



August 6, 2020

Mr. James F. Fisher
Plan Administrator
City Pension Fund for Firefighters and Police Officers
in the City of Pembroke Pines, Florida
Hampton Professional Center
1951 NW 150th Avenue – Suite 104
Pembroke Pines, Florida 33028

Re: October 1, 2019 Chapter 112.664 Compliance Report

Dear Jim:

As requested, we are pleased to provide the attached October 1, 2019 Chapter 112.664 Compliance Report for the City Pension Fund for Firefighters and Police Officers in the City of Pembroke Pines, Florida (Fund).

As required, we will timely upload the required data to the State's online portal.

Please note we understand the following items must be posted on the Fund's website and must be posted on any website containing budget information relating to the City or actuarial or performance information relating to the Fund:

- this compliance report
- most recent financial statement
- most recent actuarial valuation report
- a link to the Division of Retirement Actuarial Summary Fact Sheet
http://www.dms.myflorida.com/workforce_operations/retirement/local_retirement_plans/local_retirement_section/actuarial_summary_fact_sheets
- for the previous five years - a side-by-side comparison of the Fund's assumed rate of return compared to the actual rate of return as well as the percentages of cash, equity, bond and alternative investments in the Fund portfolio
- the Fund's funded ratio as determined in the most recent actuarial valuation – 76.1% on a market value of assets basis as of October 1, 2019

We appreciate the opportunity to work with the Board on this important assignment.

If you should have any questions concerning the above, please do not hesitate to contact us.

Sincerest regards,

A handwritten signature in black ink that reads "Jennifer Borregard". The signature is written in a cursive, flowing style.

Jennifer M. Borregard, E.A.
Consultant and Actuary

Enclosures

City Pension Fund For Firefighters and Police Officers In The City Of Pembroke Pines

CHAPTER 112.664, F.S. COMPLIANCE REPORT

In Connection with the October 1, 2019 Funding Actuarial Valuation Report and the Fund's Financial Reporting for the Year Ended September 30, 2019





August 6, 2020

Board of Trustees
c/o Mr. James F. Fisher
Plan Administrator
City Pension Fund for Firefighters and Police Officers
in the City of Pembroke Pines, Florida
Hampton Professional Center
1951 NW 150th Avenue – Suite 104
Pembroke Pines, Florida 33028

Re: October 1, 2019 Chapter 112.664 Compliance Report

Dear Board Members:

Gabriel, Roeder, Smith & Company (GRS) has been engaged by the Board of Trustees (Board) of the City Pension Fund for Firefighters and Police Officers in the City of Pembroke Pines, Florida (Fund) to prepare a disclosure report to satisfy the requirements set forth in Chapter 112.664, F.S. and as further required pursuant to Chapter 60T-1.0035, F.A.C.

This report was prepared at the request of the Board and is intended for use by the Board and those designated or approved by the Board. This report may be provided to parties other than the Board only in its entirety and only with the permission of the Board.

The purpose of the report is to provide the required information specified in Chapter 112.664, F.S. and to supplement this information with additional exhibits. This report should not be relied on for any purpose other than the purpose described above.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: Fund experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Fund's funded status); and changes in Fund provisions or applicable law. The scope of this engagement does not include an analysis of the potential range of such measurements.

This report is based upon information furnished by the City and the Board concerning Fund benefits, Fund provisions and Fund members as used in the corresponding Actuarial Valuation Reports for the Valuation Dates indicated. Financial information was provided by the City and

Board as of September 30, 2019. We reviewed the information provided for internal and year-to-year consistency, but did not audit the data. The Fund is responsible for the accuracy of the data.

Except where specific assumptions are required by Chapter 112.664, F.S, this report was prepared using actuarial assumptions adopted by the Board as described in Section C. The Board's actuarial assumptions are based on the results of an actuarial Experience Study for the period October 1, 2009 – September 30, 2014. The mortality assumptions are prescribed by statute. The actuarial assumptions represent an estimate of future Fund experience.

