



# **City of Pompano Beach Police & Firefighters' Retirement Plan**

October 1, 2018  
Actuarial Valuation Report

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## Actuarial Certification

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At the request of the plan sponsor, this report summarizes the Police and Firefighters' Retirement System for the City of Pompano Beach as of October 1, 2018. The purpose of this report is to communicate the following results of the valuation:

- Determine Funded Status; and
- Determine Actuarial Contribution for the fiscal year October 1, 2019 through September 30, 2020

This report has been prepared in accordance with the laws and accounting standards indicated above and their applicable regulations. 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.

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

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

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

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

**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



Lawrence Watts, Jr., FSA, CFA, EA, MAAA  
Enrolled Actuary No. 17-8496



Tayt Odom, FSA, MBA

**February 22, 2019**  
Date

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

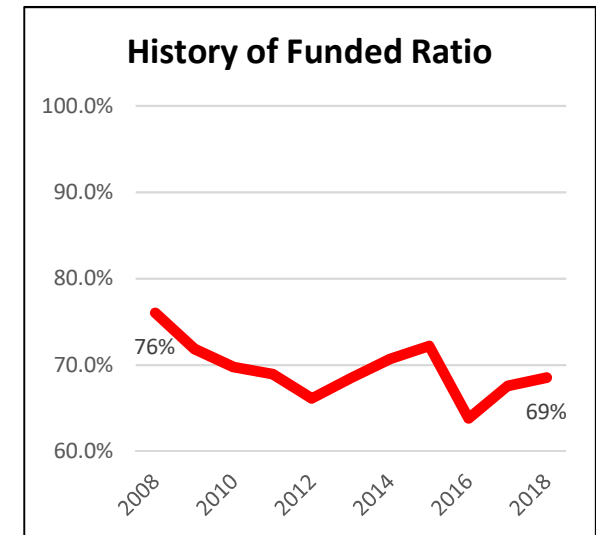
Mr. Stephen Bardin  
Benefits Administrator  
Municipal Police Officers' &  
Firefighters' Trust Funds  
Division of Retirement  
Post Office Box 3010  
Tallahassee, FL 32315-3010

Mr. Keith Brinkman  
Bureau & Chief  
Local Retirement Systems  
Division of Retirement  
Department of Management Services  
P. O. Box 9000  
Tallahassee, FL 32315-9000

## Executive Summary

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, 2017	October 1, 2018
<b>Funded Status Measures</b>		
Accrued Liability	\$325,074,421	\$331,499,780
Actuarial Value of Assets	\$219,680,159	227,193,975
Unfunded Accrued Liability	\$105,394,262	\$104,305,805
Funded Percentage (AVA)	68%	69%
Funded percentage (MVA)	67%	69%
<b>Cost Measures</b>		
Recommended Contribution	\$11,001,636	\$10,902,279
Recommended Contribution (as a percentage of payroll)	75.3%	72.8%
<b>Asset Performance</b>		
Market Value of Assets	\$218,512,322	\$229,180,812
Actuarial Value of Assets	219,680,159	227,193,975
Actuarial Value/Market Value	100.5%	99.1%
<b>Member Information</b>		
Active Members	170	179
Terminated Vested Members	4	3
Retirees, Beneficiaries, and Disabled Members	366	374
DROP Participants	33	29
Total	573	585
Expected Payroll	\$14,353,623	\$14,705,355



## Executive Summary

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### Changes Since Prior Valuation and Key Notes

There have been no changes to the plan provisions since the last valuation.

The Police State Premium Tax Revenues were being reserved in the Trust based on proposed ordinances for allocation to a share plan. The balance of these premiums as of September 30, 2018 was \$500,119. It is our understanding that the share plan has been created and funded, with the first distributions to occur during the October 1, 2018 fiscal year.

The assumed rate of return has been lowered from 7.50% to 7.40% in this valuation report. It is our understanding that the Board intends to lower the rate in 10 basis point increments until reaching 7.00%.

The mortality tables have been updated to reflect the mortality used in the most recent FRS valuation. Relative to previous valuations, the primary difference is generally lower assumed pre-retirement mortality.

Per the Board's policy, beginning in 2018, new amortization bases will be amortized over a 20-year period.

## 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, 2018

#### Present Value of Future Benefits

##### Active members

Retirement	\$86,315,882
Disability	6,736,194
Death	2,416,407
Termination	1,497,269
Return of contributions	358,133
Total active	<u>\$97,323,885</u>

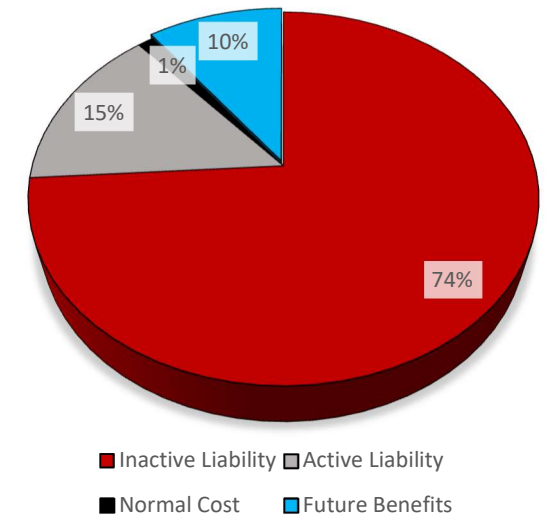
##### Inactive members

Retired members	\$241,621,163
Beneficiaries	10,655,930
Disableds	23,524,826
Terminated vested members	<u>732,569</u>
Total inactive	<u>\$276,534,488</u>

Total \$373,858,373

Present value of future payrolls \$145,028,682

#### Breakdown of Present Value of Future Benefits



## Assets and Liabilities

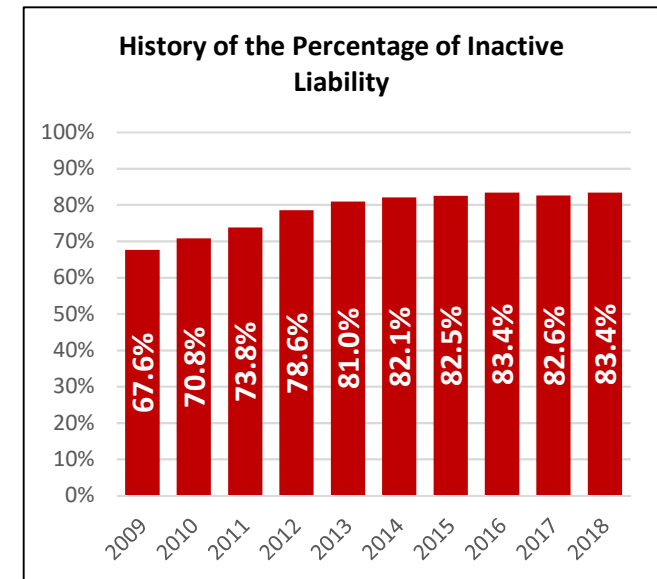
### Accrued Liability

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, 2018

#### Accrued Liabilities

Active members	
Retirement	\$51,737,240
Disability	1,979,844
Death	600,888
Termination	603,743
Refund of contributions	43,577
Total Active	\$54,965,292
Inactive members	
Retired members	\$241,621,163
Beneficiaries	10,655,930
Disableds	23,524,826
Terminated vested members	732,569
Total Inactive	\$276,534,488
Total	\$331,499,780
Normal Cost	\$4,367,560





## Assets and Liabilities

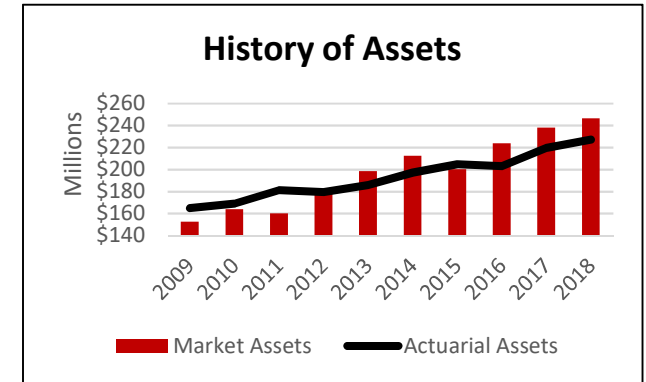
### Asset Information

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, 2018

#### Market Value Reconciliation

Market value of assets, beginning of prior year	\$237,937,762
Employer contributions (incl. discounted accrued items)	10,775,021
Member contributions	1,708,166
Non-employer contributing entity	2,501,946
Investment income	21,328,155
Investment expenses	(1,423,132)
Benefit payments	(25,849,524)
Administrative expenses	(626,768)
Other expenses	0
Market value of asset, beginning of current year	\$246,351,626
Return on Market Value	8.59%
Reserve assets	\$932,573
DROP account	\$16,238,241
Market value of assets available for pension benefits	\$229,180,812
<b>Actuarial value of plan assets</b>	
Value at beginning of current year	\$227,193,975



