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

### Assumption Change

Pursuant to the requirements of State law, the mortality basis has been changed from a 2015 projection of the RP-2000 Mortality Table for annuitants to a full generational projection using Scale BB of the RP-2000 Combined Mortality Table. This change increased the minimum required contribution for the 2016/17 plan year by 5.01% of payroll.

### Certification

This actuarial valuation was prepared 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 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 change in plan costs or required contribution rates have been taken into account in the valuation.



For the firm,



Charles T. Carr  
Consulting Actuary  
Southern Actuarial Services Company, Inc.

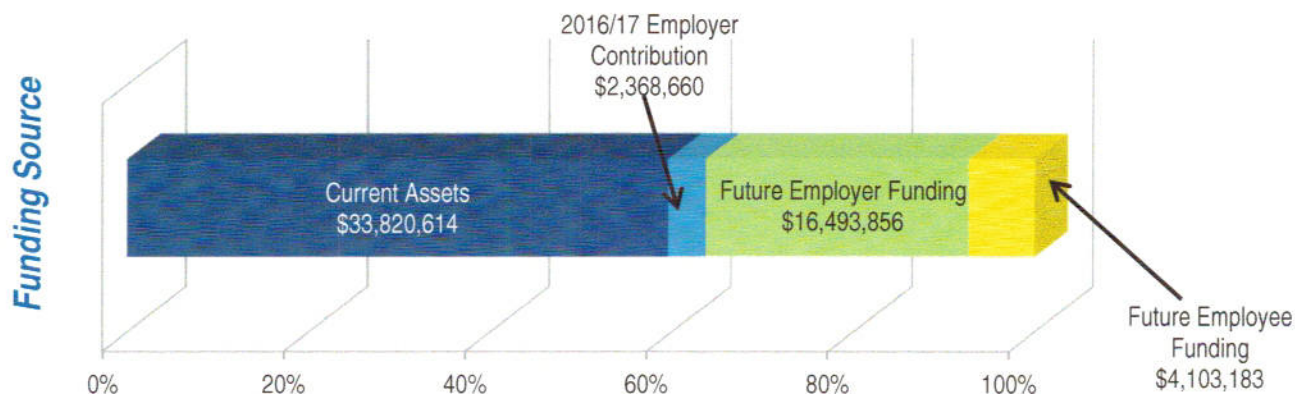
Enrolled Actuary No. 14-04927

*The individual above is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.*



## Minimum Required Contribution

Table I-A



### For the 2016/17 Plan Year

Entry Age Normal Cost	\$2,086,201
Unfunded Liability Amortization Payment	\$909,112
Expense Allowance	\$47,167
Expected Employee Contribution	(\$673,820)
	<hr/>
	\$2,368,660
Adjustment to Reflect Beginning-of-Year Employer Contribution	\$0
Preliminary Employer Contribution for the 2016/17 Plan Year	<hr/>
	\$2,368,660
Expected Payroll for the 2016/17 Plan Year	÷ \$6,738,201

**Minimum Required Contribution Rate** **35.15%**

*(The actual contribution should be based on the minimum required contribution rate multiplied by the actual payroll for the year.)*

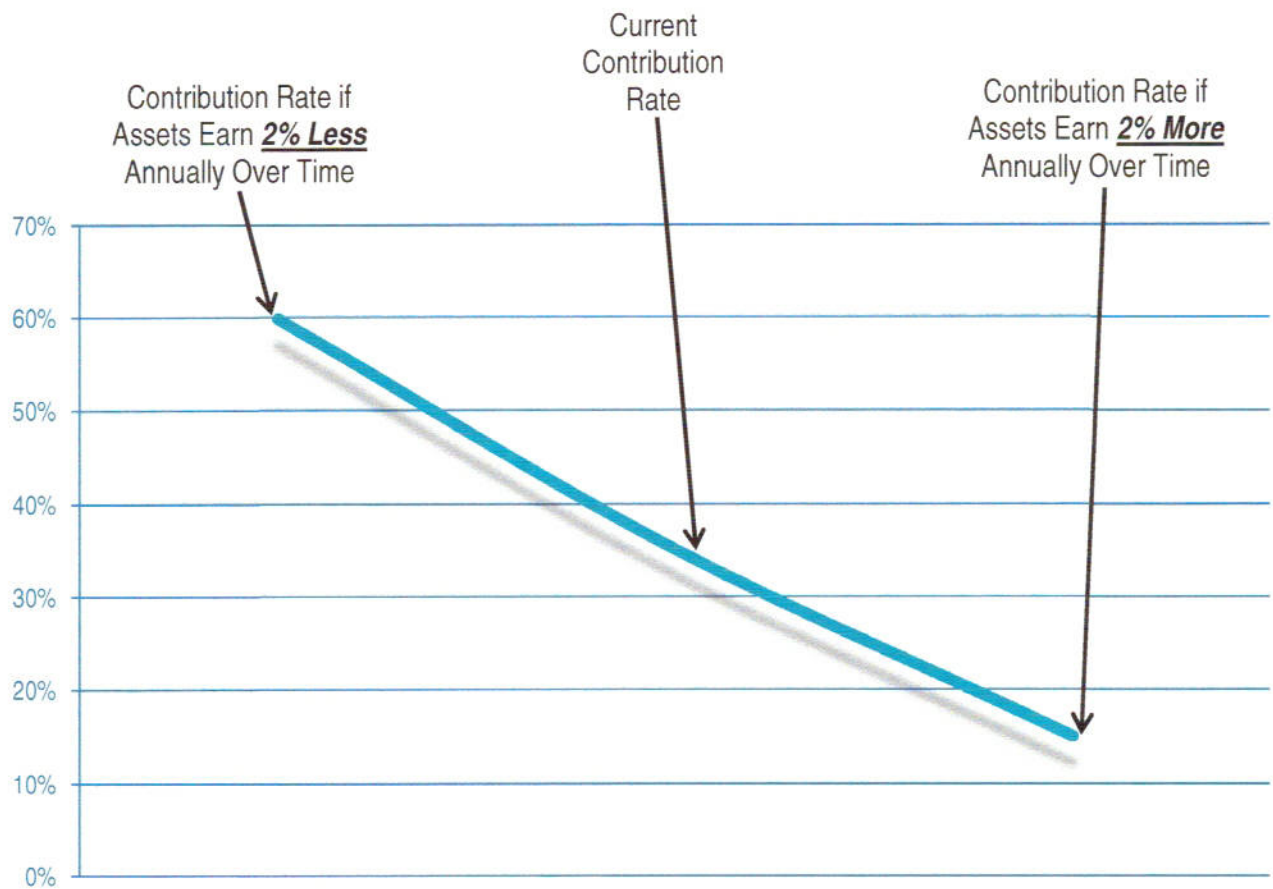
### Additional Disclosures

Present Value of Future Compensation	\$41,031,844
Present Value of Future Employer Contributions	\$18,862,516
Present Value of Future Employee Contributions	\$4,103,183



# Sensitivity Analysis

Table I-B



*The line above illustrates the sensitivity of the contribution rate to changes in the long-term investment return.*



