

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

ACTUARIAL VALUATION
AS OF OCTOBER 1, 2017

DETERMINES THE CONTRIBUTION
FOR THE 2017/18 FISCAL YEAR



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March 1, 2018

Introduction

This report presents the results of the October 1, 2017 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, 2017 and to determine the minimum required contribution under Chapter 112, Florida Statutes, for the 2017/18 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 2017/18 plan year. The minimum required contribution rate is 34.95% of covered payroll, which represents a decrease of 0.20% 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 0.33% of payroll due to investment losses and decreased by 0.53% of payroll due to demographic experience. Although the market value of assets earned 13.79% during the 2016/17 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 6.09% during the 2016/17 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 2017/18 minimum required contribution will be equal to 34.95% multiplied by the total pensionable earnings for the 2017/18 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 \$61,896,019. As illustrated in Table I-A, current assets are sufficient to cover \$37,653,200 of this amount, the employer's 2017/18 expected contribution will cover \$2,491,122 of this amount, and future employee contributions are expected to cover \$4,504,146 of this amount, leaving \$17,247,551 to be covered by future employer funding beyond the 2017/18 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, 2017, the advance employer contribution is \$1,243,358, which reflects the advance employer contribution of \$1,316,618 as of October 1, 2016 less \$73,260 to cover the shortfall between the minimum required contribution and actual employer contributions for the 2016/17 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 2017/18 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, 2017 would reduce the minimum required contribution for the 2017/18 plan year to 33.64% 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, 2017, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

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.

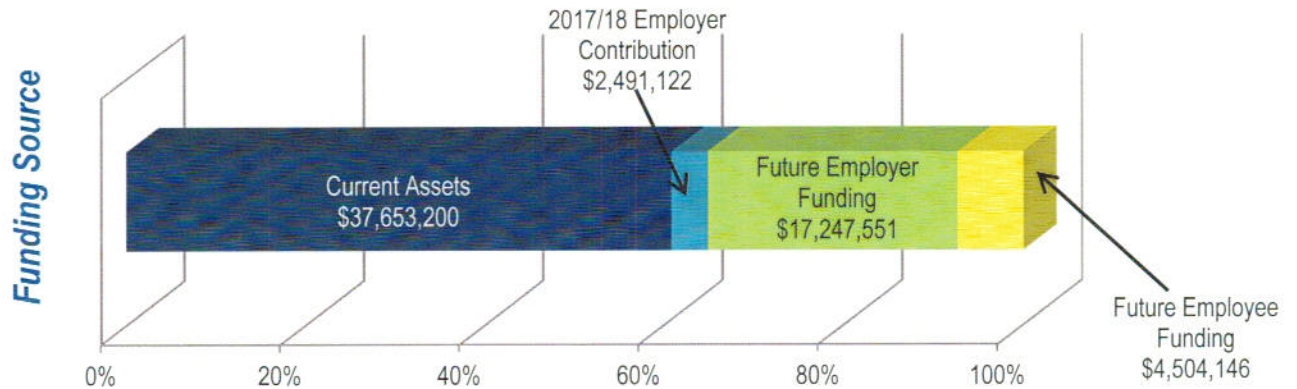
Enrolled Actuary No. 17-04927

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 2017/18 Plan Year

Entry Age Normal Cost	\$2,228,720
Unfunded Liability Amortization Payment	\$925,254
Expense Allowance	\$49,892
Expected Employee Contribution	(\$712,744)
	<hr/>
	\$2,491,122
Adjustment to Reflect Beginning-of-Year Employer Contribution	\$0
Preliminary Employer Contribution for the 2017/18 Plan Year	<hr/>
	\$2,491,122
Expected Payroll for the 2017/18 Plan Year	÷ \$7,127,437

