

CITY OF GAINESVILLE
CONSOLIDATED POLICE OFFICERS' AND
FIREFIGHTERS' RETIREMENT PLAN
REVISED ACTUARIAL VALUATION
AS OF OCTOBER 1, 2019
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2021



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

June 17, 2021

Board of Trustees
City of Gainesville
Consolidated Police Officers' and Firefighters' Retirement Plan

Re: Revised October 1, 2019 Actuarial Valuation

Dear Trustees:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Gainesville Consolidated Police Officers' and Firefighters' Retirement Plan ("Plan"). The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. Use of the results for other purposes may not be applicable and may produce significantly different results.

The valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Chapters 112, 175, and 185, Florida Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in the valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuation, we did not perform an analysis of the potential range of such future measurements.

For determining required contributions under Florida Statutes, funded percentages and unfunded liabilities are measured on an actuarial value of assets basis. The same measurements using market value of assets would result in different funded percentages and unfunded liabilities. The funded percentage and unfunded liabilities are appropriate for assessing the need and level of future contributions but do not assess the funded status of the plan if the plan were to settle all or a portion of its liabilities.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by the City of Gainesville, financial reports prepared by the City, and the actuarial assumptions and methods

described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

The undersigned are familiar with the immediate and long-term aspects of pension valuations, and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

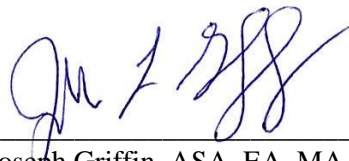
To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Gainesville, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Consolidated Police Officers' and Firefighters' Retirement Plan. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 239-433-5500.

Respectfully submitted,

Foster & Foster, Inc.

By:

A handwritten signature in blue ink, appearing to read 'J. Griffin', is written over a horizontal line.

Joseph Griffin, ASA, EA, MAAA
Enrolled Actuary #20-6938

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
I	<u>Introduction</u>	
	a. Summary of Report	5
	b. Changes Since Prior Report	6
	c. Comparative Summary of Principal Valuation Results	
	i. Total	7
	ii. Firefighters	12
	iii. Police Officers	17
	d. Statement by Enrolled Actuary	22
II	<u>Valuation Information</u>	
	a. Reconciliation of Unfunded Actuarial Accrued Liability	
	i. Total	23
	ii. Firefighters	24
	iii. Police Officers	25
	b. Detailed Actuarial (Gain)/Loss Analysis	
	i. Total	26
	ii. Firefighters	27
	iii. Police Officers	28
	c. Actuarial Assumptions and Methods	29
	d. Glossary	32
	e. Discussion of Risk	33
	i. Total	35
	ii. Firefighters	36
	iii. Police Officers	37
	f. Excess State Monies Reserve	
	i. Firefighters	38
	ii. Police Officers	39
	g. Reconciliation of City's Shortfall/(Prepaid) Contribution	
	i. Firefighters	40
	ii. Police Officers	41
III	<u>Trust Fund</u>	42
IV	<u>Member Statistics</u>	
	i. Total	48
	ii. Firefighters	51
	iii. Police Officers	54
V	<u>Summary of Current Plan</u>	57

SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Gainesville Consolidated Police Officers' and Firefighters' Retirement Plan, performed as of October 1, 2019, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ending September 30, 2021.

The contribution requirements, compared with those set forth in the October 1, 2018 actuarial valuation report, are as follows:

Valuation Date Applicable to Fiscal Year Ending	10/1/2019 <u>9/30/2021</u>	10/1/2018 <u>9/30/2020</u>
City Required Contribution (Firefighters) % of Projected Annual Payroll	\$ 706,034 7.01%	\$ 2,199,954 24.14%
City Required Contribution (Police Officers) % of Projected Annual Payroll	\$ 1,421,661 9.72%	\$ 3,504,448 22.06%
City Required Contribution (Total) % of Projected Annual Payroll	\$ 2,127,695 8.62%	\$ 5,704,402 22.80%

The City Required Contribution has increased when expressed as a percentage of Total Annual Payroll when compared to the results determined in the October 1, 2018 actuarial valuation. The primary reason for the increase is attributable to the increase in the projected annual payroll.

Plan Experience

Overall, actual experience was consistent with expected experience which resulted in a small increase to the unfunded liability of \$47 thousand. The fund experienced a 1.67% investment return on market value. The actuarial value of assets, which smooths investment gains and losses over a 5-year period, was 7.71% compared to the assumed rate of return of 7.90%. This resulted in a loss to the plan of \$451 thousand and was partially offset by favorable lower expected salary increases and higher turnover for active police officers.

Pension Obligation Bond

During fiscal 2020, the City issued a Pension Obligation Bond (POB) that was specifically intended to reduce the Unfunded Actuarial Accrued Liability by 95% as of October 1, 2019. The proceeds of the POB were deposited in the Plan's assets during fiscal 2020 and are reflected as a contribution receivable in this valuation.

CHANGES SINCE PRIOR VALUATION

Plan Changes

There have been no changes in benefits since the prior valuation.

Actuarial Assumption/Method Changes

The assumed payroll growth rate has been decreased from 1.68% to 0.00% for this valuation. This assumption reflects the average annual payroll growth rate over the past 10 years.

Cancer Presumption

Chapter 2019-21, Laws of Florida was signed into effect granting certain death and disability benefits to firefighters participating in an employer-sponsored retirement plan. Effective July 1, 2019, firefighters who have died as a result of cancer or circumstances that arise out of the treatment of cancer must be considered to have died in the line of duty. Additionally, the retirement plan must consider the firefighter totally and permanently disabled in the line of duty if he or she meets the retirement plan's definition of totally and permanently disabled due to the diagnosis of cancer or circumstances that arise out of the treatment of cancer. For this purpose, "cancer" is as defined in Section 112.1816(1), Florida Statutes. We reviewed the assumptions related to these benefits and have determined that they will have no material impact on the liabilities or contributions required.

CONSOLIDATED TOTAL
COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>10/1/2019</u>	<u>10/1/2018</u>
A. Participant Data		
Actives	391	393
Service Retirees	369	362
DROP Retirees	39	41
Beneficiaries	37	37
Disability Retirees	26	25
Terminated Vested	<u>29</u>	<u>35</u>
Total	891	893
 Total Annual Payroll	 \$24,710,307	 \$25,009,614
 Annual Rate of Payments to:		
Service Retirees	14,867,547	14,161,996
DROP Retirees	2,101,388	2,265,370
Beneficiaries	772,110	763,756
Disability Retirees	481,882	449,616
Terminated Vested	378,353	302,643
 B. Assets		
Actuarial Value (AVA) ¹	292,543,799	240,646,321
Market Value (MVA) ¹	290,738,332	253,221,825
 C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	90,476,910	89,464,548
Disability Benefits	4,584,959	4,655,494
Death Benefits	767,684	767,259
Vested Benefits	348,667	437,546
Refund of Contributions	638,233	624,312
Service Retirees	180,198,998	171,656,121
DROP Retirees ¹	34,709,780	37,249,704
Beneficiaries	7,823,060	7,822,016
Disability Retirees	4,817,064	4,544,298
Terminated Vested	2,190,855	1,686,349
Share Plan Balances ¹	1,860,413	1,453,977
Excess State Monies Reserve	<u>0</u>	<u>951,203</u>
Total	328,416,623	321,312,827

CONSOLIDATED TOTAL

C. Liabilities - (Continued)	<u>10/1/2019</u>	<u>10/1/2018</u>
Present Value of Future Salaries	197,437,235	197,512,242
Present Value of Future Member Contributions	16,122,318	15,949,825
Normal Cost (Retirement)	3,318,232	3,252,223
Normal Cost (Disability)	318,556	315,974
Normal Cost (Death)	45,121	43,649
Normal Cost (Vesting)	45,665	49,664
Normal Cost (Refunds)	<u>177,458</u>	<u>180,930</u>
Total Normal Cost	3,905,032	3,842,440
Present Value of Future Normal Costs	33,445,595	33,343,052
Accrued Liability (Retirement)	61,948,105	61,145,009
Accrued Liability (Disability)	1,941,194	1,997,664
Accrued Liability (Death)	388,347	395,806
Accrued Liability (Vesting)	(15,093)	27,051
Accrued Liability (Refunds)	(891,695)	(959,423)
Accrued Liability (Inactives) ¹	229,739,757	222,958,488
Share Plan Balances ¹	1,860,413	1,453,977
Excess State Monies Reserve	<u>0</u>	<u>951,203</u>
Actuarial Accrued Liability (EAN AL)	294,971,028	287,969,775
Unfunded Actuarial Accrued Liability (UAAL)	2,427,229	47,323,454
Funded Ratio (AVA / EAN AL)	99.2%	83.6%

CONSOLIDATED TOTAL

D. Actuarial Present Value of

Accrued Benefits	<u>10/1/2019</u>	<u>10/1/2018</u>
Vested Accrued Benefits		
Inactives + Share Plan Balances ¹	231,600,170	224,412,465
Actives	22,109,581	22,000,860
Member Contributions	<u>15,537,104</u>	<u>15,266,745</u>
Total	269,246,855	261,680,070
Non-vested Accrued Benefits	<u>11,760,730</u>	<u>11,629,106</u>
Total Present Value		
Accrued Benefits (PVAB)	281,007,585	273,309,176
Funded Ratio (MVA / PVAB)	103.5%	92.7%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
Plan Experience	5,661,554	
Benefits Paid	(18,379,538)	
Interest	20,883,900	
Refund of Member Contributions	<u>(467,507)</u>	
Total	7,698,409	

CONSOLIDATED TOTAL

Valuation Date	10/1/2019	10/1/2018
Applicable to Fiscal Year Ending	<u>9/30/2021</u>	<u>9/30/2020</u>

E. Pension Cost

Normal Cost (with interest)	\$4,181,060	\$4,114,043
% of Total Annual Payroll ²	16.92	16.45
Administrative Expenses (with interest)	825,775	748,779
% of Total Annual Payroll ²	3.34	2.99
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 30 years (as of 10/1/2017, with interest)	237,722	3,986,177
% of Total Annual Payroll ²	0.96	15.94
Total Required Contribution	5,244,557	8,848,999
% of Total Annual Payroll ²	21.22	35.38
Expected Member Contributions	2,004,518	2,012,464
% of Total Annual Payroll ²	8.11	8.05
Expected State Contribution	1,112,344	1,132,133
% of Total Annual Payroll ²	4.50	4.53
Expected City Contribution	2,127,695	5,704,402
% of Total Annual Payroll ²	8.62	22.80

F. Past Contributions

Plan Years Ending:	<u>9/30/2019</u>
Total Required Contribution	7,983,128
City and State Requirement	6,036,605
Actual Contributions Made:	
Members (excluding buyback)	1,946,523
City	4,958,811
State	<u>0</u>
Total	6,905,334

G. Net Actuarial (Gain)/Loss	47,318
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¹ The asset values and liabilities include accumulated DROP and Share Plan Balances as of 9/30/2019 and 9/30/2018.