The investment return assumption of 2% higher than the investment return assumption utilized in the Actuarial Valuation Report does not represent an estimate of future Fund experience nor observation of the estimates inherent in market data. This assumption is provided as a counterpart to the Chapter 112.664, F.S. requirement to utilize an investment return assumption of 2% lower than the investment return assumption utilized in the Actuarial Valuation Report. Inclusion of an investment return 2% higher than the investment return assumption utilized in the Actuarial Valuation Report shows a more complete assessment of the potential range of results as opposed to the *one-sided* range required by statute.

If all actuarial assumptions are met and if all current and future minimum required contributions are paid Fund assets will be sufficient to pay all Fund benefits, future contributions are expected to remain relatively stable as a percent of payroll and the funded status is expected to improve. Fund minimum required contributions are determined in compliance with the requirements of the Florida Protection of Public Employee Retirement Benefits Act, Firefighters Retirement Chapter 175 and Police Officers Retirement Chapter 185 with normal cost determined as a level percent of covered payroll and a level percent amortization payment using an initial amortization period of 30 years.

The Fund's funded ratio as of October 1, 2019 is 76.1% defined as the ratio of the market value of Fund assets to the actuarial accrued liability.

The Fund's funded ratio and the GASB Net Pension Liability may not be appropriate for assessing the sufficiency of Fund assets to meet the estimated cost of settling benefit obligations but may be appropriate for assessing the need for or the amount of future contributions.

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing actuaries are independent of the Fund sponsor.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and presents the actuarial position of the Fund as of the valuation date as



required by statute. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

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

Respectfully submitted,

GABRIEL, ROEDER, SMITH AND COMPANY

By *Jennifer Borregard*
Jennifer M. Borregard, M.A.A.A.
Enrolled Actuary No. 20-07624
Consultant & Actuary

By *Michelle Jones*
Shelly L. Jones, M.A.A.A.
Enrolled Actuary No. 20-08646
Consultant & Actuary

Date: August 6, 2020



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SECTION A

CHAPTER 112.664, F.S. RESULTS

Net Pension Liability
Using Financial Reporting Assumptions per GASB Statements No. 67 and No. 68
and Using Assumptions Required Under 112.664(1)(a), F.S.

Measurement Date	September 30, 2019
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 9,460,539
Interest	66,491,126
Benefit Changes	0
Difference Between Actual and Expected Experience	6,212,714
Assumption Changes	6,152,407
Benefit Payments	(34,120,424)
Contribution Refunds	(65,557)
Other	0
Net Change in Total Pension Liability	\$ 54,130,805
Total Pension Liability (TPL) - (beginning of year)	846,652,694
Total Pension Liability (TPL) - (end of year)	\$ 900,783,499
 B. <u>Fund Fiduciary Net Position</u>	
Contributions - City	\$ 27,248,665
Contributions - State	2,978,593
Contributions - Member	2,688,739
Net Investment Income	25,868,833
Benefit Payments	(34,120,424)
Contribution Refunds	(65,557)
Administrative Expenses	(749,211)
Other	0
Net Change in Fund Fiduciary Net Position	\$ 23,849,638
Fund Fiduciary Net Position - (beginning of year)	662,653,584
Fund Fiduciary Net Position - (end of year)	\$ 686,503,222
 C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	 \$ 214,280,277
 Valuation Date	 October 1, 2018

Certain Key Assumptions

Investment Return Assumption 7.80%

Mortality Table:

For healthy participants during employment, RP 2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy participants post employment, RP 2000 Annuitant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements.



Net Pension Liability
Using Assumptions Required Under 112.664(1)(b), F.S.