Minimum Required Contribution Rate **34.95%**

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

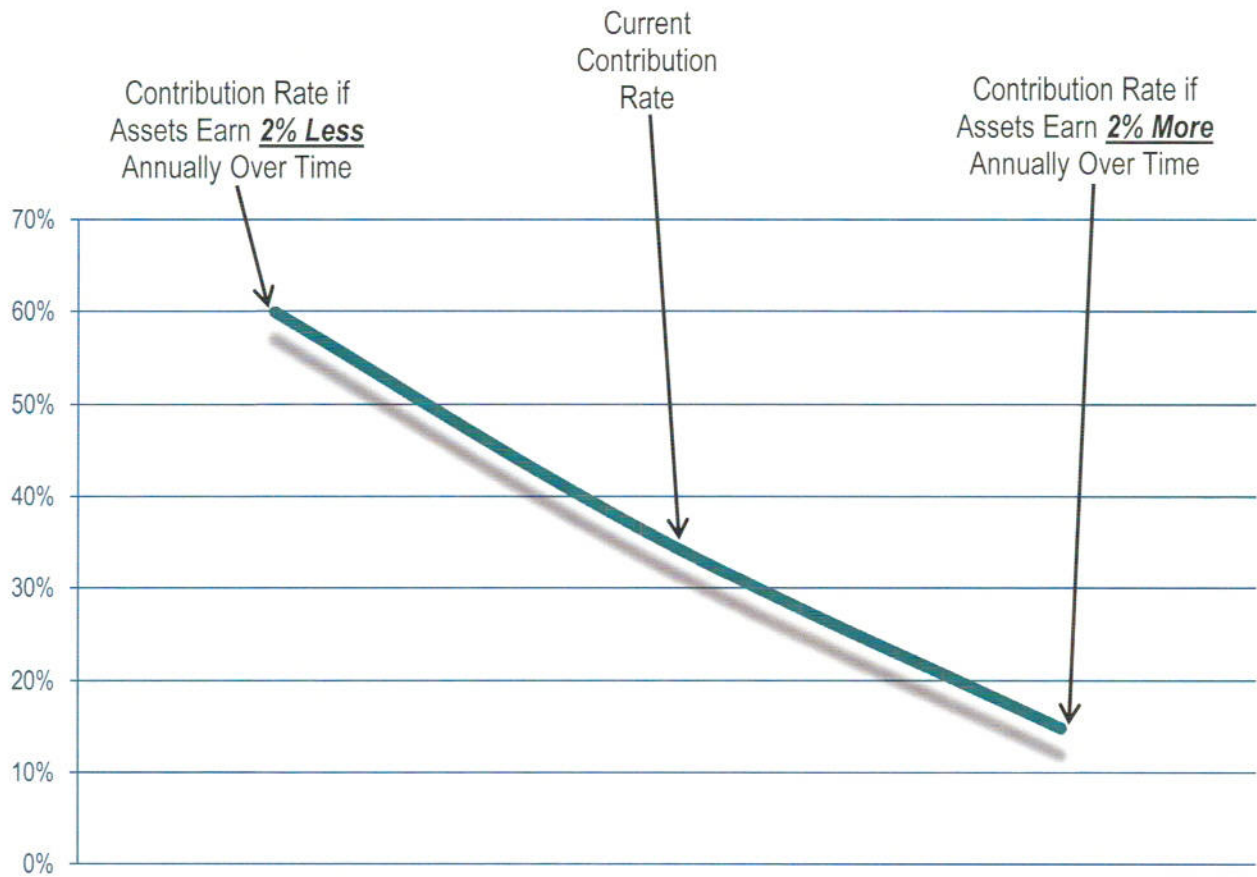
Additional Disclosures

Present Value of Future Compensation	\$45,041,388
Present Value of Future Employer Contributions	\$19,738,673
Present Value of Future Employee Contributions	\$4,504,146



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	35.15%
Increase (decrease) due to investment gains and losses	0.33%
Increase (decrease) due to demographic experience	-0.53%
Increase (decrease) due to plan amendments	0.00%
Increase (decrease) due to actuarial assumption changes	0.00%
Increase (decrease) due to actuarial method changes	0.00%
Current minimum required contribution rate	34.95%

Source of Change in the Unfunded Liability

Previous unfunded liability	\$10,282,821
Increase due to employer normal cost for the prior year	\$1,488,753
Increase due to interest on normal cost and unfunded liability	\$824,010
Decrease due to employer contributions	(\$2,416,056)
Decrease due to interest on employer contributions	(\$169,124)
Expected unfunded liability	\$10,010,404
Increase (decrease) due to plan experience	\$237,838
Increase (decrease) due to plan amendments	\$0
Increase (decrease) due to actuarial assumption changes	\$0
Increase (decrease) due to actuarial method changes	\$0
Current unfunded liability	\$10,248,242

Reconciliation of the Present Value of Accrued Benefits

Present Value of Accrued Benefits as of October 1, 2016	\$39,145,393
Increase (Decrease) During the Plan Year Due to:	
Interest	\$2,740,178
Benefits accumulated	-\$386,022
Benefits paid	\$1,336,169
Plan amendments	\$0
Changes in actuarial assumptions or methods	\$0
Net increase (decrease)	\$3,690,325
Present Value of Accrued Benefits as of October 1, 2017	\$42,835,718



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	\$39,217,210	\$39,217,210	\$39,217,210
Termination benefits	\$0	\$0	\$0
Disability benefits	\$1,298,483	\$1,298,483	\$1,298,483
Death benefits	\$295,858	\$295,858	\$295,858
Refund of employee contributions	\$792	\$792	\$792
Sub-total	\$40,812,343	\$40,812,343	\$40,812,343
<u>Deferred Vested Participants</u>			
Retirement benefits	\$2,768,720	\$2,768,720	\$2,768,720
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$2,768,720	\$2,768,720	\$2,768,720
<u>Due a Refund of Contributions</u>	\$8,139	\$8,139	\$8,139
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$17,456,288	\$17,456,288	\$17,456,288
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$535,239	\$535,239	\$535,239
DROP participants	\$0	\$0	\$0
Sub-total	\$17,991,527	\$17,991,527	\$17,991,527
<u>Grand Total</u>	<u>\$61,580,729</u>	<u>\$61,580,729</u>	<u>\$61,580,729</u>
Present Value of Future Payroll	\$45,041,388	\$45,041,388	\$45,041,388
Present Value of Future Employee Contribs.	\$4,504,146	\$4,504,146	\$4,504,146
Present Value of Future Employer Contribs.	\$19,738,673	\$19,738,673	\$19,738,673



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	\$21,343,213	\$21,343,213	\$21,343,213
Termination benefits	\$0	\$0	\$0
Disability benefits	\$552,704	\$552,704	\$552,704
Death benefits	\$171,039	\$171,039	\$171,039
Refund of employee contributions	\$376	\$376	\$376
Sub-total	\$22,067,332	\$22,067,332	\$22,067,332
<u>Deferred Vested Participants</u>			
Retirement benefits	\$2,768,720	\$2,768,720	\$2,768,720
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$2,768,720	\$2,768,720	\$2,768,720
<u>Due a Refund of Contributions</u>	\$8,139	\$8,139	\$8,139
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$17,456,288	\$17,456,288	\$17,456,288
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$535,239	\$535,239	\$535,239
DROP participants	\$0	\$0	\$0
Sub-total	\$17,991,527	\$17,991,527	\$17,991,527
<u>Grand Total</u>	<u>\$42,835,718</u>	<u>\$42,835,718</u>	<u>\$42,835,718</u>
<u>Funded Percentage</u>	106.12%	106.12%	106.12%

(Note: Funded percentage is equal to the ratio of the usable portion of the market value of assets divided by the present value of accrued benefits.)



