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City of St. Petersburg Firefighters' Retirement System

October 1, 2019
Actuarial Valuation Report

Table of Contents

Actuarial Certification	3
Executive Summary	5
Summary Results	6
Changes Since Prior Valuation and Key Notes	7
Five Year Valuation Summary	8
Identification of Risks	9
Plan Maturity Measures	10
Assets and Liabilities	11
Present Value of Future Benefits	12
Actuarial Accrued Liability	13
Asset Information	14
Funding Results	16
Reconciliation of (Gain)/Loss	17
Reconciliation of Unfunded Actuarial Accrued Liability (UAAL)	18
Development of Actuarial Recommended Contribution	19
Data, Assumptions, and Plan Provisions	20
Demographic Information	21
Participant Reconciliation	23
Active Participant Schedule	24
Plan Provisions	25
Actuarial Assumptions	29
Other Measurements	32
Asset Information	33
Schedule of Amortizations	35
Florida State Requirements	36

Actuarial Certification

At the request of the plan sponsor, this report summarizes the actuarial results of the City of St. Petersburg Firefighters' Retirement System as of October 1, 2019. The purpose of this report is to communicate the following results of the valuation:

- Determine Funded Status; and
- Determine Recommended Contribution for the fiscal year October 1, 2020 through September 30, 2021.

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

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

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

- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

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

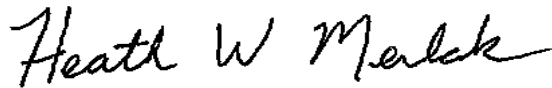
Actuarial Certification

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

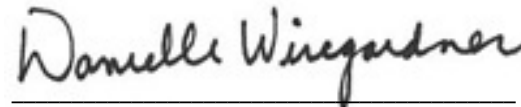
Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report. To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the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

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

Nyhart



Heath Merlak, FSA, EA, MAAA
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March 9, 2020
Date

Executive Summary

The actuarial report provides the plan sponsor with several ways to measure the funded status of the pension plan. The following detail is included in the report:

- Actuarial Recommended Contribution
- Asset Performance
- Plan Demographics

This report is filled with actuarial terminology. However, the ultimate objective of the valuation is to provide a rational method of funding the plan. It is necessary to fund the benefit promised by the employer in a manner that is logical and employer friendly, yet safeguards the participants' interest. The actuarially derived contribution, however, is not the true cost of the pension plan. The true cost is illustrated by the following formula:

$$\text{Ultimate Pension Cost} = \text{Benefits Paid} - \text{Investment Income} + \text{Plan Expenses}$$

While the plan's liability and normal cost determine the current contribution recommendations, the true cost is controlled only by the "defined" benefit and investment income generated by the underlying assets. The actuarial process only controls the timing of costs.

We suggest that a plan sponsor treat the actuarial report as you would treat a scorecard. It is simply a measure of progress toward the ultimate goal of paying all pension benefits when participants retire.

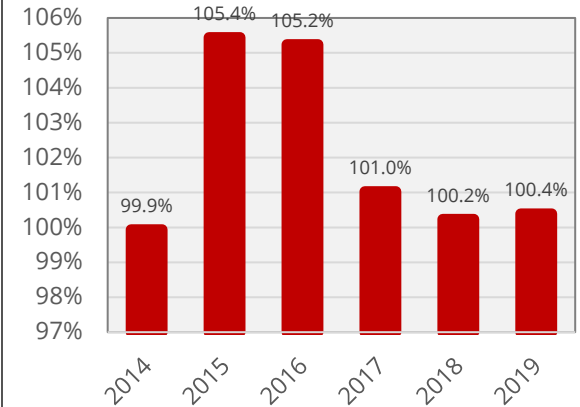
Executive Summary

Summary Results

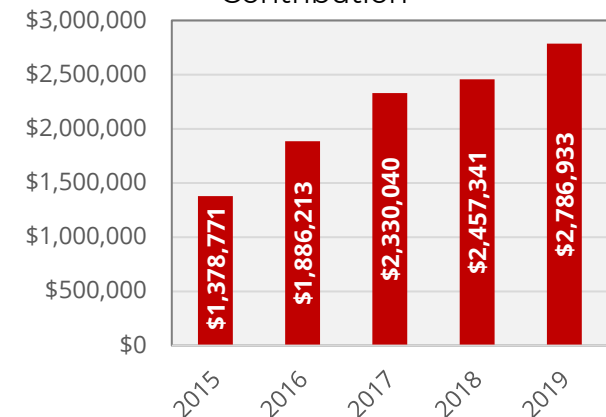
The actuarial valuation's primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level percentage of pay.

	October 1, 2018	October 1, 2019
Funded Status Measures		
Accrued Liability	\$246,985,392	\$256,346,610
Actuarial Value of Assets	247,565,775	257,345,675
Unfunded Actuarial Accrued Liability (UAAL)	(\$580,383)	(\$999,065)
Funded Percentage (AVA)	100.2%	100.4%
Funded Percentage (AMVA)	104.6%	99.5%
Cost Measures		
Recommended Contribution	\$2,457,341	\$2,786,933
Recommended Contribution (as a percentage of payroll)	12.1%	12.4%
Asset Performance		
Market Value of Assets (MVA)	\$271,728,599	\$269,215,697
Adjusted Market Value of Assets	\$258,252,617	\$255,127,118
Actuarial Value of Assets (AVA)	\$247,565,775	\$257,345,675
Actuarial Value/Market Value	95.9%	100.9%
Market Value Rate of Return	9.5%	3.9%
Actuarial Value Rate of Return	8.0%	9.4%
Participant Information		
Active Members	305	306
Terminated Vested Members	7	9
Retirees, Beneficiaries and Disabled Members	417	426
DROP Participants	47	40
Total	776	781
Expected Payroll	\$20,315,761	\$22,484,483

History of Funded Ratio



History of Recommended Contribution



Changes since Prior Valuation and Key Notes

Effective as of January 1, 2020, the following Special Pay is to be included as Pensionable Earnings: Technical Rescue Pay, Fire Tac Pay, Haz Mat Diff, and Marine Team Pay. This change in plan provisions results in an increase in accrued liability and normal cost.

For those members who retired (including disabled members) under the Supplemental Retirement Plan on or after October 1, 2008, and are at least age 60 as of October 1, 2019, a 2% increase to their retirement benefits has been provided. This COLA is payable October 1, 2019 and was funded by the Additional Premium Tax Revenues.

The aggregate payroll growth rate (used to determine the amortization of unfunded liability bases) increased from 2.10% to 2.75%, as limited by the ten-year average historical growth in payroll and the Plan's inflation assumption of 2.75%