² Contributions developed as of 10/1/2019 are expressed as a percentage of total annual payroll at 10/1/2019 of \$24,710,307.

CONSOLIDATED TOTAL

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2019	2,427,229
2020	2,379,413
2021	2,327,818
2028	1,832,579
2035	1,039,205
2042	136,520
2049	0

I. (i) 5 Year Comparison of Actual and Assumed Salary Increases

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2019	3.95%	4.00%
Year Ended 9/30/2018	3.72%	4.14%
Year Ended 9/30/2017	4.33%	4.12%
Year Ended 9/30/2016	7.17%	5.01%
Year Ended 9/30/2015	0.96%	5.03%

(ii) 5 Year Comparison of Investment Returns on Market and Actuarial Values

	<u>Market</u>	<u>Actuarial</u>	<u>Assumed</u>
Year Ended 9/30/2019	1.67%	7.71%	7.90%
Year Ended 9/30/2018	10.53%	9.38%	8.00%
Year Ended 9/30/2017	15.22%	9.21%	8.10%
Year Ended 9/30/2016	11.07%	7.91%	8.20%
Year Ended 9/30/2015	-0.14%	7.30%	8.30%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2019	\$23,990,589
	10/1/2009	\$25,211,502
(b) Total Increase		-4.84%
(c) Number of Years		10
(d) Average Annual Rate		-0.50%

FIREFIGHTERS
COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>10/1/2019</u>	<u>10/1/2018</u>
A. Participant Data		
Actives	154	138
Service Retirees	143	141
DROP Retirees	21	24
Beneficiaries	19	17
Disability Retirees	8	8
Terminated Vested	<u>2</u>	<u>4</u>
Total	347	332
 Total Annual Payroll	 \$10,083,025	 \$9,116,212
 Annual Rate of Payments to:		
Service Retirees	5,976,005	5,619,774
DROP Retirees	1,264,430	1,419,709
Beneficiaries	447,861	403,562
Disability Retirees	156,534	155,613
Terminated Vested	32,963	52,717
 B. Assets		
Actuarial Value (AVA) ¹	120,692,580	98,373,250
Market Value (MVA) ¹	120,062,772	103,609,352
 C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	36,291,281	33,685,156
Disability Benefits	1,908,645	1,681,984
Death Benefits	345,074	300,285
Vested Benefits	13,499	11,757
Refund of Contributions	252,323	198,018
Service Retirees	69,784,026	65,018,240
DROP Retirees ¹	21,460,074	24,303,720
Beneficiaries	4,272,285	3,909,033
Disability Retirees	1,602,246	1,619,732
Terminated Vested	213,049	403,422
Share Plan Balances	432,726	0
Excess State Monies Reserve	<u>0</u>	<u>951,203</u>
Total	136,575,228	132,082,550

FIREFIGHTERS

C. Liabilities - (Continued)	<u>10/1/2019</u>	<u>10/1/2018</u>
Present Value of Future Salaries	87,635,069	75,760,435
Present Value of Future Member Contributions	7,887,156	6,818,439
Normal Cost (Retirement)	1,450,724	1,249,388
Normal Cost (Disability)	126,096	108,534
Normal Cost (Death)	20,251	17,081
Normal Cost (Vesting)	2,073	2,162
Normal Cost (Refunds)	<u>52,970</u>	<u>45,630</u>
Total Normal Cost	1,652,114	1,422,795
Present Value of Future Normal Costs	14,791,561	12,781,042
Accrued Liability (Retirement)	23,327,920	22,478,526
Accrued Liability (Disability)	771,170	703,027
Accrued Liability (Death)	158,656	143,107
Accrued Liability (Vesting)	(1,765)	(4,810)
Accrued Liability (Refunds)	(236,720)	(223,692)
Accrued Liability (Inactives) ¹	97,331,680	95,254,147
Share Plan Balances	432,726	0
Excess State Monies Reserve	<u>0</u>	<u>951,203</u>
Total Actuarial Accrued Liability (EAN AL)	121,783,667	119,301,508
Unfunded Actuarial Accrued Liability (UAAL)	1,091,087	20,928,258
Funded Ratio (AVA / EAN AL)	99.1%	82.5%

FIREFIGHTERS

D. Actuarial Present Value of

Accrued Benefits	<u>10/1/2019</u>	<u>10/1/2018</u>
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Vested Accrued Benefits

Inactives + Share Plan Balances ¹	97,764,406	95,254,147
Actives	6,720,821	7,544,149
Member Contributions	<u>6,006,423</u>	<u>5,599,965</u>
Total	110,491,650	108,398,261

Non-vested Accrued Benefits

	<u>5,549,971</u>	<u>5,777,227</u>
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Total Present Value

Accrued Benefits (PVAB)	116,041,621	114,175,488
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Funded Ratio (MVA / PVAB)

	103.5%	90.7%
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Increase (Decrease) in Present Value of Accrued Benefits Attributable to:

Plan Amendments	0	
Assumption Changes	0	
Plan Experience	1,667,601	
Benefits Paid	(8,440,455)	
Interest	8,688,418	
Refund of Member Contributions	<u>(49,431)</u>	
Total	1,866,133	

FIREFIGHTERS

Valuation Date	10/1/2019	10/1/2018
Applicable to Fiscal Year Ending	<u>9/30/2021</u>	<u>9/30/2020</u>

E. Pension Cost

Normal Cost (with interest)	\$1,768,894	\$1,523,365
% of Total Annual Payroll ²	17.54	16.71
Administrative Expenses (with interest)	\$292,173	\$310,562
% of Total Annual Payroll ²	2.90	3.41
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 30 years (as of 10/1/2019, with interest)	\$106,422	\$1,760,258
% of Total Annual Payroll ²	1.06	19.31
Minimum Required Contribution	\$2,167,489	\$3,594,185
% of Total Annual Payroll ²	21.50	39.43
Expected Member Contributions	\$907,472	\$820,459
% of Total Annual Payroll ²	9.00	9.00
Expected State Contribution	\$553,983	\$573,772
% of Total Annual Payroll ²	5.49	6.29
Expected City Contribution	\$706,034	\$2,199,954
% of Total Annual Payroll ²	7.01	24.14

F. Past Contributions

Plan Years Ending:	<u>9/30/2019</u>
Total Required Contribution	3,527,217
City and State Requirement	2,674,211
Actual Contributions Made:	
Members (excluding buyback)	853,006
City	2,154,778
State	<u>0</u>
Total	3,007,784

G. Net Actuarial (Gain)/Loss	578,771
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¹ The asset values and liabilities include accumulated DROP and Share Plan Balances as of 9/30/2019 and 9/30/2018.

² Contributions developed as of 10/1/2019 are expressed as a percentage of total annual payroll at 10/1/2019 of \$10,083,025.

FIREFIGHTERS

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2019	1,091,087
2020	1,070,035
2021	1,047,319
2028	829,278
2035	478,166
2042	61,368
2049	0

I. (i) 5 Year Comparison of Actual and Assumed Salary Increases

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2019	6.34%	3.54%
Year Ended 9/30/2018	6.81%	3.50%
Year Ended 9/30/2017	1.88%	3.48%
Year Ended 9/30/2016	8.24%	5.04%
Year Ended 9/30/2015	-0.65%	4.98%

(ii) 5 Year Comparison of Investment Return on Market Value and Actuarial Value

	<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended 9/30/2019	1.67%	7.73%	7.90%
Year Ended 9/30/2018	10.53%	9.40%	8.00%
Year Ended 9/30/2017	15.22%	9.22%	8.10%
Year Ended 9/30/2016	11.07%	7.91%	8.20%
Year Ended 9/30/2015	-0.14%	7.30%	8.30%

POLICE OFFICERS
COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>10/1/2019</u>	<u>10/1/2018</u>
A. Participant Data		
Actives	237	255
Service Retirees	226	221
DROP Retirees	18	17
Beneficiaries	18	20
Disability Retirees	18	17
Terminated Vested	<u>27</u>	<u>31</u>
Total	544	561
 Total Annual Payroll	 \$14,627,282	 \$15,893,402
 Annual Rate of Payments to:		
Service Retirees	8,891,542	8,542,222
DROP Retirees	836,958	845,661
Beneficiaries	324,249	360,194
Disability Retirees	325,348	294,003
Terminated Vested	345,390	249,926
 B. Assets		
Actuarial Value (AVA) ¹	171,851,219	142,273,071
Market Value (MVA) ¹	170,675,560	149,612,473
 C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	54,185,629	55,779,392
Disability Benefits	2,676,314	2,973,510
Death Benefits	422,610	466,974
Vested Benefits	335,168	425,789
Refund of Contributions	385,910	426,294
Service Retirees	110,414,972	106,637,881
DROP Retirees ¹	13,249,706	12,945,984
Beneficiaries	3,550,775	3,912,983
Disability Retirees	3,214,818	2,924,566
Terminated Vested	1,977,806	1,282,927
Share Plan Balances	<u>1,427,687</u>	<u>1,453,977</u>
Total	191,841,395	189,230,277