Measurement Date	September 30, 2019
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 15,286,171
Interest	63,114,891
Benefit Changes	0
Difference Between Actual and Expected Experience	12,133,708
Assumption Changes	10,396,214
Benefit Payments	(34,120,424)
Contribution Refunds	(65,557)
Other	0
Net Change in Total Pension Liability	\$ 66,745,003
Total Pension Liability (TPL) - (beginning of year)	1,069,189,987
Total Pension Liability (TPL) - (end of year)	\$ 1,135,934,990
B. <u>Fund Fiduciary Net Position</u>	
Contributions - City	\$ 27,248,665
Contributions - State	2,978,593
Contributions - Member	2,688,739
Net Investment Income	25,868,833
Benefit Payments	(34,120,424)
Contribution Refunds	(65,557)
Administrative Expenses	(749,211)
Other	0
Net Change in Fund Fiduciary Net Position	\$ 23,849,638
Fund Fiduciary Net Position - (beginning of year)	662,653,584
Fund Fiduciary Net Position - (end of year)	\$ 686,503,222
C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	\$ 449,431,768
Valuation Date	October 1, 2018

Certain Key Assumptions

Investment Return Assumption 5.80%

Mortality Table:

For healthy participants during employment, RP 2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy participants post employment, RP 2000 Annuitant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements.



Net Pension Liability

Using Assumptions Required Under 112.664(1)(a), F.S. Plus 2% on Investment Return Assumption

Measurement Date	September 30, 2019
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 6,127,663
Interest	68,239,391
Benefit Changes	0
Difference Between Actual and Expected Experience	1,546,493
Assumption Changes	2,972,592
Benefit Payments	(34,120,424)
Contribution Refunds	(65,557)
Other	0
Net Change in Total Pension Liability	\$ 44,700,158
Total Pension Liability (TPL) - (beginning of year)	698,911,322
Total Pension Liability (TPL) - (end of year)	\$ 743,611,480
 B. <u>Fund Fiduciary Net Position</u>	
Contributions - City	\$ 27,248,665
Contributions - State	2,978,593
Contributions - Member	2,688,739
Net Investment Income	25,868,833
Benefit Payments	(34,120,424)
Contribution Refunds	(65,557)
Administrative Expenses	(749,211)
Other	0
Net Change in Fund Fiduciary Net Position	\$ 23,849,638
Fund Fiduciary Net Position - (beginning of year)	662,653,584
Fund Fiduciary Net Position - (end of year)	\$ 686,503,222
 C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	 \$ 57,108,258
 Valuation Date	 October 1, 2018

Certain Key Assumptions

Investment Return Assumption 9.80%

Mortality Table:

For healthy participants during employment, RP 2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For healthy participants post employment, RP 2000 Annuitant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB. For disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements.



Asset and Benefit Payment Projection
Not Reflecting Any Future Contributions
Using Financial Reporting Assumptions per GASB Statements No. 67 and No. 68
and Using Assumptions Required Under 112.664(1)(a), F.S.

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2020	\$ 535,709,049	\$ 39,901,044	\$ 38,949,122	\$ 536,660,971
2021	536,660,971	39,869,238	41,493,187	535,037,022
2022	535,037,022	39,645,809	43,844,300	530,838,531
2023	530,838,531	39,221,883	46,218,800	523,841,614
2024	523,841,614	38,589,955	48,379,436	514,052,133
2025	514,052,133	37,758,786	50,126,014	501,684,905
2026	501,684,905	36,729,203	51,839,815	486,574,293
2027	486,574,293	35,492,048	53,432,132	468,634,209
2028	468,634,209	34,038,193	54,962,198	447,710,204
2029	447,710,204	32,365,561	56,191,628	423,884,137
2030	423,884,137	30,472,048	57,323,975	397,032,210
2031	397,032,210	28,345,997	58,408,926	366,969,281
2032	366,969,281	25,975,113	59,397,049	333,547,345
2033	333,547,345	23,347,671	60,294,429	296,600,587
2034	296,600,587	20,449,929	61,122,578	255,927,938
2035	255,927,938	17,265,058	61,911,500	211,281,496
2036	211,281,496	13,773,726	62,664,073	162,391,149
2037	162,391,149	9,953,582	63,414,489	108,930,242
2038	108,930,242	5,783,933	64,051,314	50,662,861
2039	50,662,861	1,379,886	64,610,807	-
2040	-	-	65,059,840	-
2041	-	-	65,372,211	-
2042	-	-	65,589,541	-
2043	-	-	65,666,625	-
2044	-	-	65,588,530	-
2045	-	-	65,315,974	-
2046	-	-	64,888,406	-
2047	-	-	64,299,020	-
2048	-	-	63,541,063	-
2049	-	-	62,612,651	-

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State: 19.75

Certain Key Assumptions

Investment return assumption 7.75%

Mortality Table:

For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Fund assets does not include future contributions from the City, Member or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.