**Assets and Liabilities**

**Asset Information (continued)**

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

	October 1, 2018
1. Expected actuarial value of assets	
(a) Actuarial value of assets, beginning of prior year	\$239,105,599
(b) Contributions	14,985,133
(c) Benefit payments	(25,849,524)
(d) Expenses	(626,768)
(e) Expected return	17,509,792
(f) Expected actuarial value of assets, beginning of current year	<u>\$245,124,232</u>
2. Market value of assets, beginning of current year	\$246,351,626
3. Actual return on market value	\$19,905,023
4. Amount subject to phase in [(3)-(1e)]	\$2,395,231
5. Phase in of asset gain/(loss)	
(a) Current year (20% x \$2,395,231)	\$479,046
(b) First prior year (20% x \$6,827,672)	1,365,534
(c) Second prior year (20% x (\$127,551))	(25,510)
(d) Third prior year (20% x (\$19,874,699))	(3,974,940)
(e) Fourth prior year (20% x \$6,982,137)	1,396,427
(f) Total phase-in	<u>\$(759,443)</u>
6. Preliminary actuarial value of assets, beginning of current year [(1f)+(5f)]	\$244,364,789
7. 80% Market value of assets	\$197,081,301
8. 120% Market value of assets	\$295,621,951
9. Adjusted actuarial value of assets	\$244,364,789
10. Reserved Assets	(\$17,170,814)
11. Final actuarial value of assets [(9+10)]	\$227,193,975
12. Return on actuarial value of assets	7.19%

**Contribution Requirements**

**Reconciliation of Gain/Loss**

**October 1, 2018**

**Liability (gain)/loss**

Actuarial liability, beginning of prior year	\$325,074,421
Normal cost	4,342,954
Benefit payments	(25,849,524)
Interest	23,754,470
1-year lag adjustment	1,024,151
Assumption Changes	<u>\$3,521,145</u>
Expected actuarial liability, beginning of current year	\$331,867,617
Actual actuarial liability	\$331,499,780
Liability (gain)/loss	\$(367,837)

**Asset (gain)/loss**

Actuarial value of assets, beginning of prior year	\$219,680,159
Contributions	14,985,133
Benefit payments and expenses	(26,476,292)
Investment return	<u>16,052,883</u>
Expected actuarial value of assets, beginning of current year	\$224,241,883
Actual actuarial value of assets, beginning of current year (before accumulated reserve adjustment)	\$227,193,975
Asset (gain)/loss	\$(2,952,092)

**Total (gain)/loss**

\$(3,319,929)

## Contribution Requirements

### Development of Recommended Contribution

The minimum recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws. The recommended contribution is composed of the normal cost, administrative expenses, plus an amortization charge.

October 1, 2018

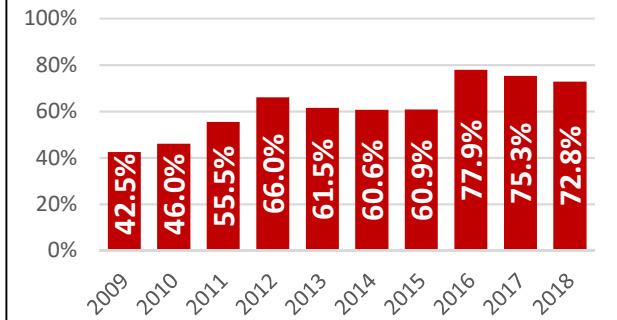
#### Funded Position

1. Entry age accrued liability	\$331,499,780
2. Actuarial value of assets	<u>227,193,975</u>
3. Unfunded actuarial accrued liability (UAAL)	\$104,305,805

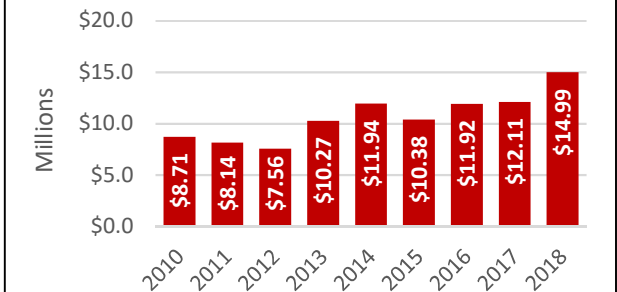
#### Employer Contributions

1. Normal Cost	
(a) Total normal cost	\$4,367,560
(b) Expected participant contributions	<u>1,803,258</u>
(c) Net normal cost	\$2,564,302
2. Administrative expenses	578,530
3. Amortization of UAAL	8,582,946
4. Applicable interest	<u>867,708</u>
5. Total required contribution	\$12,593,486
6. Expected non-employer contributions	1,883,405
7. Total recommended contribution	\$10,710,081
As a percentage of expected payroll	72.83%
8. Recommended contributions to be paid on 12/31/2019	\$10,902,279

History of Recommended Contributions  
(% of Payroll)



History of Contributions



## Demographic Information

### Demographic Information

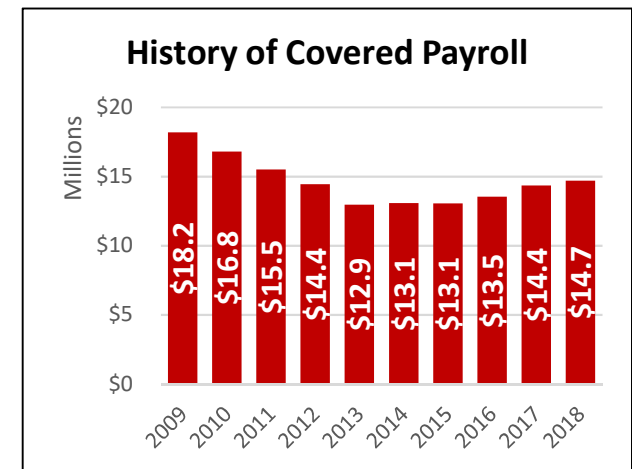
The foundation of a reliable actuarial report is the participant information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

October 1, 2018

Participant Counts	<u>Police</u>	<u>Fire</u>	<u>Total</u>
Active Participants	2	177	179
Retired Participants	188	120	308
Beneficiaries	21	11	32
Disabled Participants	17	17	34
Terminated Vested Participants	0	3	3
DROP Participants	<u>4</u>	<u>25</u>	<u>29</u>
Total Participants	232	353	585

#### Active Participant Demographics

Average Age	38.42
Average Service	9.93
Average Compensation	\$82,153
Covered Payroll	\$14,705,355



**Demographic Information**

**Demographic Information**

**October 1, 2018**

**Retiree Statistics**

Average Age	64.71
Average Monthly Benefit	\$4,605

**Beneficiary Statistics**

Average Age	72.86
Average Monthly Benefit	\$2,704

**Disabled Participants Statistics**

Average Age	59.78
Average Monthly Benefit	\$4,865

**Terminated Participants Statistics**

Average Age	41.24
Average Monthly Benefit	\$2,606

**DROP Participants Statistics**

Average Age	53.56
Average Monthly Benefit	\$5,785

Participant Reconciliation

Participant Reconciliation

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	DROP	Totals
<b>Prior Year</b>	170	4	32	302	32	33	573
<b>Active</b>							
To Terminated Vested	(1)	1	0	0	0	0	0
To Disabled	0	0	0	0	0	0	0
To Retired	(1)	0	0	1	0	0	0
To DROP	(7)	0	0	0	0	7	0
To Death	0	0	0	0	0	0	0
To Lump Sum	(5)	0	0	0	0	0	(5)
<b>Terminated Vested</b>							
To Retired	0	(2)	0	2	0	0	0
<b>Retired</b>							
To Forfeiture	0	0	0	0	0	0	0
To Death	0	0	0	(6)	0	0	(6)
<b>Survivor</b>							
To End of Certain Period	0	0	0	0	(1)	0	(1)
<b>DROP</b>							
To Retired	0	0	0	9	0	(9)	0
To Disabled	0	0	2	0	0	(2)	0
<b>Additions</b>	23	0	0	0	1	0	24
<b>Departures</b>	0	0	0	0	0	0	0
<b>Current Year</b>	179	3	34	308	32	29	585

Participant Reconciliation

Active Participant Schedule

Active participant information grouped based on age and service.