Executive Summary

Five Year Valuation Summary

	10/01/2015*	10/01/2016	10/01/2017	10/01/2018	10/01/2019
Funding					
Accrued Liability	\$218,541,035	\$227,791,977	\$244,164,815	\$246,985,392	\$256,346,610
Actuarial Value of Assets	\$230,430,452	\$239,724,279	\$246,675,297	\$247,565,775	\$257,345,675
Unfunded Actuarial Accrued Liability	(\$11,889,417)	(\$11,932,302)	(\$2,510,482)	(\$580,383)	(\$999,065)
Funded Percentage	105.4%	105.2%	101.0%	100.2%	100.4%
Total Normal Cost (NC)	\$3,266,823	\$3,799,931	\$4,481,637	\$4,669,646	\$5,137,979
NC as a Percent of Covered Payroll	22.9%	23.4%	22.9%	23.0%	22.9%
Actual Employer Contribution	\$7,725,079	\$4,477,204	\$1,378,771	\$1,886,213	\$2,330,040
Recommended Contribution	\$7,725,079	\$4,477,204	\$1,378,771	\$1,886,213	\$2,330,040
Recommended Contribution (% of Pay)	48.4%	31.4%	8.5%	9.6%	11.5%
Interest Rate	8.00%	8.00%	7.50%	7.50%	7.50%
Expense Load Assumption	\$110,777	\$91,395	\$70,472	\$50,911	\$35,498
Rate of Return					
Actuarial Value of Assets	10.3%	8.7%	8.8%	8.0%	9.4%
Market Value of Assets	0.5%	11.3%	12.3%	9.5%	3.9%
Demographic Information					
Active Participants	237	259	300	305	306
Terminated Vested Participants	8	6	10	7	9
Retired Participants	251	292	299	303	312
Beneficiaries	73	72	76	78	80
Disabled Participants	41	39	38	36	34
DROP Participants	102	63	53	47	40
Total Participants	712	731	776	776	781
Covered Payroll	\$14,252,652	\$16,264,742	\$19,574,164	\$20,315,761	\$22,484,483
Average Covered Pay	\$60,138	\$62,798	\$65,247	\$66,609	\$73,479

*From valuation reports prepared by Buck Consultants, LLC

Executive Summary

Identification of Risks

The results presented in this report are shown as single point values. However, these values are derived using assumptions about future markets and demographic behavior. If actual experience deviates from our assumptions, the actual results for the plan will consequently deviate from those presented in this report. Therefore, it is critical to understand the risks facing this pension plan. The following table shows the risks we believe are most relevant to the City of St. Petersburg Firefighters' Retirement System. The risks are generally ordered with those we believe to have the most significance at the top. Also shown are possible methods by which a more detailed assessment of the risk can be performed.

Type of Risk	Method to Assess Risk
Investment Return	Scenario Testing; Asset Liability Study
Contribution Risk	Projections and Contribution Strategy; Annual Monitoring
Demographic Risk	Projections; Stress Testing

Plan Maturity Measures - October 1, 2019

Each pension plan has a distinct life-cycle. New plans promise future benefits to active employees and then accumulate assets to pre-fund those benefits. As the plan matures, benefits are paid and the pre-funded assets begin to decumulate until ultimately, the plan pays out all benefits. A plan's maturity has a dramatic influence on how risks should be viewed. The following maturity measures illustrate where the City of St. Petersburg Firefighters' Retirement System falls in its life-cycle.

Duration of Liabilities: 11.3

Duration is the most common measure of plan maturity. It is defined as the sensitivity of the liabilities to a change in the interest rate assumption. The metric also approximates the weighted average length of time, in years, until benefits are expected to be paid. A plan with high duration is, by definition, more sensitive to changes in interest rates. A plan with low duration is more susceptible to risk if asset performance deviates from expectations as there would be less time to make up for market losses in adverse market environments while more favorable environments could result in trapped surplus from gains. Conversely, high duration plans can often take on more risk when investing, and low duration plans are less sensitive to interest rate fluctuations.

Demographic Distribution - Ratio of Actively Accruing Participants to All Participants: 39.2%

A plan with a high ratio is more sensitive to fluctuations in salary and statutory changes. A plan with a low ratio is at higher risk from demographic experience. Such a plan should pay close attention to valuation assumptions as there will be less opportunity to realize future offsetting gains or losses when current experience deviates from assumptions. Plans with a low ratio also have limited opportunities to make alterations to plan design to affect future funded status.

Asset Leverage - Ratio of Payroll for Plan Participants to Market Value of Assets: 8.8%

Younger plans typically have a large payroll base from which to draw in order to fund the plan while mature plans often have a large pool of assets dedicated to providing benefits to a population primarily consisting of members no longer on payroll. Plans with low asset leverage will find it more difficult to address underfunding, as the contributions needed to make up the deficit will represent a higher percentage of payroll than for a plan with high asset leverage.

Benefit Payment Percentage - Ratio of Annual Benefit Payments to Market Value of Assets: 6.8%

As a plan enters its decumulation phase, a larger percentage of the pre-funded assets are paid out each year to retirees. A high percentage is not cause for alarm as long as the plan is nearly fully funded. However, such a plan is more sensitive to negative asset performance, especially if cash contributions are not an option to make up for losses.

Assets and Liabilities

The basic building blocks of the actuarial report are contained in this section. These include:

- Actuarial Accrued Liabilities
- Asset Information

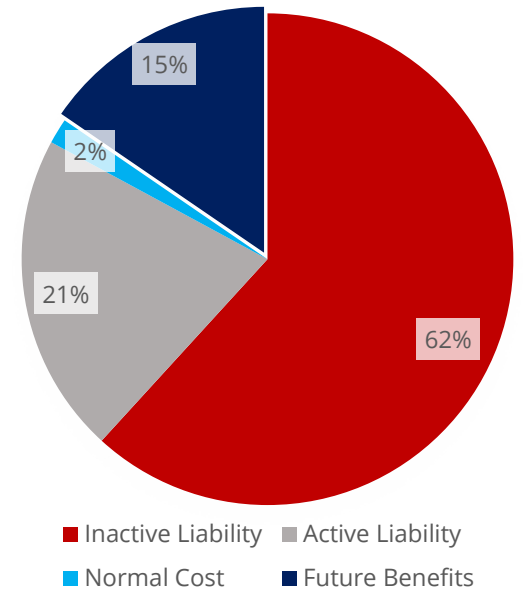
Assets and Liabilities

Present Value of Future Benefits

The Present Value of Future Benefits represents the discounted value of all future benefits expected to be payable to current members, considering future service and compensation not yet earned.

	October 1, 2019
Present Value of Future Benefits	
Active participants	
Retirement	\$102,907,029
Disability	8,696,691
Death	1,606,148
Termination	4,979,954
Total active	<u>\$118,189,822</u>
Inactive participants	
Retired participants	\$139,083,037
DROP participants	23,933,823
Beneficiaries	15,761,440
Disabled	11,659,916
Terminated vested participants	628,189
Total inactive	<u>\$191,066,405</u>
Total	<u>\$309,256,227</u>
Present value of future payrolls	\$231,155,140

Breakdown of Present Value of Future Benefits



Assets and Liabilities

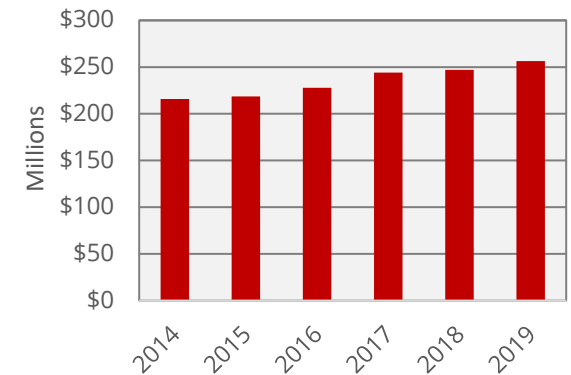
Actuarial Accrued Liability

The Accrued Liability measures the present value of benefits earned as of the valuation date, using a specified set of actuarial assumptions. It is not a long-term snapshot of the liabilities.