**Asset and Benefit Payment Projection
Not Reflecting Any Future Contributions
Using Assumptions Required Under 112.664(1)(b), F.S.**

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2020	\$ 535,709,049	\$ 29,600,529	\$ 38,949,122	\$ 526,360,456
2021	526,360,456	28,984,424	41,493,187	513,851,693
2022	513,851,693	28,192,568	43,844,300	498,199,961
2023	498,199,961	27,219,270	46,218,800	479,200,431
2024	479,200,431	26,060,077	48,379,436	456,881,072
2025	456,881,072	24,722,780	50,126,014	431,477,838
2026	431,477,838	23,209,172	51,839,815	402,847,195
2027	402,847,195	21,513,739	53,432,132	370,928,802
2028	370,928,802	19,631,184	54,962,198	335,597,788
2029	335,597,788	17,561,686	56,191,628	296,967,846
2030	296,967,846	15,305,497	57,323,975	254,949,368
2031	254,949,368	12,855,932	58,408,926	209,396,374
2032	209,396,374	10,206,122	59,397,049	160,205,447
2033	160,205,447	7,349,932	60,294,429	107,260,950
2034	107,260,950	4,280,051	61,122,578	50,418,423
2035	50,418,423	1,061,229	61,911,500	-
2036	-	-	62,664,073	-
2037	-	-	63,414,489	-
2038	-	-	64,051,314	-
2039	-	-	64,610,807	-
2040	-	-	65,059,840	-
2041	-	-	65,372,211	-
2042	-	-	65,589,541	-
2043	-	-	65,666,625	-
2044	-	-	65,588,530	-
2045	-	-	65,315,974	-
2046	-	-	64,888,406	-
2047	-	-	64,299,020	-
2048	-	-	63,541,063	-
2049	-	-	62,612,651	-

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State: 15.75

Certain Key Assumptions

Investment return assumption 5.75%

Mortality Table:

For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Fund assets does not include future contributions from the City, Member or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.



Asset and Benefit Payment Projection
Not Reflecting Any Future Contributions
Using Assumptions Required Under 112.664(1)(a), F.S. Plus 2% on Investment Return Assumption

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2020	\$ 535,709,049	\$ 50,203,865	\$ 38,949,122	\$ 546,963,792
2021	546,963,792	51,168,753	41,493,187	556,639,358
2022	556,639,358	51,989,718	43,844,300	564,784,776
2023	564,784,776	52,660,275	46,218,800	571,226,251
2024	571,226,251	53,175,832	48,379,436	576,022,647
2025	576,022,647	53,552,550	50,126,014	579,449,183
2026	579,449,183	53,797,413	51,839,815	581,406,781
2027	581,406,781	53,905,380	53,432,132	581,880,029
2028	581,880,029	53,871,864	54,962,198	580,789,695
2029	580,789,695	53,701,550	56,191,628	578,299,617
2030	578,299,617	53,399,815	57,323,975	574,375,457
2031	574,375,457	52,960,724	58,408,926	568,927,255
2032	568,927,255	52,378,081	59,397,049	561,908,287
2033	561,908,287	51,647,012	60,294,429	553,260,870
2034	553,260,870	50,760,774	61,122,578	542,899,066
2035	542,899,066	49,709,426	61,911,500	530,696,992
2036	530,696,992	48,480,543	62,664,073	516,513,462
2037	516,513,462	47,058,581	63,414,489	500,157,554
2038	500,157,554	45,430,725	64,051,314	481,536,965
2039	481,536,965	43,586,089	64,610,807	460,512,247
2040	460,512,247	41,512,802	65,059,840	436,965,209
2041	436,965,209	39,200,703	65,372,211	410,793,701
2042	410,793,701	36,637,666	65,589,541	381,841,826
2043	381,841,826	33,810,845	65,666,625	349,986,046
2044	349,986,046	30,708,973	65,588,530	315,106,489
2045	315,106,489	27,322,406	65,315,974	277,112,921
2046	277,112,921	23,640,293	64,888,406	235,864,808
2047	235,864,808	19,649,286	64,299,020	191,215,074
2048	191,215,074	15,335,398	63,541,063	143,009,409
2049	143,009,409	10,683,681	62,612,651	91,080,439
2050	91,080,439	5,677,977	61,510,686	35,247,730
2051	35,247,730	854,662	60,235,838	-