Present Value of Vested Benefits

Table I-F

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$20,161,247	\$20,161,247	\$20,161,247
Termination benefits	\$0	\$0	\$0
Disability benefits	\$552,704	\$552,704	\$552,704
Death benefits	\$113,118	\$113,118	\$113,118
Refund of employee contributions	\$2,560	\$2,560	\$2,560
Sub-total	\$20,829,629	\$20,829,629	\$20,829,629
<u>Deferred Vested Participants</u>			
Retirement benefits	\$2,768,720	\$2,768,720	\$2,768,720
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$2,768,720	\$2,768,720	\$2,768,720
<u>Due a Refund of Contributions</u>	\$8,139	\$8,139	\$8,139
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$17,456,288	\$17,456,288	\$17,456,288
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$535,239	\$535,239	\$535,239
DROP participants	\$0	\$0	\$0
Sub-total	\$17,991,527	\$17,991,527	\$17,991,527
<u>Grand Total</u>	<u>\$41,598,015</u>	<u>\$41,598,015</u>	<u>\$41,598,015</u>



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	\$26,274,221	\$26,274,221	\$26,274,221
Termination benefits	\$0	\$0	\$0
Disability benefits	\$696,523	\$696,523	\$696,523
Death benefits	\$162,083	\$162,083	\$162,083
Refund of employee contributions	\$229	\$229	\$229
Sub-total	\$27,133,056	\$27,133,056	\$27,133,056
<u>Deferred Vested Participants</u>			
Retirement benefits	\$2,768,720	\$2,768,720	\$2,768,720
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$2,768,720	\$2,768,720	\$2,768,720
<u>Due a Refund of Contributions</u>	\$8,139	\$8,139	\$8,139
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$17,456,288	\$17,456,288	\$17,456,288
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$535,239	\$535,239	\$535,239
DROP participants	\$0	\$0	\$0
Sub-total	\$17,991,527	\$17,991,527	\$17,991,527
<u>Grand Total</u>	<u>\$47,901,442</u>	<u>\$47,901,442</u>	<u>\$47,901,442</u>
less Actuarial Value of Assets	(\$37,653,200)	(\$37,653,200)	(\$37,653,200)
<u>Unfunded Accrued Liability</u>	<u>\$10,248,242</u>	<u>\$10,248,242</u>	<u>\$10,248,242</u>



Entry Age Normal Cost

Table I-H

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$2,117,070	\$2,117,070	\$2,117,070
Termination benefits	\$0	\$0	\$0
Disability benefits	\$91,876	\$91,876	\$91,876
Death benefits	\$19,569	\$19,569	\$19,569
Refund of employee contributions	\$205	\$205	\$205
Sub-total	\$2,228,720	\$2,228,720	\$2,228,720
<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	\$0	\$0	\$0
<u>Due a Refund of Contributions</u>	\$0	\$0	\$0
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<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	\$0	\$0	\$0
<u>Grand Total</u>	<u>\$2,228,720</u>	<u>\$2,228,720</u>	<u>\$2,228,720</u>



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>
	Total	\$10,248,242	\$925,254	
		↓	↓	
Initial Unfunded Liability	\$8,427,025	\$7,776,148	\$722,474	18
2005/06 Experience Gain	(\$537,954)	(\$495,464)	(\$44,802)	19
2006/07 Experience Loss	\$713,345	\$653,776	\$57,675	20
10/1/2008 Method Change	(\$996,242)	(\$906,107)	(\$78,153)	21
2007/08 Experience Loss	\$1,540,614	\$1,401,228	\$120,858	21
2008/09 Experience Loss	\$915,268	\$824,111	\$69,630	22
2009/10 Experience Loss	\$2,556,391	\$2,273,643	\$188,508	23
2010/11 Experience Loss	\$105,907	\$92,853	\$7,566	24
1/1/2012 Amendment	(\$11)	(\$7)	(\$1)	24
2011/12 Experience Loss	\$118,781	\$105,636	\$8,472	25
10/1/2013 Method Change	(\$4,498,116)	(\$4,007,782)	(\$316,731)	26
2012/13 Experience Gain	(\$1,567,817)	(\$1,396,911)	(\$110,396)	26
2013/14 Experience Loss	\$898,369	\$863,558	\$67,330	27
10/1/2014 Assumption Change	\$99,452	\$95,599	\$7,454	27
2014/15 Experience Gain	(\$415,771)	(\$408,154)	(\$31,429)	28
2015/16 Experience Gain	\$458,932	\$453,334	\$34,508	29
10/1/2016 Assumption Change	\$2,718,101	\$2,684,943	\$204,378	29
2016/17 Experience Loss	\$237,838	\$237,838	\$17,913	30



Actuarial Value of Assets

Table II-A

	<u>Net Investment Gain (Loss)</u>		<u>Unrecognized Gain (Loss)</u>
For the 2013/14 plan year	\$2,518,348	x 20%	\$503,670
For the 2014/15 plan year	(\$42,219)	x 40%	(\$16,888)
For the 2015/16 plan year	\$2,852,407	x 60%	\$1,711,444
For the 2016/17 plan year	\$5,453,018	x 80%	\$4,362,414
			<u>\$6,560,640</u>

Market Value of Assets as of October 1, 2017 \$45,457,198

Minus advance employer contributions (\$1,243,358)

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 (\$6,560,640)