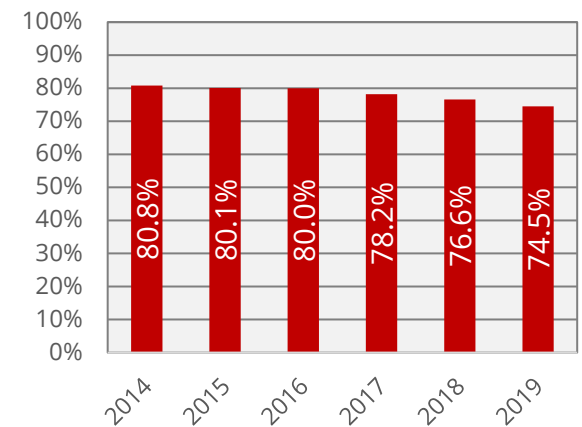
October 1, 2019

Active participants	
Retirement	\$61,331,277
Disability	2,047,285
Death	641,729
Termination	1,259,914
Total Active	\$65,280,205
Inactive participants	
Retired participants	\$139,083,037
DROP participants	23,933,823
Beneficiaries	15,761,440
Disabled	11,659,916
Terminated vested participants	628,189
Total Inactive	\$191,066,405
Total Actuarial Accrued Liability	\$256,346,610
Normal Cost	\$5,137,979
Interest Rate	7.50%

History of Liabilities



History of the Percentage of Inactive Liability



Assets and Liabilities

Asset Information

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

October 1, 2019

Market Value Reconciliation

Market value of assets, beginning of prior year	\$271,728,599
Contributions	
Employer contributions	\$2,330,040
Employee contributions	1,468,732
Non-Employer contributions	1,750,211
Total	\$5,548,983
Investment income, net expenses	10,253,725
Benefit payments and refunds	(18,273,075)
Administrative expenses	(42,535)
Market value of assets, beginning of current year	\$269,215,697
Accumulated reserve	(14,088,579)
Adjusted market value of assets available for pension benefits	\$255,127,118

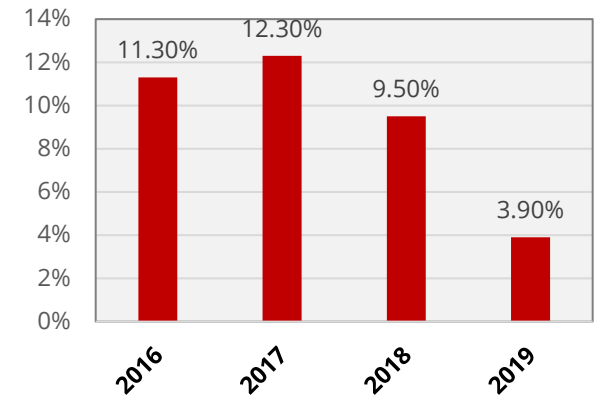
Historical Rates of Return

Rate of return for 2019	3.9%
Rate of return for 2018	9.5%
Rate of return for 2017	12.3%
Rate of return for 2016	11.3%

Actuarial Value of Assets

Value at beginning of current year	\$257,345,675
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Rates of Return



Monitoring the pension plan's investment performance is crucial to eliminating surprises.

Assets and Liabilities

Asset Information (continued)

Plan Assets are used to develop funded percentages and contribution requirements.

October 1, 2019

1. Expected market value of assets	
(a) Market value of assets (10/1/2018)	\$271,728,599
(b) Contributions	5,548,983
(c) Benefit payments	(18,273,075)
(d) Expenses	(42,535)
(e) Expected return	<u>19,917,655</u>
(f) Expected market value of assets (10/1/2019)	\$278,879,627
2. Market value of assets (10/1/2019)	\$269,215,697
3. Actual return on market value	\$10,253,725
4. Amount subject to phase in [(3)-(1e)]	(\$9,663,930)
5. Phase in of asset gain/(loss)	
(a) Current year (75% x (\$9,663,930))	(\$7,247,948)
(b) First prior year (50% x \$4,994,449)	2,497,225
(c) Second prior year (25% x \$10,128,663)	<u>2,532,166</u>
(d) Total phase-in	(\$2,218,557)
6. Preliminary actuarial value of assets (10/1/2019) [(2)-(5d)]	\$271,434,254
7. Adjusted market value of assets (less accumulated reserve)	\$255,127,118
8. 80% Market value of assets	\$204,101,695
9. 120% Market value of assets	\$306,152,541
10. Adjusted actuarial value of assets	\$271,434,254
11. Reserved assets	(\$14,088,579)
12. Final actuarial value of assets	\$257,345,675
13. Return on actuarial value of assets	9.35%

Funding Results

The basic building blocks of the actuarial report are contained in this section. These include:

- Reconciliation of Gain/Loss
- Reconciliation of Unfunded Actuarial Accrued Liability (UAAL)
- Recommended Contribution

Funding Results

Reconciliation of (Gain)/Loss

October 1, 2019

Liability (Gain)/Loss

1. Actuarial liability, beginning of prior year	\$246,985,392
2. Supplemental COLA for select retirees	445,965
3. Normal cost for prior year	4,669,646
4. Benefit payments	(18,273,075)
5. Expected Interest	18,234,723
6. Change in Assumptions	0
7. Change in Plan Provisions	277,554
8. Expected actuarial liability, beginning of current year	\$252,340,205
9. Actual actuarial liability	256,346,610
10. Liability (Gain)/Loss, (9) – (8)	\$4,006,405

Asset (Gain)/Loss

11. Actuarial value of assets, beginning of prior year	\$247,565,775
12. Employer and Employee Contributions	3,798,772
13. State Contribution allocated to Plan for funding of Plan benefits	1,210,916
14. Contribution from Additional Premium Tax Revenues	445,965
15. Benefit payments and expenses	(18,315,610)
16. Expected Investment return	18,104,569
17. Expected actuarial value of assets, beginning of current year	\$252,810,387
18. Actual actuarial value of assets, beginning of current year	257,345,675
19. Asset (Gain)/Loss, (17) – (18)	(\$4,535,288)

Total (Gain)/Loss, (10) + (19) (\$528,883)

Funding Results

Reconciliation of Unfunded Actuarial Accrued Liability (UAAL)

	October 1, 2019
1. UAAL beginning of prior year	(\$580,383)
2. Normal Cost for prior year	4,669,646
3. Supplemental COLA and Contribution from Additional Premium Tax Revenues	0
4. Expenses	42,535
5. Employer Contributions	(2,330,040)
6. Employee Contributions	(1,468,732)
7. Non-Employer Contributions	(1,210,916)
8. Interest	130,154
9. Expected UAAL, beginning of current year	(\$747,736)
10. Changes due to:	
(a) Amendments	\$0
(b) Assumptions	
(1) Mortality Update	0
(2) Interest Rate Update	0
(c) Funding Methods	0
(d) Plan Provisions	277,554
(e) Total	\$277,554
11. (Gain)/Loss due to:	
(b) Assets	(\$4,535,288)
(c) Liabilities	4,006,405
(d) Total	(\$528,883)
12. UAAL beginning of current year [(9)+(10)+(11)]	(\$999,065)

Funding Results

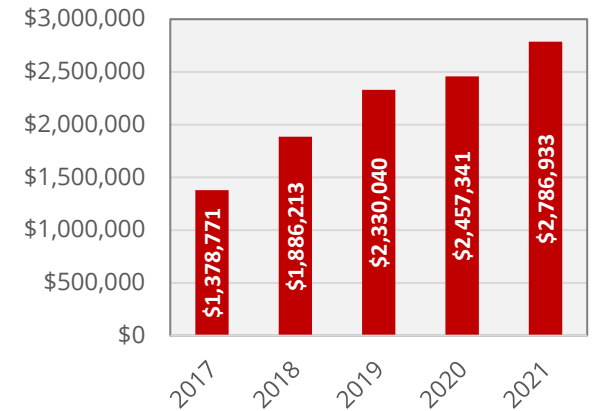
Development of Actuarial Recommended Contribution