Gain and Loss Analysis

Table I-C

**Source of Change in the Contribution Rate**

Previous minimum required contribution rate	29.58%
Increase (decrease) due to investment gains and losses	1.39%
Increase (decrease) due to demographic experience	-0.83%
Increase (decrease) due to plan amendments	0.00%
Increase (decrease) due to actuarial assumption changes	5.01%
Increase (decrease) due to actuarial method changes	0.00%
Current minimum required contribution rate	<u>35.15%</u>

**Source of Change in the Unfunded Liability**

Previous unfunded liability	\$7,262,839
Increase due to employer normal cost for the prior year	\$1,233,836
Increase due to interest on normal cost and unfunded liability	\$594,767
Decrease due to employer contributions	(\$1,855,752)
Decrease due to interest on employer contributions	(\$129,902)
Expected unfunded liability	<u>\$7,105,788</u>
Increase (decrease) due to plan experience	\$458,932
Increase (decrease) due to plan amendments	\$0
Increase (decrease) due to actuarial assumption changes	\$2,718,101
Increase (decrease) due to actuarial method changes	\$0
Current unfunded liability	<u>\$10,282,821</u>



## Present Value of Future Benefits

Table I-D

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$34,540,760	\$34,540,760	\$37,065,632
Termination benefits	\$0	\$0	\$0
Disability benefits	\$1,160,085	\$1,160,085	\$1,234,374
Death benefits	\$380,627	\$380,627	\$278,281
Refund of employee contributions	\$728	\$728	\$593
Sub-total	<b>\$36,082,200</b>	<b>\$36,082,200</b>	<b>\$38,578,880</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$2,376,955	\$2,376,955	\$2,529,328
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$2,376,955</b>	<b>\$2,376,955</b>	<b>\$2,529,328</b>
<u>Due a Refund of Contributions</u>	<b>\$7,702</b>	<b>\$7,702</b>	<b>\$7,702</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$13,911,654	\$13,911,654	\$14,847,110
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$501,665	\$501,665	\$536,070
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$14,413,319</b>	<b>\$14,413,319</b>	<b>\$15,383,180</b>
<u>Grand Total</u>	<b><u>\$52,880,176</u></b>	<b><u>\$52,880,176</u></b>	<b><u>\$56,499,090</u></b>
Present Value of Future Payroll	\$40,933,554	\$40,933,554	\$41,031,844
Present Value of Future Employee Contribs.	\$4,093,355	\$4,093,355	\$4,103,183
Present Value of Future Employer Contribs.	\$15,252,742	\$15,252,742	\$18,862,516



## Present Value of Accrued Benefits

Table I-E

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$19,188,195	\$19,188,195	\$20,478,652
Termination benefits	\$0	\$0	\$0
Disability benefits	\$524,227	\$524,227	\$555,679
Death benefits	\$247,771	\$247,771	\$173,396
Refund of employee contributions	\$20,553	\$20,553	\$17,456
Sub-total	<b>\$19,980,746</b>	<b>\$19,980,746</b>	<b>\$21,225,183</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$2,376,955	\$2,376,955	\$2,529,328
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$2,376,955</b>	<b>\$2,376,955</b>	<b>\$2,529,328</b>
<u>Due a Refund of Contributions</u>	<b>\$7,702</b>	<b>\$7,702</b>	<b>\$7,702</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$13,911,654	\$13,911,654	\$14,847,110
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$501,665	\$501,665	\$536,070
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$14,413,319</b>	<b>\$14,413,319</b>	<b>\$15,383,180</b>
<u>Grand Total</u>	<b><u>\$36,778,722</u></b>	<b><u>\$36,778,722</u></b>	<b><u>\$39,145,393</u></b>
<u>Funded Percentage</u>	104.41%	104.41%	98.10%



## Present Value of Vested Benefits

Table I-F

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<i><u>Actively Employed Participants</u></i>			
Retirement benefits	\$18,193,344	\$18,193,344	\$19,410,147
Termination benefits	\$0	\$0	\$0
Disability benefits	\$524,227	\$524,227	\$555,679
Death benefits	\$163,974	\$163,974	\$116,409
Refund of employee contributions	\$23,387	\$23,387	\$19,551
Sub-total	<b>\$18,904,932</b>	<b>\$18,904,932</b>	<b>\$20,101,786</b>
<i><u>Deferred Vested Participants</u></i>			
Retirement benefits	\$2,376,955	\$2,376,955	\$2,529,328
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$2,376,955</b>	<b>\$2,376,955</b>	<b>\$2,529,328</b>
<i><u>Due a Refund of Contributions</u></i>	<b>\$7,702</b>	<b>\$7,702</b>	<b>\$7,702</b>
<i><u>Deferred Beneficiaries</u></i>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<i><u>Retired Participants</u></i>			
Service retirements	\$13,911,654	\$13,911,654	\$14,847,110
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$501,665	\$501,665	\$536,070
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$14,413,319</b>	<b>\$14,413,319</b>	<b>\$15,383,180</b>
<i><u>Grand Total</u></i>	<b><u>\$35,702,908</u></b>	<b><u>\$35,702,908</u></b>	<b><u>\$38,021,996</u></b>



Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$23,699,762	\$23,699,762	\$25,320,605
Termination benefits	\$0	\$0	\$0
Disability benefits	\$659,484	\$659,484	\$699,734
Death benefits	\$227,836	\$227,836	\$162,637
Refund of employee contributions	\$276	\$276	\$249
Sub-total	<b>\$24,587,358</b>	<b>\$24,587,358</b>	<b>\$26,183,225</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$2,376,955	\$2,376,955	\$2,529,328
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$2,376,955</b>	<b>\$2,376,955</b>	<b>\$2,529,328</b>
<u>Due a Refund of Contributions</u>	<b>\$7,702</b>	<b>\$7,702</b>	<b>\$7,702</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$13,911,654	\$13,911,654	\$14,847,110
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$501,665	\$501,665	\$536,070
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$14,413,319</b>	<b>\$14,413,319</b>	<b>\$15,383,180</b>
<u>Grand Total</u>	<b><u>\$41,385,334</u></b>	<b><u>\$41,385,334</u></b>	<b><u>\$44,103,435</u></b>
less Actuarial Value of Assets	(\$33,820,614)	(\$33,820,614)	(\$33,820,614)
<u>Unfunded Accrued Liability</u>	<b><u>\$7,564,720</u></b>	<b><u>\$7,564,720</u></b>	<b><u>\$10,282,821</u></b>



## Entry Age Normal Cost

Table I-H

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$1,849,051	\$1,849,051	\$1,982,613
Termination benefits	\$0	\$0	\$0
Disability benefits	\$80,413	\$80,413	\$85,372
Death benefits	\$23,599	\$23,599	\$18,009
Refund of employee contributions	\$264	\$264	\$207
Sub-total	<b>\$1,953,327</b>	<b>\$1,953,327</b>	<b>\$2,086,201</b>
<u>Deferred Vested Participants</u>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Due a Refund of Contributions</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Deferred Beneficiaries</u>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Retired Participants</u>			
Service retirements	\$0	\$0	\$0
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<u>Grand Total</u>	<b><u>\$1,953,327</u></b>	<b><u>\$1,953,327</u></b>	<b><u>\$2,086,201</u></b>