Actuarial Value of Assets as of October 1, 2017 \$37,653,200

<u>Historical Actuarial Value of Assets</u>	
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
October 1, 2017	\$37,653,200

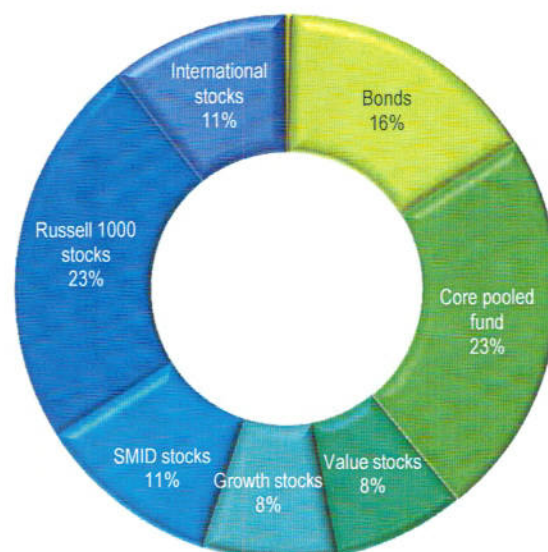


Market Value of Assets

Table II-B

As of October 1, 2017

Market Value of Assets	<u>\$45,457,198</u>
Cash	\$182,031
Bonds	\$7,138,989
Core pooled fund	\$10,503,864
Value stocks	\$3,592,230
Growth stocks	\$3,637,702
SMID stocks	\$5,001,840
Russell 1000 stocks	\$10,594,806
International stocks	\$4,819,955
Accounts payable	(\$14,219)



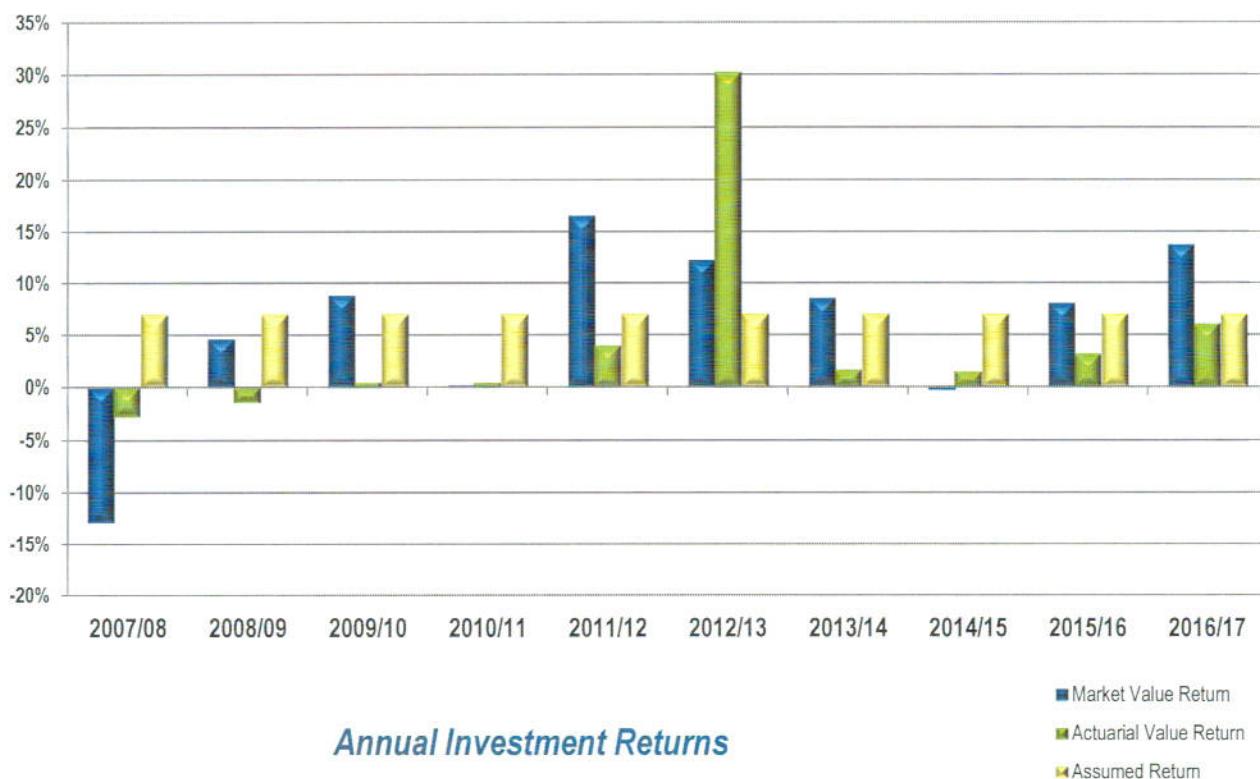
Historical Market Value of Assets

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
October 1, 2017	\$45,457,198



Investment Return

Table II-C

*Annual Investment Returns*

Plan	Market Value	Actuarial Value	Assumed
<u>Year</u>	<u>Return</u>	<u>Return</u>	<u>Return</u>
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%
2016/17	13.79%	6.09%	7.00%
10yr. Avg.	5.64%	3.99%	7.00%