Age Group	Years of Service										Total	Average Pay
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up		
Under 25	4	2									6	56,472
25 to 29	9	8	4								21	62,321
30 to 34	4	21	10	7							42	73,432
35 to 39	5	7	4	15	6						37	83,043
40 to 44	1	2	1	13	15	2					34	92,236
45 to 49				7	15	2					24	97,552
50 to 54		2		3	5	1					11	93,967
55 to 59				1	3						4	97,532
60 to 64												
65 to 69												
70 & up												
Total	23	42	19	46	44	5					179	82,153



## Plan Provisions

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### Plan Status

Plan established under the Code of Ordinances for the City of Pompano Beach, Florida, Sections 34.045-34.073 and was most recently stated under Ordinance No. 2018-23, passed and adopted on January 9, 2018. The Plan is also governed by certain provisions of Chapters 175 and 185, Florida Statutes, Part VII, Chapter 112, Florida Statutes and the Internal Revenue Code.

### Eligibility for Participation

- (1) All Police Officers and Dispatchers who were participants of the prior Employees' Pension Plan and
- (2) Police Officers and Dispatchers who elected to remain in the Plan prior to the takeover of the police department by the Broward Sheriff's Office on 8/1/99.
- (3) All Firefighters who were participants in the prior Employees' Pension Plan; and
- (4) All regular, full time Firefighters (20 hours per week and 5 months per year) from age 18, upon date of employment.

### Benefits

#### Normal Retirement

Eligibility	<p>A member hired before May 27, 2014 may retire on the first day of the month coincident with or next following the earlier of:</p> <ol style="list-style-type: none"><li>(1) age 47 with 20 years of Continuous Service, or</li><li>(2) age 55 with 10 years of Continuous Service.</li></ol> <p>A Firefighter member hired on or after May 27, 2014 may retire on the first day of the month coincident with or next following the earlier of:</p> <ol style="list-style-type: none"><li>(1) age 50 with 20 years of Continuous Service, or</li><li>(2) age 55 with 10 years of Continuous Service.</li></ol>
Police Benefit:	3.0% of Average Monthly Earnings (AME) multiplied by years of Continuous Service up to a maximum of 25 years, plus 2.0% of AME multiplied by years of Continuous Service in excess of 37.5.
Firefighter Benefit:	3.0% of AME multiplied by the first 10 years Continuous Service, plus 4.0% of AME multiplied by the next 10 years, plus 2.0% of AME multiplied by the next 5 years with a maximum benefit equal to 80% of AME; plus 2% of AME multiplied by each year of service in excess of 40.
Normal Form of Benefit	10 Years Certain and Life; other options are also available.
COLA	Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An additional annual increase of up to 1% is payable if certain conditions are met

## Plan Provisions

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### Early Retirement

Eligibility	A member may elect to retire earlier than the Normal Retirement Eligibility upon the completion of 20 years of Continuous Service or the attainment of age 50 with 10 years of Continuous Service.
Benefit	The member's accrued Normal Retirement Benefit based upon the member's AME and Continuous Service as of the date of termination. Benefit is actuarially reduced for each year by which the Early Retirement date precedes the member's Normal Retirement date. The Early Retirement reduction is 3% per year if early retirement occurs after age 50.
Normal Form of Benefit	10 Years Certain and Life; other options are also available.
COLA	Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An additional annual increase of up to 1% is payable if certain conditions are met.

### Late Retirement

Eligibility	Same as Normal Retirement taking into account compensation earned and service credited until the date of actual retirement.
Benefit	Accrued Benefit
Normal Form of Benefit	10 Years Certain and Life; other options are also available.
COLA	Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An additional annual increase of up to 1% is payable if certain conditions are met.

## Plan Provisions

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### Ordinary Death before Retirement

Eligibility	Any member with 1 or more years of Continuous Service who dies while employed by the City is eligible for survivor benefits.
Benefit	<p>(A) For members with less than 1 year of Continuous Service, no survivor benefits are payable.</p> <p>(B) For members with 1 year, but less than 5 years, of Continuous Service, the designated beneficiary will be paid a \$5,000 lump sum.</p> <p>(C) For members with 5 years, but less than 10 years, of Continuous Service:</p> <ol style="list-style-type: none"><li>(1) \$5,000 lump sum paid to the member's designated beneficiary; plus</li><li>(2) Member's spouse will receive 65% of member's accrued pension as of the date of death subject to a minimum of 20% of AME; plus</li><li>(3) Each unmarried child under age 18 (22 if full-time student) will receive 7 ½% of member's Earnings. If there is no spouse, benefits increase to 15% of member's Earnings per child.</li></ol> <p>Maximum benefit to spouse and children is 50% of earnings.</p> <p>(D) For members with 10 or more years of Continuous Service, the designated beneficiary can elect to receive benefits described under subsection (C) above or the member's accrued benefit as of the date of death. Benefits are payable at the member's Normal or Early Retirement date and will be reduced for Early Retirement, when applicable.</p>
Normal Form of Benefit	Spouse's benefits are paid until death or remarriage; children's benefits are paid until the earlier of age 18 (22 if full-time student), marriage or death.
COLA	Beginning five years after benefit payments begin, beneficiaries receive an automatic annual increase of 2% on each October 1. An additional annual increase of up to 1% is payable if certain conditions are met.

## Plan Provisions

### Accidental Death before Retirement

Eligibility	Any member who dies as a direct result of an occurrence arising in the performance of service for the City is eligible for survivor benefits.
Benefit	<p>(1) \$5,000 lump sum paid to the member's designated beneficiary; plus</p> <p>(2) Member's spouse will receive 75% of member's Earnings; plus</p> <p>(3) Each unmarried child under age 18 (22 if full-time student) will receive 7 ½% of member's Earnings. If there is no spouse, benefits increase to 15% per child.</p> <p>Maximum benefit to spouse and children is 90% of earnings; if no spouse, maximum for children is 50% of Earnings.</p>
Normal Form of Benefit	Spouse's benefits are paid until death or remarriage; children's benefits are paid until the earlier of age 18 (22 if full-time student), marriage or death.
COLA	Beginning five years after benefit payments begin, beneficiaries receive an automatic annual increase of 2% on each October 1. An additional annual increase of up to 1% is payable if certain conditions are met.

### Termination Benefit

Eligibility	A member has earned a non-forfeitable right to Plan benefits after the completion of 10 years of Credited Service (See vesting table below).	
	<div>Years of Credited Service</div> <div>Less Than 10</div> <div>10 or more</div>	<div>% of Normal Retirement Benefits</div> <div>0%</div> <div>100%</div>
Benefit	The member's accrued Normal Retirement Benefit as of the date of termination. Benefit begins on the member's Normal Retirement date. Alternatively, members may elect to receive an actuarially reduced Early Retirement Benefit.	
Normal Form of Benefit	10 Years Certain and Life thereafter; other options are also available.	
COLA	Beginning five years after benefit payments begin, beneficiaries receive an automatic annual increase of 2% on each October 1. An additional annual increase of up to 1% is payable if certain conditions are met.	
Plan members with less than 10 years of Credited Service will receive a refund of accumulated contributions with interest		

## Plan Provisions

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### Ordinary Disability Benefit

Eligibility	Any member who becomes totally and permanently disabled and unable to perform regular duties or any other duties available in the Department from an act occurring in the performance of duty for the City is eligible for a disability benefit.
Benefit	75% of rate of Earnings in effect on the date of disability (for Firefighters, not to be less than the accrued benefit).
Normal Form of Benefit	Benefits begin on the first day of the month following the date the Board approves the disability and are payable until death or recovery from disability. If the member dies before receiving payments for 10 years, the member's designated beneficiary will receive the same monthly benefit for the remainder of the 10 year period. Other options are also available.
COLA	Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An additional annual increase of up to 1% is payable if certain conditions are met.