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

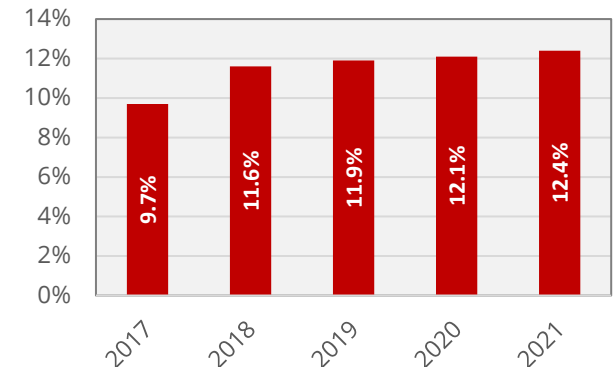
Funded Position	October 1, 2019
1. Entry age accrued Liability	\$256,346,610
2. Actuarial value of assets	<u>257,345,675</u>
3. Unfunded accrued liability, (1)-(2)	(\$999,065)
Employer Contributions	
1. Normal Cost	
a. Total normal cost	\$5,137,979
b. Expected participant contributions	<u>1,562,346</u>
c. Net normal cost	\$3,575,633
2. Administrative expenses	35,498
3. Amortization of UAAL	0
4. Applicable interest ⁽¹⁾	<u>386,718</u>
5. Total required contribution	\$3,997,849
6. Expected state contribution	<u>1,210,916</u>
7. Total recommended contribution	\$2,786,933
As a percentage of current payroll	12.4%

¹⁾ Based on assumed payment schedule where 1/12th of the City contribution is made on 10/1, 11/1, and 12/1 of the year following the valuation date with the remaining 9/12th contributed on 1/1 thereafter. The State contribution is estimated to be made 8/15 of the applicable fiscal year.

History of Recommended Contribution



History of Recommended Contribution (% of Payroll)



Data, Assumptions, and Plan Provisions

- Demographic Information
- Plan Provisions
- Assumptions and Methods

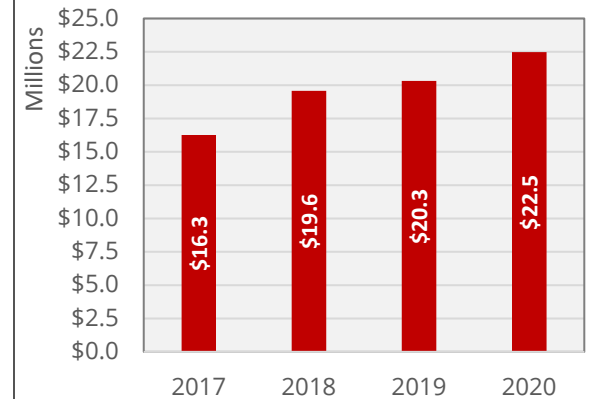
Data, Assumptions, and Plan Provisions

Demographic Information

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

	October 1, 2018	October 1, 2019
Participant Counts		
Active Participants	305	306
Retired Participants	303	312
Beneficiaries	78	80
Disabled Participants	36	34
Terminated Vested Participants	7	9
DROP Participants	47	40
Total Participants	776	781
Active Participant Demographics (Ongoing)		
Average Age	36.1	36.5
Average Service	9.0	9.4
Average Compensation	\$66,609	\$73,479
Total Covered Payroll	\$20,315,761	\$22,484,483

History of Covered Payroll



Demographic Information (continued)

	October 1, 2018	October 1, 2019
Retiree Statistics		
Average Age	68.9	68.8
Average Monthly Benefit	\$3,604	\$3,664
Beneficiary Statistics		
Average Age	77.4	77.6
Average Monthly Benefit	\$1,755	\$1,863
Disabled Participant Statistics		
Average Age	66.0	65.8
Average Monthly Benefit	\$2,963	\$2,914
Terminated Participant Statistics		
Average Age	46.0	38.6
Average Monthly Benefit	\$1,891	\$752
DROP Participant Statistics		
Average Age	55.2	54.8
Average Monthly Benefit	\$3,987	\$4,115

Monitoring the average age of the population is important due to the relationship of actuarial cost to age. Generally speaking, an older population generates a higher actuarial cost.

Changes in the ratio of active to retired participants can be a significant driver of costs in a volatile asset market.

Participant Reconciliation

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Totals
Prior Year	305	7	36	350	78	776
Active						
To Death	(1)	0	0	0	0	(1)
To Terminated Vested	(3)	3	0	0	0	0
To Disabled	0	0	0	0	0	0
To Lump Sum Cash-Out	(1)	0	0	0	0	(1)
To Retired	(7)	0	0	7	0	0
Terminated Vested						
To Retired	0	(3)	0	3	0	0
To Survivor	0	0	0	0	0	0
To Lump Sum Cash-Out	0	0	0	0	0	0
To Death	0	0	0	0	0	0
Disabled						
To Death	0	0	(2)	0	0	(2)
Retired						
To Death	0	0	0	(8)	0	(8)
Beneficiary						
To Death	0	0	0	0	(2)	(2)
Additions	13	2	0	0	5	20
Departures	0	0	0	0	(1)	(1)
Current Year	306	9	34	352	80	781

Data, Assumptions, and Plan Provisions

Active Participant Schedule

Active participant information grouped based on age and service.

Age Group	Years of Service										Total	Average Pay
	Under 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up		
Under 25	3	9									12	\$51,451
25 to 29	4	53	20								77	\$61,701
30 to 34	5	29	19	3							56	\$65,402
35 to 39	1	15	16	17	8						57	\$77,099
40 to 44		2	7	16	19	1					45	\$83,572
45 to 49			2	11	7	22	2				44	\$91,182
50 to 54		1	2		3	3	3				12	\$86,206
55 to 59						1					1	\$86,439
60 to 64									2		2	\$82,626
65 to 69											0	\$0
70 & up											0	\$0
Total	13	109	66	47	37	27	5	0	2	0	306	\$73,479

Data, Assumptions, and Plan Provisions

Plan Status

Prior Retirement System: 1951; Supplemental Retirement System: October 1, 1970, as revised October 1, 1983.

Eligibility for Participation

Supplemental Retirement System

Membership is optional for members of Prior Firefighters' Plan as of October 1, 1970. All regularly employed officers and Firefighters (excluding civilian employees) hired on or after October 1, 1970, are eligible to participate. Employees excluded before October 1, 1986, due to being over age 35 may elect to be covered, and may purchase prior service for service in Employees' Retirement System.

Accrual of Benefits

Supplemental Retirement System

Effective January 1, 2004, 3.0% per year of Credited Service times Average Monthly Salary.

Benefits

Normal Retirement

Eligibility

Supplemental Retirement System

Earlier of:

- a. achieving 30 years of Credited Service, or
- b. attaining Age 50 with 10 years of Credited Service, or
- c. achieving 20 years of Credited Service before attaining age 50, in which case benefits will commence at age 50, or
- d. attaining age 53

For members not eligible as of September 20, 2017 under the rules above, the earlier of:

- a. achieving 25 years of Credited Service, or
- b. attaining Age 50 with 10 years of Credited Service, or
- c. achieving 20 years of Credited Service before attaining age 50, in which case benefits will commence at age 50, or
- d. attaining age 55

Benefit

Supplemental Retirement System

Effective January 1, 2004, 3.0% per year of Credited Service times Average Monthly Salary.

Death before Retirement In Line of Duty

Supplemental Retirement System

Monthly benefit payable to designated beneficiary based on the greater of 60% of Average Monthly Salary or the Member's accrued pension benefit. Designated beneficiary will receive the survivor portion of the actuarial equivalent form of payment selected. Children's benefit equals 7.5% of Average Monthly Salary for each unmarried child under age 18. The total of all benefits cannot exceed the greater of 60% of Average Monthly Salary or the Member's accrued pension benefit.