Asset Reconciliation

Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of October 1, 2016	\$38,401,166	\$33,820,614
<i>Increases Due To:</i>		
Employer Contributions	\$2,342,796	\$2,342,796
Employee Contributions	\$687,356	\$687,356
Service Purchase Contributions	\$0	\$0
Total Contributions	<u>\$3,030,152</u>	<u>\$3,030,152</u>
Interest and Dividends	\$12	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	\$5,453,018	
Total Investment Income	<u>\$5,453,030</u>	\$2,110,890
Other Income	\$0	
Total Income	<u>\$8,483,182</u>	<u>\$5,141,042</u>
<i>Decreases Due To:</i>		
Monthly Benefit Payments	(\$1,216,406)	(\$1,216,406)
Refund of Employee Contributions	(\$119,763)	(\$119,763)
Total Benefit Payments	<u>(\$1,336,169)</u>	<u>(\$1,336,169)</u>
Investment Expenses	(\$45,434)	
Administrative Expenses	(\$45,547)	(\$45,547)
Advance Employer Contribution		\$73,260
Total Expenses	<u>(\$1,427,150)</u>	<u>(\$1,308,456)</u>
As of October 1, 2017	<u><u>\$45,457,198</u></u>	<u><u>\$37,653,200</u></u>



Historical Trust Fund Detail

Table II-E

Income

Plan	Employer	Employee	Service		Realized	Unrealized	Other
<u>Year</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Purchase</u>	<u>Interest /</u>	<u>Gains /</u>	<u>Gains /</u>	<u>Income</u>
			<u>Contribs.</u>	<u>Dividends</u>	<u>Losses</u>	<u>Losses</u>	
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
2016/17	\$2,342,796	\$687,356	\$0	\$12	\$0	\$5,453,018	\$0

Expenses

Plan	Monthly				<u>Other Actuarial Adjustments</u>
<u>Year</u>	<u>Benefit</u>	<u>Contrib.</u>	<u>Admin.</u>	<u>Invest.</u>	<u>Advance</u>
	<u>Payments</u>	<u>Refunds</u>	<u>Expenses</u>	<u>Expenses</u>	<u>Employer</u>
2007/08	\$78,815	\$100,553	\$59,451	\$0	\$73,513
2008/09	\$166,204	\$8,879	\$44,361	\$0	\$333,949
2009/10	\$244,728	\$0	\$33,955	\$22,091	\$6,446
2010/11	\$560,250	\$22,114	\$44,108	\$27,363	\$0
2011/12	\$555,067	\$139,141	\$25,348	\$38,346	\$0
2012/13	\$640,550	\$33,641	\$28,287	\$36,272	\$0
2013/14	\$758,768	\$104,695	\$31,033	\$38,981	\$0
2014/15	\$884,571	\$23,481	\$33,063	\$40,796	-\$107,755
2015/16	\$1,136,848	\$495,191	\$25,452	\$41,815	\$442,492
2016/17	\$1,216,406	\$119,763	\$45,547	\$45,434	-\$73,260

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

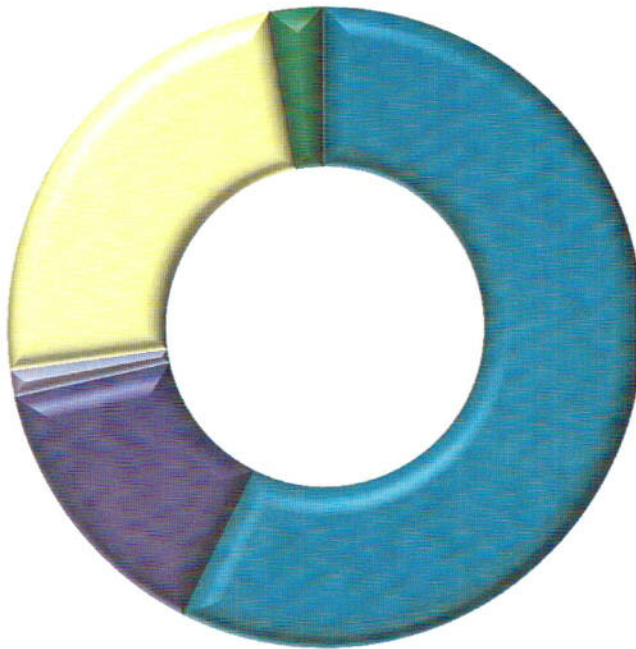
Advance Employer Contribution as of October 1, 2016	\$1,316,618
Additional Employer Contribution	\$2,342,796
Minimum Required Contribution	(\$2,416,056)
Net Increase in Advance Employer Contribution	(\$73,260)
Advance Employer Contribution as of October 1, 2017	<u>\$1,243,358</u>



Summary of Participant Data

Table III-A

As of October 1, 2017

Actively Employed Participants

Active Participants	85
DROP Participants	0

Inactive Participants

Deferred Vested Participants	21
Due a Refund of Contributions	2
Deferred Beneficiaries	0

Participants Receiving a Benefit

Service Retirements	36
Disability Retirements	0
Beneficiaries Receiving	4

Total Participants 148Number of Participants Included in Prior Valuations

	Active	DROP	Inactive	Retired	Total
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
October 1, 2017	85	0	23	40	148



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, 2016</u>	80	0	22	1	0	31	0	4	138
<u>Change in Status</u>									
Re-employed	1		(1)						
Terminated	(4)		1	3					
Retired	(5)					5			
<u>Participation Ended</u>									
Transferred Out									
Cashed Out			(1)	(2)					(3)
Died									
<u>Participation Began</u>									
Newly Hired	9								9
Transferred In	4								4
New Beneficiary									
<u>Other Adjustment</u>									
<u>October 1, 2017</u>	85	0	21	2	0	36	0	4	148