### Accidental Disability Benefit

Eligibility	Any active member with 10 or more years of Continuous Service who becomes totally and permanently disabled and unable to perform regular duties or any other duties available in the Department from an act not directly caused by the performance of duty for the City is eligible for a disability benefit.
Benefit	3.0% of AME multiplied by years of Continuous Service subject to a maximum of 60% of the rate of Earnings on the date of disability, plus 2.0% of AME multiplied by years of Continuous Service in excess of 25. Disability benefit is guaranteed to be no less than 25% of AME.
Normal Form of Benefit	Benefits begin on the first day of the month following the date the Board approves the disability and are payable until death or recovery from disability. If the member dies before receiving payments for 10 years, the member's designated beneficiary will receive the same monthly benefit for the remainder of the 10 year period. Other options are also available.
COLA	Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An additional annual increase of up to 1% is payable if certain conditions are met.

## Plan Provisions

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### Compensation

#### Earnable Compensation

Police Officers: Basic compensation and regular longevity pay, increased for temporary upgrade pay. Also includes up to 25 hours per year of overtime pay.

Firefighters: Basic compensation and regular longevity pay, increased for temporary upgrade pay.

#### Average Monthly Earnings (AME)

For members hired before May 27, 2014:

The average of Earnings during the highest 3 years preceding termination; not including lump sum payments of unused leave

For members hired after May 27, 2014:

The average of Earnings during the highest 5 years preceding termination; not including lump sum payments of unused leave

### Continuous Service

For Vesting and Benefit Accrual, total number of years and completed months from date of employment to date of termination or retirement

No service is credited for any periods of employment for which a member received a refund of contributions.

### Employee Contributions

Police: 8.6% of Earnings, paid by BSO.

Firefighters: 11.6% of Earnings "picked up" by the City, reduced to 0.5% after 25 years of service and reaching maximum benefit of 80%, reverting back to 11.6% if member does not enter DROP.

## Plan Provisions

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### DROP

Eligibility	<p>Plan members hired before May 27, 2014 are eligible for the DROP on the first day of the month coincident with or next following the earlier of:</p> <ul style="list-style-type: none"><li>(1) age 47 with 20 years of Continuous Service, or</li><li>(2) age 55 with 10 years of Continuous Service.</li></ul> <p>Plan members hired after May 27, 2014 are eligible for DROP on the first day of the month coincident with or next following the earlier of:</p> <ul style="list-style-type: none"><li>(1) age 50 with 20 years of Continuous Service, or</li><li>(2) age 55 with 10 years of Continuous Service.</li></ul> <p>Members who meet eligibility must submit a written election to participate in the DROP.</p>
Benefit	<p>The member's Credited Service and AME are frozen upon entry into the DROP. The monthly retirement benefit as described under Normal Retirement is calculated based upon the frozen Credited Service and AME.</p> <p>In addition, the members accumulated sick and annual leave pay will be paid in 5 equal annual installments on the member's DROP participation anniversary dates.</p>
Maximum Period	60 months (police) & 96 months (firefighters)
Interest Credited	<p>The member's DROP account is credited or debited quarterly at a rate equal to one of the following elected by the member:</p> <ul style="list-style-type: none"><li>(1) the actual net rate of investment return realized by the Plan for that quarter, or</li><li>(2) a rate set quarterly by the Board of Trustees, or</li><li>(3) the actual net rate of investment return realized by a separate investment account made available by the Board of Trustees but the investment proportions designated by the member.</li></ul>
Normal Form of Benefit	<p>The member's DROP account is paid out under one of the following options as elected by the member:</p> <ul style="list-style-type: none"><li>(1) a full single lump sum payment, or</li><li>(2) annual installments in amounts as requested by the member by June 30<sup>th</sup> of each year, or</li><li>(3) equal monthly installments as requested by the member by June 30<sup>th</sup> of each year, or</li><li>(4) a single lump sum of the remaining balance after any annual or monthly installments have been made under options (2) or (3) above.</li></ul>
COLA	<p>Beginning five years after benefit payments begin, retirees receive an automatic annual increase of 2% on each October 1. An additional increase of up to 1% is payable if certain conditions are met. For Firefighters, if participant leaves the DROP after five years, the COLA begins when participant leaves the DROP.</p>

## Plan Provisions

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### Payment Forms

Normal Form:	10 Years Certain and Life Annuity
Optional Forms:	Single Life Annuity Joint and 100% Contingent Survivor Annuity Joint and 75% Contingent Survivor Annuity Joint and 66 2/3% Contingent Survivor Annuity Joint and 50% Contingent Survivor Annuity Any Board-approved, actuarially equivalent benefit

### Plan Provisions Not Included

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

### Adjustments Made for Subsequent Events

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

### Changes Since Prior Report

None



**Actuarial Assumptions**

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**Cost Method**

Individual Entry Age Normal Cost Method; Closed Group; All new bases are to be amortized over 20 years from the date established using a level dollar for police and a level percent of pay for firefighters.

**Asset Valuation Method**

20% Phase-In Method: Actuarial value of assets is equal to expected value phase in the difference between the expected investment earnings and actual investment earnings at the rate of 20% per year. The result cannot be greater than 120% of market value or less than 80% of market value.

**Interest Rates**

7.4%, compounded annually, net of investment expenses. Nyhart's professional judgment is that the rate is reasonable and has no significant bias.

**Annual Pay Increases**

2.5%, compounded annually for inflation plus a seniority/merit scale using the following representative rates:

Years of Service	Merit and Seniority
1	8.5%
2	7.5%
3	7.0%
4	6.0%
5	4.5%
6	4.5%
7	3.5%
8-20	1.5%
21 and Higher	0.5%

**Expense and/or Contingency Loading**

One year term cost method; average of prior two years' expenses

**Mortality Rates**

Pre-Retirement:

RP2000 Generational, Females, 100% Combined Healthy White Collar Scale BB; Males, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB

Post-Retirement:

RP2000 Generational, Females, 100% Annuitant White Collar, Scale BB; Males, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB

Disability

RP2000, Females, 60% Disabled Female set forward two years / 40% Annuitant White Collar with no setback, no projection scale; Males, 60% Disabled Male set back four years / 40% Annuitant White Collar with no setback, no projection scale

These are the same mortality rates used by FRS in their most recent Actuarial Valuation Report.

## Actuarial Assumptions

### Retirement Rates

If eligible for Retirement, the following decrements apply, based on service.

<u>After First Eligibility for Normal Retirement</u>	<u>Police %</u>	<u>Fire %</u>
0	80	35
1	50	30
2	75	30
3	100	30
4		30
5+		100

### Disability Rates

Specimen rates for all groups are shown below:

<u>Sample Ages</u>	<u>% Becoming Disabled Within Next Year</u>
25	0.15%
30	0.18
35	0.23
40	0.30
45	0.51
50	1.00
55	1.59

### Type of Disability or Death:

75% of disabilities and deaths are assumed to be service-related

### Workers' Compensation Offsets

Current offsets are assumed to continue.

### Withdrawal Rates

Decreasing rates from 1 to 10 years of service, then 0.5% thereafter.

### Withdrawal of Employee Contributions

It is assumed that employees withdraw their contribution balances upon employment termination, if not vested. If vested, employees are assumed to not withdraw contributions, with monthly benefit deferred to age 52.

### Marital Status and Ages

100% of employees are assumed to be married. Females are assumed to be 3 years younger than males

### State Contributions

Assumed to be the same as in the prior year

### Changes Since Prior Report

Interest rate has been lowered to 7.4% from 7.5%; Mortality has been updated to published FRS mortality rates, primarily affecting pre-retirement lives, and new unfunded liability amortization bases will be paid off over 20 years rather than 30 years going forward.