Unfunded Liability Bases

Table I-I

<u>Description</u>	<u>Original Amount</u>	<u>Outstanding Balance</u>	<u>Amortization Payment</u>	<u>Years Rem.</u>
	<b>Total</b>	<b>\$10,282,821</b>	<b>\$909,112</b>	
Initial Unfunded Liability	\$8,427,025	\$8,005,827	\$723,914	19
2005/06 Experience Gain	(\$537,954)	(\$508,837)	(\$44,888)	20
2006/07 Experience Loss	\$713,345	\$669,946	\$57,784	21
10/1/2008 Method Change	(\$996,242)	(\$926,694)	(\$78,298)	22
2007/08 Experience Loss	\$1,540,614	\$1,433,064	\$121,082	22
2008/09 Experience Loss	\$915,268	\$841,350	\$69,757	23
2009/10 Experience Loss	\$2,556,391	\$2,317,523	\$188,844	24
2010/11 Experience Loss	\$105,907	\$94,509	\$7,579	25
1/1/2012 Amendment	(\$11)	(\$6)		25
2011/12 Experience Loss	\$118,781	\$107,381	\$8,486	26
10/1/2013 Method Change	(\$4,498,116)	(\$4,069,207)	(\$317,268)	27
2012/13 Experience Gain	(\$1,567,817)	(\$1,418,321)	(\$110,584)	27
2013/14 Experience Loss	\$898,369	\$875,855	\$67,442	28
10/1/2014 Assumption Change	\$99,452	\$96,960	\$7,466	28
2014/15 Experience Gain	(\$415,771)	(\$413,562)	(\$31,480)	29
2015/16 Experience Gain	\$458,932	\$458,932	\$34,564	30
10/1/2016 Assumption Change	\$2,718,101	\$2,718,101	\$204,712	30



## Actuarial Value of Assets

Table II-A

	<u>Net Investment Gain (Loss)</u>		<u>Unrecognized Gain (Loss)</u>
For the 2012/13 plan year	N/A	x 20%	N/A
For the 2013/14 plan year	\$2,518,348	x 40%	\$1,007,339
For the 2014/15 plan year	(\$42,219)	x 60%	(\$25,331)
For the 2015/16 plan year	\$2,852,407	x 80%	\$2,281,926
			<u>\$3,263,934</u>

Market Value of Assets as of October 1, 2016 \$38,401,166

Minus advance employer contributions (\$1,316,618)

Adjustment for unrecognized gain or loss as shown above,  
but restricted to an amount that keeps the actuarial value  
of assets within an 80%-120% corridor of the market value (\$3,263,934)

**Actuarial Value of Assets as of October 1, 2016 \$33,820,614**

<u>Historical Actuarial Value of Assets</u>	
October 1, 2007	\$8,287,371
October 1, 2008	\$9,628,373
October 1, 2009	\$11,195,853
October 1, 2010	\$13,583,013
October 1, 2011	\$15,665,465
October 1, 2012	\$18,675,782
October 1, 2013	\$27,153,986
October 1, 2014	\$29,484,473
October 1, 2015	\$31,971,088
October 1, 2016	\$33,820,614

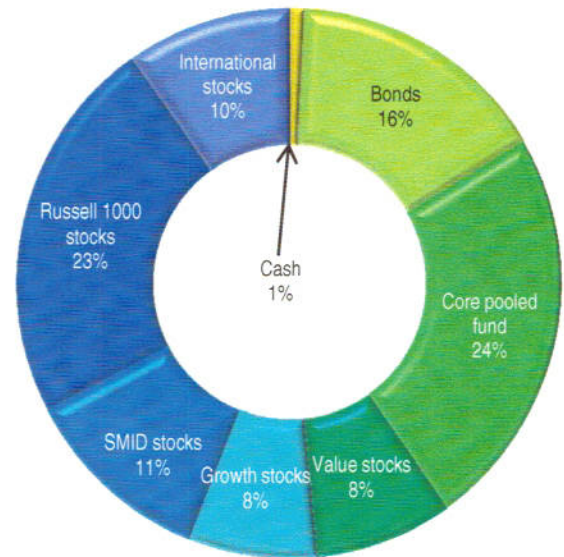


## Market Value of Assets

Table II-B

**As of October 1, 2016**

<b>Market Value of Assets</b>	<b><u>\$38,401,166</u></b>
Cash	\$307,462
Bonds	\$5,992,319
Core pooled fund	\$9,142,128
Value stocks	\$3,149,809
Growth stocks	\$2,919,335
SMID stocks	\$4,340,590
Russell 1000 stocks	\$8,796,418
International stocks	\$3,764,406
Contribution receivable	\$29
Accounts payable	(\$11,330)