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State: 31.58

Certain Key Assumptions

Investment return assumption 9.75%

Mortality Table:

For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Fund assets does not include future contributions from the City, Member or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.



ACTUARIALLY DETERMINED CONTRIBUTION

	Valuation Assumptions and 112.664(1)(a), F.S. Assumptions	112.664(1)(b), F.S. Assumptions	112.664(1)(a), F.S. Assumptions Plus 2% on Investment Return Assumption
A. Valuation Date	October 1, 2019	October 1, 2019	October 1, 2019
B. Actuarial Determined Contribution to Be Paid During Fiscal Year Ending	September 30, 2021	September 30, 2021	September 30, 2021
C. Annual Payroll of Active Employees	\$ 27,929,987	\$ 27,929,987	\$ 27,929,987
D. Total Minimum Funding Requirement			
1. Total Normal Cost	\$ 9,875,991	\$ 15,461,523	\$ 6,654,765
2. Annual Payment to Amortize Unfunded Actuarial Liability	22,012,143	34,893,848	9,829,560
3. Interest Adjustment	1,505,868	1,775,118	975,212
4. Total Minimum Funding Requirement	<u>\$ 33,394,002</u>	<u>\$ 52,130,489</u>	<u>\$ 17,459,537</u>
E. Expected Payroll of Active Employees for Following Fund Year (\$ / % of pay) (C x 1.001)	\$ 27,957,917 100.10%	\$ 27,957,917 100.10%	\$ 27,957,917 100.10%
F. Expected Contribution Sources (\$ / % of pay)			
1. City	\$ 27,999,406 100.15%	\$ 46,731,210 167.15%	\$ 12,035,435 43.05%
2. Members	2,459,670 8.80%	2,459,670 8.80%	2,459,670 8.80%
3. State	2,978,593 10.65%	2,978,593 10.65%	2,978,593 10.65%
4. Total	<u>\$ 33,437,669 119.60%</u>	<u>\$ 52,169,473 186.60%</u>	<u>\$ 17,473,698 62.50%</u>