## Other Measurements

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

- Reconciliation of unfunded actuarial liability
- Statement of changes on value of assets
- Distribution Assets
- Schedule of amortizations
- Florida State requirements
  - Corporative Summary of Principal Valuation Results
  - Separation for Police & Fire
  - Comparison of payroll growth, salary increases and investment returns
  - Requirements under Florida Statute 112.664 and F.A.C. 60T – 1.0035
  - Reserve account for benefit improvements under 99-1 and SB 172

**Other Measurements**

**Reconciliation of Unfunded Actuarial Liability**

	October 1, 2018
1. Unfunded Actuarial Accrued Liability beginning of prior year	\$105,394,262
2. Normal Cost	4,342,954
3. Expenses	626,768
4. Employer Contributions	(10,775,021)
5. Employee Contributions	(1,708,166)
6. Non-Employer Contributions	(2,501,946)
7. Interest	7,701,587
8. 1-year lag adjustment	1,024,151
9. Expected Unfunded Actuarial Accrued Liability, beginning of current year	\$104,104,589
10. Accumulated Reserve Adjustment	\$0
11. Liability changes due to:	
(a) Amendments	\$0
(b) Assumptions	3,521,145
(c) Funding Methods	0
(d) (Gain)/Loss	(3,319,929)
(e) Total	\$201,216
12. Unfunded Actuarial Liability beginning of current year	\$104,305,805

**Other Measurements**

**Statement of Changes on Value of Assets**

**Additions**

Contributions:

Employer	\$8,142,644	\$10,775,021
Member	1,632,948	1,708,166
Nonemployer contributing entity	2,336,040	2,501,946
Total contributions	\$12,111,632	\$14,985,133

Investment income

Net increase in fair value of investments	\$20,455,847	\$15,816,895
Interest and dividends	4,720,167	5,492,691
Less investment expense, other than from securities lending	(1,458,812)	(1,423,132)
Net income other than from securities lending	\$23,717,202	\$19,886,454
Securities lending income	\$0	\$0
Less securities lending expense	0	0
Net income from securities lending	\$0	\$0
Net investment income	\$23,717,202	\$19,886,454

Other	75,815	18,569
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Total additions	\$35,904,649	\$34,890,156
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**Deductions**

Benefit payments, including refunds of member contributions	\$21,308,109	\$25,849,524
Administrative expense	530,291	626,768
Other	0	0
Total deductions	\$21,838,400	\$26,476,292

<b>Net increase in market value</b>	\$14,066,249	\$8,413,864
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**Market Value as of**

Beginning of year	223,871,513	237,937,762
End of year	\$237,937,762	\$246,351,626

**Other Measurements**

**Distribution of Assets**

	<u>September 30, 2017</u>	<u>September 30, 2018</u>
Cash and deposits	\$1,676,004	\$1,721,281
Securities lending cash collateral	<u>0</u>	<u>0</u>
Total cash	\$1,676,004	\$1,721,281
Receivables:		
Contributions	\$0	\$0
Due from broker for investments sold	306,497	586,097
Investment income	357,733	384,179
Other	<u>434,567</u>	<u>186,494</u>
Total receivables	\$1,098,797	\$1,156,770
Investments:		
Equity	\$129,981,739	\$133,349,238
Fixed Income	49,737,225	52,166,853
Real Estate	3,261,263	3,224,587
Hedge Funds & Private Equity	47,293,478	49,106,322
Short Term Investments	<u>6,376,998</u>	<u>6,554,212</u>
Total investments	<u>\$236,650,703</u>	<u>\$244,401,212</u>
Sub-total	\$239,425,504	\$247,279,263
Payables:		
Investment management fees	\$399,402	\$265,525
Due to broker for investments purchased	1,088,340	662,112
Collateral payable for securities lending	0	0
Other	<u>0</u>	<u>0</u>
Total liabilities	<u>\$1,487,742</u>	<u>\$927,637</u>
Total	\$237,937,762	\$246,351,626

Other Measurements

Schedule of Amortizations - Police

			October 1, 2018		
			Total	\$58,951,942	\$5,163,424
<u>Date Established</u>	<u>Description</u>	<u>Original Amount</u>	<u>Remaining Period Years</u>	<u>Remaining Balance</u>	<u>Annual Payment</u>
10/1/1989	Actuarial Loss (Gain)	67,725	1	6,381	6,381
10/1/1990	Actuarial Loss (Gain)	(173,266)	2	(34,367)	(17,797)
10/1/1991	Assumption Change	(4,082)	3	(1,213)	(434)
10/1/1991	Actuarial Loss (Gain)	(298,306)	3	(88,621)	(31,672)
10/1/1992	Assumption Change	(3,250)	4	(1,215)	(337)
10/1/1992	Actuarial Loss (Gain)	(721,063)	4	(269,702)	(74,808)
10/1/1993	Assumption Change	(53,335)	5	(23,898)	(5,485)
10/1/1993	Actuarial Loss (Gain)	(301,531)	5	(135,106)	(31,010)
10/1/1994	Assumption Change	768,410	6	359,871	71,168
10/1/1994	Actuarial Loss (Gain)	422,754	6	197,988	39,154
10/1/1995	Assumption Change	(311,136)	7	(184,023)	(32,238)
10/1/1995	Actuarial Loss (Gain)	(271,042)	7	(160,307)	(28,083)
10/1/1996	Assumption Change	(374,561)	8	(251,754)	(39,866)
10/1/1996	Actuarial Loss (Gain)	(276,460)	8	(185,816)	(29,425)
10/1/1997	Assumption Change	1,345,971	9	978,609	142,243
10/1/1997	Actuarial Loss (Gain)	(3,074,778)	9	(2,492,804)	(362,335)
10/1/1998	Plan Amendment	(337,295)	10	(285,108)	(38,498)
10/1/1998	Actuarial Loss (Gain)	(3,155,507)	10	(2,667,271)	(360,160)
10/1/1999	Actuarial Loss (Gain)	(2,565,536)	11	(2,247,487)	(284,653)

Other Measurements

Schedule of Amortizations - Police

October 1, 2018

<u>Date Established</u>	<u>Description</u>	<u>Original Amount</u>	<u>Remaining Period Years</u>	<u>Remaining Balance</u>	<u>Annual Payment</u>
10/1/2000	Assumption Change	(18,775,480)	12	(16,307,213)	(1,952,604)
10/1/2000	Plan Amendment	11,651,128	12	10,119,445	1,211,689
10/1/2000	Actuarial Loss (Gain)	3,153,187	12	2,738,664	327,924
10/1/2001	Variable COLA	484,615	13	432,331	49,262
10/1/2001	Plan Amendment	377,521	13	336,790	38,376
10/1/2001	Actuarial Loss (Gain)	5,917,320	13	5,278,881	601,507
10/1/2002	Actuarial Loss (Gain)	13,547,635	14	13,218,620	1,441,286
10/1/2003	Actuarial Loss (Gain)	8,453,577	15	7,403,015	776,039
10/1/2004	Actuarial Loss (Gain)	7,733,735	16	6,649,959	672,923
10/1/2005	Plan Amendment	528,766	17	378,040	37,058
10/1/2005	Actuarial Loss (Gain)	1,811,918	17	1,553,366	152,271
10/1/2006	Actuarial Loss (Gain)	(2,245,390)	18	(1,955,935)	(186,308)
10/1/2007	Actuarial Loss (Gain)	(3,930,059)	19	(3,516,631)	(326,367)
10/1/2008	Assumption Change	(2,460,748)	20	(2,281,489)	(206,794)
10/1/2008	Actuarial Loss (Gain)	4,312,669	20	3,998,501	362,424
10/1/2009	Assumption Change	2,211,808	21	2,078,513	184,388
10/1/2009	Actuarial Loss (Gain)	4,953,816	21	4,655,275	412,977
10/1/2010	Assumption Change	2,351,731	22	2,205,372	191,842
10/1/2010	Actuarial Loss (Gain)	4,329,632	22	4,060,180	353,188



Other Measurements

Schedule of Amortizations - Police

October 1, 2018

<u>Date Established</u>	<u>Description</u>	<u>Original Amount</u>	<u>Remaining Period Years</u>	<u>Remaining Balance</u>	<u>Annual Payment</u>
10/1/2011	Assumption Change	2,628,245	23	2,401,965	205,231
10/1/2011	Actuarial Loss (Gain)	2,882,428	23	2,634,265	225,079
10/1/2012	Valuation Software	(955,577)	24	(886,930)	(74,549)
10/1/2012	Assumption Change	2,734,348	24	2,537,913	213,318
10/1/2012	Actuarial Loss (Gain)	7,401,751	24	6,870,011	577,442
10/1/2013	Assumption Change	(2,014,446)	25	(1,896,982)	(157,066)
10/1/2013	Actuarial Loss (Gain)	1,279,029	25	1,204,450	99,726
10/1/2014	Actuarial Loss (Gain)	(1,640,207)	26	(1,565,701)	(127,860)
10/1/2015	Actuarial Loss (Gain)	(532,193)	27	(515,565)	(41,572)
10/1/2016	Actuarial Loss (Gain)	(1,637,449)	28	(1,604,589)	(127,884)
10/1/2016	Assumption Changes	14,723,929	28	14,428,451	1,149,934
10/1/2017	Actuarial Loss (Gain)	289,192	29	286,395	22,582
10/1/2018	Actuarial Loss (Gain)	(28,169)	20	(28,169)	(2,553)
10/1/2018	Assumption Change	1,526,587	20	1,526,587	138,370

