

CITY OF FORT LAUDERDALE  
POLICE AND FIREFIGHTERS' RETIREMENT SYSTEM  
ACTUARIAL VALUATION  
AS OF OCTOBER 1, 2019  
CONTRIBUTIONS APPLICABLE TO THE  
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2021  
GASB 67/68 DISCLOSURE INFORMATION  
AS OF SEPTEMBER 30, 2019



April 3, 2020

Board of Trustees  
City of Fort Lauderdale  
Police and Firefighters' Retirement System

Re: City of Fort Lauderdale Police and Firefighters' Retirement System

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Fort Lauderdale Police and Firefighters' Retirement System. Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and may produce significantly different results.

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

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the City of Fort Lauderdale, financial reports prepared by the custodian bank, and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

The total pension liability, net pension liability, and certain sensitivity information shown in this report are based on an actuarial valuation performed as of October 1, 2018. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2019 using generally accepted actuarial principles. It is our opinion that the assumptions used for this purpose are internally consistent, reasonable, and comply with the requirements under GASB No. 67 and No. 68.

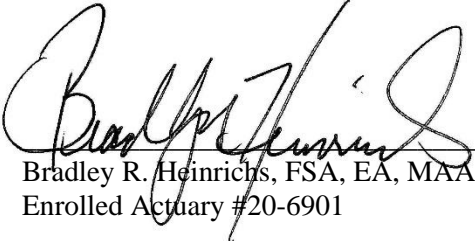
The undersigned are familiar with the immediate and long-term aspects of pension valuations, and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the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

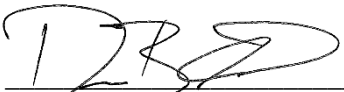
To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Fort Lauderdale, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Police and Firefighters'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

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

Respectfully submitted,

Foster & Foster, Inc.

By:   
Bradley R. Heinrichs, FSA, EA, MAAA  
Enrolled Actuary #20-6901

By:   
Drew D. Ballard, EA, MAAA  
Enrolled Actuary #20-8193

Enclosures

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## SUMMARY OF REPORT

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

The contribution requirements, compared with those set forth in the March 13, 2020 actuarial impact statement, are as follows:

Valuation Date	10/1/2019	10/1/2018
Applicable to Fiscal Year Ending	9/30/2021	9/30/2020
Applicable City Fiscal Year Ended	<u>9/30/2021</u>	<u>9/30/2020</u>
<b>Assumed City Contribution Date</b>	<b>10/1/2020</b>	<b>10/1/2019</b>
Minimum Required Contribution	\$32,867,570	\$30,928,705
Member Contributions (Est.)	8,359,987	8,161,816
City And State Required Contribution	24,507,583	22,766,889
State Contribution (Est.) <sup>1</sup>	5,159,386	5,159,386
City Required Contribution	\$19,348,197	\$17,607,503
As % of Covered Payroll <sup>2</sup>	24.9%	23.2%
As % of Total Payroll (incl. DROP) <sup>2</sup>	20.0%	19.5%

<sup>1</sup> Reflects updated per capita amounts based on recent premium tax distributions. It is important to keep in mind that a slight adjustment to the City's bottom line funding requirement may be necessary, based on actual allowable State Monies received.

<sup>2</sup> Please note the percentage-of-payroll rates included in the table shown above are for illustration purposes only. The City should budget based on the actual dollar contribution requirements.

As you can see, the Minimum Required Contribution shows an increase when compared to the results determined in the March 13, 2020 actuarial impact statement. The increase is attributable to net unfavorable experience and a reduction in the investment return assumption from 7.35% to 7.30%. The increase was offset in part by City contributions in excess of the required City contributions.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of actuarial loss included an average salary increase of 9.83% which exceeded the 4.51% assumption and more retirements than expected. These losses were offset in part by gains associated with an investment return of 7.68% (Actuarial Asset Basis) which exceeded the 7.35% assumption.

## CHANGES SINCE PRIOR VALUATION

### Plan Changes

Chapter 2019-21, Laws of Florida was signed into effect granting certain disability benefits to firefighters participating in an employer-sponsored retirement plan. Effective July 1, 2019, "the retirement plan must consider the firefighter totally and permanently disabled in the line of duty if he or she meets the retirement plan's definition of totally and permanently disabled due to the diagnosis of cancer or circumstances that arise out of the treatment of cancer." For this purpose, "cancer" is as defined in Section 112.1816(1), Florida Statutes.

Please note that the benefit changes only relate to the disability benefits for the Pension Fund and do not provide for other additional benefits that are provided for in Florida Statutes Section 112.1816.

### Actuarial Assumption/Method Changes

The expected percentage of disabilities and pre-retirement deaths that are in line-of-duty has increased from 75% to 90% for Firefighters, as a result of the plan change described above.

Additionally, as previously approved by the Board of Trustees, the investment return assumption has been lowered from 7.35% to 7.30% per year, net of investment related expenses.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>10/1/2019</u>	Old Assump <u>10/1/2019</u>	<u>10/1/2018</u>
<b>A. Participant Data</b>			
Actives	763	763	793
Service Retirees	761	761	755
DROP Retirees	172	172	133
Beneficiaries	172	172	166
Disability Retirees	28	28	26
Terminated Vested	<u>34</u>	<u>34</u>	<u>24</u>
<b>Total</b>	<b>1,930</b>	<b>1,930</b>	<b>1,897</b>
<b>Total Annual Payroll</b>	<b>\$77,841,923</b>	<b>\$77,841,923</b>	<b>\$76,011,651</b>
<b>Payroll Under Assumed Ret. Age</b>	<b>77,841,923</b>	<b>77,841,923</b>	<b>75,841,699</b>
<b>Annual Rate of Payments to:</b>			
Service Retirees	37,484,078	37,484,078	36,627,548
DROP Retirees	13,426,154	13,426,154	10,078,934
Beneficiaries	4,368,505	4,368,505	4,296,023
Disability Retirees	1,212,155	1,212,155	1,095,660
Terminated Vested	584,740	584,740	622,882
<b>B. Assets</b>			
Actuarial Value (AVA)	939,243,604	939,243,604	883,827,216
Market Value (MVA)	927,340,809	927,340,809	905,150,399
<b>C. Liabilities</b>			
<b>Present Value of Benefits</b>			
<b>Actives</b>			
Retirement Benefits	467,545,747	463,252,603	463,103,652
Disability Benefits	10,793,852	10,718,206	8,759,959
Death Benefits	6,666,908	6,612,854	6,393,918
Vested Benefits	13,757,401	13,596,815	12,618,845
Refund of Contributions	879,885	878,643	524,606
Service Retirees	410,200,304	408,409,824	400,252,912
DROP Retirees	224,959,122	224,042,592	170,330,213
Beneficiaries	38,483,079	38,337,751	37,170,964
Disability Retirees	13,855,059	13,790,576	12,369,437
Terminated Vested	<u>5,420,418</u>	<u>5,381,418</u>	<u>5,828,728</u>
<b>Total</b>	<b>1,192,561,775</b>	<b>1,185,021,282</b>	<b>1,117,353,234</b>



C. Liabilities - (Continued)	New Assump <u>10/1/2019</u>	Old Assump <u>10/1/2019</u>	<u>10/1/2018</u>
Present Value of Future Salaries	658,972,508	657,188,097	634,544,922
Normal Cost (Retirement)	18,759,254	18,551,669	18,666,993
Normal Cost (Disability)	1,033,561	1,027,714	924,845
Normal Cost (Death)	549,585	545,929	552,348
Normal Cost (Vesting)	878,953	868,108	869,918
Normal Cost (Refunds)	<u>166,366</u>	<u>166,335</u>	<u>100,736</u>
Total Normal Cost	21,387,719	21,159,755	21,114,840
Present Value of Future Normal Costs	173,850,449	171,541,939	169,504,650
Accrued Liability (Retirement)	313,570,264	311,382,965	311,209,511
Accrued Liability (Disability)	2,860,996	2,848,918	2,201,456
Accrued Liability (Death)	2,008,642	1,998,025	1,852,301
Accrued Liability (Vesting)	7,281,514	7,215,363	6,551,623
Accrued Liability (Refunds)	71,928	71,911	81,439
Accrued Liability (Inactives)	<u>692,917,982</u>	<u>689,962,161</u>	<u>625,952,254</u>
Total Actuarial Accrued Liability (EAN AL)	1,018,711,326	1,013,479,343	947,848,584
Unfunded Actuarial Accrued Liability (UAAL)	79,467,722	74,235,739	64,021,368
Funded Ratio (AVA / EAN AL)	92.2%	92.7%	93.2%

D. Actuarial Present Value of Accrued Benefits	New Assump <u>10/1/2019</u>	Old Assump <u>10/1/2019</u>	<u>10/1/2018</u>
Vested Accrued Benefits			
Inactives	692,917,982	689,962,161	625,952,254
Actives	167,386,903	165,675,016	163,205,167
Member Contributions	<u>54,807,315</u>	<u>54,807,315</u>	<u>58,051,354</u>
Total	915,112,200	910,444,492	847,208,775
Non-vested Accrued Benefits	<u>37,324,591</u>	<u>37,035,066</u>	<u>42,445,683</u>
Total Present Value Accrued Benefits (PVAB)	952,436,791	947,479,558	889,654,458
Funded Ratio (MVA / PVAB)	97.4%	97.9%	101.7%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	4,957,233	0	
Plan Experience	0	45,673,067	
Benefits Paid	0	(51,350,441)	
Interest	0	63,502,474	
Other	<u>0</u>	<u>0</u>	
Total	4,957,233	57,825,100	

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

<b>Assumed City Contribution Date</b>	<b>October 1, 2020</b>	<b>October 1, 2020</b>	<b>October 1, 2019</b>
E. Pension Cost			
Normal Cost <sup>1</sup>	\$22,371,554	\$22,133,104	\$22,065,008
Administrative Expenses <sup>1</sup>	630,738	630,738	637,450
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 20 years <sup>1</sup>	9,865,278	9,460,438	8,226,247
Applicable Interest <sup>1</sup>	0	0	0
Minimum Required Contribution	32,867,570	32,224,280	30,928,705
Expected Member Contributions <sup>1</sup>	8,359,987	8,359,987	8,161,816
Expected City and State Contribution	24,507,583	23,864,293	22,766,889
Less Expected State Contributions <sup>2</sup>	5,159,386	5,159,386	5,159,386
<b>Equals Expected City Required Contribution</b>	<b>19,348,197</b>	<b>18,704,907</b>	<b>17,607,503</b>

F. Past Contributions

Plan Years Ending: 9/30/2019

City and State Requirement 22,535,977

Actual Contributions Made:

Members (excluding buyback)	7,975,985
City	18,108,528
State	<u>5,218,863</u>
Total	31,303,376

G. Net Actuarial (Gain)/Loss 15,252,381

<sup>1</sup> Contribution requirements developed above have been adjusted to account for an applicable assumed salary increase component. Additionally, the above stated requirements reflect no interest as a result of the assumed beginning of year City contribution date. If the required contributions are deposited at a later date, additional interest at the assumed 7.30% annual rate must be added.

<sup>2</sup> Reflects updated per capita amounts based on recent premium tax distributions.