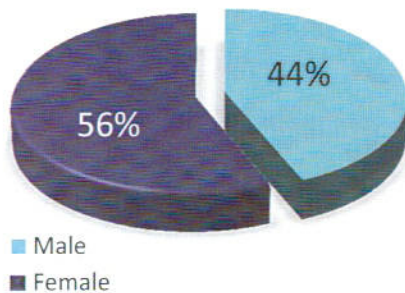


Active Participant Data

Table III-C

As of October 1, 2017

Gender Mix



Average Age	48.9 years
Average Service	10.6 years
Total Annualized Compensation for the Prior Year	\$6,788,035
Total Expected Compensation for the Current Year	\$7,127,437
Average Increase in Compensation for the Prior Year	4.16%
Expected Increase in Compensation for the Current Year	5.00%
Accumulated Contributions for Active Employees	\$6,884,522



Actual vs. Expected Salary Increases

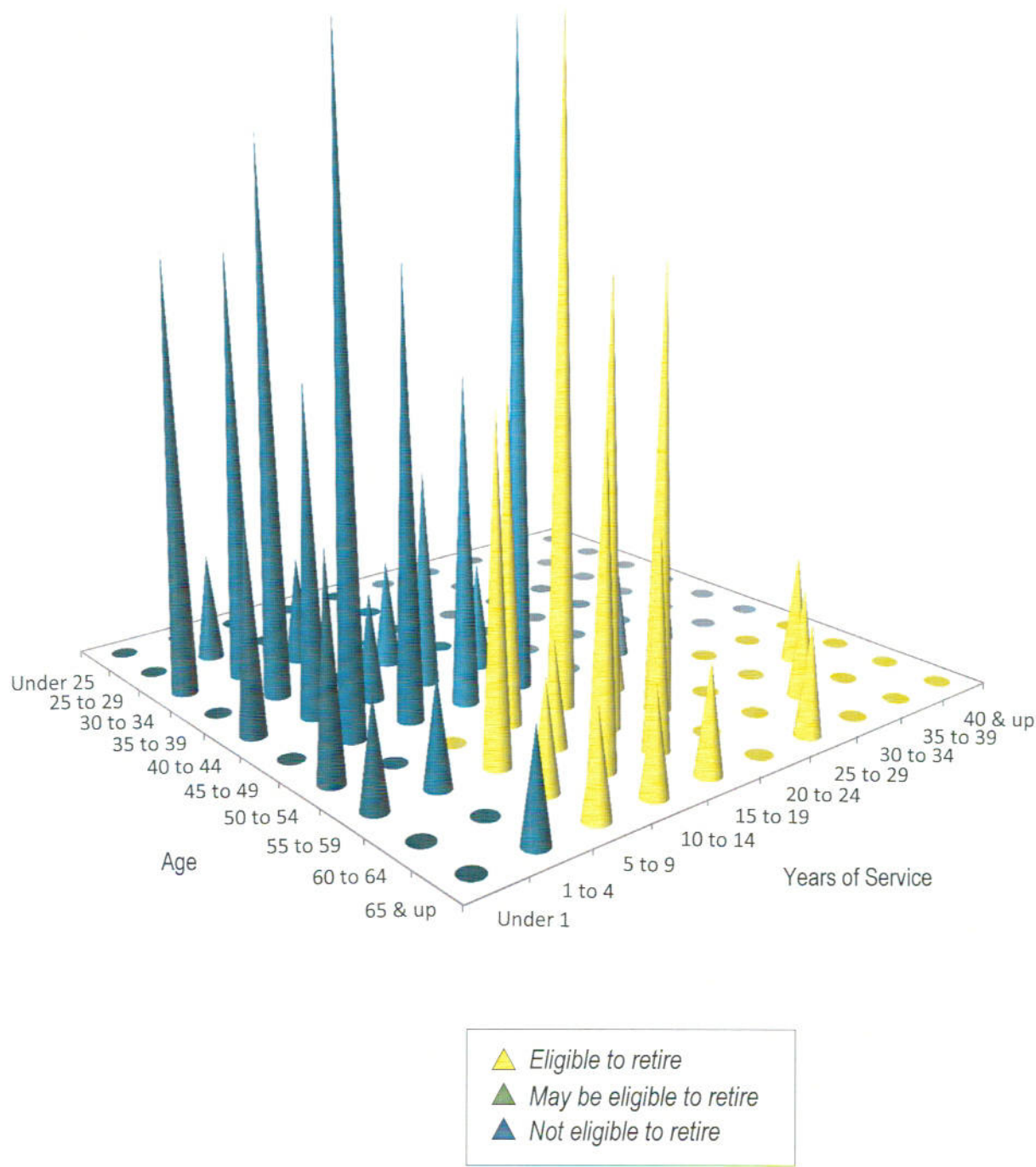
Active Participant Statistics From Prior Valuations

	Average Age	Average Service	Average Salary	Average Expected Salary Increase	Average Actual Salary Increase
October 1, 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%
October 1, 2017	48.9	10.6	\$79,859	5.00%	4.16%