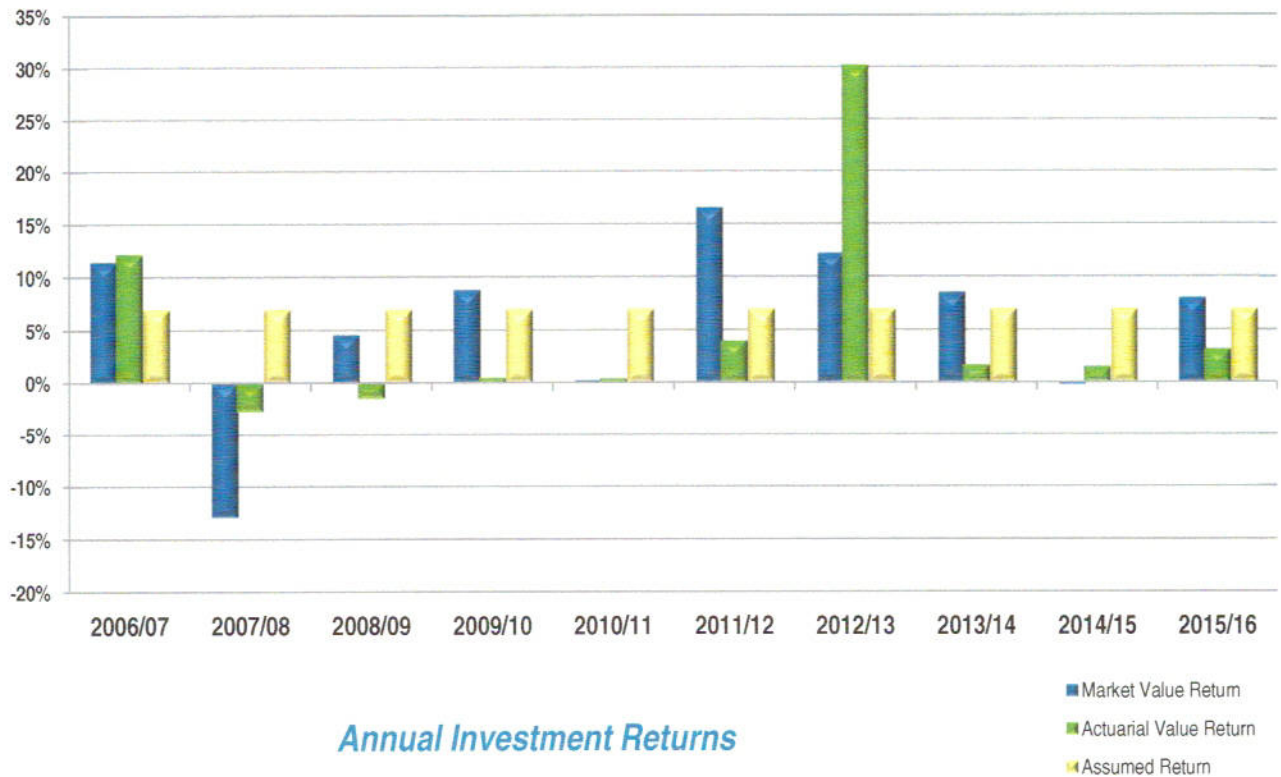
**Historical Market Value of Assets**

October 1, 2007	\$8,855,344
October 1, 2008	\$9,273,617
October 1, 2009	\$11,803,150
October 1, 2010	\$15,284,596
October 1, 2011	\$17,339,652
October 1, 2012	\$22,741,134
October 1, 2013	\$28,135,867
October 1, 2014	\$32,481,032
October 1, 2015	\$34,322,448
October 1, 2016	\$38,401,166



## Investment Return

Table II-C

*Annual Investment Returns*

Plan Year	Market Value Return	Actuarial Value Return	Assumed Return
2006/07	11.46%	12.18%	7.00%
2007/08	-12.86%	-2.74%	7.00%
2008/09	4.60%	-1.47%	7.00%
2009/10	8.85%	0.49%	7.00%
2010/11	0.23%	0.44%	7.00%
2011/12	16.56%	4.01%	7.00%
2012/13	12.24%	30.23%	7.00%
2013/14	8.53%	1.65%	7.00%
2014/15	-0.25%	1.49%	7.00%
2015/16	8.04%	3.16%	7.00%
10yr. Avg.	5.43%	4.57%	7.00%



## Asset Reconciliation

## Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
<b>As of October 1, 2015</b>	<b>\$34,322,448</b>	<b>\$31,971,088</b>
<b><i>Increases Due To:</i></b>		
Employer Contributions	\$2,298,244	\$2,298,244
Employee Contributions	\$627,367	\$627,367
Service Purchase Contributions	\$0	\$0
Total Contributions	<u>\$2,925,611</u>	<u>\$2,925,611</u>
Interest and Dividends	\$6	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	<u>\$2,852,407</u>	
Total Investment Income	<u>\$2,852,413</u>	\$1,023,898
Other Income	\$0	
<b>Total Income</b>	<u><b>\$5,778,024</b></u>	<u><b>\$3,949,509</b></u>
<b><i>Decreases Due To:</i></b>		
Monthly Benefit Payments	(\$1,136,848)	(\$1,136,848)
Refund of Employee Contributions	(\$495,191)	(\$495,191)
Total Benefit Payments	<u>(\$1,632,039)</u>	<u>(\$1,632,039)</u>
Investment Expenses	(\$41,815)	
Administrative Expenses	(\$25,452)	(\$25,452)
Advance Employer Contribution		(\$442,492)
<b>Total Expenses</b>	<u><b>(\$1,699,306)</b></u>	<u><b>(\$2,099,983)</b></u>
<b>As of October 1, 2016</b>	<u><b>\$38,401,166</b></u>	<u><b>\$33,820,614</b></u>



## Historical Trust Fund Detail

Table II-E

**Income**

Plan Year	Employer Contribs.	Employee Contribs.	Service Purchase Contribs.	Interest / Dividends	Realized Gains / Losses	Unrealized Gains / Losses	Other Income
2006/07	\$1,182,130	\$720,283	\$0	\$0	\$0	\$823,354	\$0
2007/08	\$1,364,737	\$537,676	\$0	\$0	\$0	-\$1,245,321	\$0
2008/09	\$1,697,115	\$578,043	\$0	\$0	\$0	\$473,819	\$0
2009/10	\$1,986,045	\$626,059	\$0	\$1,684	\$0	\$1,166,924	\$1,508
2010/11	\$1,958,981	\$685,143	\$0	\$157	\$0	\$64,610	\$0
2011/12	\$2,211,719	\$713,434	\$130,210	\$57	\$0	\$3,103,964	\$0
2012/13	\$2,278,870	\$883,964	\$0	\$13	\$0	\$2,970,636	\$0
2013/14	\$2,129,940	\$630,346	\$0	\$8	\$0	\$2,518,348	\$0
2014/15	\$2,129,940	\$735,600	\$0	\$8	\$0	-\$42,219	\$0
2015/16	\$2,298,244	\$627,367	\$0	\$6	\$0	\$2,852,407	\$0

**Expenses**

Plan Year	Monthly Benefit Payments	Contrib. Refunds	Admin. Expenses	Invest. Expenses
2006/07	\$32,458	\$122,528	\$49,107	\$0
2007/08	\$78,815	\$100,553	\$59,451	\$0
2008/09	\$166,204	\$8,879	\$44,361	\$0
2009/10	\$244,728	\$0	\$33,955	\$22,091
2010/11	\$560,250	\$22,114	\$44,108	\$27,363
2011/12	\$555,067	\$139,141	\$25,348	\$38,346
2012/13	\$640,550	\$33,641	\$28,287	\$36,272
2013/14	\$758,768	\$104,695	\$31,033	\$38,981
2014/15	\$884,571	\$23,481	\$33,063	\$40,796
2015/16	\$1,136,848	\$495,191	\$25,452	\$41,815

**Other Actuarial Adjustments**

Advance  
Employer  
Contribs.

\$285,707  
\$73,513  
\$333,949  
\$6,446  
\$0  
\$0  
\$0  
\$0  
-\$107,755  
\$442,492

Note: Prior to October 1, 2009, information was not available to separate the investment expenses from the investment income nor was information available to separate the investment income by source. Monthly benefit payments include contribution refunds for the 2009/10 plan year.