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

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2019	79,467,722
2020	75,148,940
2021	70,312,486
2026	49,324,404
2030	32,963,980
2035	9,095,342
2039	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2019	9.83%	4.51%
Year Ended 9/30/2018	5.10%	4.59%
Year Ended 9/30/2017	3.34%	4.68%
Year Ended 9/30/2016	4.95%	4.67%
Year Ended 9/30/2015	3.00%	4.65%

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

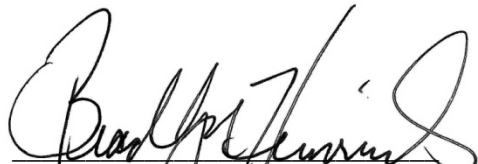
	<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended 9/30/2019	3.94%	7.68%	7.35%
Year Ended 9/30/2018	6.99%	8.60%	7.40%
Year Ended 9/30/2017	11.98%	8.61%	7.50%
Year Ended 9/30/2016	8.35%	7.67%	7.50%
Year Ended 9/30/2015	0.77%	6.33%	7.50%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2019	\$77,841,923
	10/1/2009	N/A
(b) Total Increase		N/A
(c) Number of Years		10.00
(d) Average Annual Rate		N/A

STATEMENT BY ENROLLED ACTUARY

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



Bradley R. Heinrichs, FSA, EA, MAAA  
Enrolled Actuary #20-6901

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

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

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

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

(1) Unfunded Actuarial Accrued Liability as of October 1, 2018	\$64,021,368
(2) Sponsor Normal Cost developed as of October 1, 2018	13,304,490
(3) Expected administrative expenses for the year ended September 30, 2019	610,000
(4) Expected interest on (1), (2) and (3)	5,705,868
(5) Sponsor contributions to the System during the year ended September 30, 2019	23,327,391
(6) Expected interest on (5)	1,330,977
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2019 (1)+(2)+(3)+(4)-(5)-(6)	58,983,358
(8) Change to UAAL due to Assumption Change	5,231,983
(9) Change to UAAL due to Actuarial (Gain)/Loss	15,252,381
(10) Unfunded Actuarial Accrued Liability as of October 1, 2019	79,467,722

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2019 Amount</u>	<u>Amortization Amount</u>
Re-inalized Base	1/1/2003	3.25	5,679,701	1,848,195
Actuarial Loss	1/1/2004	4.25	2,631,771	671,145
Software Change	1/1/2005	5.25	(329,302)	(69,655)
Actuarial Loss	1/1/2005	5.25	2,599,471	549,847
Share Plan Gain	1/1/2006	6.25	(39,936)	(7,269)
Actuarial Loss	1/1/2006	6.25	1,129,406	205,567
Actuarial Loss	1/1/2007	7.25	441,812	71,000
Actuarial Gain	1/1/2008	8.25	(26,465)	(3,827)
Assum Change	1/1/2008	8.25	455,302	65,839
Asset Smooth Change	1/1/2008	8.25	(3,438,219)	(497,186)
Actuarial Loss	1/1/2009	9.25	11,132,238	1,469,838
Plan Amendment	1/1/2010	10.25	716,239	87,350
Actuarial Loss	1/1/2010	10.25	4,838,299	590,059
Actuarial Gain	1/1/2011	11.25	(158,899)	(18,068)
Actuarial Loss	1/1/2012	12.25	2,722,994	290,910
Assum Change	1/1/2012	12.25	3,468,038	370,507
Actuarial Gain	1/1/2013	13.25	(10,183,295)	(1,028,832)
Assum Change	1/1/2013	13.25	(373,798)	(37,765)
Actuarial Gain	10/1/2013	14	(1,483,409)	(144,249)

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2019 <u>Amount</u>	Amortization <u>Amount</u>
Plan Amendment	10/1/2013	14	(24,378)	(2,371)
Actuarial Gain	10/1/2014	15	(8,427,863)	(782,117)
Plan Amendment	10/1/2014	15	1,109,903	103,000
Actuarial Loss	10/1/2015	16	4,743,528	421,893
Assump/Method Changes	10/1/2015	16	30,726,166	2,732,806
Actuarial Gain	10/1/2016	17	(3,233,520)	(276,651)
Assump Change	10/1/2016	17	15,440,005	1,321,004
Actuarial Gain	10/1/2017	18	(9,168,107)	(757,021)
Assump. Change	10/1/2017	18	10,045,738	829,488
Plan Amendment	10/1/2017	18	10,507	868
Actuarial Gain	10/1/2018	19	(6,840,690)	(546,706)
Assump Change	10/1/2018	19	4,716,591	376,948
Plan Amendment	10/1/2018	19	103,530	8,274
Actuarial Loss	10/1/2019	20	15,252,381	1,182,858
Assump Change	10/1/2019	20	<u>5,231,983</u>	<u>405,753</u>
			79,467,722	9,431,432

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2018	\$64,021,368
(2) Expected UAAL as of October 1, 2019	58,983,358
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(2,991,925)
Salary Increases	15,802,515
Active Decrements	4,169,176
Inactive Mortality	(61,405)
Other	<u>(1,665,980)</u>
Increase in UAAL due to (Gain)/Loss	15,252,381
Assumption Changes	<u>5,231,983</u>
(4) Actual UAAL as of October 1, 2019	\$79,467,722



DETERMINATION OF CUMULATIVE GAIN/(LOSS) EXPERIENCE POSITION

<u>Valuation Date</u>	<u>Year Ended</u>	<u>Gain/(Loss)</u>	<u>Balance</u>
1/1/1995	12/31/1994	(7,367,475)	(7,367,475)
1/1/1996	12/31/1995	5,757,825	(1,609,650)
1/1/1997	12/31/1996	8,249,398	6,639,748
1/1/1998	12/31/1997	14,303,191	20,942,939
1/1/1999	12/31/1998	26,177,594	47,120,533
1/1/2000	12/31/1999	26,361,263	73,481,796
1/1/2001	12/31/2000	18,708,226	92,190,022
1/1/2002	12/31/2001	(15,137,682)	77,052,340
1/1/2003	12/31/2002	(51,423,738)	25,628,602
1/1/2004	12/31/2003	(28,715,070)	(3,086,468)
1/1/2005	12/31/2004	(23,810,048)	(26,896,516)
1/1/2006	12/31/2005	(8,656,358)	(35,552,874)
1/1/2007	12/31/2006	(3,123,728)	(38,676,602)
1/1/2008	12/31/2007	169,648	(38,506,954)
1/1/2009	12/31/2008	(66,572,825)	(105,079,779)
1/1/2010	12/31/2009	(27,303,032)	(132,382,811)
1/1/2011	12/31/2010	854,077	(131,528,734)
1/1/2012	12/31/2011	(14,047,611)	(145,576,345)
1/1/2013	12/31/2012	12,807,830	(132,768,515)
10/1/2013	9/30/2013	1,811,169	(130,957,346)
10/1/2014	9/30/2014	9,867,338	(121,090,008)
10/1/2015	9/30/2015	(4,973,675)	(126,063,683)
10/1/2016	9/30/2016	3,492,745	(122,570,938)
10/1/2017	9/30/2017	9,924,966	(112,645,972)
10/1/2018	9/30/2018	7,061,664	(105,584,308)
10/1/2019	9/30/2019	(15,252,381)	<b>(120,836,689)</b>

## ACTUARIAL ASSUMPTIONS AND METHODS

### Mortality Rate

#### *Healthy Active Lives:*

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

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

#### *Healthy Inactive Lives:*

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

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

#### *Disabled Lives:*

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

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

The above assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumptions used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman's July 1, 2018 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

90% (prior year 75%) of active Firefighter deaths, and 75% of active Police Officer deaths are assumed to be service-incurred.

### Interest Rate

7.30% (prior year 7.35%) per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.

### Payroll Growth

2.00% for purposes of amortizing the Unfunded Actuarial Accrued Liability. We feel this is reasonable based on long-term expectations and historical increases in inflation.

Salary Increases

Salary Scale	
Service	Rate
0-6	3.0%
7-10	2.5%
11-25	1.0%
26+	0.5%

Expected increase in annual salary in addition to 2.75% inflationary component. The assumed rates of salary received approval from the Division of Retirement based on historical data and long-term expectations.

Administrative Expenses

\$603,000 annually, based on the average of actual expenses incurred in the prior two fiscal years. Previously, the actual expense in the prior fiscal year was used. Using a two-year average results in a less volatile estimate than the prior method.

Amortization Method

New UAAL amortization bases are amortized over 20 years.

Retirement Rates

Service	% Retiring During the Year	
	Police	Fire
10-19	5%	5%
20	30%	25%
21	30%	35%
22	30%	45%
23	50%	50%
24	80%	50%
25-34	10%	20%
35+	100%	100%

No Members are expected to take reduced Early Retirement. The assumed rates of retirement were approved in conjunction with an actuarial experience study dated July 10, 2015.

Cost of Living Adjustments

None.

Funding Method

Entry Age Normal Actuarial Cost Method. Beginning with the pension fund's plan year ended September 30, 2015, a full year salary load based on the current 4.6% assumption is utilized under the projection funding method, as mandated by the Division of Retirement.

Marital Status

All employed Members and all retired Members are assumed to be married. Females are assumed to be 3 years younger than males. This assumption was approved in conjunction with an actuarial experience study dated July 10, 2015.

Termination Rates

% Terminating During the Year			
Age	Service	Police	Fire
All Ages	0	15.0%	15.0%
	1	5.0%	5.0%
	2	3.0%	1.0%
	3	3.0%	1.0%
	4	3.0%	1.0%
<50	5+	1.5%	1.0%
50+	5+	0.0%	0.0%

The assumed rates of termination were approved in conjunction with an actuarial experience study dated July 10, 2015.

Disability Rates

% Becoming Disabled During the Year		
Age	Police	Fire
20	0.07%	0.14%
25	0.08%	0.15%
30	0.09%	0.18%
35	0.12%	0.23%
40	0.15%	0.30%
45	0.26%	0.51%
50	0.50%	1.00%
55+	0.78%	1.55%

It is assumed that 90% (prior year 75%) of Firefighter disablements, and 75% of Police Officer disablements are service related. The assumed rates of disablement were approved in conjunction with an actuarial experience study dated July 10, 2015.

Actuarial Value of Assets

All assets are valued at market value with an adjustment to uniformly spread investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period.

## GLOSSARY

Total Annual Payroll is the projected annual rate of pay as of the valuation date of all covered Members.

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

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

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

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

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

## DISCUSSION OF RISK

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

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

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

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

### Impact of Plan Maturity on Risk

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

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

- The Support Ratio, determined as the ratio of active to inactive members, has decreased from 72.8% on October 1, 2016 to 66.3% on October 1, 2019, indicating that the plan has been maturing during the period.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 68.0%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors may result in larger increases in contribution requirements than would be needed for a less mature plan. Please note Chapter 112, Florida Statutes, requires that the plan sponsor contributes the minimum required contribution; thus, there is minimal solvency risk to the plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has stayed approximately the same from October 1, 2016 to October 1, 2019.
- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, increased from -3.1% on October 1, 2016 to -1.8% on October 1, 2019. The current Net Cash Flow Ratio of -1.8% indicates that contributions are not currently covering the plan's benefit payments and administrative expenses.