Active Age-Service Distribution

Table III-D



Active Age-Service-Salary Table

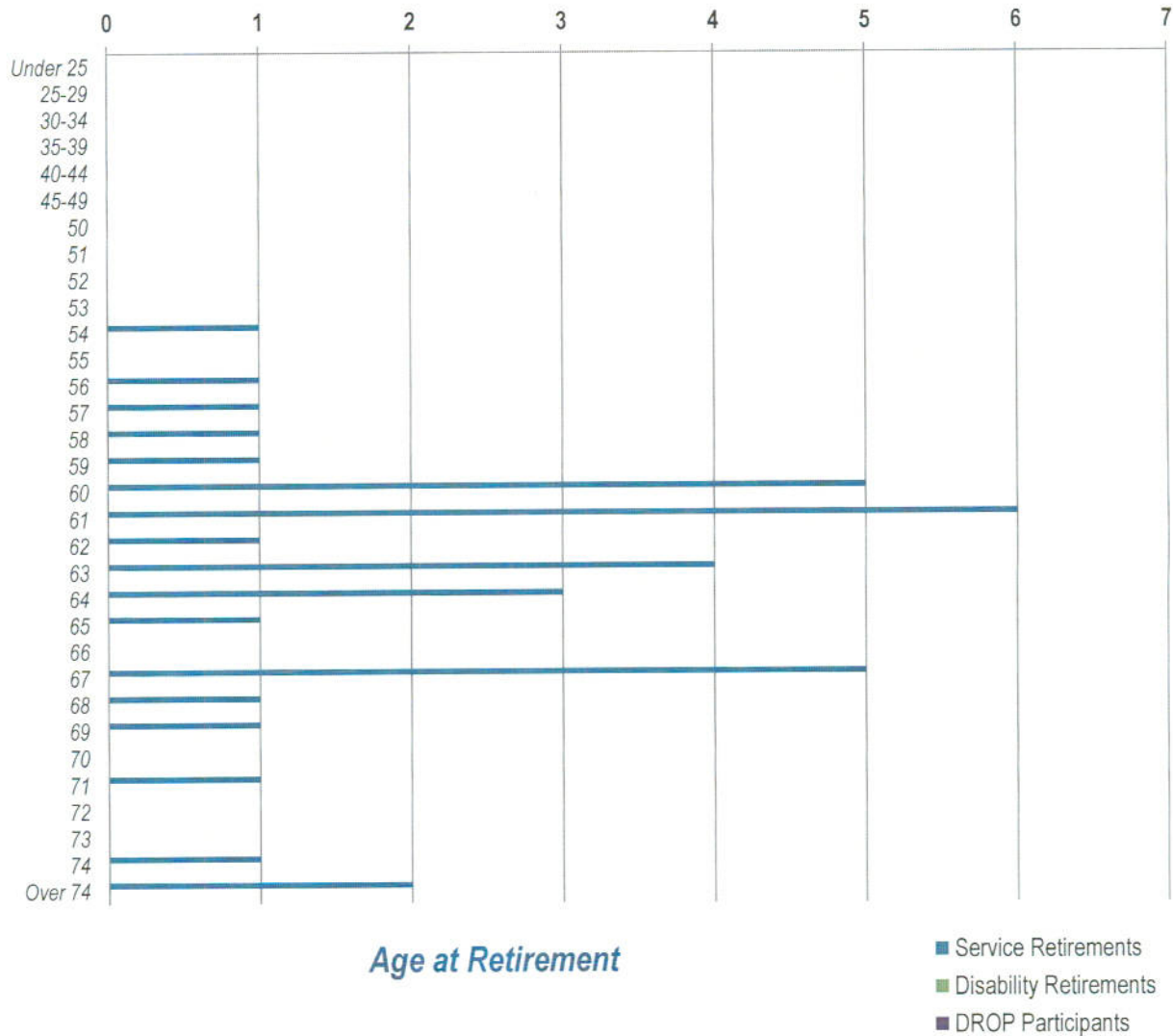
Table III-E

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	
Under 25	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	1	0	0	0	0	0	0	0	0	1
Avg.Pay	0	53,408	0	0	0	0	0	0	0	0	53,408
30 to 34	4	4	1	0	0	0	0	0	0	0	9
Avg.Pay	64,026	54,417	62,541	0	0	0	0	0	0	0	59,590
35 to 39	0	5	0	1	0	0	0	0	0	0	6
Avg.Pay	0	48,907	0	113,846	0	0	0	0	0	0	59,730
40 to 44	2	3	1	2	1	0	0	0	0	0	9
Avg.Pay	40,000	65,065	61,092	64,133	72,690	0	0	0	0	0	59,694
45 to 49	0	6	4	3	6	0	1	1	0	0	21
Avg.Pay	0	85,379	69,600	81,448	101,851	0	91,980	65,610	0	0	85,891
50 to 54	2	0	0	3	6	1	0	0	0	0	12
Avg.Pay	66,399	0	0	82,604	97,139	109,815	0	0	0	0	89,438
55 to 59	1	1	3	1	4	4	0	0	1	0	15
Avg.Pay	40,795	66,914	113,879	115,420	66,372	71,504	0	0	90,852	0	80,475
60 to 64	0	0	1	3	2	0	0	1	0	0	7
Avg.Pay	0	0	89,096	123,725	81,219	0	0	93,732	0	0	102,349
65 & up	0	1	1	1	1	0	1	0	0	0	5
Avg.Pay	0	41,227	133,676	46,091	197,672	0	83,492	0	0	0	100,432
Total	9	21	11	14	20	5	2	2	1	0	85
Avg.Pay	56,633	63,391	87,858	90,497	94,611	79,166	87,736	79,671	90,852	0	79,859