Death before Retirement Not In Line of Duty

Supplemental Retirement System

Monthly benefit payable to designated beneficiary equal to the Member's accrued pension benefit. Designated beneficiary will receive the survivor portion of the actuarial equivalent form of payment selected. Children's benefit equals 7.5% of Average Monthly Salary for each unmarried child under age 18. The total of all benefits cannot exceed the Member's accrued pension benefit.

Termination Benefit

Eligibility

Supplemental Retirement System

Prior to September 27, 2004, 20% vested after 7 years of Credited Service, plus 8% per year thereafter to 100% after 17 years. Effective September 27, 2004, 20% vested after 7 years of Credited Service, plus 8% per year through year 9, then 100% for 10 or more years.

Benefit

Supplemental Retirement System

Vested accrued retirement pension payable on a life annuity basis beginning at age 50.

Disability Benefit In Line of Duty

Supplemental Retirement System

The greater of the Member's accrued pension benefit at the date of disability or 60% of Average Monthly Salary, reduced by certain amounts payable under Worker's Compensation. Benefit is payable under the Normal Form, or as an actuarially adjusted optional form of payment.

Disability Benefit Not In Line of Duty

Supplemental Retirement System

The greater of the Member's accrued pension benefit at the date of disability or 25% of Average Monthly Salary, plus 7.5% of Average Monthly Salary for each unmarried child under the age of 18. Benefit is payable under the Normal Form, or as an actuarially adjusted optional form of payment.

Average Monthly Salary

Supplemental Retirement System

Average Monthly Salary is the average of Covered Salary during the highest three years of creditable service. Covered Salary is (1) base compensation, plus (2) overtime pay (up to 80 hours beginning 10/1/2017, then up to 100 hours beginning 10/1/2018), plus (3) driver engineer pay. Effective 1/1/2020, the following Special Pay is to be included: Technical Rescue Pay, Fire Tac Pay, Haz Matt Diff, and Marine Team Pay.

Credited Service

Length of service with the City measured from date of enrollment in the Retirement System, including vacations and other paid leaves of absence. Unpaid leaves of absence are excluded.

Credited service accruals will cease upon termination date or date of entry into the Deferred Retirement Option Plan (DROP).

Employee Contributions

Supplemental Retirement System

Five and a half percent of pay beginning March 3, 1997; 6.0% of pay beginning September 27, 1999; 6.5% of pay beginning September 25, 2000, and 7.0% of pay effective September 20, 2004.

DROP

Eligibility

A Member who is eligible for Normal Retirement is eligible to elect to participate in DROP. The Member may participate in DROP for the lesser of 84 months or until the Member would have earned 35 years of Credited Service.

Benefit

Upon entering the DROP, the monthly retirement benefit under the plan is calculated and each monthly benefit payment is deposited in an account with a Third Party Administrator (TPA). The Member is responsible for directing the payments into investment options made available by the TPA pursuant to an agreement with the Board. Any losses, changes or expenses in the DROP account incurred as a result of these investment options will not be made up by the Plan, the Pension Board or the City.

At the end of the DROP period or termination of employment, if earlier, the DROP account will be paid to the Member through an option available from the outside vendor. The Member will also begin receiving the monthly retirement benefit from the Plan. When participation in the DROP is over, the Member must separate employment as a firefighter.

Members in the DROP are no longer eligible for disability or pre-retirement death benefits, nor do they accrue any additional credited service. The Retirement Benefit is fixed as of the entry date into the DROP. Member contributions to the Plan cease upon entering the DROP. Beneficiaries of Members who die while participating in the DROP will be able to choose from the same payout options available to the Member through the outside provider. If the Member dies while receiving payments from the DROP account, payments will be made in accordance with the payout option selected through the outside provider.

Data, Assumptions, and Plan Provisions

COLA

Prior Retirement System

In accordance with changes in compensation of rank held.

Supplemental Retirement System

For all members, available only upon recommendation of the Mayor and approval of the City Council. In addition, members retired on or after October 1, 2008, who are at least age 60, receive a 2% annual adjustment subject to availability of State premium tax reserve funding.

Payment Forms

The benefit begins at retirement and continues for the Member's life for those who are not married on the date of retirement or for the Member's life with 50% of the benefit continued after death to the Member's surviving spouse for the remainder of his or her lifetime for those who are married on the date of retirement.

Optional Forms – For purposes of calculating the optional form of retirement benefit, the normal form will be treated as a single life annuity. The following optional forms of retirement income are available based on Actuarial Equivalence: Option 1 – Life annuity with Ten Years Certain; Option 2 – 100% Joint and Survivor Annuity; Option 3 – 75% Joint and Survivor Annuity; Option 4 – 66.7% Joint and Survivor Annuity; Option 5 – 50% Joint and Survivor Annuity

Plan Provisions Not Included

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

Adjustment Made for Subsequent Events

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

Changes Since Prior Report

The following Special Pay is to be included as Pensionable Earnings as of January 1, 2020: Technical Rescue Pay, Fire Tac Pay, Haz Mat Diff, and Marine Team Pay.

For those members who retired (including disabled members) under the Supplemental Retirement Plan on or after October 1, 2008, and are at least age 60 as of October 1, 2019, a 2% increase to their retirement benefits has been provided. This COLA is payable October 1, 2019 and was funded by the Additional Premium Tax Revenues.

Data, Assumptions, and Plan Provisions

Except where otherwise indicated, the following assumptions were selected by the plan sponsor with the concurrence of the actuary. Prescribed assumptions are based on the requirements of the relevant law, the Internal Revenue Code, and applicable regulation. The actuary was not able to evaluate the prescribed assumptions for reasonableness for the purpose of the measurement.

Valuation Date: October 1, 2019

Participant and Asset Information as of: October 1, 2019

Retirement Rates (FE): Representative values of the assumed annual rates of retirement among members in active service

<u>Age</u>	<u>Service</u>	<u>Rates</u>
Under 50	25+ Years	40%
50-52	10+ Years	30%
53-54	10+ Years	40%
55-56	10+ Years	50%
57+	10+ Years	100%

The assumed retirement rates are based on a study of actual experience for the plan during 2011-2016. See the experience study report dated August 2017.

Disability Rates (FE): Representative values of the assumed annual rates of disability among members in active service

<u>Age</u>	<u>Rates</u>	<u>Age</u>	<u>Rates</u>
20	0.19%	40	0.68%
25	0.24%	45	0.73%
30	0.37%	50	0.67%
35	0.55%	55	0.55%

The assumed disability rates are based on a study of actual experience for the plan during 2011-2016. See the experience study report dated August 2017.

Mortality:

Healthy Active Mortality Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB
 Male (Special Risk): RP2000 Generational, 10% Combined Healthy White Collar /
 90% Combined Healthy Blue Collar, Scale BB.

Healthy Inactive Mortality Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB
 Male (Special Risk): RP2000 Generational, 10% Annuitant White Collar /
 90% Annuitant Blue Collar, Scale BB.

Data, Assumptions, and Plan Provisions

Disabled

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

Male Disabled (Special Risk): 60% RP2000 Disabled Male setback four years / 40% Annuitant White Collar with no setback, no projection scale.

50% of deaths among active Members are assumed to be service incurred, and 50% are assumed to be non-service incurred.

The mortality table is prescribed by state law, following the assumptions used by the Florida Retirement System.

Withdrawal (FE):

Representative values of the assumed rates of withdrawal from active status

<u>Age</u>	<u>Rates</u>	<u>Age</u>	<u>Rates</u>
20-24	6.00%	40-44	1.58%
25-29	3.60%	45-49	0.90%
30-34	2.40%	50+	0.00%
35-39	2.25%		

The assumed withdrawal rates are based on a study of actual experience for the plan during 2011-2016. See the experience study report dated August 2017.