## Other Reconciliations

Table II-F

**Advance Employer Contribution**

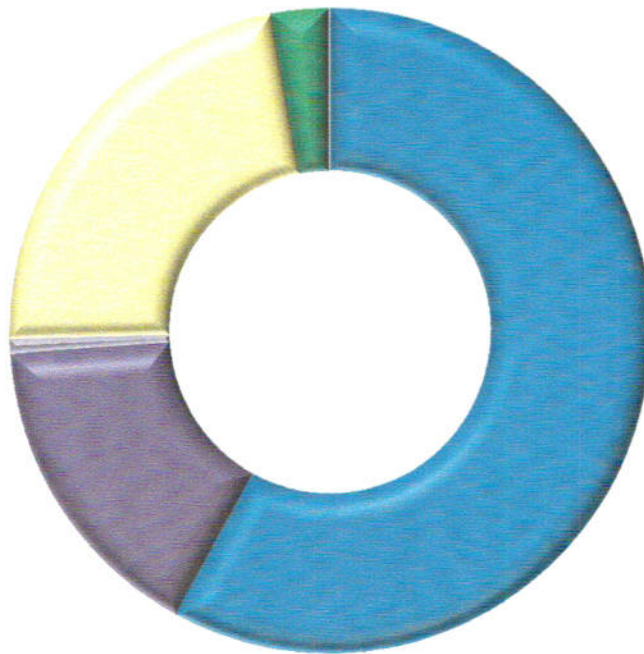
Advance Employer Contribution as of October 1, 2015	\$874,126
Additional Employer Contribution	\$2,298,244
Minimum Required Contribution	<u>(\$1,855,752)</u>
Net Increase in Advance Employer Contribution	<u>\$442,492</u>
Advance Employer Contribution as of October 1, 2016	<u><u>\$1,316,618</u></u>



## Summary of Participant Data

Table III-A

As of October 1, 2016

Actively Employed Participants

Active Participants	80
DROP Participants	0

Inactive Participants

Deferred Vested Participants	22
Due a Refund of Contributions	1
Deferred Beneficiaries	0

Participants Receiving a Benefit

Service Retirements	31
Disability Retirements	0
Beneficiaries Receiving	4

**Total Participants 138**Number of Participants Included in Prior Valuations

	Active	DROP	Inactive	Retired	Total
October 1, 2007	78	0	9	4	91
October 1, 2008	81	0	13	5	99
October 1, 2009	79	0	15	8	102
October 1, 2010	75	0	17	14	106
October 1, 2011	73	0	15	18	106
October 1, 2012	81	0	14	21	116
October 1, 2013	77	0	17	24	118
October 1, 2014	81	0	18	26	125
October 1, 2015	81	0	17	33	131
October 1, 2016	80	0	23	35	138



## Data Reconciliation

Table III-B

	<u>Active</u>	<u>DROP</u>	<u>Deferred Vested</u>	<u>Due a Refund</u>	<u>Def. Benef.</u>	<u>Service Retiree</u>	<u>Disabled Retiree</u>	<u>Benef. Rec'v.</u>	<u>Total</u>
<u>October 1, 2015</u>	81	0	17	0	0	28	0	5	131
<u>Change in Status</u>									
Re-employed									
Terminated	(8)		5	3					
Retired	(3)					3			
<u>Participation Ended</u>									
Transferred Out									
Cashed Out				(2)					(2)
Died									
<u>Participation Began</u>									
Newly Hired	9								9
Transferred In	1								1
New Beneficiary									
Other Adjustment								(1)	(1)
<u>October 1, 2016</u>	80	0	22	1	0	31	0	4	138

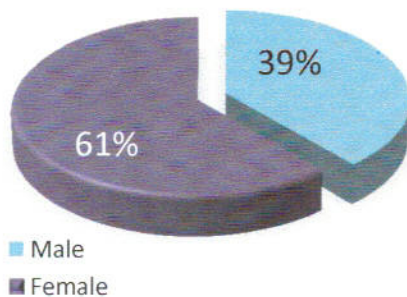


## Active Participant Data

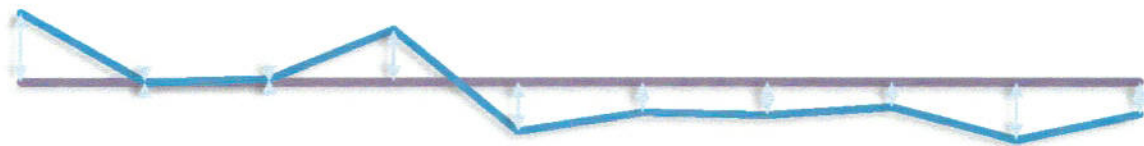
## Table III-C

As of October 1, 2016

## Gender Mix



Average Age	50.5 years
Average Service	10.7 years
Total Annualized Compensation for the Prior Year	\$6,417,331
Total Expected Compensation for the Current Year	\$6,738,201
Average Increase in Compensation for the Prior Year	2.62%
Expected Increase in Compensation for the Current Year	5.00%
Accumulated Contributions for Active Employees	\$6,738,131



## Actual vs. Expected Salary Increases

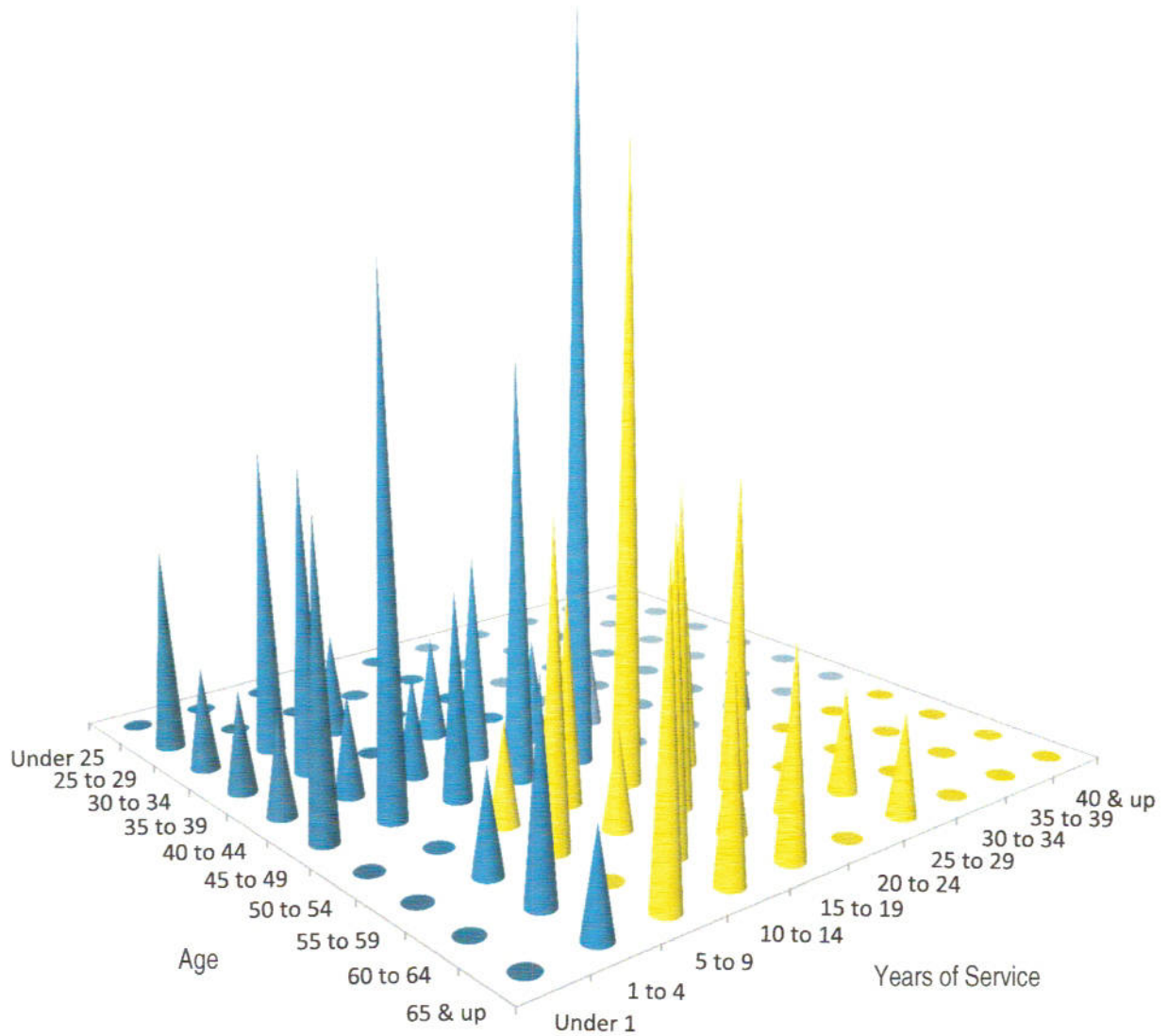
## Active Participant Statistics From Prior Valuations