POLICE OFFICERS

C. Liabilities - (Continued)	<u>10/1/2019</u>	<u>10/1/2018</u>
Present Value of Future Salaries	109,802,166	121,751,807
Present Value of Future Member Contributions	8,235,162	9,131,386
Normal Cost (Retirement)	1,867,508	2,002,835
Normal Cost (Disability)	192,460	207,440
Normal Cost (Death)	24,870	26,568
Normal Cost (Vesting)	43,592	47,502
Normal Cost (Refunds)	<u>124,488</u>	<u>135,300</u>
Total Normal Cost	2,252,918	2,419,645
Present Value of Future Normal Costs	18,654,034	20,562,010
Accrued Liability (Retirement)	38,620,185	38,666,483
Accrued Liability (Disability)	1,170,024	1,294,637
Accrued Liability (Death)	229,691	252,699
Accrued Liability (Vesting)	(13,328)	31,861
Accrued Liability (Refunds)	(654,975)	(735,731)
Accrued Liability (Inactives) ¹	132,408,077	127,704,341
Share Plan Balances	<u>1,427,687</u>	<u>1,453,977</u>
Total Actuarial Accrued Liability (EAN AL)	173,187,361	168,668,267
Unfunded Actuarial Accrued Liability (UAAL)	1,336,142	26,395,196
Funded Ratio (AVA / EAN AL)	99.2%	84.4%

POLICE OFFICERS

D. Actuarial Present Value of

Accrued Benefits	<u>10/1/2019</u>	<u>10/1/2018</u>
Vested Accrued Benefits		
Inactives + Share Plan Balances ¹	133,835,764	129,158,318
Actives	15,388,760	14,456,711
Member Contributions	<u>9,530,681</u>	<u>9,666,780</u>
Total	158,755,205	153,281,809
Non-vested Accrued Benefits	<u>6,210,759</u>	<u>5,851,879</u>
Total Present Value		
Accrued Benefits (PVAB)	164,965,964	159,133,688
Funded Ratio (MVA / PVAB)	103.5%	94.0%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
Plan Experience	3,993,953	
Benefits Paid	(9,939,083)	
Interest	12,195,482	
Refund of Member Contributions	<u>(418,076)</u>	
Total	5,832,276	

POLICE OFFICERS

Valuation Date	10/1/2019	10/1/2018
Applicable to Fiscal Year Ending	<u>9/30/2021</u>	<u>9/30/2020</u>

E. Pension Cost

Normal Cost (with interest)	2,412,166	2,590,678
% of Total Annual Payroll ²	16.49	16.30
Administrative Expenses (with interest)	533,602	438,217
% of Total Annual Payroll ²	3.65	2.76
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 30 years (as of 10/1/2019, with interest)	131,300	2,225,919
% of Total Annual Payroll ²	0.90	14.01
Minimum Required Contribution	3,077,068	5,254,814
% of Total Annual Payroll ²	21.04	33.07
Expected Member Contributions	1,097,046	1,192,005
% of Total Annual Payroll ²	7.50	7.50
Expected State Contribution	558,361	558,361
% of Total Annual Payroll ²	3.82	3.51
Expected City Contribution	1,421,661	3,504,448
% of Total Annual Payroll ²	9.72	22.06

F. Past Contributions

Plan Years Ending:	<u>9/30/2019</u>
Total Required Contribution	4,455,911
City and State Requirement	3,362,394
Actual Contributions Made:	
Members (excluding buyback)	1,093,517
City	2,804,033
State	<u>0</u>
Total	3,897,550

G. Net Actuarial (Gain)/Loss	(531,453)
------------------------------	-----------

¹ The asset values and liabilities include accumulated DROP and Share Plan Balances as of 9/30/2019 and 9/30/2018.

² Contributions developed as of 10/1/2019 are expressed as a percentage of total annual payroll at 10/1/2019 of \$14,627,282.

POLICE OFFICERS

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2019	1,336,142
2020	1,309,378
2021	1,280,499
2028	1,003,301
2035	561,039
2042	75,152
2049	0

I. (i) 5 Year Comparison of Actual and Assumed Salary Increases

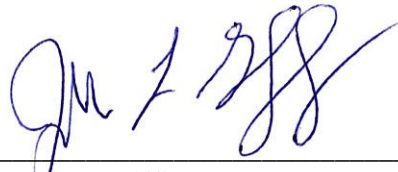
	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2019	2.32%	4.31%
Year Ended 9/30/2018	1.94%	4.51%
Year Ended 9/30/2017	5.67%	4.48%
Year Ended 9/30/2016	6.61%	4.99%
Year Ended 9/30/2015	1.87%	5.05%

(ii) 5 Year Comparison of Investment Return on Market Value and Actuarial Value

	<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended 9/30/2019	1.67%	7.69%	7.90%
Year Ended 9/30/2018	10.53%	9.37%	8.00%
Year Ended 9/30/2017	15.22%	9.20%	8.10%
Year Ended 9/30/2016	11.07%	7.91%	8.20%
Year Ended 9/30/2015	-0.14%	7.30%	8.30%

STATEMENT BY ENROLLED ACTUARY

This actuarial valuation 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.



Joseph L. Griffin, EA, ASA, MAAA
Enrolled Actuary #20-6938

Please let us know when the report is approved by the Board and unless otherwise directed we will provide copies of the report to the following offices to comply with Chapter 112 Florida Statutes:

Mr. Keith Brinkman
Bureau of Local
Retirement Systems
Post Office Box 9000
Tallahassee, FL 32315-9000

Mr. Steve Bardin
Municipal Police and Fire
Pension Trust Funds
Division of Retirement
Post Office Box 3010
Tallahassee, FL 32315-3010

CONSOLIDATED TOTAL
RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2018	\$47,323,454
(2)	Sponsor Normal Cost developed as of October 1, 2018	1,829,976
(3)	Expected administrative expenses for the year ended September 30, 2019	699,346
(4)	Expected interest on (1), (2) and (3)	3,910,745
(5)	Sponsor contributions to the System during the year ended September 30, 2019	4,958,811
(6)	Expected interest on (5)	195,873
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2019 (1)+(2)+(3)+(4)-(5)-(6)	48,608,837
(8)	Change to UAAL due to Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	47,318
(10)	Change to UAAL due to Pension Obligation Bond Receivable	(46,228,926)
(11)	Unfunded Actuarial Accrued Liability as of October 1, 2019	2,427,229

Type of Base	Date Established	Years Remaining	10/1/2019 Amount	Amortization Amount
Assum. Change	10/1/2003	14	\$131,269	\$14,671
Actuarial Loss	10/1/2003	14	\$84,704	\$9,467
Assum. Change	10/1/2004	15	(\$90,895)	(\$9,782)
Actuarial Loss	10/1/2004	15	\$54,055	\$5,817
Actuarial Gain	10/1/2005	16	(\$17,371)	(\$1,807)
Actuarial Gain	10/1/2006	17	(\$87,546)	(\$8,836)
Assum. Change	10/1/2007	18	(\$19,377)	(\$1,903)
Benefit Change	10/1/2007	18	\$157,921	\$15,509
Actuarial Gain	10/1/2007	18	(\$319,679)	(\$31,394)
Actuarial Loss	10/1/2008	19	\$186,079	\$17,828
Assum. Change	10/1/2009	20	\$91,635	\$8,586
Actuarial Loss	10/1/2009	20	\$694,681	\$65,087
Actuarial Loss	10/1/2010	21	\$403,138	\$37,013
Assum. Change	10/1/2010	21	\$21,791	\$2,000
Actuarial Loss	10/1/2011	22	\$748,696	\$67,485
Assum. Change	10/1/2011	22	(\$6,984)	(\$629)
Actuarial Loss	10/1/2012	23	\$99,870	\$8,852
Benefit Change	10/1/2012	23	(\$146,101)	(\$12,950)
Actuarial Gain	10/1/2013	24	(\$170,582)	(\$14,890)
Assum. Change	10/1/2013	24	\$134,018	\$11,699
Actuarial Gain	10/1/2014	25	(\$223,798)	(\$19,265)
Assum. Change	10/1/2014	25	\$139,099	\$11,973
Actuarial Loss	10/1/2015	26	\$26,795	\$2,277
Assum. Change	10/1/2015	26	\$142,302	\$12,093
Actuarial Loss	10/1/2016	27	\$150,307	\$12,626
Assum. Change	10/1/2016	27	\$269,595	\$22,645
Actuarial Gain	10/1/2017	28	(\$196,099)	(\$16,296)
Assum. Change	10/1/2017	28	\$233,685	\$19,419
Actuarial Gain	10/1/2018	29	(\$223,932)	(\$18,427)
Assum. Change	10/1/2018	29	\$157,593	\$12,968
Actuarial Loss	10/1/2019	30	<u>2,360</u>	<u>192</u>
			2,427,229	222,028

FIREFIGHTERS
RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2018	\$20,928,258
(2)	Sponsor Normal Cost developed as of October 1, 2018	602,336
(3)	Expected administrative expenses for the year ended September 30, 2019	290,059
(4)	Expected interest on (1), (2) and (3)	1,712,374
(5)	Sponsor contributions to the System during the year ended September 30, 2019	2,154,778
(6)	Expected interest on (5)	85,114
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2019 (1)+(2)+(3)+(4)-(5)-(6)	21,293,135
(8)	Change to UAAL due to Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	578,771
(10)	Change to UAAL due to Pension Obligation Bond Receivable	(20,780,819)
(11)	Unfunded Actuarial Accrued Liability as of October 1, 2019	1,091,087