Salary Projection Scale (FE):

Assumed annual rates of salary increase for fiscal years 2017 and beyond.

<u>Age</u>	<u>Rates</u>	<u>Age</u>	<u>Rates</u>
20	8.00%	40	4.50%
25	7.00%	45	4.00%
30	6.00%	50	4.00%
35	5.00%	55	4.00%

The assumed annual pay increases are based on a study of actual experience for the plan during 2011-2016. See the experience study report dated August 2017.

Aggregate Compensation (FE):

Aggregate compensation is assumed to increase 2.75 % per year, as limited by the ten-year average historical growth in payroll and the Plan's inflation assumption of 2.75%.

Interest Rate (CO):

7.50% per annum, net of expenses

Support for the discount rate assumption has been provided in the experience study report dated August 2017.

Expense and/or

Contingency Loading (FE):

The contribution is increased by anticipated administrative expenses, equal to the average of the prior four years of administrative expenses.

Marital Status and Ages (FE):

85% of active Members are assumed to be married with males assumed to be 3 years older than female spouses.

Data, Assumptions, and Plan Provisions

Funding method	Liabilities and contributions in the report are based on application of an Entry Age Normal cost method.
Asset Valuation Method:	The Actuarial Value of assets is determined using a method that spreads over a period of four years the difference between the actual investment income and the expected income (based on the valuation interest rate applied to the prior year's market value of assets). Resulting value constrained to be within corridor from 80% to 120% of market value. Finally, the Actuarial Value of Assets is adjusted to exclude the value of DROP accounts and any State Contribution reserve.
Amortization Method:	A 25-year amortization period will apply to any future changes in the unfunded actuarial accrued liability.
Other Procedures:	Benefits projected to assumed retirement age for active participants have been limited so as not to exceed maximum benefits imposed by Code Section 415(b) and/or maximum compensation limits of Code Section 401(a)(17).
Cost-of-Living	0.0% for the Supplemental Plan; 4.0% per year for the Prior Plan
State Contributions	It is assumed future State tax revenue paid to the plan will not increase from the current level.
Changes Since Prior Report:	The aggregate payroll growth rate (used to determine the amortization of unfunded liability bases) increased from 2.1% to 2.75%, as limited by the ten-year average historical growth in payroll and the Plan's inflation assumption of 2.75%.

FE indicates an assumption representing an estimate of future experience

MD indicates an assumption representing observations of estimates inherent in market data

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

Other Measurements

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

- ✓ Statement of changes in plan net assets
- ✓ Distribution of assets
- ✓ Schedule of amortizations
- ✓ Florida State requirements
 - Comparative Summary of Principal Valuation Results
 - Comparison of Payroll Growth, salary increases and investment results
 - Requirements under Florida Statute 112.664 and F.A.C. 60T – 1.0035
 - Reserve account for benefit improvements under F.L. 99-1 and SB 172

Other Measurements

Statement of Changes in Plan Net Assets

	<u>September 30, 2018</u>	<u>September 30, 2019</u>
1. Additions		
(a) Contributions:		
(i) Employer	\$1,886,213	\$2,330,040
(ii) Member	1,369,948	1,468,732
(iii) Nonemployer contributing entity	1,685,634	1,750,211
(iv) Excess premium tax	0	0
(v) Total	<u>\$4,941,795</u>	<u>\$5,548,983</u>
(b) Investment income		
(i) Net increase in fair value of investments	\$18,415,833	\$5,801,700
(ii) Interest and dividends	6,144,266	6,459,618
(iii) Investment expense, other than from securities lending	(487,881)	(2,007,593)
(iv) Securities lending income	0	0
(v) Securities lending expense	0	0
(vi) Total	<u>24,072,218</u>	<u>\$10,253,725</u>
(c) Other	<u>0</u>	<u>0</u>
(d) Total additions [(a)+(b)+(c)]	<u>\$29,014,013</u>	<u>\$15,802,708</u>
2. Deductions		
(a) Benefit payments, including refunds of member contributions	\$18,114,425	\$18,273,075
(b) Administrative expense	22,325	42,535
(c) Other	0	0
(d) Total deductions	<u>\$18,136,750</u>	<u>\$18,315,610</u>
3. Net increase [(1d)-(2d)]	<u>\$10,877,263</u>	<u>(\$2,512,902)</u>
4. Net assets held in trust for pension benefits, beginning of year	<u>260,851,336</u>	<u>271,728,599</u>
5. Net assets held in trust for pension benefits, end of year [(3)+(4)]	<u>\$271,728,599</u>	<u>\$269,215,697</u>

Other Measurements

Distribution of Assets

	<u>September 30, 2018</u>	<u>September 30, 2019</u>
Cash and deposits	\$4,597,451	\$1,859,713
Securities lending cash collateral	0	0
Total cash	\$4,597,451	\$1,859,713
Receivables		
Contributions	\$0	\$0
Other	512,340	531,865
Total receivables	\$512,340	\$531,865
Investments		
Common Stock and Equities	\$210,569,031	\$208,472,519
Corporate Bonds	33,358,546	38,135,732
Government Securities	22,712,481	20,453,608
Total investments	\$266,640,058	\$267,061,859
Payables		
Investment management fees	\$21,250	\$237,740
Due to broker for investments purchased	0	0
Other	0	0
Total liabilities	\$21,250	\$237,740
Market value of assets	\$271,728,599	\$269,215,697

Other Measurements

Schedule of Amortizations

As of October 1, 2019, the actuarial value of assets exceeds the actuarial accrued liability. Therefore, there is no unfunded liability to be amortized.

Other Measurements

Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results

	10/1/2019 7.50% (current methods & assumptions)	10/1/2019 7.50% (prior methods & assumptions)	10/1/2018 7.50%
Participant Data			
Active members	306	306	305
Total annual payroll	\$22,484,483	\$22,386,931	\$20,315,761
Members in DROP	40	40	47
Total annualized benefit	\$1,975,035	\$1,975,035	2,248,668
Retired members and beneficiaries	392	392	381
Total annualized benefit	\$15,505,546	\$15,505,546	\$14,746,578
Disabled members receiving benefits	34	34	36
Total annualized benefit	\$1,188,940	\$1,188,940	\$1,279,937
Terminated vested members	9	9	7
Total annualized benefit	\$81,195	\$81,195	\$158,869
Assets			
Actuarial value of assets	\$257,345,675	\$257,345,675	\$247,565,775
Market value of assets	\$269,215,697	\$269,215,697	\$271,728,599

Other Measurements

Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results (continued)

	10/1/2019 7.50% (current methods & assumptions)	10/1/2019 7.50% (prior methods & assumptions)	10/1/2018 7.50%
Liabilities, present value of all future expected benefit payments			
Active members			
Retirement benefits	\$102,907,029	\$102,474,932	\$92,413,369
Vesting benefits	\$4,979,954	\$4,960,221	\$4,535,229
Disability benefits	\$8,696,691	\$8,663,567	\$7,914,792
Death benefits	\$1,606,148	\$1,599,844	\$1,453,368
Return of contribution	0	0	0
Total	\$118,189,822	\$117,698,564	\$106,316,758
Terminated vested members	\$628,189	\$628,189	\$1,652,302
Retired members and beneficiaries	\$178,778,300	\$178,778,300	\$175,146,580
Disabled members	\$11,659,916	\$11,659,916	\$12,411,811
Total	\$309,256,227	\$308,764,969	\$295,527,451
Liabilities due and unpaid	\$0	\$0	\$0
Actuarial accrued liability	\$256,346,610	\$256,069,056	\$246,985,392
Unfunded actuarial accrued liability	(\$999,065)	(\$1,276,619)	(\$580,383)