Inactive Participant Data

Table III-F

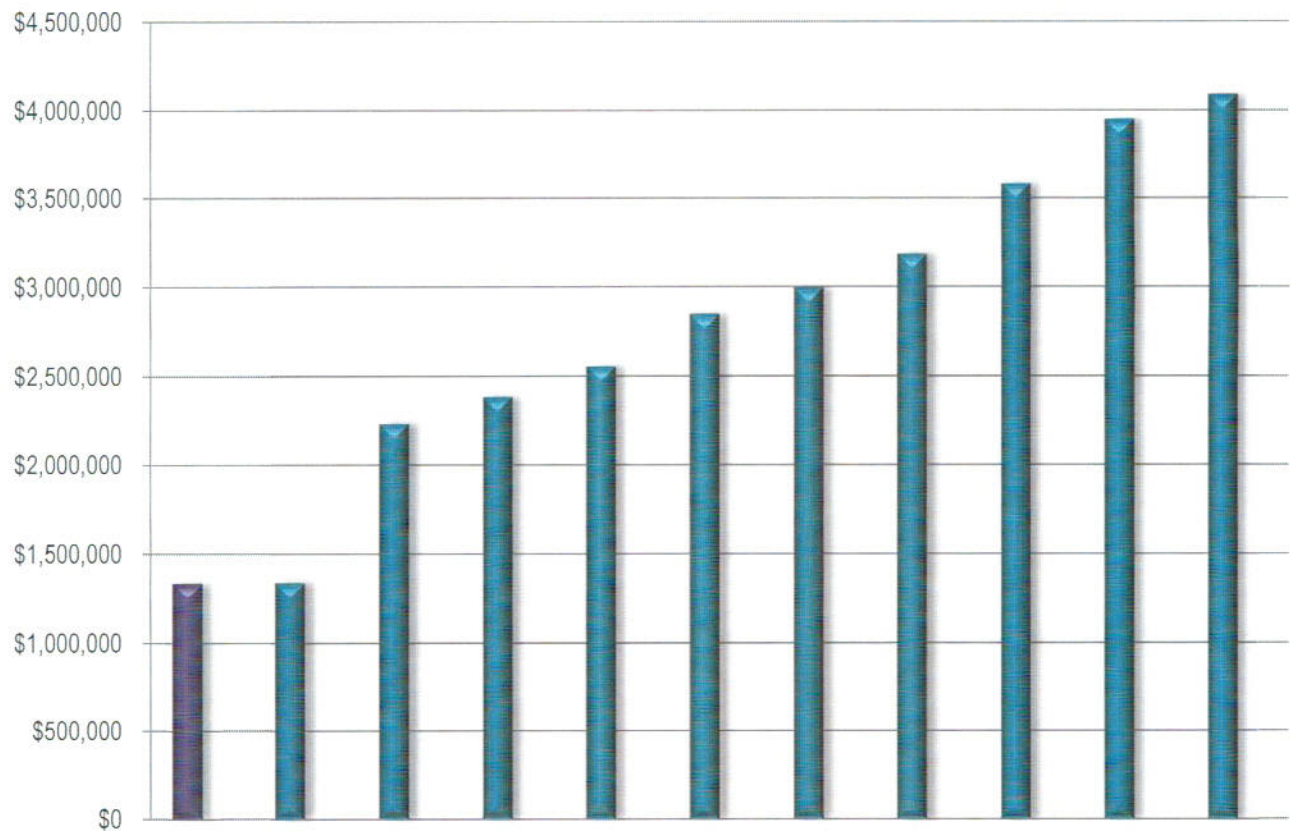
Average Monthly Benefit

Service Retirements	\$2,992.31
Disability Retirements	Not applicable
Beneficiaries Receiving	\$853.99
DROP Participants	Not applicable
Deferred Vested Participants	\$1,102.34
Deferred Beneficiaries	Not applicable



Projected Benefit Payments

Table III-G

Actual

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

\$1,336,169

Projected

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

\$1,340,734

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

\$2,236,495

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

\$2,387,327

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

\$2,559,627

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

\$2,852,861

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

\$2,998,079

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

\$3,186,739

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

\$3,584,625

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

\$3,952,414

For the period October 1, 2026 through September 30, 2027

\$4,092,801



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

No methods or assumptions have been changed since the completion of the previous valuation.

The following additional assumption and method changes were made during the past 10 years:

- (1) *Effective October 1, 2016, 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.*
- (2) *Effective October 1, 2014, the mortality basis was updated from the 1994 Group Annuity Reserving Table, projected to 2002 by Scale AA, to the RP-2000 Mortality Table, projected to 2015 by Scale AA.*
- (3) *Effective October 1, 2014, no decrements are assumed to occur during the first year following the valuation date.*
- (4) *Effective October 1, 2013, the method used to determine the actuarial value of assets was changed from the market value, adjusted to reflect a five-year phase-in of the net investment gains or losses, to the market value, adjusted to reflect a five-year phase-in of the net investment gains and losses that occur after September 30, 2013.*
- (5) *Effective October 1, 2013, the assumed increase in future payroll for purposes of amortizing the unfunded liability was eliminated.*
- (6) *Effective October 1, 2011, the assumed increase in future payroll used to amortize the unfunded liability was decreased from 5.00% per year to 4.00% per year.*
- (7) *Effective October 1, 2009, the administrative expense assumption was changed from a flat \$60,000 per year to 1.00% of covered payroll.*
- (8) *Effective October 1, 2008, the actuarial value of assets was changed from the market value to the market value adjusted to reflect a five-year phase-in of the net investment appreciation or depreciation that occurs after September 30, 2007.*
- (9) *Effective October 1, 2008, the assumed administrative expenses were increased from \$20,000 per year to \$60,000 per year.*



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 were adopted since the completion of the previous valuation.

The following additional plan amendments were adopted during the past 10 years and were reflected in prior valuation reports:

- (1) *During the 2010/11 plan year, the interest rate that is credited to participant contributions was reduced from 4.00% simple interest per annum to 2.50% simple interest per annum.*
- (2) *During the 2010/11 plan year, other non-taxable reimbursements and overtime pay in excess of 300 hours per year after June 30, 2011 were excluded from the definition of plan compensation.*
- (3) *During the 2008/09 plan year, the eligibility and vesting service rules between this plan and other pension plans sponsored by the City were coordinated with each other, the term of the Trustees was extended from two years to four years, and the benefit formula for elected officials was restated to coordinate with their modified terms of office.*