	Average Age	Average Service	Average Salary	Average Expected Salary Increase	Average Actual Salary Increase
October 1, 2007	47.7	8.3	\$65,578	5.00%	10.16%
October 1, 2008	47.7	8.6	\$65,587	5.00%	4.99%
October 1, 2009	48.8	8.8	\$70,828	5.00%	5.21%
October 1, 2010	48.1	8.7	\$77,000	5.00%	8.88%
October 1, 2011	48.6	9.6	\$77,029	5.00%	1.38%
October 1, 2012	49.8	10.3	\$77,535	5.00%	2.75%
October 1, 2013	50.0	11.0	\$77,861	5.00%	2.56%
October 1, 2014	50.1	10.8	\$78,255	5.00%	3.15%
October 1, 2015	50.2	11.1	\$78,925	5.00%	0.73%
October 1, 2016	50.5	10.7	\$80,217	5.00%	2.62%



## Active Age-Service Distribution

Table III-D



- ▲ Eligible to retire
- ▲ May be eligible to retire
- ▲ Not eligible to retire



Active Age-Service-Salary Table

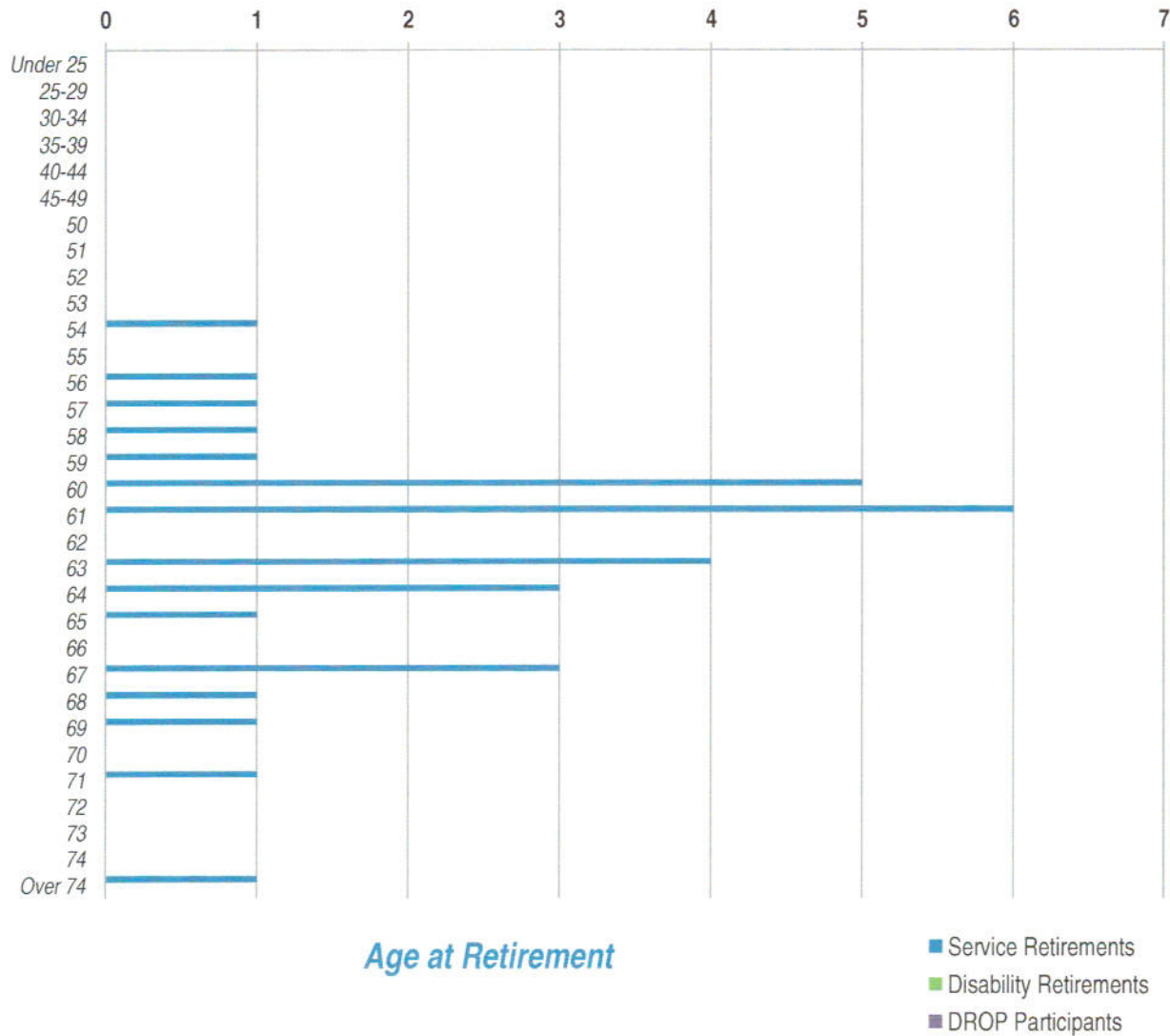
Table III-E

Attained Age	Completed Years of 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	
<b>Under 25</b>	0	0	0	0	0	0	0	0	0	0	0
Avg. Pay	0	0	0	0	0	0	0	0	0	0	0
<b>25 to 29</b>	2	0	0	0	0	0	0	0	0	0	2
Avg. Pay	61,139	0	0	0	0	0	0	0	0	0	61,139
<b>30 to 34</b>	1	3	1	0	0	0	0	0	0	0	5
Avg. Pay	61,607	49,749	60,059	0	0	0	0	0	0	0	54,183
<b>35 to 39</b>	1	3	0	1	0	0	0	0	0	0	5
Avg. Pay	51,359	48,497	0	110,713	0	0	0	0	0	0	61,513
<b>40 to 44</b>	1	1	1	2	1	1	0	0	0	0	7
Avg. Pay	76,000	48,984	59,248	74,889	69,916	86,398	0	0	0	0	70,046
<b>45 to 49</b>	3	5	2	4	7	0	0	1	0	0	22
Avg. Pay	85,968	76,293	74,721	119,264	75,602	0	0	65,309	0	0	84,563
<b>50 to 54</b>	0	0	1	2	6	2	0	0	0	0	11
Avg. Pay	0	0	111,776	65,776	78,712	126,990	0	0	0	0	88,143
<b>55 to 59</b>	0	1	3	1	3	3	0	0	0	0	11
Avg. Pay	0	64,194	110,470	100,541	53,343	58,949	0	0	0	0	75,729
<b>60 to 64</b>	0	2	0	3	1	1	1	0	0	0	8
Avg. Pay	0	65,648	0	120,073	84,665	153,496	93,094	0	0	0	102,846
<b>65 &amp; up</b>	0	1	3	2	2	0	1	0	0	0	9
Avg. Pay	0	40,307	70,371	82,347	120,969	0	82,436	0	0	0	82,276
<b>Total</b>	8	16	11	15	20	7	2	1	0	0	80
Avg. Pay	71,144	60,062	83,914	99,637	77,902	95,817	87,765	65,309	0	0	80,217



## Inactive Participant Data

Table III-F

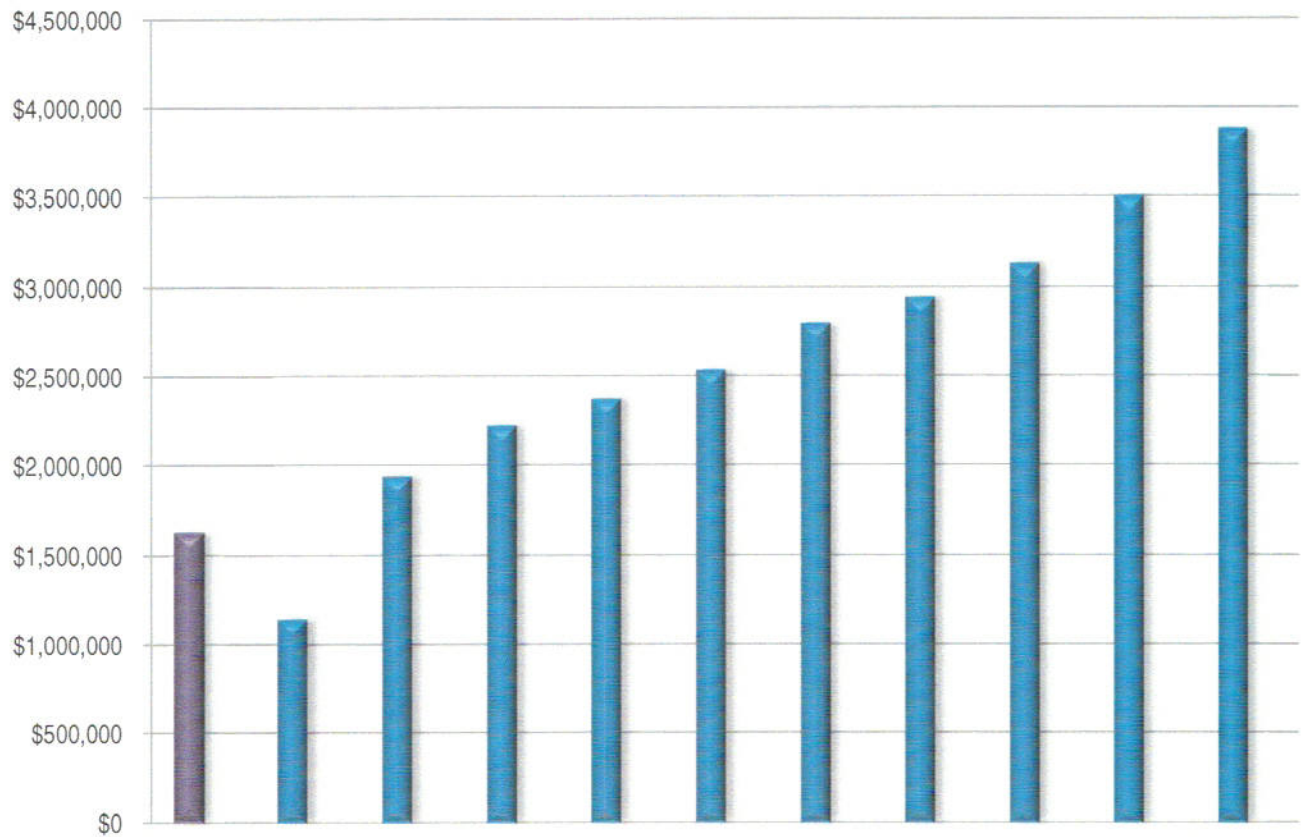
Average Monthly Benefit

Service Retirements	\$2,986.49
Disability Retirements	Not applicable
Beneficiaries Receiving	\$838.45
DROP Participants	Not applicable
Deferred Vested Participants	\$1,047.10
Deferred Beneficiaries	Not applicable



## Projected Benefit Payments

Table III-G

Actual