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

PLAN MATURITY MEASURES AND OTHER RISK METRICS

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Support Ratio</u>				
Total Actives	779	786	793	763
Total Inactives <sup>1</sup>	1,070	1,079	1,097	1,150
Actives / Inactives <sup>1</sup>	72.8%	72.8%	72.3%	66.3%
<u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	783,398,728	857,734,650	905,150,399	927,340,809
Total Annual Payroll	72,145,101	73,231,488	76,011,651	77,841,923
MVA / Total Annual Payroll	1,085.9%	1,171.3%	1,190.8%	1,191.3%
<u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability	565,099,365	594,813,784	625,952,254	692,917,982
Total Accrued Liability (EAN)	850,927,690	896,871,913	947,848,584	1,018,711,326
Inactive AL / Total AL	66.4%	66.3%	66.0%	68.0%
<u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)	778,211,946	824,951,911	883,827,216	939,243,604
Total Accrued Liability (EAN)	850,927,690	896,871,913	947,848,584	1,018,711,326
AVA / Total Accrued Liability (EAN)	91.5%	92.0%	93.2%	92.2%
<u>Net Cash Flow Ratio</u>				
Net Cash Flow <sup>2</sup>	(23,922,781)	(17,959,833)	(13,107,960)	(16,229,916)
Market Value of Assets (MVA)	783,398,728	857,734,650	905,150,399	927,340,809
Ratio	-3.1%	-2.1%	-1.4%	-1.8%

<sup>1</sup> Excludes terminated participants awaiting a refund of member contributions.

<sup>2</sup> Determined as total contributions minus benefit payments and administrative expenses.



STATEMENT OF FIDUCIARY NET POSITION  
SEPTEMBER 30, 2019

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Money Market	13,523,044.00
Cash and Short Term Investments	3,257.00
Total Cash and Equivalents	13,526,301.00
Receivables:	
From Broker for Investments Sold	2,625,447.00
Investment Income	1,913,384.00
Total Receivable	4,538,831.00
Investments:	
U. S. Bonds and Bills	75,136,177.00
Federal Agency Guaranteed Securities	6,164,666.00
Corporate Bonds and Other Fixed Income	93,831,350.00
Real Estate	169,130,606.00
Hedge Fund of Funds	25,792,027.00
Stocks	122,788,491.00
Private Debt and Equity Funds	39,744,398.00
Mutual Funds	205,336,754.00
Pooled/Common/Commingled Funds	212,039,675.00
Total Investments	949,964,144.00
Total Assets	968,029,276.00
<u>LIABILITIES</u>	
Payables:	
To Broker for Investments Purchased	2,403,259.00
Accounts Payable and Accrued Liabilities	1,177,891.00
To City of Fort Lauderdale	2,389,132.00
Total Liabilities	5,970,282.00
Net Assets:	
Active and Retired Members' Equity	927,340,809.25
Share Plan Benefits	34,718,184.75
NET POSITION RESTRICTED FOR PENSIONS	962,058,994.00

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED SEPTEMBER 30, 2019  
Market Value Basis

ADDITIONS

Contributions:		
Member		7,975,985.28
Member for Buy-Back		250,975.64
Member Share for Buy-back		2,639,111.74
City		18,108,528.00
State for Share Plan		1,524,327.54
State for Contribution		5,218,862.96
Total Contributions		35,717,791.16
Investment Income:		
Miscellaneous Income	8,141,047.00	
Net Increase in Fair Value of Investments		27,531,702.87
Interest & Dividends		14,403,741.00
Less Investment Expense <sup>1</sup>		(5,132,454.00)
Net Investment Income		36,802,989.87
Total Additions		72,520,781.03

DEDUCTIONS

Distributions to Members:		
Benefit Payments		42,806,184.65
Lump Sum DROP Distributions		4,421,522.22
Lump Sum Share Distributions		1,411,892.13
Lump Sum Share for Buybacks		2,639,111.74
Refunds of Member Contributions		71,729.82
Total Distributions		51,350,440.56
Administrative Expense		597,265.96
Administrative Expense for Share		41,653.04
Share Account Net Change		(1,658,988.41)
Total Deductions		50,330,371.15
Net Increase in Net Position		22,190,409.88
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		905,150,399.37
End of the Year		927,340,809.25

<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION  
September 30, 2019

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of Market Value of Assets.

Plan Year Ending	Gain/Loss	<u>Gains/(Losses) Not Yet Recognized</u>				
		Amounts Not Yet Recognized by Valuation Year				
		2019	2020	2021	2022	2023
09/30/2016	6,483,477	1,296,697	0	0	0	0
09/30/2017	36,115,815	14,446,326	7,223,163	0	0	0
09/30/2018	(3,674,623)	(2,204,773)	(1,469,848)	(734,923)	0	0
09/30/2019	(31,801,306)	(25,441,045)	(19,080,784)	(12,720,523)	(6,360,262)	0
Total		(11,902,795)	(13,327,469)	(13,455,446)	(6,360,262)	0

<u>Development of Investment Gain/(Loss)</u>	
Market Value of Assets, including Share Account, 09/30/2018	941,527,573
Contributions Less Benefit Payments & Admin Expenses	(16,271,568)
Expected Investment Earnings*	68,604,296
Actual Net Investment Earnings	36,802,990
2019 Actuarial Investment Gain/(Loss)	<u>(31,801,306)</u>

\*Expected Investment Earnings =  $0.0735 * [941,527,573 + 0.5 * (16,271,568)]$

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, net of Share, 09/30/2019	927,340,809
(2) Gains/(Losses) Not Yet Recognized	(11,902,795)
(3) Actuarial Value of Assets, net of Share, 09/30/2019, (1) - (2)	<u>939,243,604</u>
(A) 09/30/2018 Actuarial Assets, including Share:	920,204,390
(I) Net Investment Income:	
1. Interest, Dividends and Other Income	22,544,788
2. Net Increase in Fair Value of Investments	19,390,656
2. Change in Actuarial Value	33,225,978
3. Investment Expenses	(5,132,454)
Total	<u>70,028,968</u>
(B) 09/30/2019 Actuarial Assets, including Share:	973,961,789
Actuarial Asset Rate of Return = $2I/(A+B-I)$ :	7.68%
Market Value of Assets Rate of Return:	3.94%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	2,991,925
10/01/2019 Limited Net Actuarial Assets (not including Share):	939,243,604

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS  
 SEPTEMBER 30, 2019  
 Actuarial Asset Basis

REVENUES

Contributions:		
Member	7,975,985.28	
Member for Buy-Back	250,975.64	
Member Share for Buy-back	2,639,111.74	
City	18,108,528.00	
State for Share Plan	1,524,327.54	
State for Contribution	5,218,862.96	
 Total Contributions		 35,717,791.16
Earnings from Investments:		
Interest & Dividends	14,403,741.00	
Miscellaneous Income	8,141,047.00	
Net Increase in Fair Value of Investments	19,390,655.87	
Change in Actuarial Value	33,225,978.00	
 Total Earnings and Investment Gains		 75,161,421.87

EXPENDITURES

Distributions to Members:		
Benefit Payments	42,806,184.65	
Lump Sum DROP Distributions	4,421,522.22	
Lump Sum Share Distributions	1,411,892.13	
Lump Sum Share for Buybacks	2,639,111.74	
Refunds of Member Contributions	71,729.82	
 Total Distributions		 51,350,440.56
Expenses:		
Investment related <sup>1</sup>	5,132,454.00	
Administrative	597,265.96	
Administrative for Share	41,653.04	
 Total Expenses		 5,771,373.00
Share Account Net Change		(1,658,988.41)
Change in Net Assets for the Year		55,416,387.88
Net Assets Beginning of the Year		883,827,216.37
Net Assets End of the Year <sup>2</sup>		939,243,604.25

<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

<sup>2</sup>Net Assets may be limited for actuarial consideration.

DEFERRED RETIREMENT OPTION PLAN ACTIVITY  
October 1, 2018 to September 30, 2019

Beginning of the Year Balance	41,488,073.35
Plus Additions	12,106,342.96
Investment Return Earned	2,298,313.90
Less Distributions	(4,421,522.22)
End of the Year Balance	51,471,207.99

CITY CONTRIBUTIONS IN EXCESS OF MINIMUM REQUIREMENT  
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2019

(1) Required City and State Contributions	\$22,535,977.00
(2) Less Allowable State Contribution	<u>(5,218,862.96)</u>
(3) Required City Contribution for Fiscal 2019	17,317,114.04
(4) Less 2018 Prepaid Contribution	0.00
(5) Less Actual City Contributions	<u>(18,108,528.00)</u>
(6) City Contributions in Excess of Minimum Requirement Applied to Reduce Unfunded Actuarial Accrued Liability as of September 30, 2019	(\$791,413.96)

STATISTICAL DATA

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Actives - Hired before 10/1/2014</u>				
Number	724	689	655	588
Average Current Age	40.1	40.7	41.4	41.5
Average Age at Employment	28.2	28.1	28.1	27.9
Average Past Service	11.9	12.6	13.3	13.6
Average Annual Salary	\$95,133	\$97,726	\$101,535	\$110,107

Actives - Hired on or after 10/1/2014

Number	55	97	138	175
Average Current Age	28.8	29.2	29.4	30.4
Average Age at Employment	28.0	27.9	27.7	28.2
Average Past Service	0.8	1.3	1.7	2.2
Average Annual Salary	\$59,437	\$60,807	\$68,886	\$74,851

Service Retirees

Number	761	768	755	761
Average Current Age	66.1	66.6	67.0	67.3
Average Annual Benefit	\$47,248	\$48,011	\$48,513	\$49,256

DROP Retirees

Number	102	113	133	172
Average Current Age	51.8	52.3	52.7	52.5
Average Annual Benefit	\$74,877	\$75,723	\$75,781	\$78,059

Beneficiaries

Number	159	156	166	172
Average Current Age	73.9	73.6	74.3	74.1
Average Annual Benefit	\$23,498	\$23,906	\$25,880	\$25,398

Disability Retirees

Number	28	26	26	28
Average Current Age	53.4	54.2	55.2	55.3
Average Annual Benefit	\$42,598	\$42,733	\$42,141	\$43,291

STATISTICAL DATA  
(Police Only)

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Actives - Hired before 10/1/2014</u>				
Number	402	385	364	340
Average Current Age	39.4	40.2	40.8	41.3
Average Age at Employment	28.2	28.3	28.3	28.3
Average Past Service	11.2	11.9	12.5	13.0
Average Annual Salary	\$92,685	\$95,799	\$101,062	\$105,176
<u>Actives - Hired on or after 10/1/2014</u>				
Number	40	50	75	103
Average Current Age	28.2	28.1	28.3	29.8
Average Age at Employment	27.4	26.7	26.6	27.8
Average Past Service	0.8	1.4	1.7	2.0
Average Annual Salary	\$58,729	\$62,053	\$68,584	\$71,298



STATISTICAL DATA  
(Fire Only)

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Actives - Hired before 10/1/2014</u>				
Number	322	304	291	248
Average Current Age	41.0	41.4	42.0	41.8
Average Age at Employment	28.2	28.1	27.7	27.3
Average Past Service	12.8	13.3	14.3	14.5
Average Annual Salary	\$98,189	\$100,167	\$102,126	\$116,867
<u>Actives - Hired on or after 10/1/2014</u>				
Number	15	47	63	72
Average Current Age	30.4	30.4	30.8	31.3
Average Age at Employment	29.6	29.3	29.0	28.8
Average Past Service	0.8	1.1	1.8	2.5
Average Annual Salary	\$61,325	\$59,481	\$69,245	\$79,934