Type of Base	Date Established	Years Remaining	10/1/2019 Amount	Amortization Amount
Assum. Change	10/1/2003	14	53,034	5,927
Actuarial Loss	10/1/2003	14	34,222	3,825
Assum. Change	10/1/2004	15	(36,723)	(3,952)
Actuarial Loss	10/1/2004	15	21,839	2,350
Actuarial Gain	10/1/2005	16	(7,018)	(730)
Actuarial Gain	10/1/2006	17	(35,370)	(3,570)
Assum. Change	10/1/2007	18	(7,829)	(769)
Benefit Change	10/1/2007	18	63,803	6,266
Actuarial Gain	10/1/2007	18	(129,156)	(12,684)
Actuarial Loss	10/1/2008	19	75,179	7,203
Assum. Change	10/1/2009	20	37,022	3,469
Actuarial Loss	10/1/2009	20	280,663	26,296
Actuarial Loss	10/1/2010	21	162,875	14,954
Assum. Change	10/1/2010	21	8,804	808
Actuarial Loss	10/1/2011	22	302,486	27,265
Assum. Change	10/1/2011	22	(2,822)	(254)
Actuarial Loss	10/1/2012	23	40,349	3,576
Benefit Change	10/1/2012	23	(7,976)	(707)
Actuarial Gain	10/1/2013	24	(34,873)	(3,044)
Assum. Change	10/1/2013	24	52,041	4,543
Actuarial Gain	10/1/2014	25	(8,697)	(749)
Assum. Change	10/1/2014	25	54,920	4,727
Actuarial Gain	10/1/2015	26	(26,478)	(2,250)
Assum. Change	10/1/2015	26	54,638	4,643
Actuarial Loss	10/1/2016	27	49,722	4,177
Assum. Change	10/1/2016	27	99,877	8,389
Actuarial Gain	10/1/2017	28	(101,014)	(8,394)
Assum. Change	10/1/2017	28	90,831	7,548
Actuarial Gain	10/1/2018	29	(83,248)	(6,850)
Assum. Change	10/1/2018	29	61,114	5,029
Actuarial Loss	10/1/2019	30	<u>28,872</u>	<u>2,354</u>
			1,091,087	99,396

POLICE OFFICERS
RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2018	\$26,395,196
(2)	Sponsor Normal Cost developed as of October 1, 2018	1,227,640
(3)	Expected administrative expenses for the year ended September 30, 2019	409,287
(4)	Expected interest on (1), (2) and (3)	2,198,371
(5)	Sponsor contributions to the System during the year ended September 30, 2019	2,804,033
(6)	Expected interest on (5)	110,759
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2019 (1)+(2)+(3)+(4)-(5)-(6)	27,315,702
(8)	Change to UAAL due to Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(531,453)
(10)	Change to UAAL due to Pension Obligation Bond Receivable	(25,448,107)
(11)	Unfunded Actuarial Accrued Liability as of October 1, 2019	1,336,142

Type of	Date	Years	10/1/2019	Amortization
<u>Base</u>	<u>Established</u>	<u>Remaining</u>	<u>Amount</u>	<u>Amount</u>
Assum. Change	10/1/2003	14	78,235	8,744
Actuarial Loss	10/1/2003	14	50,482	5,642
Assum. Change	10/1/2004	15	(54,172)	(5,830)
Actuarial Loss	10/1/2004	15	32,216	3,467
Actuarial Gain	10/1/2005	16	(10,353)	(1,077)
Actuarial Gain	10/1/2006	17	(52,176)	(5,266)
Assum. Change	10/1/2007	18	(11,548)	(1,134)
Benefit Change	10/1/2007	18	94,118	9,243
Actuarial Gain	10/1/2007	18	(190,523)	(18,710)
Actuarial Loss	10/1/2008	19	110,900	10,625
Assum. Change	10/1/2009	20	54,613	5,117
Actuarial Loss	10/1/2009	20	414,018	38,791
Actuarial Loss	10/1/2010	21	240,263	22,059
Assum. Change	10/1/2010	21	12,987	1,192
Actuarial Loss	10/1/2011	22	446,210	40,220
Assum. Change	10/1/2011	22	(4,162)	(375)
Actuarial Loss	10/1/2012	23	59,521	5,276
Benefit Change	10/1/2012	23	(138,125)	(12,243)
Actuarial Gain	10/1/2013	24	(135,709)	(11,846)
Assum. Change	10/1/2013	24	81,977	7,156
Actuarial Gain	10/1/2014	25	(215,101)	(18,516)
Assum. Change	10/1/2014	25	84,179	7,246
Actuarial Loss	10/1/2015	26	53,273	4,527
Assum. Change	10/1/2015	26	87,664	7,450
Actuarial Loss	10/1/2016	27	100,585	8,449
Assum. Change	10/1/2016	27	169,718	14,256
Actuarial Gain	10/1/2017	28	(95,085)	(7,902)
Assum. Change	10/1/2017	28	142,854	11,871
Actuarial Gain	10/1/2018	29	(140,684)	(11,577)
Assum. Change	10/1/2018	29	96,479	7,939
Actuarial Gain	10/1/2019	30	(26,512)	(2,162)
			1,336,142	122,632

CONSOLIDATED TOTAL
DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2018	\$47,323,454
(2) Expected UAAL as of October 1, 2019	48,608,837
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	451,367
Salary Increases	(89,945)
Active Decrements	(546,969)
Inactive Mortality	(140,215)
Other	<u>373,080</u>
Increase in UAAL due to (Gain)/Loss	47,318
Assumption Changes	0
Pension Obligation Bond Receivable	<u>(46,228,926)</u>
(4) Actual UAAL as of October 1, 2019	\$2,427,229

FIREFIGHTERS
DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2018	\$20,928,258
(2) Expected UAAL as of October 1, 2019	21,293,135
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	157,452
Salary Increases	646,858
Active Decrements	224,138
Inactive Mortality	(21,643)
Other	<u>(428,034)</u>
Increase in UAAL due to (Gain)/Loss	578,771
Assumption Changes	0
Pension Obligation Bond Receivable	<u>(20,780,819)</u>
(4) Actual UAAL as of October 1, 2019	\$1,091,087

POLICE OFFICERS
DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2018	\$26,395,196
(2) Expected UAAL as of October 1, 2019	27,315,702
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	293,915
Salary Increases	(736,803)
Active Decrements	(771,107)
Inactive Mortality	(118,572)
Other	<u>801,114</u>
Increase in UAAL due to (Gain)/Loss	(531,453)
Assumption Changes	0
Pension Obligation Bond Receivable	<u>(25,448,107)</u>
(4) Actual UAAL as of October 1, 2019	\$1,336,142

ACTUARIAL ASSUMPTIONS AND METHODS

Except where expressed herein, the actuarial assumptions and methods are the same as those used in the October 1, 2018 valuation. These assumptions were set by the prior actuary based on an experience study conducted in 2017 reflecting plan year experience for the six-year period ending September 30, 2015.

The Board reviews assumptions at least once every five years.

Mortality Rate

Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB

Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB

50% of all deaths are assumed to be in the line of duty.

Healthy Inactive Lives:

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB

Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB

Disabled Lives:

Female: 60% RP2000 Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale

Male: 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale

The assumed rates of mortality were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumption used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in the July 1, 2017 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate

7.9% per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.

Administrative Expenses

Administrative expenses are assumed to equal the prior year's actual administrative expenses adjusted for interest and assumed payroll increases.

Retirement Rates

Rates of retirement are shown below.

<u>Service</u>	<u>Firefighters</u>	<u>Police Officers</u>
20	17.5%	25%
21 – 24	5.0%	5.0%
25	100%	100%

Firefighters who entered the plan on or after January 1, 2014 and Police Officers who are not eligible to retire by July 1, 2013 are assumed to retire at a rate of 1.0% per year once the sum of age and years of Credited Service is at least 70, with 100% assumed to retire upon reaching 25 years of Credited Service. In addition, all Members are assumed to retire no later than age 58.

Disability Rates

Sample rates of disability are shown below.

<u>Age</u>	<u>Disability Rate</u>
25	0.105%
30	0.144%
35	0.182%
40	0.308%
45	0.434%
50	0.854%
55	1.274%

100% of disablements are assumed to be service related.

Termination Rates

Sample rates of termination are shown below.

<u>Service</u>	<u>Firefighters</u>	<u>Police Officers</u>
0 – 5	0.5%	0.7%
6 – 9	1.5%	3.5%
10 – 11	0.0%	2.5%
12+	0.0%	0.0%

Non vested members are assumed to withdraw their contributions and vested members are assumed to commence an annuity at age 55.

Salary Increases

Rates of salary increases are shown below.

<u>Service</u>	<u>Firefighters</u>	<u>Police Officer</u>
0 – 4	5.0%	6.0%
5 – 9	4.0%	5.0%
10 – 14	3.0%	4.0%
15+	2.0%	3.0%

State Contributions

State premium tax revenue is assumed to be the same as the most recent distribution.

Payroll Increase Rate

3.00% per year for projecting aggregate payroll to the following fiscal year and 0.00% (previously 1.68%) for determining amortization payments towards the unfunded accrued liability.

Marital Assumptions

90% of active members are assumed to be married with males 2 years older than females.

Overtime Pay

Overtime pay is assumed to equal to 6.5% of non-overtime related pensionable earnings in the years preceding retirement.

Vacation Payout upon Termination

Accumulated vacation that is payable upon termination of employment is assumed to be equal to the vacation balance as of July 1, 2013 for police officers and January 1, 2014 for firefighters.

Accumulated Sick Leave

Accumulated sick leave is assumed to increase benefit service according to the balance as of July 1, 2013 for police officers and January 1, 2014 for firefighters.

Funding Method

Entry Age Normal Actuarial Cost Method.

Asset Allocation Method

Assets were allocated to police officers and firefighters separately as of October 1, 2012. The allocation was performed based on the accrued actuarial liability of each group (net of DROP accounts) with recognition that certain assets (DROP account and State Premium Tax Revenue) are already designated to each group. Future investment returns are allocated to each group such that the investment return as a percentage will be the same as the return on the total assets by taking into account the cash flow of each group separately.

Actuarial Asset Method

Each year, the prior Actuarial Value of Assets (AVA) is projected forward at the assumed interest rate assumption and reflecting actual contributions and benefit payments. One-fifth of the difference between the projected actuarial value and market value is added to the projected actuarial value. The resulting AVA cannot be greater than 120% of the market value or less than 80% of the market value. It is possible that over time this technique will produce an insignificant bias above or below Market Value.