For the period October 1, 2015 through September 30, 2016

\$1,632,039

Projected

For the period October 1, 2016 through September 30, 2017

\$1,148,484

For the period October 1, 2017 through September 30, 2018

\$1,944,312

For the period October 1, 2018 through September 30, 2019

\$2,226,655

For the period October 1, 2019 through September 30, 2020

\$2,378,253

For the period October 1, 2020 through September 30, 2021

\$2,539,050

For the period October 1, 2021 through September 30, 2022

\$2,802,260

For the period October 1, 2022 through September 30, 2023

\$2,947,697

For the period October 1, 2023 through September 30, 2024

\$3,133,272

For the period October 1, 2024 through September 30, 2025

\$3,508,028

For the period October 1, 2025 through September 30, 2026

\$3,877,398



## Summary of Actuarial Methods and Assumptions

## Table IV-A

*NOTE: The following assumptions and methods have been selected and approved by the Board of Trustees based in part on the advice of the plan's enrolled actuary in accordance with the authority granted to the Board under the pension ordinances and State law.*

1. **Actuarial Cost Method**

Individual entry age normal cost method. Under this actuarial cost method, a level funding cost is developed with respect to each benefit for each participant. The level funding cost for each benefit applies to the period beginning when the participant's service commences and ends when the participant is assumed to cease active participation due to each respective decrement. The actuarial accrued liability is equal to the accumulated level funding cost to the valuation date for all participants. The normal cost is equal to the level funding cost for the year immediately following the valuation date for all active participants.

2. **Amortization Method**

The unfunded liability is amortized as a level dollar amount over a period of up to 30 years.

3. **Asset Method**

The actuarial value of assets is equal to the market value of assets, adjusted to reflect a five-year phase-in of the net investment appreciation (both realized and unrealized) that occurs after September 30, 2013.

4. **Interest (or Discount) Rate**

7.00% per annum

5. **Salary Increases**

Plan compensation is assumed to increase at the rate of 5.00% per annum, unless actual plan compensation is known for a prior plan year.