## AGE AND SERVICE DISTRIBUTION

### PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24	8	10	3	1								22
25 - 29	16	12	18	12	6	13						77
30 - 34	14	12	14	14	4	66	31					155
35 - 39	1	4	8	3	2	35	95	13				161
40 - 44		1	1	2	1	16	55	46	16			138
45 - 49	4		2	1		9	43	33	37			129
50 - 54				1		6	14	21	17			59
55 - 59							9	7	1			17
60 - 64							1	2	2			5
65+												0
<b>Total</b>	<b>43</b>	<b>39</b>	<b>46</b>	<b>34</b>	<b>13</b>	<b>145</b>	<b>248</b>	<b>122</b>	<b>73</b>	<b>0</b>	<b>0</b>	<b>763</b>

AGE AND SERVICE DISTRIBUTION  
(Police Only)

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24	6	6	1	1								14
25 - 29	11	7	9	8	6	7						48
30 - 34	13	9	1	8	4	41	19					95
35 - 39	1	1	2	1	2	20	55	7				89
40 - 44				1	1	13	37	28	5			85
45 - 49	3					5	26	16	15			65
50 - 54				1		5	10	13	4			33
55 - 59							7	6	1			14
60 - 64												0
65+												0
Total	34	23	13	20	13	91	154	70	25	0	0	443

AGE AND SERVICE DISTRIBUTION  
(Fire Only)

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24	2	4	2									8
25 - 29	5	5	9	4		6						29
30 - 34	1	3	13	6		25	12					60
35 - 39		3	6	2		15	40	6				72
40 - 44		1	1	1		3	18	18	11			53
45 - 49	1		2	1		4	17	17	22			64
50 - 54						1	4	8	13			26
55 - 59							2	1				3
60 - 64							1	2	2			5
65+												0
Total	9	16	33	14	0	54	94	52	48	0	0	320

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2018	793
b. Terminations	
i. Vested (partial or full) with deferred annuity	(1)
ii. Vested in refund of member contributions only	(4)
iii. Refund of member contributions or full lump sum distribution received	(6)
c. Deaths	
i. Beneficiary receiving benefits	(1)
ii. No future benefits payable	0
d. Disabled	(2)
e. Retired	(8)
f. DROP	<u>(52)</u>
g. Continuing participants	719
h. New entrants	<u>44</u>
i. Total active life participants in valuation	763

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

	Service Retirees, Vested Receiving <u>Benefits</u>	DROP <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested (Deferred Annuity)	Vested (Due Refund)	<u>Total</u>
a. Number prior valuation	755	133	166	26	17	7	1,104
Retired	25	(13)	0	0	(4)	0	8
DROP	0	52	0	0	0	0	52
Vested (Deferred Annuity)	0	0	0	0	1	0	1
Vested (Due Refund)	0	0	0	0	0	4	4
Hired/Terminated in Same Year	0	0	0	0	0	6	6
Death, With Survivor	(13)	0	14	0	0	0	1
Death, No Survivor	(7)	0	(8)	0	0	0	(15)
Disabled	0	0	0	2	0	0	2
Refund of Contributions	0	0	0	0	0	0	0
Rehires	0	0	0	0	0	0	0
Expired Annuities	0	0	0	0	0	0	0
Data Corrections	1	0	0	0	3	0	4
b. Number current valuation	761	172	172	28	17	17	1,167

## SUMMARY OF CURRENT PLAN

<u>Membership</u>	Police officers and firefighters.
<u>Credited Service</u>	Total years and fractional parts of years of years of service of any Member, from the date he first entered employment as a Police Officer or Firefighter until either the date of his DROP Retirement or the date his employment shall be terminated by death, retirement, or discharge.
<u>Compensation</u>	Base pay, assignment pay, and longevity bonuses, including pick-up contributions, and up to forty (40) hours of overtime for police officers.
<u>Average Final Compensation</u>	<i>Firefighters hired prior October 1, 2014:</i> Average Compensation during the highest 2 years of Credited Service.  <i>Firefighters hired after September 30, 2014:</i> Average Compensation during the highest 5 years of Credited Service.  <i>Police Officers hired prior to April 1, 2014:</i> Average Compensation during the highest 2 years of Credited Service.  <i>Police Officers hired after March 31, 2014:</i> Average Compensation during the highest 5 years of Credited Service.
<u>Member Contributions</u>	10.00% of Compensation.
<u>City and State Contributions</u>	Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Part VII, Chapter 112, F.S.
<u>Normal Retirement</u>	
Date	Earlier of: 1) Age 55 with 10 years of Credited Service, or 2) attainment of 20 years of Credited Service, regardless of Age.
Plan 1 Benefit	
Firefighters	<i>Hired prior to October 1, 2014:</i> 3.38% of Average Final Compensation times Credited Service, with a maximum of 81% of Average Final Compensation. Firefighters with 25 or more years of Credited Service on October 1, 2002 are subject to a maximum of 91.26% of Average Final Compensation. Firefighters employed before

December 11, 1993 receive an additional 2.0% of Average Final Compensation (excluded from the 81% maximum percentage).

*Hired after September 30, 2014:* 3.00% of Average Final Compensation times Credited Service, with a maximum of 75% of Average Final Compensation.

Police Officers

*Hired prior to April 1, 2014:* 3.38% of Average Final Compensation times Credited Service, with a maximum of 81% of Average Final Compensation. Police Officers with 25 or more years of Credited Service on January 1, 2002 are subject to a maximum of 91.26%.

*Hired after March 31, 2014:* 3.00% of Average Final Compensation times Credited Service, with a maximum of 75% of Average Final Compensation.

Plan 2 Benefit

3.0% of Average Final Compensation for the first 20 years of Credited Service, plus 2.0% of Average Final Compensation for each year in excess of 20. Firefighters employed before December 11, 1993 receive an additional 2.0% of Average Final Compensation.

Form of Benefit

*Firefighters hired prior to October 1, 2014:* 60% Joint and Survivor, with an additional 40% death benefit during the first year of retirement (Optional forms available).

*Firefighters hired after September 30, 2014:* 10-Year Certain and Life (Optional forms available).

*Police Officers hired prior to April 1, 2014:* 60% Joint and Survivor, with an additional 40% death benefit during the first year of retirement (Optional forms available).

*Police Officers hired after March 31, 2014:* 10-Year Certain and Life (Optional forms available).

Early Retirement (Firefighters Only)

Eligibility

Age 50 with 10 years of Credited Service.

Benefit

Accrued benefit, reduced 3.0% per year that the benefit commencement date precedes the Normal Retirement date.

Vesting

Less than 10 Years of Credited Service

Refund of Member contributions. For Police Officers who separate employment with the City on or after December 3, 2013 and Firefighters who separate employment with the City on or after October 1, 2014, no interest will be credited when determining the refund amount.

10 years of Credited Service

Accrued benefit deferred to Normal Retirement date.

Disability

Eligibility

Covered from Date of Employment.

Exclusions

Disability resulting from use of drugs, illegal participation in riots, service in military, etc.

Benefit

Non-Service Connected

50% of Average Final Compensation offset by 100% of Social Security Disability benefits, Workers' Compensation benefits, and earned income.

Service Connected

65% of Average Final Compensation.

Duration

Payable for life or until recovery.

Death Benefits

Eligibility

Covered from Date of Employment.

Benefit

Non-Service Connected

50% of the Member's monthly Compensation for eight (8) years. For a Member with at least 10 years of Credited Service, not less than the benefits otherwise payable at early or normal retirement age. The minimum benefit payable is four (4) times the rate of the Member's annual compensation.

Service Connected

50% of Member's monthly Compensation to spouse until death or remarriage. Children's benefits of 10% of Member's monthly benefits per child (50% maximum) until age 18, and a maximum of 80% to spouse and children. For Members who are not married and have no children, a 10-year benefit will be paid to the designated beneficiary. The minimum benefit payable is four (4) times the rate of the Member's annual compensation.



COLA

Adjustment Date

July 1st

Eligibility

Receipt of retirement benefits for one year. Additionally, must have entered Retirement status prior to July 1, 2008.

Amount

Lesser of 1) percentage not greater than CPI (all Urban Consumers) for preceding calendar year, or 2) percentage increase limited to present value of which can be funded by excess gains for preceding calendar year. Maximum cost-of-living adjustment is 5.0%.

The COLA increase may be granted only if the System remains in a net positive experience position, determined on a cumulative basis from January 1, 1987 (in State Statute – not in Ordinance)

DROP

Members eligible for Normal Retirement may elect either a Deferred Retirement Option Plan for up to 96 months or a Benefit Actuarially Calculated Deferred Retirement Option Program for up to 36 months, but not both. For Police Officers hired after March 31, 2014 and Firefighters hired after September 30, 2014, each month a Member delays entry into DROP following completion of 25 years of Credited Service, the 96 month maximum DROP participation period shall be correspondingly reduced by one month. Tier 1 DROP participants shall contribute 1.75% of salary during DROP participation. Tier 2 DROP participants shall contribute 10% of salary for the first five (5) years of DROP participation, and 1.50% of salary for each year thereafter. Members will not receive a refund of contributions made while participating in DROP.

STATEMENT OF FIDUCIARY NET POSITION  
SEPTEMBER 30, 2019

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Money Market	13,523,044
Cash and Short Term Investments	3,257
Total Cash and Equivalents	13,526,301
Receivables:	
From Broker for Investments Sold	2,625,447
Investment Income	1,913,384
Total Receivable	4,538,831
Investments:	
U. S. Bonds and Bills	75,136,177
Federal Agency Guaranteed Securities	6,164,666
Corporate Bonds and Other Fixed Income	93,831,350
Real Estate	169,130,606
Hedge Fund of Funds	25,792,027
Stocks	122,788,491
Private Debt and Equity Funds	39,744,398
Mutual Funds	205,336,754
Pooled/Common/Commingled Funds	212,039,675
Total Investments	949,964,144
Total Assets	968,029,276
<u>LIABILITIES</u>	
Payables:	
To Broker for Investments Purchased	2,403,259
Accounts Payable and Accrued Liabilities	1,177,891
To City of Fort Lauderdale	2,389,132
Total Liabilities	5,970,282
NET POSITION RESTRICTED FOR PENSIONS	962,058,994

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED SEPTEMBER 30, 2019  
Market Value Basis

ADDITIONS

## Contributions:

Member	7,975,985
Member for Buy-Back	250,976
Member Share for Buy-back	2,639,112
City	18,108,528
State for Share Plan	1,524,327
State for Contribution	5,218,863

Total Contributions	35,717,791
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## Investment Income:

Net Increase in Fair Value of Investments	27,531,702
Interest & Dividends	14,403,741
Less Investment Expense <sup>1</sup>	(5,132,454)

Net Investment Income	36,802,989
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Total Additions	72,520,780
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DEDUCTIONS

## Distributions to Members:

Benefit Payments	42,806,185
Lump Sum DROP Distributions	4,421,522
Lump Sum Share Distributions	1,411,892
Lump Sum Share for Buybacks	2,639,112
Refunds of Member Contributions	71,729

Total Distributions	51,350,440
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Administrative Expense	638,919
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Total Deductions	51,989,359
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Net Increase in Net Position	20,531,421
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## NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	941,527,573
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End of the Year	962,058,994
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**NOTES TO THE FINANCIAL STATEMENTS**  
(For the Year Ended September 30, 2019)

*Plan Administration*

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of: Two of the three appointive Members shall be appointed by the City Commission, each of whom must be a legal resident of the City. The two above appointive Members appointed after September 18, 2012 shall serve as trustee for a period of 4 years, unless sooner replaced by the City Commission at whose pleasure they shall serve. The third appointive Member shall be chosen by a majority of the previous six Members and such person's name shall be submitted to the City Commission. Upon receipt of the seventh person's name, the City Commission shall, as a ministerial duty, appoint such person to the Board of Trustees as its seventh Member. The seventh Member shall have the same rights as each of the other six Members appointed or elected as herein provided, shall serve on the Board for a period of four years, and may succeed himself or herself in office. The term of office of the seventh Member appointed after September 18, 2012 shall be four years.