Amortization Periods

Changes in unfunded liability are amortized on a level percentage of payroll basis over the following periods:

Plan Changes	30 years
Assumption/Method Changes	30 years
Gains or Losses	30 years

GLOSSARY

Individual Entry Age Normal Actuarial Cost Method (Level Percent of Compensation) is the method used to determine required contributions under the Plan. The use of this method involves the systematic funding of the Normal Cost (described above) and the Unfunded Accrued (Past Service) Liability. The actuarial accrued liability for active participants is the difference between the present value of future benefits and the present value of future Normal Costs. The actuarial accrued liability for inactive participants is the present value of future benefits.

Normal (Current Year's) Cost is determined for each participant as the present value of future benefits, determined as of the Member's entry age, amortized as a level percentage of compensation over the anticipated number of years of participation, determined as of the entry age.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current active Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

Total Annual Payroll is the projected annual rate of pay for the fiscal year beginning on the valuation date of all covered Members.

Total Required Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over no more than 30 years. The required amount is adjusted for interest according to the timing of contributions during the year.

Unfunded Actuarial Accrued Liability (UAAL) is the difference between the actuarial accrued liability (described above) and the actuarial value of assets. Under the Entry Age Normal Actuarial Cost Method, an actuarial gain or loss, based on actual versus expected UAAL, is determined in conjunction with each valuation of the plan.

DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined using various actuarial assumptions. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- Investment Return: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.
- Salary Increases: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.
- Payroll Growth: The plan's payroll growth assumption, if one is used, causes a predictable annual increase in the plan's amortization payment in order to produce an amortization payment that remains constant as a percentage of payroll if all assumptions are realized. If payroll does not increase according to the plan's payroll growth assumption, the plan's amortization payment can increase significantly as a percentage of payroll even if all assumptions other than the payroll growth assumption are realized.
- Demographic Assumptions: Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, closed plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature closed plans with a substantial inactive liability. Similarly, mature closed plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled “Plan Maturity Measures and Other Risk Metrics”. Highlights of this information are discussed below:

- The Support Ratio, determined as the ratio of active to inactive members, has decreased from 89.9% on October 1, 2016 to 78.5% on October 1, 2019, indicating that the plan has been maturing during the period.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 78.5%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors may result in larger increases in contribution requirements than would be needed for a less mature plan. Please note Chapter 112, Florida Statutes, requires that the plan sponsor contributes the minimum required contribution; thus, there is minimal solvency risk to the plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 82.5% on October 1, 2016 to 99.2% on October 1, 2019, due primarily to an increase in plan assets associated with the pension obligation bond receivable.
- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, stayed approximately the same from October 1, 2016 to October 1, 2019. The current Net Cash Flow Ratio of -4.1% indicates that contributions are not currently covering the plan's benefit payments and administrative expenses.

It is important to note that the actuary has identified the risks in this section as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

CONSOLIDATED TOTAL
PLAN MATURITY MEASURES AND OTHER RISK METRICS

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Support Ratio</u>				
Total Actives	408	396	393	391
Total Inactives ¹	454	463	491	498
Actives / Inactives ¹	89.9%	85.5%	80.0%	78.5%
 <u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	217,896,240	240,184,925	253,221,825	290,738,332
Total Annual Payroll	25,501,291	25,263,376	25,009,614	24,710,307
MVA / Total Annual Payroll	854.5%	950.7%	1,012.5%	1,176.6%
 <u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability	198,824,797	210,252,070	224,412,465	231,600,170
Total Accrued Liability (EAN)	265,766,825	278,266,916	287,969,775	294,971,028
Inactive AL / Total AL	74.8%	75.6%	77.9%	78.5%
 <u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)	219,134,571	230,456,038	240,646,321	292,543,799
Total Accrued Liability (EAN)	265,766,825	278,266,916	287,969,775	294,971,028
AVA / Total Accrued Liability (EAN)	82.5%	82.8%	83.6%	99.2%
 <u>Net Cash Flow Ratio</u>				
Net Cash Flow ²	(8,867,774)	(9,462,042)	(12,306,508)	(11,794,677)
Market Value of Assets (MVA)	217,896,240	240,184,925	253,221,825	290,738,332
Ratio	-4.1%	-3.9%	-4.9%	-4.1%

¹ Excludes terminated participants awaiting a refund of member contributions.

² Determined as total contributions minus benefit payments and administrative expenses.

FIREFIGHTERS
PLAN MATURITY MEASURES AND OTHER RISK METRICS

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Support Ratio</u>				
Total Actives	133	133	138	154
Total Inactives ¹	191	189	193	193
Actives / Inactives ¹	69.6%	70.4%	71.5%	79.8%
 <u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	89,180,118	98,557,944	103,609,352	120,062,772
Total Annual Payroll	8,547,843	8,574,191	9,116,212	10,083,025
MVA / Total Annual Payroll	1,043.3%	1,149.5%	1,136.5%	1,190.7%
 <u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability	87,254,483	91,328,862	95,254,147	97,764,406
Total Accrued Liability (EAN)	110,322,542	115,770,786	119,301,508	121,783,667
Inactive AL / Total AL	79.1%	78.9%	79.8%	80.3%
 <u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)	89,129,799	94,533,571	98,373,250	120,692,580
Total Accrued Liability (EAN)	110,322,542	115,770,786	119,301,508	121,783,667
AVA / Total Accrued Liability (EAN)	80.8%	81.7%	82.5%	99.1%
 <u>Net Cash Flow Ratio</u>				
Net Cash Flow ²	(3,726,417)	(3,680,008)	(4,816,425)	(5,577,819)
Market Value of Assets (MVA)	89,180,118	98,557,944	103,609,352	120,062,772
Ratio	-4.2%	-3.7%	-4.6%	-4.6%

¹ Excludes terminated participants awaiting a refund of member contributions.

² Determined as total contributions minus benefit payments and administrative expenses.

POLICE OFFICERS
PLAN MATURITY MEASURES AND OTHER RISK METRICS

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Support Ratio</u>				
Total Actives	275	263	255	237
Total Inactives ¹	263	274	298	305
Actives / Inactives ¹	104.6%	96.0%	85.6%	77.7%
 <u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	128,716,122	141,626,981	149,612,473	170,675,560
Total Annual Payroll	16,953,448	16,689,185	15,893,402	14,627,282
MVA / Total Annual Payroll	759.2%	848.6%	941.3%	1,166.8%
 <u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability	111,570,314	118,923,208	129,158,318	133,835,764
Total Accrued Liability (EAN)	155,444,283	162,496,130	168,668,267	173,187,361
Inactive AL / Total AL	71.8%	73.2%	76.6%	77.3%
 <u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)	130,004,772	135,922,467	142,273,071	171,851,219
Total Accrued Liability (EAN)	155,444,283	162,496,130	168,668,267	173,187,361
AVA / Total Accrued Liability (EAN)	83.6%	83.6%	84.4%	99.2%
 <u>Net Cash Flow Ratio</u>				
Net Cash Flow ²	(5,141,357)	(5,782,034)	(7,490,083)	(6,216,858)
Market Value of Assets (MVA)	128,716,122	141,626,981	149,612,473	170,675,560
Ratio	-4.0%	-4.1%	-5.0%	-3.6%

¹ Excludes terminated participants awaiting a refund of member contributions.

² Determined as total contributions minus benefit payments and administrative expenses.

FIREFIGHTERS
EXCESS STATE MONIES RESERVE

Firefighters' Distribution

	<u>Actual State Contribution</u>	<u>Applicable "Frozen" Amount</u>	<u>Excess State Monies Reserve</u>
1998	\$310,569.70	\$310,569.70	\$0.00
1999	308,826.01	310,569.70	0.00
2000	340,476.79	310,569.70	29,907.09
2001	365,050.96	310,569.70	54,481.26
2002	386,831.39	310,569.70	76,261.69
2003	404,962.46	310,569.70	94,392.76
2004	420,900.88	310,569.70	110,331.18
2005	478,607.14	310,569.70	168,037.44
2006	539,517.35	310,569.70	228,947.65
2007	639,048.86	580,918.87	58,129.99
2008	653,591.00	580,918.87	72,672.13
2009	586,462.27	580,918.87	5,543.40
2010	566,345.69	580,918.87	0.00
2011	572,537.52	580,918.87	0.00
2012	578,012.52	580,918.87	0.00
2013	573,439.20	580,918.87	0.00
2014	616,730.22	580,918.87	35,811.35
2015	597,606.37	580,918.87	16,687.50
2016	554,610.96	580,918.87	0.00
2017	519,432.67	580,918.87	0.00
2018	573,771.90	580,918.87	0.00
2019	0.00 *	580,918.87	<u>0.00</u>
			951,203.44
	Accumulated Regular Excess		951,203.44
	Accumulated Special Excess		<u>0.00</u>
	Total Excess State Monies		951,203.44
	Less Amount Allocated to Share Plan		<u>(951,203.44)</u>
	Equals Current State Monies Reserve		\$0.00

* The distribution for 2019 would have been \$553,982.69.

POLICE OFFICERS
EXCESS STATE MONIES RESERVE

Police Officers' Distribution

	<u>Actual State Contribution</u>	<u>Applicable "Frozen" Amount</u>	<u>Excess State Monies Reserve</u>
1998	\$485,156.16	\$485,156.16	\$0.00
1999	484,907.97	485,156.16	0.00
2000	479,761.05	485,156.16	0.00
2001	532,645.23	485,156.16	47,489.07
2002	577,629.43	485,156.16	92,473.27
2003	613,690.66	485,156.16	128,534.50
2004	599,120.94	485,156.16	113,964.78
2005	607,282.55	485,156.16	122,126.39
2006	632,775.65	485,156.16	147,619.49
2007	614,350.42	558,361.13	55,989.29
2008	641,820.00	558,361.13	83,458.87
2009	667,804.62	558,361.13	109,443.49
2010	614,258.14	558,361.13	55,897.01
2011	609,604.08	558,361.13	51,242.95
2012	599,909.03	558,361.13	41,547.90
2013	596,585.28	558,361.13	38,224.15
2014	643,264.53	558,361.13	84,903.40
2015	672,221.27	558,361.13	113,860.14
2016	688,129.56	558,361.13	129,768.43
2017	738,850.69	558,361.13	180,489.56
2018	792,532.36	558,361.13	234,171.23
2019	0.00 *	558,361.13	<u>0.00</u>
Total Excess State Monies			1,831,203.92
Less Amount Allocated to Benefit Improvements			<u>(1,831,203.92)</u>
Equals Current State Monies Reserve			\$0.00

* The distribution for 2019 would have been \$1,029,476.16.