6. **Decrements**

- Pre-retirement mortality: Sex-distinct rates set forth in the RP-2000 Combined Mortality Table, with full generational improvements in mortality using Scale BB
- Post-retirement mortality: Sex-distinct rates set forth in the RP-2000 Combined Mortality Table, with full generational improvements in mortality using Scale BB



Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

- Disability: Male disability rates set forth in the Wyatt 1985 Disability Study (Class 1)
- Termination: None assumed
- Retirement: 5% of eligible participants are assumed to retire at each early retirement age and 100% of eligible participants are assumed to retire on their normal retirement age.

No decrements have been assumed to occur during the first year following the valuation date.

7. Form of Payment

Future retirees have been assumed to select the 10-year certain and life annuity.

8. Marriage Assumption

100% of participants are assumed to be married, with male spouses assumed to be three years older than female spouses.

9. Expenses

Administrative expenses are assumed to be 1.00% of covered payroll. In addition, the interest rate set forth in item 4. above is assumed to be net of investment expenses and commissions.



## Changes in Actuarial Methods and Assumptions

Table IV-B

Since the completion of the previous valuation, the mortality basis was changed from a 2015 projection of the RP-2000 Mortality Table for annuitants to a full generational projection using Scale BB of the RP-2000 Combined Mortality Table as required by State law.



# Summary of Plan Provisions

## Table V-A

### 1. Monthly Accrued Benefit

For elected officials:

6 $\frac{2}{3}$ % of Average Final Compensation for each completed year of Credited Service, with a pro-rata benefit accrual for a partial year and with the benefit limited to 80% of Average Final Compensation

For City manager and City attorney:

4.00% of Average Final Compensation multiplied by Credited Service, with the benefit limited to 80% of Average Final Compensation

For all other participants:

3.00% of Average Final Compensation multiplied by Credited Service, with the benefit limited to 80% of Average Final Compensation

### 2. Normal Retirement Age and Benefit

- **Age**

Age 60 with at least five years of Credited Service;  
Age 57 with at least 20 years of Credited Service; or  
Age 55 with at least 25 years of Credited Service

- **Amount**

Monthly Accrued Benefit

- **Form of Payment**

Actuarially equivalent single life annuity (optional);  
10-year certain and life annuity (normal form of payment);  
Actuarially equivalent joint and contingent annuity (optional);  
Actuarially equivalent joint and contingent annuity with "pop-up" feature (optional); or  
Actuarially equivalent annuity plus a partial lump sum payment, with the partial lump sum payment equal to up to three years of monthly benefit payments with simple interest calculated at the rate of 4% per year and a refund of the participant's contributions during the same period

*(Note: All forms of payment guarantee at least the return of the participant's Accumulated Contributions.)*



## Summary of Plan Provisions

## Table V-A

(continued)

### 3. Early Retirement Age and Benefit

- **Age**  
Age 50 with at least five years of Credited Service
- **Amount**  
Monthly Accrued Benefit (payable at Normal Retirement Age); or  
Monthly Accrued Benefit reduced by 5% for each year by which the participant's Early Retirement Age precedes age 60 (payable at Early Retirement Age)
- **Form of Payment**  
Same as for Normal Retirement

### 4. Disability Eligibility and Benefit

- **Eligibility**  
All participants are eligible.
- **Condition**  
The participant must be totally and permanently disabled such that he is unable to perform his duties as a City employee.
- **Amount**  
Monthly Accrued Benefit
- **Form of Payment**  
Same as for Normal Retirement

### 5. Deferred Vested Benefit

- **Age**  
Any age with at least one year of Credited Service
- **Amount**  
Monthly Accrued Benefit multiplied by the Vested Percentage (payable at Normal Retirement Age); or  
Monthly Accrued Benefit multiplied by the Vested Percentage and reduced by 5% for each year by which the participant's Early Retirement Age precedes age 60 (payable at Early Retirement Age)
- **Form of Payment**  
Same as for Normal Retirement



## Summary of Plan Provisions

## Table V-A

(continued)

### 6. Pre-Retirement Death Benefits

- **Fully or Partially Vested Participant**

Upon the death prior to retirement of a fully or partially vested participant, the participant's beneficiary receives an immediate Pre-Retirement Survivor Annuity equal to one-half of a 50% joint and contingent annuity based on the participant's Monthly Accrued Benefit calculated without regard to any reduction for early retirement. The Pre-Retirement Survivor Annuity guarantees at least the return of the participant's Accumulated Contributions.

- **Non-Vested Participant**

In the case of the death of a non-vested participant prior to retirement, his beneficiary will receive the participant's Accumulated Contributions.

### 7. Vested Percentage

Each participant earns a 20% vested interest in his Monthly Accrued Benefit for each whole year of Credited Service up to five years of Credited Service

### 8. Average Final Compensation

Average compensation for the highest five consecutive years of service prior to the determination; compensation includes total cash remuneration paid for services rendered to the City, but excludes: (i) bonuses, (ii) employer contributions to any health, dental, disability, or related insurance program, (iii) medical, child care, and other non-taxable reimbursements, (iv) employer contributions to a deferred compensation program under Internal Revenue Code (IRC) section 457, (v) cash payments of unused accumulated leave payable upon employment termination, and (vi) any overtime pay in excess of 300 hours per year after June 30, 2011.

### 9. Credited Service

The uninterrupted service, expressed in years and completed months, from the participant's date of hire until his date of termination, retirement, or death. For purposes of determining the Monthly Accrued Benefit, Credited Service earned prior to the effective date of the plan is not included for participants other than elected officials unless the participant purchases such credit by paying into the plan 50% of the full actuarial cost thereof. In addition, participants may purchase up to four years of credit for other prior governmental or military service by paying into the plan the full actuarial cost thereof, provided that no other pension benefit is granted for such service by any other governmental employer.



## Summary of Plan Provisions

## Table V-A

(continued)

### 10. Participation Requirement

All managerial and non-bargaining employees, as well as charter officers and elected commissioners, of the City of Tamarac, Florida, may voluntarily participate in the plan. Subject to certain exceptions, those individuals who are hired on or after October 1, 2005 are required to participate in the plan.

### 11. Accumulated Contributions

The participant's Contributions accumulated with 2.50% simple interest per annum *(Prior to January 1, 2012, the participant's Contributions were accumulated with 4.00% simple interest per annum.)*

### 12. Participant Contributions

10% of compensation per year; participant Contributions are deemed to be "picked-up" by the City pursuant to Internal Revenue Code (IRC) §414(h)(2).

### 13. Actuarial Equivalence

Based on 7.00% interest per annum and the unisex mortality rates set forth in the 1994 Group Annuity Reserving Table, projected to 2002 by Scale AA

### 14. Automatic Cost-of-Living Adjustment

Effective each January 1, retirement, disability, and deferred vested benefits are automatically increased by 2% compounded annually after the participant has been receiving payments for at least five years.

### 15. Plan Effective Date

October 1, 2005



## Summary of Plan Amendments

Table V-B

No significant plan changes have been adopted since the completion of the previous valuation.