*Plan Membership as of October 1, 2018:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	1,080
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	24
Active Plan Members	793
	1,897

*Benefits Provided*

The Plan provides retirement, termination, disability and death benefits. A summary of the benefit provisions can be found in the October 1, 2018 Actuarial Valuation Report for the City of Fort Lauderdale Police and Firefighters' Retirement System prepared by Foster & Foster Actuaries and Consultants. Incorporated are the benefit changes for measurement date 09/30/2019 as noted under the Notes to Schedule of Changes in Net Pension Liability and Related Ratios.

*Contributions*

Member Contributions: 10.00% of Compensation.  
City and State Contributions: Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Part VII, Chapter 112, F.S.

**Investments**

*Investment Policy:*

The following was the Board's adopted asset allocation policy as of September 30, 2019:

Asset Class	Target Allocation
Domestic Equity	30.00%
International Equity	15.00%
Domestic Bonds	20.00%
Real Estate	15.00%
Other	20.00%
Total	100.00%

*Concentrations:*

The Plan did not hold investments in any one organization that represent 5 percent or more of the Pension Plan's Fiduciary Net Position.

*Rate of Return:*

For the year ended September 30, 2019, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 3.94 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Deferred Retirement Option Program

Members eligible for Normal Retirement may elect either a Deferred Retirement Option Plan for up to 96 months or a Benefit Actuarially Calculated Deferred Retirement Option Program for up to 36 months, but not both. For Police Officers hired after March 31, 2014 and Firefighters hired after September 30, 2014, each month a Member delays entry into DROP following completion of 25 years of Credited Service, the 96 month maximum DROP participation period shall be correspondingly reduced by one month. Tier 1 DROP participants shall contribute 1.75% of salary during DROP participation. Tier 2 DROP participants shall contribute 10% of salary for the first five (5) years of DROP participation, and 1.50% of salary for each year thereafter. Members will not receive a refund of contributions made while participating in DROP.

The DROP balance as September 30, 2019 is \$51,471,208.

## NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2019 were as follows:

Total Pension Liability	\$ 1,030,710,899
Plan Fiduciary Net Position	<u>\$ (962,058,994)</u>
Sponsor's Net Pension Liability	<u>\$ 68,651,905</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	93.34%

*Actuarial Assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2018 updated to September 30, 2019 using the following actuarial assumptions:

Inflation	2.75%	
Salary Increases	0.50% - 3.00%	*Expected increase in annual salary in addition to 2.75% inflationary component.
Discount Rate	7.30%	
Investment Rate of Return	7.30%	

*Mortality Rate Healthy Active Lives:*

Female: RP2000 Generational, 100% Combined Healthy White Collar, Scale BB.  
 Male: RP2000 Generational, 10% Combined Healthy White Collar / 90% Combined Healthy Blue Collar, Scale BB.

*Mortality Rate Healthy Inactive Lives:*

Female: RP2000 Generational, 100% Annuitant White Collar, Scale BB.  
 Male: RP2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

*Mortality Rate Disabled Lives:*

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

The above assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumptions used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman's July 1, 2018 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

The most recent actuarial experience study used to review the other significant assumptions was dated July 10, 2015.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2019 the inflation rate assumption of the investment advisor was 2.25%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of arithmetic real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2019 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return <sup>1</sup>
Domestic Equity	7.35%
International Equity	7.15%
Domestic Bonds	2.10%
Real Estate	6.25%
Other	5.44%

<sup>1</sup>Based on 7-10 year projected returns

## GASB 67

### Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.30 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

	1% Decrease 6.30%	Current Discount Rate 7.30%	1% Increase 8.30%
Sponsor's Net Pension Liability	\$ 179,371,945	\$ 68,651,905	\$ (22,918,326)

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2019	09/30/2018	09/30/2017
Total Pension Liability			
Service Cost	21,371,855	20,478,769	20,106,284
Interest	71,544,868	68,505,318	65,765,964
Change in Excess State Money	-	-	-
Share Plan Allocation	1,524,328	1,599,747	1,653,054
Changes of benefit terms	65,590	6,411	-
Differences between Expected and Actual Experience	2,008,045	(1,668,323)	(2,762,831)
Changes of assumptions	5,019,222	4,790,360	10,692,637
Contributions - Buy Back	2,890,088	2,371,335	24,749
Contributions - Transfer from General Plan	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(51,350,440)	(47,417,274)	(46,564,184)
Net Change in Total Pension Liability	53,073,556	48,666,343	48,915,673
Total Pension Liability - Beginning	977,637,343	928,971,000	880,055,327
Total Pension Liability - Ending (a)	<u>\$ 1,030,710,899</u>	<u>\$ 977,637,343</u>	<u>\$ 928,971,000</u>
Plan Fiduciary Net Position			
Contributions - Employer	18,108,528	19,328,568	17,325,393
Contributions - State	6,743,190	6,380,918	5,932,068
Contributions - Employee	7,975,985	6,838,045	5,901,141
Contributions - Buy Back	2,890,088	2,371,335	24,749
Contributions - Transfer from General Plan	-	-	-
Net Investment Income	36,802,989	61,903,958	96,510,340
Benefit Payments, including Refunds of Employee Contributions	(51,350,440)	(47,417,274)	(46,564,184)
Administrative Expense	(638,919)	(648,453)	(619,575)
Other	-	-	-
Net Change in Plan Fiduciary Net Position	20,531,421	48,757,097	78,509,932
Plan Fiduciary Net Position - Beginning	941,527,573	892,770,476	814,260,544
Plan Fiduciary Net Position - Ending (b)	<u>\$ 962,058,994</u>	<u>\$ 941,527,573</u>	<u>\$ 892,770,476</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 68,651,905</u>	<u>\$ 36,109,770</u>	<u>\$ 36,200,524</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	93.34%	96.31%	96.10%
Covered Payroll <sup>1</sup>	\$ 76,177,179	\$ 72,960,842	\$ 71,050,792
Net Pension Liability as a percentage of Covered Payroll	90.12%	49.49%	50.95%



**SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS**  
Last 10 Fiscal Years

	<u>09/30/2016</u>	<u>09/30/2015</u>
Total Pension Liability		
Service Cost	19,199,538	18,531,300
Interest	62,181,617	60,367,031
Change in Excess State Money	-	-
Share Plan Allocation	1,732,185	1,826,197
Changes of benefit terms	-	1,097,988
Differences between Expected and Actual Experience	(5,100,657)	(7,319,054)
Changes of assumptions	16,504,779	(2,194,981)
Contributions - Buy Back	73,763	43,865
Contributions - Transfer from General Plan	-	26,692
Benefit Payments, including Refunds of Employee Contributions	(48,849,184)	(46,660,430)
Net Change in Total Pension Liability	<u>45,742,041</u>	<u>25,718,608</u>
Total Pension Liability - Beginning	<u>834,313,286</u>	<u>808,594,678</u>
Total Pension Liability - Ending (a)	<u><u>\$ 880,055,327</u></u>	<u><u>\$ 834,313,286</u></u>
Plan Fiduciary Net Position		
Contributions - Employer	13,867,934	15,599,916
Contributions - State	5,860,782	5,799,228
Contributions - Employee	5,732,925	5,584,263
Contributions - Buy Back	73,763	43,865
Contributions - Transfer from General Plan	-	26,692
Net Investment Income	63,676,002	5,969,880
Benefit Payments, including Refunds of Employee Contributions	(48,849,184)	(46,660,430)
Administrative Expense	(651,146)	(692,348)
Other	-	-
Net Change in Plan Fiduciary Net Position	<u>39,711,076</u>	<u>(14,328,934)</u>
Plan Fiduciary Net Position - Beginning	<u>774,549,468</u>	<u>788,878,402</u>
Plan Fiduciary Net Position - Ending (b)	<u><u>\$ 814,260,544</u></u>	<u><u>\$ 774,549,468</u></u>
Net Pension Liability - Ending (a) - (b)	<u><u>\$ 65,794,783</u></u>	<u><u>\$ 59,763,818</u></u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	92.52%	92.84%
Covered Payroll <sup>1</sup>	\$ 69,471,501	\$ 68,064,001
Net Pension Liability as a percentage of Covered Payroll	94.71%	87.81%

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2014	09/30/2013
Total Pension Liability		
Service Cost	18,025,712	16,768,104
Interest	57,797,227	55,119,489
Change in Excess State Money	(1,223,158)	-
Share Plan Allocation	2,561,814	-
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	-	-
Changes of assumptions	-	-
Contributions - Buy Back	-	-
Contributions - Transfer from General Plan	-	-
Benefit Payments, including Refunds of Employee Contributions	(44,137,555)	(31,351,671)
Net Change in Total Pension Liability	33,024,040	40,535,922
Total Pension Liability - Beginning	775,570,638	735,034,716
Total Pension Liability - Ending (a)	<u>\$ 808,594,678</u>	<u>\$ 775,570,638</u>
Plan Fiduciary Net Position		
Contributions - Employer	14,498,457	11,219,401
Contributions - State	5,875,363	6,053,952
Contributions - Employee	5,581,044	4,113,451
Contributions - Buy Back	-	-
Contributions - Transfer from General Plan	-	-
Net Investment Income	59,358,824	69,488,348
Benefit Payments, including Refunds of Employee Contributions	(44,137,555)	(31,351,671)
Administrative Expense	(647,397)	(507,376)
Other	4,000,034	-
Net Change in Plan Fiduciary Net Position	44,528,770	59,016,105
Plan Fiduciary Net Position - Beginning	744,349,632	685,333,527
Plan Fiduciary Net Position - Ending (b)	<u>\$ 788,878,402</u>	<u>\$ 744,349,632</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 19,716,276</u>	<u>\$ 31,221,006</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	97.56%	95.97%
Covered Payroll <sup>1</sup>	\$ 67,279,327	\$ 65,886,733
Net Pension Liability as a percentage of Covered Payroll	29.31%	47.39%

**Notes to Schedule of Changes in Net Pension Liability and Related Ratios**

<sup>1</sup> The Covered Payroll numbers shown are in compliance with GASB 82.

*Changes of benefit terms:*

For measurement date 09/30/2019, amounts reported as changes of benefit terms resulted from the provisions of Chapter 112.1816, Florida Statutes. The Statutes state that, effective July 1, 2019, a death or disability (under the Plan's definition of total and permanent disability) for a Firefighter due to the diagnosis of cancer or circumstances that arise out of the treatment of cancer will be treated as duty-related.