Other Measurements

Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results (continued)

	10/1/2019 7.50% (current methods & assumptions)	10/1/2019 7.50% (prior methods & assumptions)	10/1/2018 7.50%
Actuarial present value of accrued benefits			
Statement of actuarial present value of all accrued benefits			
Vested accrued benefits			
Members currently receiving benefits	\$190,438,216	\$190,438,216	\$189,210,693
Other members	44,262,517	44,262,517	40,748,142
Total value of all vested accrued benefits	\$234,700,733	\$234,700,733	\$229,958,835
Non-vested accrued benefits	4,225,590	4,225,590	3,137,459
Total actuarial present value of all accrued benefits	\$238,926,323	\$238,926,323	\$233,096,294
Statement of changes in total actuarial present value of all accrued benefits (ASC 960)			
Actuarial present value of accrued benefits, beginning of year	\$233,096,294	\$233,096,294	\$230,945,695
Increase (decrease) during year			
Benefits accumulated	\$7,293,734	\$7,293,734	\$4,168,927
Plan amendment	0	0	0
Changes in actuarial assumptions	0	0	(557,820)
Interest	16,809,370	16,809,370	16,653,917
Benefits paid	(18,273,075)	(18,273,075)	(18,114,425)
Other changes	0	0	0
Net increase (decrease)	\$5,830,029	\$5,830,029	\$2,150,599
Actuarial present value of accrued benefits, end of year	\$238,926,323	\$238,926,323	\$233,096,294

Other Measurements

Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results (continued)

	10/1/2019 7.50% (current methods & assumptions)	10/1/2019 7.50% (prior methods & assumptions)	10/1/2018 7.50%
Pension cost			
Normal Cost	\$5,137,979	\$5,118,757	\$4,669,646
Member contributions	\$1,562,346	\$1,555,518	\$1,411,443
Expected city and state contribution	\$2,786,933	\$2,786,933	\$2,457,341
As % of payroll	12.39%	12.39%	12.10%
Member Contributions as % of payroll	7.00%	7.00%	7.00%
Past contributions	9/30/2019		9/30/2018
Required plan sponsor contribution	\$2,330,040		\$1,886,213
Required member contribution	\$1,468,732		\$1,124,378
Actual contributions made by:			
Plan's sponsor	\$2,330,040		\$1,886,213
Members	\$1,468,732		\$1,369,948
Other	\$1,750,211		\$1,685,634
Net actuarial gain (loss) (if applicable)	\$44,732		\$2,778,735
Other disclosures (where applicable)			
Present value of active member			
Future salaries at attained age	\$231,155,140	\$230,134,356	\$211,081,282
Future contributions at attained age	\$16,180,746	\$16,109,306	\$14,775,669

Other Measurements

Information to Comply with Florida 60T-1.003(3)(f)

Historical Salary Increases and Asset Performance

Year Ending	Salary Growth	Expected Salary Growth	Asset Return (Market)	Asset Return (Actuarial)	Asset Return (Expected)
9/30/2019	10.70%	5.50%	3.86%	9.35%	7.50%
9/30/2018	3.80%	5.50%	9.47%	8.02%	7.50%
9/30/2017	20.30%	6.70%	12.25%	8.81%	8.00%
9/30/2016	14.10%	6.60%	11.34%	8.69%	8.00%
9/30/2015	4.80%	2.70%	0.50%	10.30%	8.00%
9/30/2014	-1.50%	4.70%	11.20%	10.60%	8.00%
9/30/2013	-1.80%	2.60%	14.00%	9.50%	8.00%
9/29/2012	-3.20%	2.40%	16.70%	6.40%	8.00%
9/30/2011	-9.00%	6.40%	(0.40%)	0.00%	8.00%
9/30/2010	-4.00%	6.30%	8.30%	2.20%	8.00%
9/30/2009	-2.10%	6.40%			
Averages					
3-year			8.47%	8.73%	
5-year			7.39%	9.03%	
10-year	3.21%				
20-year					

Amortization of Unfunded Actuarial Accrued Liability

None

Other Measurements

Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035¹

	GASB 67/68 Valuation	- 200 bp ² 5.50%	Funding Rate ² 7.50%	+ 200 bp ² 9.50%
Total pension liability				
Service Cost	\$4,674,184	\$4,669,646	\$4,669,646	\$4,669,646
Interest	18,327,756	18,201,276	18,201,276	18,201,276
Benefit changes	835,762	277,554	277,554	277,554
Difference between expected and actual experience	(2,119,389)	4,485,817	4,485,817	4,485,817
Changes in assumptions	128,940	61,139,936	0	(43,021,277)
Benefit payments	(18,265,476)	(18,265,476)	(18,265,476)	(18,265,476)
Contribution refunds	(7,599)	(7,599)	(7,599)	(7,599)
Net change in pension liability	\$3,574,178	\$70,501,154	\$9,361,218	(\$33,660,059)
Total pension liability, beginning of year	\$248,832,436	\$246,985,392	\$246,985,392	\$246,985,392
Total pension liability, end of year	\$252,406,614	\$317,486,546	\$256,346,610	\$213,325,333
Plan fiduciary net position				
Contributions - Employer	\$2,330,040	\$2,330,040	\$2,330,040	\$2,330,040
Contributions - State	1,468,732	1,468,732	1,468,732	1,468,732
Contributions - Member	1,750,211	1,750,211	1,750,211	1,750,211
Net investment income	10,253,725	10,253,725	10,253,725	10,253,725
Benefit payments	(18,265,476)	(18,265,476)	(18,265,476)	(18,265,476)
Contribution refunds	(7,599)	(7,599)	(7,599)	(7,599)
Administrative expense	(42,535)	(42,535)	(42,535)	(42,535)
Other	0	0	0	0
Net change in plan fiduciary net position	(\$2,512,902)	(\$2,512,902)	(\$2,512,902)	(\$2,512,902)
Plan fiduciary net position, beginning of year	\$271,728,599	\$271,728,599	\$271,728,599	\$271,728,599
Plan fiduciary net position, end of year	\$269,215,697	\$269,215,697	\$269,215,697	\$269,215,697
Net pension liability/(asset)	(\$16,809,083)	\$48,270,849	(\$12,869,087)	(\$55,890,364)
Funded ratio	106.66%	84.80%	105.02%	126.20%
Years that Assets support expected benefit payments	30	20	28	100
Estimated city contribution				
Annual dollar value	\$2,773,407	\$7,647,120	\$2,786,933	\$926,469
Percentage of payroll	12.3%	34.0%	12.4%	4.1%

¹Does not include DROP assets and liabilities

Other Measurements

Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035¹

Sustainment of Expected Benefit Payments

Mortality Valuation
Interest 7.50%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$269,215,697	\$19,498,757	\$18,804,504
2	269,909,950	19,543,261	19,009,930
3	270,443,281	19,572,545	19,300,964
4	270,714,862	19,583,225	19,564,063
5	270,734,024	19,576,235	19,792,945
6	270,517,314	19,551,081	20,034,651
7	270,033,744	19,502,226	20,376,489
8	269,159,481	19,423,507	20,733,603
9	267,849,385	19,314,722	21,019,520
10	266,144,587	19,170,472	21,464,630
11	263,850,429	18,984,768	21,835,105
12	261,000,092	18,760,270	22,126,320
13	257,634,042	18,497,625	22,403,078
14	253,728,589	18,195,504	22,653,281
15	249,270,812	17,847,140	23,034,297
16	244,083,655	17,448,191	23,303,500
17	238,228,346	16,998,120	23,600,145
18	231,626,321	16,491,364	23,915,286
19	224,202,399	15,917,712	24,373,095
20	215,747,016	15,263,497	24,917,917
21	206,092,596	14,515,738	25,560,952
22	195,047,382	13,659,380	26,320,454
23	182,386,308	12,682,865	27,051,926
24	168,017,247	11,572,102	27,950,410
25	151,638,939	10,325,755	28,438,530
26	133,526,164	8,961,546	28,594,711
27	113,892,999	7,492,747	28,494,544
28	92,891,202	5,926,323	28,257,979
29	70,559,546	4,265,622	27,873,062