Other Measurements

Schedule of Amortizations - Fire

				October 1, 2018	
				Total	\$45,353,863
					\$3,419,522
<u>Date Established</u>	<u>Description</u>	<u>Original Amount</u>	<u>Remaining Period Years</u>	<u>Remaining Balance</u>	<u>Annual Payment</u>
10/1/1989	Actuarial Loss (Gain)	53,834	1	4,774	4,774
10/1/1990	Actuarial Loss (Gain)	(137,729)	2	(26,252)	(13,416)
10/1/1991	Assumption Change	(3,244)	3	(944)	(329)
10/1/1991	Actuarial Loss (Gain)	(237,123)	3	(68,966)	(24,013)
10/1/1992	Assumption Change	(2,583)	4	(961)	(256)
10/1/1992	Actuarial Loss (Gain)	(573,171)	4	(213,438)	(56,953)
10/1/1993	Assumption Change	(42,396)	5	(19,202)	(4,188)
10/1/1993	Actuarial Loss (Gain)	(239,687)	5	(108,564)	(23,676)
10/1/1994	Assumption Change	610,808	6	293,254	54,439
10/1/1994	Actuarial Loss (Gain)	336,046	6	161,335	29,950
10/1/1995	Assumption Change	(247,322)	7	(151,903)	(24,685)
10/1/1995	Actuarial Loss (Gain)	(215,450)	7	(132,328)	(21,504)
10/1/1996	Assumption Change	(297,737)	8	(210,319)	(30,538)
10/1/1996	Actuarial Loss (Gain)	(219,757)	8	(155,235)	(22,540)
10/1/1997	Assumption Change	1,069,910	9	826,717	108,936
10/1/1997	Actuarial Loss (Gain)	(2,444,135)	9	(2,105,888)	(277,492)
10/1/1998	Plan Amendment	(268,116)	10	(243,383)	(29,464)
10/1/1998	Actuarial Loss (Gain)	(2,508,306)	10	(2,276,940)	(275,644)
10/1/1999	Plan Amendment	114,009	11	108,318	12,167
10/1/1999	Actuarial Loss (Gain)	(2,039,340)	11	(1,937,497)	(217,628)

Other Measurements

Schedule of Amortizations - Fire

October 1, 2018

<u>Date Established</u>	<u>Description</u>	<u>Original Amount</u>	<u>Remaining Period Years</u>	<u>Remaining Balance</u>	<u>Annual Payment</u>
10/1/2000	Assumption Change	(13,798,204)	12	(12,938,018)	(1,359,416)
10/1/2000	Plan Amendment	8,646,272	12	8,107,260	851,842
10/1/2000	Actuarial Loss (Gain)	676,828	12	634,636	66,682
10/1/2000	Plan Amendment	299,541	12	280,871	29,512
10/1/2001	Actuarial Loss (Gain)	7,539,001	13	7,232,784	715,744
10/1/2002	Actuarial Loss (Gain)	9,466,755	14	11,810,424	1,107,115
10/1/2003	Actuarial Loss (Gain)	7,616,087	15	8,818,049	786,913
10/1/2004	Actuarial Loss (Gain)	6,692,396	16	7,575,807	646,361
10/1/2005	Plan Amendment	4,413,733	17	4,929,859	403,649
10/1/2005	Actuarial Loss (Gain)	2,591,529	17	2,894,567	237,002
10/1/2006	Actuarial Loss (Gain)	(2,040,207)	18	(2,267,496)	(178,762)
10/1/2007	Actuarial Loss (Gain)	(868,128)	19	(969,177)	(73,784)
10/1/2008	Assumption Change	(2,812,893)	20	(3,142,159)	(231,610)
10/1/2008	Actuarial Loss (Gain)	3,519,341	20	3,931,304	289,779
10/1/2009	Assumption Change	2,293,100	21	2,548,844	182,331
10/1/2009	Plan Amendment	23,114	21	25,693	1,838
10/1/2009	Actuarial Loss (Gain)	3,014,143	21	3,350,304	239,664
10/1/2010	Assumption Change	2,377,230	22	2,608,240	181,456
10/1/2010	Actuarial Loss (Gain)	(904,732)	22	(992,651)	(69,059)

Other Measurements

Schedule of Amortizations - Fire

October 1, 2018

<u>Date Established</u>	<u>Description</u>	<u>Original Amount</u>	<u>Remaining Period Years</u>	<u>Remaining Balance</u>	<u>Annual Payment</u>
10/1/2011	Actuarial Loss (Gain)	(1,874,268)	23	(1,992,869)	(135,095)
10/1/2011	Assumption Change	2,629,741	23	2,796,148	189,549
10/1/2012	Valuation Software	(2,713,381)	24	(2,860,901)	(189,302)
10/1/2012	Assumption Change	2,714,228	24	2,861,794	189,361
10/1/2012	Actuarial Loss (Gain)	1,168,034	24	1,231,537	81,489
10/1/2013	Assumption Change	(3,541,424)	25	(3,698,823)	(239,273)
10/1/2013	Actuarial Loss (Gain)	(1,830,796)	25	(1,912,168)	(123,696)
10/1/2014	Actuarial Loss (Gain)	(1,597,600)	26	(1,658,198)	(105,020)
10/1/2014	Plan Amendment	589	26	612	39
10/1/2015	Actuarial Loss (Gain)	(1,680,516)	27	(1,731,090)	(107,483)
10/1/2016	Actuarial Loss (Gain)	(228,270)	28	(233,080)	(14,205)
10/1/2016	Assumption Changes	14,229,829	28	14,529,739	885,508
10/1/2017	Actuarial Loss (Gain)	1,124,272	29	1,136,645	68,071
10/1/2018	Actuarial Loss (Gain)	(3,291,760)	20	(3,291,760)	(242,638)
10/1/2018	Assumption Change	1,994,558	20	1,994,558	147,020

Other Measurements

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

Comparative Summary Of Principal Valuation Results

	10/1/2018 7.40% (current methods & assumptions)	10/1/2018 7.50% (prior methods & assumptions)	10/1/2017 7.50%
Participant Data			
Active members	179	179	170
Total annual payroll	\$14,705,355	\$14,705,355	\$14,353,623
Members in DROP	29	29	33
Total annualized benefit	\$2,013,136	\$2,013,136	\$2,220,099
Retired members and beneficiaries	340	340	334
Total annualized benefit	\$18,058,434	\$18,058,434	\$17,176,415
Disabled members receiving benefits	34	34	32
Total annualized benefit	\$1,984,906	\$1,984,906	\$1,804,368
Terminated vested members	3	3	4
Total annualized benefit	\$93,824	\$93,824	\$179,326
Assets			
Actuarial value of assets	\$227,193,975	\$227,193,975	\$219,680,159
Market value of assets	\$229,180,812	\$229,180,812	\$218,512,322

Other Measurements

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

	10/1/2018 7.40% (current methods & assumptions)	10/1/2018 7.50% (prior methods & assumptions)	10/1/2017 7.50%
Liabilities, present value of all future expected benefit payments			
Active members			
Retirement benefits	\$86,315,882	\$82,619,838	\$83,673,586
Vesting benefits	1,497,269	\$1,443,102	1,411,318
Disability benefits	6,736,194	\$6,562,423	6,268,345
Death benefits	2,416,407	\$5,115,172	4,918,178
Return of contribution	358,133	355,931	284,011
Total	\$97,323,885	\$96,096,466	\$96,555,438
Terminated vested members	\$732,569	\$719,183	\$2,202,420
Retired members and beneficiaries	\$252,277,093	\$249,836,281	\$244,542,322
Disabled members	\$23,524,826	\$23,351,315	\$21,720,911
Total	\$373,858,373	\$370,003,245	\$365,021,091
Liabilities due and unpaid	\$0	\$0	\$0
Actuarial accrued liability	\$331,499,780	\$327,978,635	\$325,074,421
Unfunded actuarial accrued liability	\$104,305,805	\$100,784,660	\$105,394,262