FIREFIGHTERS
RECONCILIATION OF CITY'S SHORTFALL/(PREPAID) CONTRIBUTION
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2019

(1) Required City Contribution Rate	24.14%
(2) Required Member Contribution Rate	9.00%
(3) Total Required Contribution Rate (City & Member)	33.14%
(4) Actual Contributions (City & Member)	33.14%
(5) Contribution Shortfall (City & Member)	<u>\$0</u>
(6) Expected State Contribution	\$519,433
(7) Actual State Contribution	<u>\$0</u>
(8) Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2019	\$519,433

POLICE OFFICERS
RECONCILIATION OF CITY'S SHORTFALL/(PREPAID) CONTRIBUTION
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2019

(1) Required City Contribution Rate	22.06%
(2) Required Member Contribution Rate	7.50%
(3) Total Required Contribution Rate (City & Member)	29.56%
(4) Actual Contributions (City & Member)	29.56%
(5) Contribution Shortfall (City & Member)	<u>\$0</u>
(6) Expected State Contribution	\$558,361
(7) Actual State Contribution	<u>\$0</u>
(9) Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2019	\$558,361

CITY OF GAINESVILLE
CONSOLIDATED POLICE OFFICERS' AND FIREFIGHTERS' RETIREMENT PLAN
STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2019

<u>ASSETS</u>	<u>MARKET VALUE</u>
Cash and Cash Equivalents:	
Share Plan Assets	\$ 155,688
Equity in Pooled Cash	2,706,066
	<hr/>
Total Cash and Equivalents	2,861,754
Miscellaneous Receivable	1,077,794
Total Investments	240,979,338
Pension Obligation Bond Receivable	46,228,926
	<hr/>
Total Assets	\$ 291,147,812
 <u>LIABILITIES</u>	
Payables:	
Accounts Payable	\$ 407,628
Wages Payable	1,852
	<hr/>
Total Liabilities	\$ 409,480
 NET POSITION RESTRICTED FOR PENSIONS	 \$ 290,738,332

CITY OF GAINESVILLE
CONSOLIDATED POLICE OFFICERS' AND FIREFIGHTERS' RETIREMENT PLAN
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2019
Market Value Basis

<u>ADDITIONS</u>	<u>SEPTEMBER 30, 2019</u>	<u>SEPTEMBER 30, 2018</u>
Contributions:		
Member	\$ 1,946,523	\$ 1,963,471
Buy-Back	0	0
City	4,958,811	4,507,892
State	0	1,366,304
Total Contributions	<u>\$ 6,905,334</u>	<u>\$ 7,837,667</u>
Investment Income:		
Unrealized Gains/Losses	\$ 540,914	\$ 21,908,859
Interest & Dividends	3,550,140	2,701,905
Investment Income	<u>\$ 4,091,054</u>	<u>\$ 24,610,764</u>
Pension Obligation Bond Receivable	46,228,926	0
Total Additions	\$ 57,225,314	\$ 32,448,431
<u>DEDUCTIONS</u>		
Distributions to Members:		
Benefit Payments	\$ 15,651,166	\$ 14,388,267
Lump Sum DROP Distributions	2,728,372	4,536,224
Refunds of Member Contributions	467,507	286,167
Investment Expense	569,082	721,333
Administrative Expense	771,258	699,346
Transfer to Supplemental Retirement Plan	1,005,652	234,171
Total Deductions	<u>\$ 21,193,037</u>	<u>\$ 20,865,508</u>
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year	\$ 251,767,848	\$ 240,184,925
End of the Year	\$ 287,800,125	\$ 251,767,848
Receivable from State	<u>1,077,794</u>	<u>0</u>
Total Fund including Receivable from State	\$ 288,877,919	\$ 251,767,848
Share Plan Balance	<u>1,860,413</u>	<u>1,453,977</u>
Total Fund including Share Plan Balance	\$ 290,738,332	\$ 253,221,825
Rate of Investment Return	1.67%	10.53%

CITY OF GAINESVILLE
CONSOLIDATED POLICE OFFICERS' AND FIREFIGHTERS' RETIREMENT PLAN
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2019
Market Value Basis

<u>ADDITIONS</u>	<u>FIREFIGHTERS</u>	<u>POLICE OFFICERS</u>
Contributions:		
Member	\$ 853,006	\$ 1,093,517
Buy-Back	0	0
City	2,154,778	2,804,033
State	0	0
Total Contributions	<u>\$ 3,007,784</u>	<u>\$ 3,897,550</u>
Investment Income:		
Unrealized Gains/Losses	\$ 221,455	\$ 319,459
Interest & Dividends	1,453,454	2,096,686
Investment Income	<u>\$ 1,674,909</u>	<u>\$ 2,416,145</u>
Pension Obligation Bond Receivable	20,780,819	25,448,107
Total Additions	\$ 25,463,512	\$ 31,761,802
<u>DEDUCTIONS</u>		
Distributions to Members:		
Benefit Payments	\$ 6,347,132	\$ 9,304,034
Lump Sum DROP Distributions	2,093,323	635,049
Refunds of Member Contributions	49,431	418,076
Investment Expense	193,829	375,253
Administrative Expense	272,884	498,374
Transfer to Supplemental Retirement Plan	<u>1,005,652</u>	<u>0</u>
Total Deductions	\$ 9,962,251	\$ 11,230,786
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year	\$ 103,609,352	\$ 148,158,496
End of the Year	\$ 119,110,613	\$ 168,689,512
Receivable from State	<u>519,433</u>	<u>558,361</u>
Total Fund including Receivable from State	\$ 119,630,046	\$ 169,247,873
Share Plan Balance	<u>432,726</u>	<u>1,427,687</u>
Total Fund including Share Plan Balance	\$ 120,062,772	\$ 170,675,560
Rate of Investment Return	1.67%	1.67%

CITY OF GAINESVILLE
CONSOLIDATED POLICE OFFICERS' AND FIREFIGHTERS' RETIREMENT PLAN
DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS
FOR THE YEAR ENDED SEPTEMBER 30, 2019
Actuarial Value Basis

	<u>FIREFIGHTERS</u>	<u>POLICE OFFICERS</u>
A. Actuarial Value of Assets Beginning of the Year	\$ 98,373,250	\$ 140,819,094
B. Net Cash Flow		
1. Member Contributions	\$ 853,006	\$ 1,093,517
2. City Contributions	2,154,778	2,804,033
3. Initial Transfer to Supplemental Plan	(1,005,652)	0
4. Distributions (Excluding Investment Expenses)	(8,762,770)	(10,855,533)
5. Net Cash Flow During the Plan Year (B1 + B2 + B3 + B4)	(6,760,638)	(6,957,983)
6. State Contributions (Receivable)	519,433	558,361
7. Net Cash Flow (B5 + B6)	\$ (6,241,205)	\$ (6,399,622)
C. Expected Return of 7.9% (A + B5/2) * 0.079	\$ 7,504,442	\$ 10,849,868
D. Expected Actuarial Value End of Year (A + B7 + C)	\$ 99,636,487	\$ 145,269,340
E. Market Value (MV) End of Year ¹	\$ 98,849,227	\$ 143,799,766
F. Excess of MV over Expected Actuarial Value (E - D)	\$ (787,260)	\$ (1,469,574)
G. 20% Adjustment Towards Market (20% * F)	\$ (157,452)	\$ (293,915)
H. Actuarial Value (AV) End of Year ¹		
1. Preliminary AV end of year: (D + G)	\$ 99,479,035	\$ 144,975,425
2. Upper corridor limit: 120% * E	118,619,072	172,559,719
3. Lower corridor limit: 80% * E	79,079,382	115,039,813
4. Actuarial value end of year	\$ 99,479,035	\$ 144,975,425
I. Share Plan Balance	\$ 432,726	\$ 1,427,687
J. Actuarial Value including Share Plan Balance ¹	\$ 99,911,761	\$ 146,403,112
K. Rate of Investment Return on Actuarial Value	7.73%	7.69%
L. Pension Obligation Bond Receivable	20,780,819	25,448,107
M. Actuarial Value with Pension Bond Receivable	120,692,580	171,851,219

¹ Excluding Pension Obligation Bond Receivable.