For measurement date 09/30/2018, as outlined in the July 2, 2018 actuarial impact statement, there have been a number of changes to the plan provisions. The specific changes are as follows:

- 1) Provided provisional language for firefighters to purchase prior firefighter or military service at an amount equal to the full actuarial cost, as determined by the actuary for the retirement system.
- 2) Increased the member contribution rate for all active members to 10% of pensionable earnings. This increase was effective October 1, 2018 for firefighters and October 1, 2017 for police officers.
- 3) Provided for a permissible DROP extension for members who were participating in the DROP with a DROP period of less than ninety-six (96) months. The applicable extension would be for an additional twelve (12) or twenty-four (24) months of DROP participation, such that the total DROP participation would not exceed ninety-six (96) months.
- 4) Tier 1 members participating in DROP shall contribute 1.75% of salary. This requirement was effective October 1, 2018 for firefighters and October 1, 2017 for police officers. It is our understanding that no DROP participants will receive a refund of contributions made while in DROP, regardless of length of participation.
- 5) Tier 2 members participating in DROP shall contribute 10% of salary for the first five (5) years of DROP participation, and 1.50% of salary for each year thereafter. It is our understanding that no DROP participants will receive a refund of contributions made while in DROP, regardless of length of participation.

For measurement date 09/30/2015, amounts reported as changes of benefit terms were resulted from:

- 1) For Firefighters hired on or after October 1, 2014:
  - a. The Average Monthly Earnings period will be increased from 2 to 5 years.
  - b. The benefit accrual rate will be decreased from 3.38% to 3.0% for each year of Credited Service.
  - c. The maximum accrual rate will be decreased from 81.0% to 75.0% of Average Monthly Earnings.
  - d. For each month a Firefighter delays entry into DROP following completion of 25 years of Credited Service, the 96 month maximum DROP participation period shall be correspondingly reduced by one month.
  - e. The Normal Form of Benefit will be changed from 60% joint and contingent survivor to 10-Year Certain and Life.
- 2) Eliminating the interest component on refunds of Member Contributions for all Firefighters who separate employment with the City on or after October 1, 2014.
- 3) Amending the definition of Salary to provide that pensionable earnings for Firefighters will be increased from 144 hours to 159 hours for each 21-day period.
- 4) Implementing a special formula to determine the amount of Chapter 175 premium tax revenues that the City will be able to utilize to offset its funding requirements, effective for the plan year beginning on October 1, 2014.

For the impact these changes had on the valuation results, please refer to our September 10, 2015 Revised Actuarial Impact Statement.

For measurement date 09/30/2014, a number of benefits were amended for Police Officers hired on or after April 1, 2014. Additionally, the entire balance of the Chapter 185 premium tax revenues reserve account in the Plan as of December 31, 2013 was applied to reduce the City's annual required contribution for the October 15, 2014 payment. Additionally, all future Chapter 185 premium tax revenues received shall be available to reduce the City's annual contribution requirements. For the specific changes made to the Police Officers' benefit structure and the impact these changes had on the valuation results, please refer to our March 14, 2014 Actuarial Impact Statement.

**Notes to Schedule of Changes in Net Pension Liability and Related Ratios***Changes of assumptions:*

For measurement date 09/30/2019, amounts reported as changes of assumptions resulted from lowering the investment return assumption from 7.35% to 7.30% per year, net of investment related expenses.

For measurement date 09/30/2018, amounts reported as changes of assumptions resulted from lowering the investment return assumption from 7.40% to 7.35% per year, net of investment related expenses.

For measurement date 09/30/2017, as required by Chapter 2015-157, Laws of Florida, the assumed rates of mortality have been changed from those in the July 1, 2015 FRS valuation report to those used in the July 1, 2016 FRS valuation report. Additionally, the investment rate of return was lowered from 7.50% to 7.40%, net of investment related expenses. Finally, the inflation rate assumption has been updated from 2.30% to 2.75% to match the long-term inflation rate assumption of the valuation report.

For measurement date 09/30/2016, as a result of Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the assumptions used by the Florida Retirement System for special risk employees.

The inflation assumption rate was lowered from 3.00% to 2.30%, matching the long-term inflation assumption utilized by the Plan's investment consultant.

For measurement date 09/30/2015, amounts reported as assumption changes were resulted from an actuarial experience study dated July 10, 2015 the Board approved numerous changes to the actuarial assumptions and methods in conjunction with the 10/01/20105 Valuation. The below assumptions/methods have been changed, and the specifics of the approved assumptions are displayed in the actuarial assumptions and methods section of the 10/01/2015 Valuation.

- 1) Asset Valuation Method (with a "Fresh Start")
- 2) Retirement Rates
- 3) Withdrawal Rates
- 4) Disability Rates (Police only)

**SCHEDULE OF CONTRIBUTIONS**  
Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll <sup>1</sup>	Contributions as a percentage of Covered Payroll
09/30/2019	\$ 22,535,977	\$ 23,327,391	\$ (791,414)	\$ 76,177,179	30.62%
09/30/2018	\$ 23,513,971	\$ 24,109,739	\$ (595,768)	\$ 72,960,842	33.04%
09/30/2017	\$ 21,265,207	\$ 21,604,408	\$ (339,201)	\$ 71,050,792	30.41%
09/30/2016	\$ 17,665,942	\$ 17,665,942	\$ -	\$ 69,471,501	25.43%
09/30/2015	\$ 18,913,469	\$ 18,913,469	\$ -	\$ 68,064,001	28.11%
09/30/2014	\$ 19,012,474	\$ 19,012,474	\$ -	\$ 67,279,327	28.26%
09/30/2013	\$ 14,208,593	\$ 14,208,593	\$ -	\$ 65,886,733	21.57%

<sup>1</sup> The Covered Payroll numbers shown are in compliance with GASB 82.

Notes to Schedule

Valuation Date: 10/01/2017

Actuarially determined contribution rates are calculated as of October 1, two years prior to the end of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Mortality Rates:

*Healthy Active Lives:*

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

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

*Healthy Inactive Lives:*

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

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

*Disabled Lives:*

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

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

The assumed rates of mortality were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumptions used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in the July 1, 2016 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate:

7.40% per year compounded annually, net of investment related expenses. We believe this is reasonable based on the target asset allocation of the trust and the expected long-term return by asset class.

Salary Increases:

<u>Service</u>	<u>Annual % Increase</u>
1 - 6	3.0%
7 - 10	2.5%
11 - 25	1.0%
26+	0.5%

Expected increase in annual salary in addition to 2.75% inflationary component. The assumed rates of salary received approval from the Division of Retirement based on historical data and long-term expectations.

Retirement Rates:

<u>Service</u>	<u>Probability of Retirement</u>	<u>Probability of Retirement</u>
	<u>(Police)</u>	<u>(Fire)</u>
10-19	5%	5%
20	30%	25%
21	30%	35%
22	30%	45%
23	50%	50%
24	80%	50%
25-34	10%	20%
35+	100%	100%

No Members are expected to take reduced Early Retirement. The assumed rates of retirement were approved in conjunction with an actuarial experience study dated July 10, 2015.

Cost of Living Adjustments:

None.

Funding Method:

Entry Age Normal Actuarial Cost Method. Beginning with the pension fund's plan year ended September 30, 2015, a full year salary load based on the current 4.3% assumption is utilized under the projection funding method, as mandated by the Division of Retirement.

Amortization Method:

Level Percentage of Pay, Closed.

Remaining Amortization Period:

20 Years.

Payroll Increases:

2.0% per year. We feel this is reasonable based on long-term expectations and historical increases in inflation.

Termination Rates:

<u>Age</u>	<u>Years of Service</u>	<u>% Separating from Employment within the Next Year</u>	
		<u>Police</u>	<u>Fire</u>
All Ages	0	15.0%	15.0%
	1	5.0%	5.0%
	2	3.0%	1.0%
	3	3.0%	1.0%
	4	3.0%	1.0%
<50	5+	1.5%	1.0%
50+	5+	0.0%	0.0%

The assumed rates of termination were approved in conjunction with an actuarial experience study dated July 10, 2015.

Disability Rates:

<u>Age</u>	<u>% Becoming Disabled within</u>	
	<u>Next Year</u>	
	<u>Police</u>	<u>Fire</u>
20	0.07%	0.14%
25	0.08%	0.15%
30	0.09%	0.18%
35	0.12%	0.23%
40	0.15%	0.30%
45	0.26%	0.51%
50	0.50%	1.00%
55	0.78%	1.55%

It is assumed that 75% of disablements and active Member deaths are service related. The assumed rates of disablement were approved in conjunction with an actuarial experience study dated July 10, 2015.

Marital Status:

All employed Members and all retired Members are assumed to be married. Females are assumed to be 3 years younger than males. This assumption was approved in conjunction with an actuarial experience study dated July 10, 2015.

Actuarial Value of Assets:

All assets are valued at market value with an adjustment to uniformly spread investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period.

**SCHEDULE OF INVESTMENT RETURNS**  
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2019	3.94%
09/30/2018	6.99%
09/30/2017	11.98%
09/30/2016	8.35%
09/30/2015	0.77%
09/30/2014	8.60%
09/30/2013	10.10%



**NOTES TO THE FINANCIAL STATEMENTS**  
(For the Year Ended September 30, 2019)

*Plan Description*

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of: Two of the three appointive Members shall be appointed by the City Commission, each of whom must be a legal resident of the City. The two above appointive Members appointed after September 18, 2012 shall serve as trustee for a period of 4 years, unless sooner replaced by the City Commission at whose pleasure they shall serve. The third appointive Member shall be chosen by a majority of the previous six Members and such person's name shall be submitted to the City Commission. Upon receipt of the seventh person's name, the City Commission shall, as a ministerial duty, appoint such person to the Board of Trustees as its seventh Member. The seventh Member shall have the same rights as each of the other six Members appointed or elected as herein provided, shall serve on the Board for a period of four years, and may succeed himself or herself in office. The term of office of the seventh Member appointed after September 18, 2012 shall be four years.

The Plan provides pensions for each sworn police officer and firefighter of the City who is eligible to participate in the Plan and who fulfills the prescribed eligibility requirements is considered a Member of the Plan.

*Plan Membership as of October 1, 2018:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	1,080
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	24
Active Plan Members	793
	1,897

*Benefits Provided*

The Plan provides retirement, termination, disability and death benefits. A summary of the benefit provisions can be found in the October 1, 2018 Actuarial Valuation Report for the City of Fort Lauderdale Police and Firefighters' Retirement System prepared by Foster & Foster Actuaries and Consultants. Incorporated are the benefit changes for measurement date 09/30/2019 as noted under the Notes to Schedule of Changes in Net Pension Liability and Related Ratios.

*Contributions*

Member Contributions: 10.00% of Compensation.  
City and State Contributions: Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Part VII, Chapter 112, F.S.

**Net Pension Liability**

The measurement date is September 30, 2019.  
The measurement period for the pension expense was October 1, 2018 to September 30, 2019.  
The reporting period is October 1, 2018 through September 30, 2019.

The Sponsor's Net Pension Liability was measured as of September 30, 2019.  
The Total Pension Liability used to calculate the Net Pension Liability was determined as of that date.