**Other Measurements**

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

**Comparative Summary Of Principal Valuation Results (continued)**

	10/1/2018 7.40% (current methods & assumptions)	10/1/2018 7.50% (prior methods & assumptions)	10/1/2017 7.50%
<b>Actuarial present value of accrued benefits</b>			
Statement of actuarial present value of all accrued benefits			
Vested accrued benefits			
Inactive members and beneficiaries	\$276,534,488	\$273,906,779	\$268,465,654
Active members	38,190,211	38,873,486	40,528,046
Total value of all vested accrued benefits	\$314,724,699	\$312,780,265	\$308,993,700
Non-vested accrued benefits	6,859,666	6,691,861	5,915,026
Total actuarial present value of all accrued benefits	\$321,584,365	\$319,472,126	\$314,908,726
Statement of changes in total actuarial present value of all accrued benefits (ASC 960)			
Actuarial present value of accrued benefits, beginning of year	\$314,908,726	\$314,908,726	\$307,969,234
Increase (decrease) during year			
Benefits accumulated	\$7,746,602	\$7,746,602	\$5,468,196
Plan amendment	0	0	0
Changes in actuarial assumptions	2,112,239	0	0
Interest	22,666,322	22,666,322	22,329,645
Benefits paid	(25,849,524)	(25,849,524)	(20,858,349)
Other changes	0	0	0
Net increase (decrease)	\$6,675,639	\$4,563,400	\$6,939,492
Actuarial present value of accrued benefits, end of year	\$321,584,365	\$319,472,126	\$314,908,726

Other Measurements

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

	10/1/2018 7.40% (current methods & assumptions)	10/1/2018 7.50% (prior methods & assumptions)	10/1/2017 7.50%
<b>Pension cost</b>			
Normal Cost	\$4,367,560	\$4,412,626	\$4,342,954
Member contributions	\$1,803,258	\$1,803,082	\$1,724,928
Expected plan sponsor contribution	\$10,902,279	\$10,684,601	\$11,001,636
As % of payroll	72.83%	71.36%	75.28%
Member Contributions as % of payroll	12.26%	12.26%	12.02%
<b>Past contributions</b>	9/30/2018		9/30/2017
Required plan sponsor contribution	\$12,844,513	\$9,956,015	\$9,956,015
Required member contribution	\$1,708,166	\$1,632,948	\$1,632,948
Actual contributions made by:			
Plan's sponsor	\$12,844,513	\$9,956,015	\$9,956,015
Members	\$1,708,166	\$1,632,948	\$1,632,948
Other	\$0	\$0	\$0
<b>Net actuarial gain (loss) (if applicable)</b>	\$3,319,929	\$3,319,929	(\$1,413,464)
<b>Other disclosures (where applicable)</b>			
Present value of active member			
Future salaries at attained age	\$145,028,682	\$142,647,507	\$134,256,066
Future contributions at attained age	\$15,102,998	\$14,827,607	\$13,905,021



**Other Measurements**

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

**Hypothetical City Contribution Requirement for 2018/2019 Fiscal Year**

	Police	Fire	Total
Unfunded actuarial accrued liability	\$58,951,942	\$45,353,863	\$104,305,805
Liabilities, present value of all future expected benefit payments			
Active members			
Retirement benefits	\$1,789,125	\$84,526,757	\$86,315,882
Vesting benefits	20,164	1,477,105	1,497,269
Disability benefits	51,495	6,684,699	6,736,194
Death benefits	13,657	2,402,750	2,416,407
Return of contribution	\$0	\$358,133	\$358,133
Total	\$1,874,441	\$95,449,444	\$97,323,885
Terminated vested members	\$0	\$732,569	\$732,569
Retired members and beneficiaries	\$144,061,197	\$108,215,896	\$252,277,093
Disabled members	\$10,978,221	\$12,546,605	\$23,524,826
Total	\$156,913,859	\$216,944,514	\$373,858,373
Entry age reserve			
Active	\$1,570,613	\$53,394,679	\$54,965,292
Inactive	\$155,039,418	\$121,495,070	\$276,534,488
Total	\$156,610,031	\$174,889,749	\$331,499,780
Accumulated Employee Contributions	\$304,725	\$16,227,556	\$16,532,281
Present Value of Future Salaries	\$1,048,040	\$143,980,642	\$145,028,682
Present Value of Future Member Contributions	\$71,775	\$15,031,223	\$15,102,998
Annual Inactive Benefits	\$12,047,434	\$10,102,866	\$22,150,300
Valuation Payroll	\$219,154	\$14,486,201	\$14,705,355
ASC 960 Information			
Present Value of Vested Benefits	\$155,961,313	\$158,763,386	\$314,724,699
Present Value of Accrued Benefits	\$155,362,111	\$165,222,254	\$321,584,365

Other Measurements

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

Hypothetical City Contribution Requirement for 2018/2019 Fiscal Year

	Police	Fire	Total
Actuarial Value at 10/1/17	\$103,470,801	\$135,634,798	\$239,105,599
Contribution by			
- Members	\$23,979	\$1,684,187	\$1,708,166
- City	\$0	\$5,770,377	\$5,770,377
- BSO	\$5,004,644	\$0	\$5,004,644
- State	\$1,248,262	\$1,253,684	\$2,501,946
- Total	\$6,276,885	\$8,708,248	\$14,985,133
Net Earnings Recognized <sup>1</sup>	\$7,223,848	\$9,526,501	\$16,750,349
Disbursements			
- Benefit Payment	\$11,667,923	\$14,099,198	\$25,767,121
- Refunds	\$0	\$82,403	\$82,403
- Administrative Expenses <sup>2</sup>	\$270,303	\$356,465	\$626,768
- Total	\$11,938,226	\$14,538,066	\$26,476,292
Actuarial Value at 10/1/18	\$105,033,308	\$139,331,481	\$244,364,789
DROP Account Balance	\$6,875,099	\$9,363,142	\$16,238,241
State Contribution Reserve	\$500,119	\$432,454	\$932,573
Member Plan	\$0	\$0	\$0
Adjusted Actuarial Value at 10/1/18	\$97,658,090	\$129,535,885	\$227,193,975
Market Value of Assets <sup>3</sup>	\$98,512,121	\$130,668,691	\$229,180,812

<sup>1</sup>Allocated based on Return of Actuarial Value of Assets

<sup>2</sup>Allocated based on Net Earnings Recognized

<sup>3</sup>Allocation based on Adjusted Actuarial Value as of 10/1/2018

**Other Measurements**

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

**Hypothetical City Contribution Requirement for 2019/2020 Fiscal Year**

	Police	Fire	Total
Employer Contributions			
Normal Cost	\$63,532	\$4,304,028	\$4,367,560
Expected Member Contributions	(\$21,630)	(\$1,781,628)	(\$1,803,258)
Net Normal Cost	\$41,902	\$2,522,400	\$2,564,302
Administrative expense <sup>1</sup>	\$249,500	\$329,030	\$578,530
Amortization of UAAL	\$5,163,424	\$3,419,522	\$8,582,946
Applicable Interest	403,657	464,051	867,708
Total Recommended Contribution	\$5,858,483	\$6,735,003	\$12,593,486
Expected Non-Employer Contributions	(1,062,175)	(821,230)	(1,883,405)
Total Recommended Contribution	\$4,796,308	\$5,913,773	\$10,710,081
As a percentage of payroll	2188.56%	40.82%	72.83%
Hypothetical Total			\$10,710,081
 Total Recommended Contribution (paid in Lump Sum)	 \$4,882,380	 \$6,019,899	 \$10,902,279
Total Recommended Contribution (paid in Quarterly Installments)	\$5,014,161	\$6,182,382	\$11,196,543

<sup>1</sup>Allocated based on Net Earnings Recognized

Other Measurements

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

September 30, 2018

Historical Salary Increases and Asset Performance

Year Ending	Payroll Growth	Salary Growth	Expected Salary Growth	Asset Return (Market)	Asset Return (Actuarial)	Asset Return (Expected)
9/30/2018	2.45%	2.52%	5.55%	8.59%	7.19%	7.40%
9/30/2017	6.11%	4.43%	5.41%	10.88%	7.91%	7.50%
9/30/2016	3.56%	6.06%	5.27%	7.63%	8.54%	7.50%
9/30/2015	(0.03%)	4.84%	5.41%	(1.71%)	7.46%	7.50%
9/30/2014	0.90%	5.50%	5.20%	10.00%	9.60%	7.50%
9/30/2013	(9.00%)	1.40%	7.00%	13.70%	8.00%	7.70%
9/30/2012	(7.00%)	1.60%	6.90%	16.80%	2.80%	7.90%
9/30/2011	(7.70%)	(1.50%)	6.40%	1.70%	1.20%	8.10%
9/30/2010	(7.60%)	5.00%	6.50%	10.40%	5.60%	8.30%
9/30/2009	(4.00%)	3.00%	7.00%	1.80%	2.30%	8.50%
9/30/2008	(1.40%)	7.40%	7.00%	(14.30%)	3.60%	8.50%
9/30/2007	2.80%	6.20%	6.00%	12.80%	10.00%	8.50%
Averages						
3-year				9.02%	7.88%	
5-year				6.98%	8.14%	
10-year				7.84%	6.02%	
20-year				5.90%	5.14%	
42-year				8.35%	7.50%	