Other Measurements

Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035¹

Sustainment of Expected Benefit Payments

Interest		5.50%	
	<u>Market Value of</u>	<u>Investment</u>	<u>Benefit</u>
<u>Year</u>	<u>Assets</u>	<u>Return</u>	<u>Payments</u>
1	\$269,215,697	\$14,291,137	\$19,008,112
2	264,498,722	14,026,279	19,208,020
3	259,316,981	13,732,948	19,515,235
4	253,534,694	13,407,344	19,794,527
5	247,147,511	13,049,272	20,044,323
6	240,152,460	12,657,003	20,322,268
7	232,487,195	12,224,998	20,706,147
8	224,006,046	11,747,675	21,106,418
9	214,647,303	11,223,966	21,437,309
10	204,433,960	10,648,996	21,925,172
11	193,157,784	10,017,673	22,335,514
12	180,839,943	9,331,286	22,663,735
13	167,507,494	8,589,303	22,984,327
14	153,112,470	7,789,586	23,278,840
15	137,623,216	6,925,503	23,727,520
16	120,821,199	5,992,736	24,046,583
17	102,767,352	4,990,211	24,399,036
18	83,358,527	3,912,767	24,766,087
19	62,505,207	2,750,891	25,316,857
20	39,939,241	1,491,077	26,005,554
21	15,424,764		26,805,954

Other Measurements

Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035¹

Sustainment of Expected Benefit Payments

Interest		7.50%	
	<u>Market Value</u>	<u>Investment</u>	<u>Benefit</u>
<u>Year</u>	<u>of Assets</u>	<u>Return</u>	<u>Payments</u>
1	\$269,215,697	\$19,491,259	\$19,008,112
2	269,698,844	19,520,134	19,208,020
3	270,010,958	19,532,231	19,515,235
4	270,027,954	19,523,221	19,794,527
5	269,756,648	19,493,675	20,044,323
6	269,206,000	19,442,142	20,322,268
7	268,325,874	19,361,997	20,706,147
8	266,981,724	19,246,447	21,106,418
9	265,121,753	19,094,765	21,437,309
10	262,779,209	18,901,111	21,925,172
11	259,755,148	18,659,196	22,335,514
12	256,078,830	18,371,387	22,663,735
13	251,786,482	18,037,656	22,984,327
14	246,839,811	17,655,811	23,278,840
15	241,216,782	17,217,562	23,727,520
16	234,706,824	16,717,567	24,046,583
17	227,377,808	16,154,913	24,399,036
18	219,133,685	15,523,088	24,766,087
19	209,890,686	14,809,582	25,316,857
20	199,383,411	13,996,178	26,005,554
21	187,374,035	13,066,002	26,805,954
22	173,634,083	12,000,949	27,744,420
23	157,890,612	10,786,198	28,667,526
24	140,009,284	9,405,509	29,742,684
25	119,672,109	7,855,973	30,401,205
26	97,126,877	6,151,673	30,765,313
27	72,513,237	4,304,090	30,807,696
28	46,009,631	2,321,773	30,659,593
29	17,671,811		30,328,093

Other Measurements

Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035¹

Sustainment of Expected Benefit Payments

Interest 9.50%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>	<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$269,215,697	\$24,693,088	\$19,008,112	30	\$629,664,106	\$58,431,116	\$29,877,217
2	274,900,673	25,223,880	19,208,020	31	658,218,005	61,168,282	29,348,461
3	280,916,533	25,781,125	19,515,235	32	690,037,826	64,218,012	28,770,136
4	287,182,423	26,363,419	19,794,527	33	725,485,702	67,613,991	28,157,721
5	293,751,315	26,975,868	20,044,323	34	764,941,972	71,391,390	27,531,870
6	300,682,860	27,621,462	20,322,268	35	808,801,492	75,587,071	26,906,589
7	307,982,054	28,297,065	20,706,147	36	857,481,974	80,240,750	26,281,180
8	315,572,972	28,999,620	21,106,418	37	911,441,544	85,395,796	25,658,922
9	323,466,174	29,734,114	21,437,309	38	971,178,418	91,099,536	25,039,883
10	331,762,979	30,499,662	21,925,172	39	1,037,238,071	97,403,756	24,424,812
11	340,337,469	31,295,190	22,335,514	40	1,110,217,015	104,365,086	23,814,548
12	349,297,145	32,131,122	22,663,735	41	1,190,767,553	112,045,479	23,209,409
13	358,764,532	33,015,641	22,984,327	42	1,279,603,623	120,512,810	22,608,325
14	368,795,846	33,954,944	23,278,840	43	1,377,508,108	129,841,536	22,009,467
15	379,471,950	34,948,345	23,727,520	44	1,485,340,177	140,113,353	21,411,272
16	390,692,775	35,999,512	24,046,583	45	1,604,042,258	151,417,867	20,812,069
17	402,645,704	37,118,678	24,399,036	46	1,734,648,056	163,853,383	20,209,650
18	415,365,346	38,310,005	24,766,087	47	1,878,291,789	177,527,721	19,602,559
19	428,909,264	39,571,109	25,316,857	48	2,036,216,951	192,559,094	18,989,001
20	443,163,516	40,893,292	26,005,554	49	2,209,787,044	209,077,098	18,367,639
21	458,051,254	42,270,470	26,805,954	50	2,400,496,503	227,223,729	17,737,935
22	473,515,770	43,696,033	27,744,420	51	2,609,982,297	247,154,538	17,099,043
23	489,467,383	45,168,584	28,667,526	52	2,840,037,792	269,039,925	16,450,331
24	505,968,441	46,686,273	29,742,684	53	3,092,627,386	293,066,460	15,792,826
25	522,912,030	48,265,344	30,401,205	54	3,369,901,020	319,438,357	15,127,148
26	540,776,169	49,945,534	30,765,313	55	3,674,212,229	348,379,205	14,453,263
27	559,956,390	51,765,687	30,807,696	56	4,008,138,171	380,133,758	13,772,826
28	580,914,381	53,763,572	30,659,593	57	4,374,499,103	414,969,917	13,086,283
29	604,018,360	55,973,839	30,328,093	58	4,776,382,737	453,180,991	12,394,182

Other Measurements

Use of State Premium Tax Contributions

Reserve Account for 2018/2019

	<u>Total</u>
1. Accumulated balance (10/1/2018)	\$13,475,982
2. State contributions	
(a) Regular	\$1,732,315
(b) Supplemental	17,896
(c) Total	<u>\$1,750,211</u>
3. One-time use for benefit improvements	(\$445,965)
4. Amount to be for funding of plan benefits	
(a) Base amount	(\$820,037)
(b) Cumulative benefit improvements	(390,879)
(c) Total allowable offset to City contributions	<u>(\$1,210,916)</u>
5. Trust earnings for the FY	\$519,267
6. Increase in accumulated balance during FY	\$612,597
7. Accumulated balance (10/1/2019)	\$14,088,579