Unfunded Actuarial Accrued Liabilities Bases and Amortization Payments

<u>Amortization Base</u>	<u>Current Unfunded Liabilities</u>	<u>Amortization Payment</u>			<u>Remaining Funding Period</u>
		<u>Valuation and 112.664(1)(a), F.S. Assumptions</u>	<u>112.664(1)(b), F.S. Assumptions</u>	<u>112.664(1)(a), F.S. Assumptions Plus 2%</u>	
10/01/2003 Gain and Loss Bases	\$ 9,764,420	\$ 1,940,993	\$ 1,858,674	\$ 2,023,348	6 years
10/01/2003 Others	569,267	113,160	108,361	117,961	6 years
10/01/2003 Plan Amendment	58,190,920	6,421,673	5,796,179	7,064,001	14 years
10/01/2004 Plan Amendment	37,206,273	3,950,428	3,542,395	4,370,341	15 years
10/01/2004 Plan Amendment	339,422	36,039	32,316	39,869	15 years
10/01/2006 Assumption Change	6,718,352	668,000	591,541	746,970	17 years
10/01/2006 Plan Amendment	29,232,574	2,906,570	2,573,885	3,250,181	17 years
10/01/2006 Plan Amendment	2,291,120	227,804	201,730	254,735	17 years
10/01/2009 Assumption Change	12,875,584	1,186,057	1,032,105	1,345,679	20 years
10/01/2009 Method Change	25,368,411	2,336,855	2,033,529	2,651,355	20 years
05/01/2010 Plan Amendment	(33,905,367)	(3,084,669)	(2,675,650)	(3,508,985)	20.583 years
10/01/2010 Actuarial (Gain) / Loss	13,507,890	1,218,568	1,054,599	1,388,729	21 years
10/01/2011 Actuarial (Gain) / Loss	10,599,650	938,185	807,640	1,073,757	22 years
10/01/2011 Assumption Change	(1,651,453)	(146,172)	(125,832)	(167,294)	22 years
10/01/2012 Actuarial (Gain) / Loss	4,333,297	376,943	322,826	433,175	23 years
10/01/2013 Actuarial (Gain) / Loss	(630,899)	(54,017)	(46,031)	(62,317)	24 years
10/01/2013 Plan Amendment	748,155	64,056	54,587	73,899	24 years
10/01/2014 Actuarial (Gain) / Loss	(4,979,197)	(420,168)	(356,329)	(486,544)	25 years
10/01/2014 Plan Amendment	12,846	1,084	919	1,255	25 years
10/01/2015 Actuarial (Gain) / Loss	4,047,025	336,996	284,461	391,623	26 years
10/01/2015 Plan Amendment	9,075	756	638	878	26 years
10/01/2015 Assumption Change	8,371,534	697,097	588,426	810,097	26 years
10/01/2016 Actuarial (Gain) / Loss	4,325,320	355,803	298,981	414,885	27 years
10/01/2016 Assumption Change	5,703,693	469,188	394,259	547,099	27 years
10/01/2017 Actuarial (Gain) / Loss	3,305,587	268,891	224,962	314,558	28 years
10/01/2017 Assumption Change	5,712,555	464,684	388,769	543,604	28 years
10/01/2018 Actuarial (Gain) / Loss	2,145,080	172,703	143,879	202,659	29 years
10/01/2018 Assumption Change	6,119,189	492,664	410,439	578,118	29 years
10/01/2019 Actuarial (Gain) / Loss	8,199,450	653,927	542,567	769,612	30 years
10/01/2019 Assumption / Plan Change	(7,297,010)	(581,955)	(482,851)	(684,908)	30 years
10/01/2019 Assumption Change - 112.664(1)(b), F.S. Assumptions	231,095,865	N/A	15,291,874	N/A	30 years
10/01/2019 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%	(156,281,169)	N/A	N/A	(14,668,780)	30 years



SECTION B

SUMMARY OF FUND PROVISIONS

**Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2019)**

A. Effective Date:

October 1, 1973, revised and restated as of February 19, 1981. Most recently amended - Ordinance Number 1916.

B. Eligibility Requirements:

1. Participants in previous Retirement Plan as of February 19, 1981 are automatically and immediately included.
2. Mandatory participation (with satisfactory physical) for Police Officers and Firefighters upon date of hire or attainment of age 18, if later. The Fire Chief and Police Chief may elect to participate.

C. Continuous Service:

For Police and Firefighter Members hired before October 1, 2018, years and completed months of uninterrupted service from date of hire to date of retirement or termination.

For Police and Firefighter Members hired on or after October 1, 2018, completed years of uninterrupted service from date of hire to date of retirement or termination.

D. Earnings:

Base wages, regular longevity, overtime up to 300 hours per year, voluntary deductions and IRC 457 deferred compensation. For Police and Firefighter Members hired before October 1, 2018, earnings shall include payment of up to 1,000 hours of accrued unused sick and vacation leave, but limited to amounts accrued as of May 1, 2010. Maximum annual earnings limited to \$275,000 subject to annual increase.

E. Average Monthly Earnings (AME):

For Police and Firefighter Members hired before October 1, 2018, average monthly earnings during the highest two years of continuous service preceding the date on which the participant retires or terminates.

For Police and Firefighter Members hired on or after October 1, 2018, average monthly earnings during the highest five years out of the last ten years of service.



**Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2019)**

F. Regular Wages:

Base pay including any incentive pay, regular longevity, assignment pay and any current or future additional pensionable compensation, but excluding overtime or accrued unused leave. Regular wages shall be used to calculate the maximum retirement benefit for Firefighters hired on or after April 1, 2006.