Amortization of Unfunded Actuarial Accrued Liability

	UAAL	Amortization
10/1/2018	\$104,305,805	\$8,582,946
10/1/2019	\$102,806,350	\$8,665,690
10/1/2020	\$101,107,076	\$8,794,141
10/1/2021	\$99,144,094	\$8,952,185
10/1/2046	\$168,079	\$168,079

**Other Measurements**

**Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035<sup>1</sup>**

				October 1, 2018
	Valuation	- 200 bp <sup>2</sup>	Funding Rate <sup>2</sup>	+ 200 bp <sup>2</sup>
	7.50%	5.40%	7.40%	9.40%
Total pension liability				
Service Cost	\$4,342,954	\$4,342,954	\$4,342,954	\$4,342,954
Interest	25,088,027	25,088,027	25,088,027	25,088,027
Benefit changes	0	0	0	0
Difference between expected and actual experience	742,156	742,156	742,156	742,156
Changes in assumptions	3,537,718	86,583,330	325,572	(59,070,255)
Benefit payments	(25,767,121)	(25,767,121)	(25,767,121)	(25,767,121)
Contribution refunds	(82,403)	(82,403)	(82,403)	(82,403)
Net change in pension liability	\$7,861,331	\$90,906,943	\$4,649,185	(\$54,746,642)
Total pension liability, beginning of year	\$343,088,836	\$343,088,836	\$343,088,836	\$343,088,836
Total pension liability, end of year	\$350,950,167	\$433,995,779	\$347,738,021	\$288,342,194
Plan fiduciary net position				
Contributions - Employer	\$10,775,021	\$10,775,021	\$10,775,021	\$10,775,021
Contributions - State	2,501,946	2,501,946	2,501,946	2,501,946
Contributions - Member	1,708,166	1,708,166	1,708,166	1,708,166
Net investment income	19,886,454	19,886,454	19,886,454	19,886,454
Benefit payments	(25,767,121)	(25,767,121)	(25,767,121)	(25,767,121)
Contribution refunds	(82,403)	(82,403)	(82,403)	(82,403)
Administrative expense	(626,768)	(626,768)	(626,768)	(626,768)
Other	18,569	18,569	18,569	18,569
Net change in plan fiduciary net position	\$8,413,864	\$8,413,864	\$8,413,864	\$8,413,864
Plan fiduciary net position, beginning of year	\$237,937,762	\$237,937,762	\$237,937,762	\$237,937,762
Plan fiduciary net position, end of year	\$246,351,626	\$246,351,626	\$246,351,626	\$246,351,626
Net pension liability/(asset)	\$104,598,541	\$187,644,153	\$101,386,395	\$41,990,568
Funded ratio	70.20%	56.76%	70.84%	85.44%
Years that Assets support expected benefit payments	14	12	14	18
Estimated city contribution				
Annual dollar value	\$10,710,081	\$15,526,579	\$10,710,081	\$7,168,118
Percentage of payroll	72.83%	105.58%	72.83%	48.74%

<sup>1</sup>Includes DROP assets and liabilities

<sup>2</sup>Based on valuation assumption with the following changes  
-interest rate (as noted)

Other Measurements

Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035<sup>1</sup>

October 1, 2018

Sustainment of Expected Benefit Payments

Mortality FRS Special Risk Scale BB Generational  
Interest 5.40%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$246,351,626	\$12,280,277	\$38,382,815 <sup>1</sup>
2	220,249,088	11,297,337	22,372,412
3	209,174,013	10,682,965	22,984,846
4	196,872,132	10,003,013	23,572,202
5	183,302,943	9,252,506	24,239,152
6	168,316,297	8,426,335	24,873,135
7	151,869,497	7,517,851	25,637,140
8	133,750,208	6,516,981	26,478,895
9	113,788,294	5,419,331	27,218,464
10	91,989,161	4,223,825	27,907,254
11	68,305,732	2,927,479	28,561,834
12	42,671,377	1,525,318	29,233,849
13	14,962,846		29,785,955

<sup>1</sup>Benefit payments include the DROP balance at 9/30/2018

Other Measurements

Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035<sup>1</sup>

October 1, 2018

Sustainment of Expected Benefit Payments

Mortality FRS Special Risk Scale BB Generational  
Interest 7.40%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$246,351,626	\$16,835,200	\$38,382,815 <sup>1</sup>
2	224,804,011	15,822,490	22,372,412
3	218,254,089	15,315,540	22,984,846
4	210,584,783	14,726,667	23,572,202
5	201,739,248	14,047,861	24,239,152
6	191,547,957	13,270,666	24,873,135
7	179,945,488	12,384,320	25,637,140
8	166,692,668	11,373,022	26,478,895
9	151,586,795	10,228,312	27,218,464
10	134,596,643	8,946,010	27,907,254
11	115,635,399	7,519,091	28,561,834
12	94,592,656	5,937,507	29,233,849
13	71,296,314	4,193,514	29,785,955
14	45,703,873	2,281,116	30,296,623
15	17,688,366		30,691,325

<sup>1</sup>Benefit payments include the DROP balance at 9/30/2018

Other Measurements

Information to Comply with Florida Statute 112.664 and Florida Administrative Code 60T-1.0035<sup>1</sup>

October 1, 2018

Sustainment of Expected Benefit Payments

Mortality FRS Special Risk Scale BB Generational  
Interest 9.40%

<u>Year</u>	<u>Market Value of Assets</u>	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$246,351,626	\$21,393,572	\$38,382,815 <sup>1</sup>
2	229,362,383	20,532,174	22,372,412
3	227,522,145	20,331,053	22,984,846
4	224,868,352	20,054,611	23,572,202
5	221,350,761	19,693,315	24,239,152
6	216,804,924	19,236,878	24,873,135
7	211,168,667	18,671,968	25,637,140
8	204,203,495	17,978,568	26,478,895
9	195,703,168	17,145,558	27,218,464
10	185,630,262	16,167,058	27,907,254
11	173,890,066	15,033,406	28,561,834
12	160,361,638	13,730,858	29,233,849
13	144,858,647	12,248,211	29,785,955
14	127,320,903	10,576,200	30,296,623
15	107,600,480	8,704,346	30,691,325
16	85,613,501	6,620,044	31,072,789
17	61,160,756	4,301,306	31,512,000
18	33,950,062	1,726,611	31,879,624
19	3,797,049		32,343,498

<sup>1</sup>Benefit payments include the DROP balance at 9/30/2018



**Other Measurements**

**Reserve Account For Future Benefit Improvements Under F.L. 99-1**

1. Adjusted Base Amount at 10/1/2018

Year <u>Established</u>	<u>Description</u>	Ch. 185 <u>Police</u>	Ch. 175 <u>Fire</u>	Suppl. <u>Fire</u>	Total <u>Fire</u>
		-\$-	-\$-	-\$-	-\$-
	Adjusted Base Amount as of 10/1/10	798,463	704,031	28,723	732,754
2012	Ordinances 2012-30/31	0	88,476	0	88,476
2017	Ordinance 2017-30	77,625	0	0	0
	Adjusted Base Amount	876,088	792,507	28,723	821,230

2. Reserve Account for 2017/2018

	Ch. 185 <u>Police</u>	Total <u>Fire</u>
	-\$-	-\$-
(a) Reserve Account at September 30, 2017	314,032	406,615
(b) Share Plan Allocation Paid Out	0	(406,615)
(c) Share Plan Allocation for Reserve	186,087	432,454
(d) Reserve Account at September 30, 2018 (a + b + c)	500,119	432,454
(e) City Contribution Receivable for State Premium Shortfall		
i. Premium Tax Distribution for 2017	1,248,261	1,253,684
ii. Adjusted Base Amount	876,088	821,230
iii. Shortfall of State Premium Tax Distribution	0	0

3. Allocation of Accumulated Reserve Account under SB 172

	Ch. 185 <u>Police</u>	Total
	-\$-	-\$-
(a) Amount allocated to contribution	(186,086)	0
(b) Amount allocated to Member Plan	0	0
(c) Total	(186,086)	0
(d) Final Reserve Account at September 30, 2018	500,119	432,454
(e) Amount to be allocated to Member Plan	500,119	432,454