*Actuarial Assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2018 updated to September 30, 2019 using the following actuarial assumptions:

Inflation	2.75%	
Salary Increases	0.50% - 3.00%	*Expected increase in annual salary in addition to 2.75% inflationary component.
Discount Rate	7.30%	
Investment Rate of Return	7.30%	

*Mortality Rate Healthy Active Lives:*

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

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

*Mortality Rate Healthy Inactive Lives:*

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

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

*Mortality Rate Disabled Lives:*

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

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

The above assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumptions used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman's July 1, 2018 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

The most recent actuarial experience study used to review the other significant assumptions was dated July 10, 2015.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2019 the inflation rate assumption of the investment advisor was 2.25%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of arithmetic real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2019 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return <sup>1</sup>
Domestic Equity	30.00%	7.35%
International Equity	15.00%	7.15%
Domestic Bonds	20.00%	2.10%
Real Estate	15.00%	6.25%
Other	20.00%	5.44%
<b>Total</b>	<b>100.00%</b>	

<sup>1</sup>Based on 7-10 year projected returns

**Discount Rate:**

The Discount Rate used to measure the Total Pension Liability was 7.30 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a)-(b)
Balance at September 30, 2018	\$ 977,637,343	\$ 941,527,573	\$ 36,109,770
Changes for a Year:			
Service Cost	21,371,855	-	21,371,855
Interest	71,544,868	-	71,544,868
Share Plan Allocation	1,524,328	-	1,524,328
Differences between Expected and Actual Experience	2,008,045	-	2,008,045
Changes of assumptions	5,019,222	-	5,019,222
Changes of benefit terms	65,590	-	65,590
Contributions - Employer	-	18,108,528	(18,108,528)
Contributions - State	-	6,743,190	(6,743,190)
Contributions - Employee	-	7,975,985	(7,975,985)
Contributions - Buy Back	2,890,088	2,890,088	-
Net Investment Income	-	36,802,989	(36,802,989)
Benefit Payments, including Refunds of Employee Contributions	(51,350,440)	(51,350,440)	-
Administrative Expense	-	(638,919)	638,919
Net Changes	53,073,556	20,531,421	32,542,135
Balance at September 30, 2019	\$1,030,710,899	\$ 962,058,994	\$ 68,651,905

*Sensitivity of the Net Pension Liability to changes in the Discount Rate.*

	Current Discount		
	1% Decrease 6.30%	Rate 7.30%	1% Increase 8.30%
Sponsor's Net Pension Liability	\$ 179,371,945	\$ 68,651,905	\$ (22,918,326)

*Pension Plan Fiduciary Net Position.*

Detailed information about the pension Plan's Fiduciary Net Position is available in a separately issued Plan financial report.

**PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED  
INFLOWS OF RESOURCES RELATED TO PENSIONS**

For the year ended September 30, 2019, the Sponsor will recognize a Pension Expense of \$31,621,409.

On September 30, 2019, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	1,606,436	3,126,258
Changes of assumptions	14,467,602	-
Net difference between Projected and Actual Earnings on Pension Plan investments	11,902,798	-
<b>Total</b>	<b>\$ 27,976,836</b>	<b>\$ 3,126,258</b>

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions will be recognized in Pension Expense as follows:

Year ended September 30:		
2020	\$	4,471,974
2021	\$	3,487,844
2022	\$	9,125,046
2023	\$	7,765,714
2024	\$	-
Thereafter	\$	-

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2019	09/30/2018	09/30/2017
Total Pension Liability			
Service Cost	21,371,855	20,478,769	20,106,284
Interest	71,544,868	68,505,318	65,765,964
Change in Excess State Money	-	-	-
Share Plan Allocation	1,524,328	1,599,747	1,653,054
Changes of benefit terms	65,590	6,411	-
Differences between Expected and Actual Experience	2,008,045	(1,668,323)	(2,762,831)
Changes of assumptions	5,019,222	4,790,360	10,692,637
Contributions - Buy Back	2,890,088	2,371,335	24,749
Contributions - Transfer from General Plan	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(51,350,440)	(47,417,274)	(46,564,184)
Net Change in Total Pension Liability	53,073,556	48,666,343	48,915,673
Total Pension Liability - Beginning	977,637,343	928,971,000	880,055,327
Total Pension Liability - Ending (a)	\$ 1,030,710,899	\$ 977,637,343	\$ 928,971,000
Plan Fiduciary Net Position			
Contributions - Employer	18,108,528	19,328,568	17,325,393
Contributions - State	6,743,190	6,380,918	5,932,068
Contributions - Employee	7,975,985	6,838,045	5,901,141
Contributions - Buy Back	2,890,088	2,371,335	24,749
Contributions - Transfer from General Plan	-	-	-
Net Investment Income	36,802,989	61,903,958	96,510,340
Benefit Payments, including Refunds of Employee Contributions	(51,350,440)	(47,417,274)	(46,564,184)
Administrative Expense	(638,919)	(648,453)	(619,575)
Other	-	-	-
Net Change in Plan Fiduciary Net Position	20,531,421	48,757,097	78,509,932
Plan Fiduciary Net Position - Beginning	941,527,573	892,770,476	814,260,544
Plan Fiduciary Net Position - Ending (b)	\$ 962,058,994	\$ 941,527,573	\$ 892,770,476
Net Pension Liability - Ending (a) - (b)	\$ 68,651,905	\$ 36,109,770	\$ 36,200,524
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	93.34%	96.31%	96.10%
Covered Payroll <sup>1</sup>	\$ 76,177,179	\$ 72,960,842	\$ 71,050,792
Net Pension Liability as a percentage of Covered Payroll	90.12%	49.49%	50.95%

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2016	09/30/2015
Total Pension Liability		
Service Cost	19,199,538	18,531,300
Interest	62,181,617	60,367,031
Change in Excess State Money	-	-
Share Plan Allocation	1,732,185	1,826,197
Changes of benefit terms	-	1,097,988
Differences between Expected and Actual Experience	(5,100,657)	(7,319,054)
Changes of assumptions	16,504,779	(2,194,981)
Contributions - Buy Back	73,763	43,865
Contributions - Transfer from General Plan	-	26,692
Benefit Payments, including Refunds of Employee Contributions	(48,849,184)	(46,660,430)
Net Change in Total Pension Liability	45,742,041	25,718,608
Total Pension Liability - Beginning	834,313,286	808,594,678
Total Pension Liability - Ending (a)	<u>\$ 880,055,327</u>	<u>\$ 834,313,286</u>
Contributions - Employer	13,867,934	15,599,916
Contributions - State	5,860,782	5,799,228
Contributions - Employee	5,732,925	5,584,263
Contributions - Buy Back	73,763	43,865
Contributions - Transfer from General Plan	-	26,692
Net Investment Income	63,676,002	5,969,880
Benefit Payments, including Refunds of Employee Contributions	(48,849,184)	(46,660,430)
Administrative Expense	(651,146)	(692,348)
Other	-	-
Net Change in Plan Fiduciary Net Position	39,711,076	(14,328,934)
Plan Fiduciary Net Position - Beginning	774,549,468	788,878,402
Plan Fiduciary Net Position - Ending (b)	<u>\$ 814,260,544</u>	<u>\$ 774,549,468</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 65,794,783</u>	<u>\$ 59,763,818</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	92.52%	92.84%
Covered Payroll <sup>1</sup>	\$ 69,471,501	\$ 68,064,001
Net Pension Liability as a percentage of Covered Payroll	94.71%	87.81%

**SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS**  
Last 10 Fiscal Years

	09/30/2014	09/30/2013
Total Pension Liability		
Service Cost	18,025,712	16,768,104
Interest	57,797,227	55,119,489
Change in Excess State Money	(1,223,158)	-
Share Plan Allocation	2,561,814	-
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	-	-
Changes of assumptions	-	-
Contributions - Buy Back	-	-
Contributions - Transfer from General Plan	-	-
Benefit Payments, including Refunds of Employee Contributions	(44,137,555)	(31,351,671)
Net Change in Total Pension Liability	33,024,040	40,535,922
Total Pension Liability - Beginning	775,570,638	735,034,716
Total Pension Liability - Ending (a)	<u>\$ 808,594,678</u>	<u>\$ 775,570,638</u>
Contributions - Employer	14,498,457	11,219,401
Contributions - State	5,875,363	6,053,952
Contributions - Employee	5,581,044	4,113,451
Contributions - Buy Back	-	-
Contributions - Transfer from General Plan	-	-
Net Investment Income	59,358,824	69,488,348
Benefit Payments, including Refunds of Employee Contributions	(44,137,555)	(31,351,671)
Administrative Expense	(647,397)	(507,376)
Other	4,000,034	-
Net Change in Plan Fiduciary Net Position	44,528,770	59,016,105
Plan Fiduciary Net Position - Beginning	744,349,632	685,333,527
Plan Fiduciary Net Position - Ending (b)	<u>\$ 788,878,402</u>	<u>\$ 744,349,632</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 19,716,276</u>	<u>\$ 31,221,006</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	97.56%	95.97%
Covered Payroll <sup>1</sup>	\$ 67,279,327	\$ 65,886,733
Net Pension Liability as a percentage of Covered Payroll	29.31%	47.39%

**Notes to Schedule of Changes in Net Pension Liability and Related Ratios**

<sup>1</sup> The Covered Payroll numbers shown are in compliance with GASB 82.

*Changes of benefit terms:*

For measurement date 09/30/2019, amounts reported as changes of benefit terms resulted from the provisions of Chapter 112.1816, Florida Statutes. The Statutes state that, effective July 1, 2019, a death or disability (under the Plan's definition of total and permanent disability) for a Firefighter due to the diagnosis of cancer or circumstances that arise out of the treatment of cancer will be treated as duty-related.

For measurement date 09/30/2018, as outlined in the July 2, 2018 actuarial impact statement, there have been a number of changes to the plan provisions. The specific changes are as follows:

- 1) Provided provisional language for firefighters to purchase prior firefighter or military service at an amount equal to the full actuarial cost, as determined by the actuary for the retirement system.
- 2) Increased the member contribution rate for all active members to 10% of pensionable earnings. This increase was effective October 1, 2018 for firefighters and October 1, 2017 for police officers.
- 3) Provided for a permissible DROP extension for members who were participating in the DROP with a DROP period of less than ninety-six (96) months. The applicable extension would be for an additional twelve (12) or twenty-four (24) months of DROP participation, such that the total DROP participation would not exceed ninety-six (96) months.
- 4) Tier 1 members participating in DROP shall contribute 1.75% of salary. This requirement was effective October 1, 2018 for firefighters and October 1, 2017 for police officers. It is our understanding that no DROP participants will receive a refund of contributions made while in DROP, regardless of length of participation.
- 5) Tier 2 members participating in DROP shall contribute 10% of salary for the first five (5) years of DROP participation, and 1.50% of salary for each year thereafter. It is our understanding that no DROP participants will receive a refund of contributions made while in DROP, regardless of length of participation.

For measurement date 09/30/2015, amounts reported as changes of benefit terms were resulted from:

- 1) For Firefighters hired on or after October 1, 2014:
  - a. The Average Monthly Earnings period will be increased from 2 to 5 years.
  - b. The benefit accrual rate will be decreased from 3.38% to 3.0% for each year of Credited Service.
  - c. The maximum accrual rate will be decreased from 81.0% to 75.0% of Average Monthly Earnings.
  - d. For each month a Firefighter delays entry into DROP following completion of 25 years of Credited Service, the 96 month maximum DROP participation period shall be correspondingly reduced by one month.
  - e. The Normal Form of Benefit will be changed from 60% joint and contingent survivor to 10-Year Certain and Life.
- 2) Eliminating the interest component on refunds of Member Contributions for all Firefighters who separate employment with the City on or after October 1, 2014.
- 3) Amending the definition of Salary to provide that pensionable earnings for Firefighters will be increased from 144 hours to 159 hours for each 21-day period.
- 4) Implementing a special formula to determine the amount of Chapter 175 premium tax revenues that the City will be able to utilize to offset its funding requirements, effective for the plan year beginning on October 1, 2014.