CITY OF GAINESVILLE
CONSOLIDATED POLICE OFFICERS' AND FIREFIGHTERS' RETIREMENT PLAN
RECONCILIATION OF DROP ACCOUNTS
FOR THE YEAR ENDED SEPTEMBER 30, 2019

	<u>SEPTEMBER 30, 2019</u>	<u>SEPTEMBER 30, 2018</u>
Market Value Beginning of the Year	\$ 6,219,892	\$ 7,587,402
<u>ADDITIONS</u>		
Contributions	\$ 2,142,302	\$ 2,681,393
Investment Income	443,239	487,321
Total Additions	\$ 2,585,541	\$ 3,168,714
<u>DEDUCTIONS</u>		
Benefit Payments	\$ (2,728,372)	\$ (4,536,224)
Expenses	0	0
Total Deductions	\$ (2,728,372)	\$ (4,536,224)
Market Value of Assets End of the Year	\$ 6,077,061	\$ 6,219,892

	<u>FIREFIGHTERS SEPTEMBER 30, 2019</u>	<u>POLICE OFFICERS SEPTEMBER 30, 2019</u>
Market Value Beginning of the Year	\$ 4,668,530	\$ 1,551,362
<u>ADDITIONS</u>		
Contributions	\$ 1,351,585	\$ 790,717
Investment Income	223,272	219,967
Total Additions	\$ 1,574,857	\$ 1,010,684
<u>DEDUCTIONS</u>		
Benefit Payments	\$ (2,093,323)	\$ (635,049)
Expenses	0	0
Total Deductions	\$ (2,093,323)	\$ (635,049)
Market Value of Assets End of the Year	\$ 4,150,064	\$ 1,926,997

CITY OF GAINESVILLE
CONSOLIDATED POLICE OFFICERS' AND FIREFIGHTERS' RETIREMENT PLAN
RECONCILIATION OF SHARE ACCOUNTS
FOR THE YEAR ENDED SEPTEMBER 30, 2019

	<u>SEPTEMBER 30, 2019</u>	<u>SEPTEMBER 30, 2018</u>
Market Value Beginning of the Year	\$ 1,453,977	\$ 1,306,977
<u>ADDITIONS</u>		
Contributions	\$ 1,097,527	\$ 234,171
Investment Income	<u>0</u>	<u>166,696</u>
Total Additions	\$ 1,097,527	\$ 400,867
<u>DEDUCTIONS</u>		
Share Plan Distributions	\$ (691,057)	\$ (253,867)
Expenses	<u>(34)</u>	<u>0</u>
Total Deductions	\$ (691,091)	\$ (253,867)
Market Value of Assets End of the Year	\$ 1,860,413	\$ 1,453,977

	<u>FIREFIGHTERS SEPTEMBER 30, 2019</u>	<u>POLICE OFFICERS SEPTEMBER 30, 2019</u>
Market Value Beginning of the Year	\$ 0	\$ 1,453,977
<u>ADDITIONS</u>		
Contributions	\$ 1,005,652	\$ 91,875
Investment Income	<u>0</u>	<u>0</u>
Total Additions	\$ 1,005,652	\$ 91,875
<u>DEDUCTIONS</u>		
Benefit Payments	\$ (572,892)	\$ (118,165)
Expenses	<u>(34)</u>	<u>0</u>
Total Deductions	\$ (572,926)	\$ (118,165)
Market Value of Assets End of the Year	\$ 432,726	\$ 1,427,687

CONSOLIDATED TOTAL
STATISTICAL DATA

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Actives</u>				
Number	408	396	393	391
Average Current Age	37.8	38.1	37.6	37.5
Average Age at Employment	28.1	28.1	28.1	28.1
Average Past Service	9.7	10.0	9.5	9.4
Average Annual Salary	\$60,683	\$61,028	\$59,219	\$59,940
<u>Service Retirees</u>				
Number	330	337	362	369
Average Current Age	65.1	65.7	65.6	65.8
Average Annual Benefit	\$36,816	\$37,962	\$39,122	\$40,291
<u>DROP Retirees</u>				
Number	48	49	41	39
Average Current Age	53.9	53.7	52.9	53.1
Average Annual Benefit	\$53,879	\$53,940	\$55,253	\$53,882
<u>Beneficiaries</u>				
Number	35	37	37	37
Average Current Age	72.7	73.1	73.0	74.1
Average Annual Benefit	\$18,978	\$19,713	\$20,642	\$20,868
<u>Disability Retirees</u>				
Number	25	24	25	26
Average Current Age	60.1	60.7	60.3	60.6
Average Annual Benefit	\$17,313	\$17,481	\$17,985	\$18,534
<u>Terminated Vested</u>				
Number	20	20	35	29
Average Current Age ¹	47.3	47.0	41.4	46.4
Average Annual Benefit ²	\$11,964	\$14,080	\$9,763	\$14,013

¹ Effective 10/1/2019, the Average Current Age excludes participants awaiting a refund of contributions.

² The Average Annual Benefit excludes participants awaiting a refund of contributions.

CONSOLIDATED TOTAL
AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24	10	6	1	1								18
25 - 29	21	18	11	13	2	2						67
30 - 34	7	8	5	10	2	32	15					79
35 - 39	5		1	1	3	21	32	7				70
40 - 44	1	1	1	1	1	9	16	31	2			63
45 - 49		1	1		2	3	17	21	11			56
50 - 54						1	4	10	11	2		28
55 - 59		1		1		1	2	3				8
60 - 64					1					1		2
65+												0
Total	44	35	20	27	11	69	86	72	24	3	0	391

CONSOLIDATED TOTAL
VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2018	393
b. Terminations	
i. Vested (partial or full) with deferred benefits	(6)
ii. Vested in refund of member contributions only	(1)
iii. Refund of member contributions or full lump sum distribution received	(26)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	(1)
d. Disabled	(1)
e. Retired	(5)
f. DROP	<u>(7)</u>
g. Continuing participants	346
h. New entrants	<u>45</u>
i. Total active life participants in valuation	391

2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	DROP <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested (Deferred Annuity)	Vested (Due Refund)	<u>Total</u>
a. Number prior valuation	362	41	37	25	26	9	500
Retired	15	(9)			(1)		5
DROP		7					7
Vested (Deferred Annuity)					6		6
Vested (Due Refund)						1	1
Hired/Terminated in Same Year							
Death, With Survivor	(3)		2				(1)
Death, No Survivor	(5)		(2)				(7)
Disabled				1			1
Refund of Contributions					(3)	(9)	(12)
Rehires							
Expired Annuities							
Data Corrections					(1)	1	
b. Number current valuation	369	39	37	26	27	2	500

FIREFIGHTERS
STATISTICAL DATA

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Actives</u>				
Number	133	133	138	154
Average Current Age	37.4	37.4	36.8	36.3
Average Age at Employment	27.7	27.6	27.5	27.6
Average Past Service	9.7	9.8	9.3	8.7
Average Annual Salary	\$62,398	\$63,417	\$63,218	\$63,887
<u>Service Retirees</u>				
Number	135	133	141	143
Average Current Age	68.1	68.2	68.2	67.9
Average Annual Benefit	\$37,237	\$38,783	\$39,857	\$41,790
<u>DROP Retirees</u>				
Number	27	27	24	21
Average Current Age	52.9	53.1	53.1	53.0
Average Annual Benefit	\$57,270	\$58,210	\$59,155	\$60,211
<u>Beneficiaries</u>				
Number	17	17	17	19
Average Current Age	73.3	73.7	74.7	75.2
Average Annual Benefit	\$22,208	\$23,321	\$23,739	\$23,572
<u>Disability Retirees</u>				
Number	8	8	8	8
Average Current Age	59.3	60.3	61.3	62.3
Average Annual Benefit	\$19,271	\$19,339	\$19,452	\$19,567
<u>Terminated Vested</u>				
Number	5	5	4	2
Average Current Age ¹	48.9	48.4	48.8	49.2
Average Annual Benefit ²	\$16,464	\$16,464	\$17,572	\$16,482

¹ Effective 10/1/2019, the Average Current Age excludes participants awaiting a refund of contributions.

² The Average Annual Benefit excludes participants awaiting a refund of contributions.

**FIREFIGHTERS
AGE AND SERVICE DISTRIBUTION**

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24	5	3										8
25 - 29	11	6	7	4	2							30
30 - 34	2	4	4	5	2	6	4					27
35 - 39	4				1	14	13	6				38
40 - 44	1			1	1	4	5	12				24
45 - 49					1	2	2	12	3			20
50 - 54								3	2			5
55 - 59								1				1
60 - 64										1		1
65+												0
Total	23	13	11	10	7	26	24	34	5	1	0	154

FIREFIGHTERS
VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2018	138
b. Terminations	
i. Vested (partial or full) with deferred annuity	0
ii. Vested in refund of member contributions only	0
iii. Refund of member contributions or full lump sum distribution received	(3)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. DROP	<u>(4)</u>
g. Continuing participants	131
h. New entrants	<u>23</u>
i. Total active life participants in valuation	154

2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	DROP <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested (Deferred Annuity) <u> </u>	Vested (Due Refund) <u> </u>	<u>Total</u>
a. Number prior valuation	141	24	17	8	3	1	194
Retired	8	(7)			(1)		
DROP		4					4
Vested (Deferred Annuity)							
Vested (Due Refund)							
Hired/Terminated in Same Year							
Death, With Survivor	(3)		2				(1)
Death, No Survivor	(3)						(3)
Disabled							
Refund of Contributions						(1)	(1)
Rehires							
Expired Annuities							
Data Corrections							
b. Number current valuation	143	21	19	8	2	0	193

POLICE OFFICERS
STATISTICAL DATA

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Actives</u>				
Number	275	263	255	237
Average Current Age	38.0	38.4	38.1	38.3
Average Age at Employment	28.2	28.3	28.5	28.4
Average Past Service	9.8	10.1	9.6	9.9
Average Annual Salary	\$59,853	\$59,820	\$57,055	\$57,375
<u>Service Retirees</u>				
Number	195	204	221	226
Average Current Age	63.0	64.0	63.9	64.4
Average Annual Benefit	\$36,524	\$37,427	\$38,653	\$39,343
<u>DROP Retirees</u>				
Number	21	22	17	18
Average Current Age	55.1	54.4	52.5	53.3
Average Annual Benefit	\$49,520	\$48,700	\$49,745	\$46,498
<u>Beneficiaries</u>				
Number	18	20	20	18
Average Current Age	72.2	72.5	71.5	73.0
Average Annual Benefit	\$15,928	\$16,647	\$18,010	\$18,014
<u>Disability Retirees</u>				
Number	17	16	17	18
Average Current Age	60.4	60.9	59.9	59.8
Average Annual Benefit	\$16,391	\$16,553	\$17,294	\$18,075
<u>Terminated Vested</u>				
Number	15	15	31	27
Average Current Age ¹	46.7	46.5	40.4	46.2
Average Annual Benefit ²	\$14,452	\$13,286	\$10,866	\$13,816

¹ Effective 10/1/2019, the Average Current Age excludes participants awaiting a refund of contributions.