For the impact these changes had on the valuation results, please refer to our September 10, 2015 Revised Actuarial Impact Statement.

For measurement date 09/30/2014, a number of benefits were amended for Police Officers hired on or after April 1, 2014. Additionally, the entire balance of the Chapter 185 premium tax revenues reserve account in the Plan as of December 31, 2013 was applied to reduce the City's annual required contribution for the October 15, 2014 payment. Additionally, all future Chapter 185 premium tax revenues received shall be available to reduce the City's annual contribution requirements. For the specific changes made to the Police Officers' benefit structure and the impact these changes had on the valuation results, please refer to our March 14, 2014 Actuarial Impact Statement.



**Notes to Schedule of Changes in Net Pension Liability and Related Ratios***Changes of assumptions:*

For measurement date 09/30/2019, amounts reported as changes of assumptions resulted from lowering the investment return assumption from 7.35% to 7.30% per year, net of investment related expenses.

For measurement date 09/30/2018, amounts reported as changes of assumptions resulted from lowering the investment return assumption from 7.40% to 7.35% per year, net of investment related expenses.

For measurement date 09/30/2017, as required by Chapter 2015-157, Laws of Florida, the assumed rates of mortality have been changed from those in the July 1, 2015 FRS valuation report to those used in the July 1, 2016 FRS valuation report. Additionally, the investment rate of return was lowered from 7.50% to 7.40%, net of investment related expenses. Finally, the inflation rate assumption has been updated from 2.30% to 2.75% to match the long-term inflation rate assumption of the valuation report.

For measurement date 09/30/2016, as a result of Chapter 2015-157, Laws of Florida, the assumed rates of mortality were changed to the assumptions used by the Florida Retirement System for special risk employees.

The inflation assumption rate was lowered from 3.00% to 2.30%, matching the long-term inflation assumption utilized by the Plan's investment consultant.

For measurement date 09/30/2015, amounts reported as assumption changes were resulted from an actuarial experience study dated July 10, 2015 the Board approved numerous changes to the actuarial assumptions and methods in conjunction with the 10/01/20105 Valuation. The below assumptions/methods have been changed, and the specifics of the approved assumptions are displayed in the actuarial assumptions and methods section of the 10/01/2015 Valuation.

- 1) Asset Valuation Method (with a "Fresh Start")
- 2) Retirement Rates
- 3) Withdrawal Rates
- 4) Disability Rates (Police only)

## SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll <sup>1</sup>	Contributions as a percentage of Covered Payroll
09/30/2019	\$ 22,535,977	\$ 23,327,391	\$ (791,414)	\$ 76,177,179	30.62%
09/30/2018	\$ 23,513,971	\$ 24,109,739	\$ (595,768)	\$ 72,960,842	33.04%
09/30/2017	\$ 21,265,207	\$ 21,604,408	\$ (339,201)	\$ 71,050,792	30.41%
09/30/2016	\$ 17,665,942	\$ 17,665,942	\$ -	\$ 69,471,501	25.43%
09/30/2015	\$ 18,913,469	\$ 18,913,469	\$ -	\$ 68,064,001	28.11%
09/30/2014	\$ 19,012,474	\$ 19,012,474	\$ -	\$ 67,279,327	28.26%
09/30/2013	\$ 14,208,593	\$ 14,208,593	\$ -	\$ 65,886,733	21.57%

<sup>1</sup> The Covered Payroll numbers shown are in compliance with GASB 82.

Notes to Schedule

Valuation Date: 10/01/2017

Actuarially determined contribution rates are calculated as of October 1, two years prior to the end of the fiscal year in which contributions are reported.

Methods and assumptions used to determine contribution rates:

Mortality Rates:

*Healthy Active Lives:*

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

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

*Healthy Inactive Lives:*

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

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

*Disabled Lives:*

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

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

The assumed rates of mortality were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumptions used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in the July 1, 2016 FRS actuarial valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate:

7.40% per year compounded annually, net of investment related expenses. We believe this is reasonable based on the target asset allocation of the trust and the expected long-term return by asset class.

**GASB 68**

Salary Increases:	<u>Service</u>	<u>Annual % Increase</u>
	1 - 6	3.0%
	7 - 10	2.5%
	11 - 25	1.0%
	26+	0.5%

Expected increase in annual salary in addition to 2.75% inflationary component. The assumed rates of salary received approval from the Division of Retirement based on historical data and long-term expectations.

Retirement Rates:	<u>Service</u>	<u>Probability of Retirement (Police)</u>	<u>Probability of Retirement (Fire)</u>
	10-19	5%	5%
	20	30%	25%
	21	30%	35%
	22	30%	45%
	23	50%	50%
	24	80%	50%
	25-34	10%	20%
	35+	100%	100%

No Members are expected to take reduced Early Retirement. The assumed rates of retirement were approved in conjunction with an actuarial experience study dated July 10, 2015.

Cost of Living Adjustments:

None.

Funding Method:

Entry Age Normal Actuarial Cost Method. Beginning with the pension fund's plan year ended September 30, 2015, a full year salary load based on the current 4.3% assumption is utilized under the projection funding method, as mandated by the Division of Retirement.

Amortization Method:

Level Percentage of Pay, Closed.

Remaining Amortization Period:

20 Years.

Payroll Increases:

2.0% per year. We feel this is reasonable based on long-term expectations and historical increases in inflation.

Termination Rates:

	<u>Age</u>	<u>Years of Service</u>	<u>% Separating from Employment within the Next Year</u>	
			<u>Police</u>	<u>Fire</u>
	All Ages	0	15.0%	15.0%
		1	5.0%	5.0%
		2	3.0%	1.0%
		3	3.0%	1.0%
		4	3.0%	1.0%
	<50	5+	1.5%	1.0%
	50+	5+	0.0%	0.0%

The assumed rates of termination were approved in conjunction with an actuarial experience study dated July 10, 2015.

**GASB 68**

Disability Rates:

<u>Age</u>	<u>% Becoming Disabled within</u>	
	<u>Next Year</u>	
	<u>Police</u>	<u>Fire</u>
20	0.07%	0.14%
25	0.08%	0.15%
30	0.09%	0.18%
35	0.12%	0.23%
40	0.15%	0.30%
45	0.26%	0.51%
50	0.50%	1.00%
55	0.78%	1.55%

It is assumed that 75% of disablements and active Member deaths are service related. The assumed rates of disablement were approved in conjunction with an actuarial experience study dated July 10, 2015.

Marital Status:

All employed Members and all retired Members are assumed to be married. Females are assumed to be 3 years younger than males. This assumption was approved in conjunction with an actuarial experience study dated July 10, 2015.

Actuarial Value of Assets:

All assets are valued at market value with an adjustment to uniformly spread investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period.

EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

**The following information is not required to be disclosed but is provided for informational purposes.**

**COMPONENTS OF PENSION EXPENSE**  
FISCAL YEAR SEPTEMBER 30, 2019

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Balance at September 30, 2018	\$ 36,109,770	\$ 31,198,306	\$ 30,276,440	\$ -
Total Pension Liability Factors:				
Service Cost	21,371,855	-	-	21,371,855
Interest	71,544,868	-	-	71,544,868
Share Plan Allocation	1,524,328	-	-	1,524,328
Changes in benefit terms	65,590	-	-	65,590
Contributions - Buy Back	2,890,088	-	-	2,890,088
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	2,008,045	-	2,008,045	-
Current year amortization of experience difference	-	(3,370,173)	(401,609)	(2,968,564)
Change in assumptions about future economic or demographic factors or other inputs	5,019,222	-	5,019,222	-
Current year amortization of change in assumptions	-	(438,996)	(7,401,401)	6,962,405
Benefit Payments, including Refunds of Employee Contributions	(51,350,440)	-	-	-
Net change	<u>53,073,556</u>	<u>(3,809,169)</u>	<u>(775,743)</u>	<u>101,390,570</u>
Plan Fiduciary Net Position:				
Contributions - Employer	18,108,528	-	-	-
Contributions - State	6,743,190	-	-	-
Contributions - Employee	7,975,985	-	-	(7,975,985)
Contributions - Buy Back	2,890,088	-	-	(2,890,088)
Projected Net Investment Income	68,604,296	-	-	(68,604,296)
Difference between projected and actual earnings on Pension Plan investments	(31,801,307)	-	31,801,307	-
Current year amortization	-	(8,519,858)	(17,582,147)	9,062,289
Benefit Payments, including Refunds of Employee Contributions	(51,350,440)	-	-	-
Administrative Expenses	(638,919)	-	-	638,919
Net change	<u>20,531,421</u>	<u>(8,519,858)</u>	<u>14,219,160</u>	<u>(69,769,161)</u>
Balance at September 30, 2019	<u>\$ 68,651,905</u>	<u>\$ 18,869,279</u>	<u>\$ 43,719,857</u>	<u>\$ 31,621,409</u>

AMORTIZATION SCHEDULE - INVESTMENTS

Increase (Decrease) in Pension Expense Arising from the Recognition of the of Differences Between Projected and Actual Earnings on Pension Plan Investments

Plan Year Ending	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2019	\$ 31,801,307	5	\$ 6,360,263	\$ 6,360,261	\$ 6,360,261	\$ 6,360,261	\$ 6,360,261	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 3,674,623	5	\$ 734,925	\$ 734,925	\$ 734,925	\$ 734,925	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (36,115,814)	5	\$ (7,223,163)	\$ (7,223,163)	\$ (7,223,163)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (6,483,477)	5	\$ (1,296,695)	\$ (1,296,695)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 52,434,795	5	\$ 10,486,959	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 9,062,289	\$ (1,424,672)	\$ (127,977)	\$ 7,095,186	\$ 6,360,261	\$ -	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Changes of Assumptions

Plan Year Ending	Changes of Assumptions	Recognition Period (Years)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2019	\$ 5,019,222	5	\$ 1,003,846	\$ 1,003,844	\$ 1,003,844	\$ 1,003,844	\$ 1,003,844	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 4,790,360	5	\$ 958,072	\$ 958,072	\$ 958,072	\$ 958,072	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 10,692,637	5	\$ 2,138,527	\$ 2,138,527	\$ 2,138,527	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 16,504,779	5	\$ 3,300,956	\$ 3,300,956	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ (2,194,981)	5	\$ (438,996)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 6,962,405	\$ 7,401,399	\$ 4,100,443	\$ 1,961,916	\$ 1,003,844	\$ -	\$ -	\$ -	\$ -	\$ -



AMORTIZATION SCHEDULE - EXPERIENCE

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience

Plan Year Ending	Differences Between Expected and Actual Experience	Recognition Period (Years)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2019	\$ 2,008,045	5	\$ 401,609	\$ 401,609	\$ 401,609	\$ 401,609	\$ 401,609	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (1,668,323)	5	\$ (333,665)	\$ (333,665)	\$ (333,665)	\$ (333,665)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (2,762,831)	5	\$ (552,566)	\$ (552,566)	\$ (552,566)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (5,100,657)	5	\$ (1,020,131)	\$ (1,020,131)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ (7,319,054)	5	\$ (1,463,811)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (2,968,564)	\$ (1,504,753)	\$ (484,622)	\$ 67,944	\$ 401,609	\$ -	\$ -	\$ -	\$ -	\$ -