² The Average Annual Benefit excludes participants awaiting a refund of contributions.

POLICE OFFICERS
AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24	5	3	1	1								10
25 - 29	10	12	4	9		2						37
30 - 34	5	4	1	5		26	11					52
35 - 39	1		1	1	2	7	19	1				32
40 - 44		1	1			5	11	19	2			39
45 - 49		1	1		1	1	15	9	8			36
50 - 54						1	4	7	9	2		23
55 - 59		1		1		1	2	2				7
60 - 64					1							1
65+												0
Total	21	22	9	17	4	43	62	38	19	2	0	237

POLICE OFFICERS
VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2018	255
b. Terminations	
i. Vested (partial or full) with deferred annuity	(6)
ii. Vested in refund of member contributions only	(1)
iii. Refund of member contributions or full lump sum distribution received	(23)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	(1)
d. Disabled	(1)
e. Retired	(5)
f. DROP	<u>(3)</u>
g. Continuing participants	215
h. New entrants	<u>22</u>
i. Total active life participants in valuation	237

2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	DROP <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested (Deferred Annuity) <u>Annuit</u>	Vested (Due Refund) <u>Refund</u>	<u>Total</u>
a. Number prior valuation	221	17	20	17	23	8	306
Retired	7	(2)					5
DROP		3					3
Vested (Deferred Annuity)					6		6
Vested (Due Refund)						1	1
Hired/Terminated in Same Year							
Death, With Survivor							
Death, No Survivor	(2)		(2)				(4)
Disabled				1			1
Refund of Contributions					(3)	(8)	(11)
Rehires							
Expired Annuities							
Data Corrections					(1)	1	
b. Number current valuation	226	18	18	18	25	2	307

SUMMARY OF CURRENT PLAN

Eligibility

Any full-time regular employee who is certified as a firefighter as a condition of employment in accordance with the provisions of F.S. § 633.35, and whose duty it is to extinguish fires, to protect life, and to protect property, or any full-time regular employee who is certified or required to be certified as a law enforcement officer in compliance with F.S. § 943.14, who is vested with authority to bear arms and make arrests, and whose primary responsibility is the prevention and detection of crime or the enforcement of the penal, criminal, traffic, or highway laws of the state.

Member Contributions

Members are required to contribute 7.5% of gross pay. Effective with the first full pay period following January 1, 2014, firefighters contribute 9.0% of gross pay.

State Contributions

State premium tax revenue under Chapter 175/185 received annually is used to offset required contributions. Chapter 185 premium tax revenue up to \$558,361.13 will be used to offset annual required contributions with excess amounts going to the Supplemental Retirement Program. Chapter 175 premium tax revenue up to \$580,918.87 will be used to offset annual required contributions with excess amounts reserved for extra benefits.

Credited Service

Credited Service means the total number of months of service with the City, expressed in terms of full and fractional years, where a member earns one month of service for at least 10 days of service within each month beginning on the day of the month corresponding to the member's date of employment. Credited Service will include unused sick leave credits, any authorized leave of absence up to 90 days, and military service as required by Federal law.

Unused sick leave will be limited to the lesser of the number of credits at retirement and the credits earned as of July 1, 2013 for police officers and credits earned as of January 1, 2014 for firefighters.

Limited Participant Service

Service worked for the City as an ineligible member of the plan will be counted for any purpose of the Plan, except for the purpose of determining the member's accrued benefit.

Gross Pay

Types of compensation, at the discretion of the City, which will have member contribution deducted, provided that such types of compensation will also be included for determining Earnings.

Earnings

Earnings include base pay (including all paid leaves), overtime pay, working out of classification pay, longevity pay, Florida city firefighters supplemental education incentive payments, Florida police officer educational salary incentive payments, police security overtime pay, special assignment pay, special duty assignment pay, paramedic certification pay, stand-by pay, call-back pay, acting out of classification pay, and termination vacation pay, except as provided for by collective bargaining agreements. In addition, for those employees who become a member of the plan on or after October 1, 1996, earnings are limited to \$150,000 per year (as indexed).

Effective July 1, 2013 for police officers and January 1, 2014 for firefighters, overtime is limited to 300 hours per year. In addition, accumulated vacation pay included in earnings will be the lesser of the number of credited hours at retirement and the number of hours as of July 1, 2013 for police officers and the number of hours as of January 1, 2014 for firefighters.

Final Average Earnings (FAE)

Final Average Earnings mean average earnings for the highest 36 consecutive months, or highest 48 consecutive months for police officers who become members on or after July 1, 2013.

Monthly Accrued Benefit

Final average earnings multiplied by a percentage per year of credited service as follows:

<u>Date</u>	<u>Firefighters</u>	<u>Police Officers</u>
Prior to October 1, 2005	2.5%	2.5%
October 1, 2005 to July 1, 2013	2.625%	2.625%
July 1, 2013 to January 1, 2014	2.625%	2.5%
After January 1, 2014	2.5%	2.5%

Normal Retirement

Date

First day of the month coincident with or following the earlier of:

- (1) 20 years of service
- (2) Age 55 with 10 or more years of service
- (3) Age plus service equal 70

For police officers who become participants on or after July 1, 2013, and firefighters who become participants on or after January 1, 2014, item (1) above is equal to 25 years of service.

Benefit

Monthly Accrued Benefit

Vesting

Schedule	100% after 10 years of Credited Service.
Benefit Amount	<p>Members that terminate employment with 10 or more years of service, the Monthly Accrued Benefit is payable unreduced at age 55. The benefit can be commenced at age 50, actuarially reduced, but not to exceed 3.0% per year prior to age 55.</p> <p>Members that terminate employment with less than 10 years of service will be eligible to receive a refund of Member contributions without interest. Members may voluntarily leave contributions in the Plan for a period of five years after separation and receive service credit upon rehire within the five-year period. After five years, Member contributions will automatically be refunded without interest.</p>

Disability

Eligibility	
Service Incurred	Permanent and totally disabled in the line of duty.
Non-Service Incurred	Permanent and totally disabled not in the line of duty after completion of 5 years of credited service.
Benefit	
Service Incurred	The greater of the Monthly Accrued Benefit and 42% of Final Average Earnings.
Non-Service Incurred	The greater of the Monthly Accrued Benefit and 25% of Final Average Earnings.

Death Benefits

Pre-Retirement	
Eligibility	Death prior to retirement.
Benefit	If the Member has less than 10 years of service upon death, the beneficiary will receive the member's contributions without interest. If the Member has 10 or more years of service, the beneficiary will receive the member's accrued benefit payable at normal or early retirement in the form of benefit chosen by the beneficiary.
Post-Retirement	Benefits payable to beneficiary in accordance with option selected at retirement.

Deferred Retirement Option Plan (“DROP”)

Eligibility	A Member who has earned at least 25 years of service or age plus service equal 70.
Participation	Members may participate for a maximum of 60 months.
Rate of Return	DROP benefits accumulate with interest at 4.5% per year for police officers and 5.5% per year for firefighters.
Distribution	Lump sum and/or rollover to qualified retirement plan(s) at termination of employment.
Reverse DROP	Members can select a date in the past for participation in the DROP.

Normal Form of Payment

Ten Year Certain & Life

Optional Forms of Payment

Actuarial Equivalence

Interest rate: 9.5%
Mortality Table: 1994 Group Annuity Mortality Basic Table-Unisex 50/50

Form of Payment

Life Annuity
100% Joint and Last Survivor
75% Joint and Last Survivor
66 2/3% Joint and Last Survivor
66 2/3% Joint and Survivor
50% Joint and Last Survivor

Joint and Last Survivor reduces upon death of the Member or Beneficiary. Joint and Survivor reduces only upon death of the Member. All forms above guarantee the Member will receive the Member’s contributions.

Cost of Living Adjustment (“COLA”)

Members who are receiving a disability retirement after October 1, 1999 receive a 2.0% increase each October 1st following attainment of age 62.

Firefighters

- (1) Retired prior to October 1, 1999 receive a 2.0% increase each October 1st following age 62.
- (2) Retired after October 1, 1999 with at least 25 years of service receive a 2.0% increase each October 1st following age 55.
- (3) Retired after October 1, 1999 with at least 20 years but less than 25 years of service receive a 2.0% increase each October 1st following age 62.
- (4) Retired after October 1, 1999 with less than 20 years of service with age plus service at least 70 receive a 2.0% increase each October 1st following age 62.

Cost of Living Adjustment (continued)

Police Officers

- (1) Retired prior to October 1, 1999 receive a 2.0% increase each October 1st following age 62.
- (2) Retired after October 1, 1999, had at least 20 years of service on July 1, 2013, and retired with at least 25 years of service receive a 2.0% increase each October 1st following age 55.
- (3) Retired after October 1, 1999, had at least 20 years of service on July 1, 2013, and retired with less than 25 years of service receive a 2.0% increase each October 1st following age 62.
- (4) Retired after October 1, 1999, had less than 20 years of service on July 1, 2013, and retired with at least 25 years of service receive a 1.0% increase each October 1st following age 55, increasing to 2.0% each October 1st following age 62.

Supplemental Retirement Program

Firefighters

Effective February 1, 2017, firefighters hired on or after October 1, 1998 are eligible to participate in the Supplemental Retirement Program, which includes full-time active, retired, and beneficiaries of firefighters who died in the line of duty or while in the military.

The initial allocation was based on a pro rata distribution of excess State premium tax revenues for plan years 1999 through 2006. Subsequent annual allocations will be pro rata based on State premium tax revenue received annually in excess of \$580,918.87.

Police Officers

Effective July 1, 2013, police officers hired on or after October 1, 2000 are eligible to participate in the Supplemental Retirement Program, which includes full-time active, retired, and beneficiaries of police officers who died in the line of duty or while in the military.

The initial allocation was based on a pro rata distribution of excess State premium tax revenues for plan years 2001 through 2012. Subsequent annual allocations will be pro rata based on State premium tax revenue received annually in excess of \$558,361.13.