G. Average Monthly Regular Wages:

Average monthly regular wages coinciding with the highest years of continuous service for Firefighters preceding the date on which the participant retires or terminates, used in the AME.

H. Normal Retirement:

1. Eligibility:

Earliest of:

- (a) Attainment of age 50 and completion of 10 years of continuous service.
- (b) Completion of 20 years of continuous service.

2. Benefit:

- (a) For Firefighters, 3.0% times AME times years of Continuous Service - maximum 80% of AME.

Firefighters hired on or before June 18, 2003 shall receive a benefit amount equal to 4.0% per year of continuous service prior to May 1, 2010 plus 3.5% per year of continuous service after April 30, 2010 times AME - maximum 80% of AME, provided they retire or enter the DROP anytime on or after attaining age 50 with 10 years of continuous service but no later than the date they accrue the maximum 80% benefit.

Firefighters hired after June 18, 2003 but before May 1, 2010 shall receive a benefit amount equal to 4.0% per year of continuous service prior to May 1, 2010 plus 3.5% per year of continuous service after April 30, 2010 times AME - maximum 80% of AME. To obtain this benefit, such Firefighters were previously required to retire or enter the DROP upon the earlier of completion of 20 years of continuous service or attainment of age 50 with 10 years of service. To obtain this benefit, such Firefighters now are required to retire or enter the DROP no earlier than upon completion of 20 years of continuous service or attainment of age 50 with 10 years of service, and no later than the date they accrue the same accrual percentage they would have reached under the terms of the Fund in effect prior to April 30, 2010.

In no event shall the benefit for firefighters hired after March 31, 2006 exceed 98% of average monthly regular wages.

Firefighters hired after April 30, 2010 shall receive a benefit amount equal to 3.0% times AME times years of continuous service – maximum 80% of AME.



**Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2019)**

H. Normal Retirement (cont'd):

- (b) For Police Officers, 3.0% times AME times years of Continuous Service up to 20 years of service plus 3.5% times AME times years of Continuous Service in excess of 20 years - maximum 80% of AME.

Police Officers hired before May 1, 2010 shall receive a benefit amount equal to 4.0% per year of continuous service prior to May 1, 2010 plus 3.5% per year of continuous service after April 30, 2010 times AME - maximum 80% of AME, provided they retire or enter the DROP anytime on or after attaining age 50 with 10 years of continuous service but no later than the date they accrue the maximum 80% benefit.

Police Officers hired after April 30, 2010 shall receive a benefit amount equal to 3.0% times AME times years of continuous service – maximum 80% of AME.

I. Deferred Retirement:

1. Eligibility:

Any first day of a month past Normal Retirement Date.

2. Benefit:

Benefit calculated as for Normal Retirement based upon service and pay to Deferred Retirement Date.

J. Disability Retirement:

1. Eligibility:

Totally and permanently disabled meaning incapacity to perform regular duty as Firefighter or Police Officer (and completion of at least 10 years of continuous service for non-service incurred disability).

Effective July 1, 2019, a Firefighter who becomes totally and permanently unable to perform useful and efficient service as a Firefighter due to a diagnosis of cancer or circumstances that arise out of the treatment of such cancer will be presumed to be disabled in-line of duty subject to the limitations in Chapter 112.1816, Florida Statutes.

2. Benefit:

(a) Service Incurred:

Greater of:

- Accrued benefit
- 66 2/3% of monthly earnings rate on date of disability.

(b) Non-Service Incurred:

Greater of:

- Accrued benefit
- 35% of AME on date of disability.



**Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2019)**

K. Death Benefit:

1. Service Incurred:

To spouse, 50% of AME payable for life. To unmarried children, 5% of AME until death or attainment of age 18 (if full time student attainment of age 22). Total monthly benefit not to exceed 60% of AME. Upon death of spouse, the 5% child allowance shall be increased to 10%, subject to a maximum combined total of 35% of AME.

Benefit above reduced by the actuarial equivalent of payment of:

- if the Member had less than ten (10) years of Continuous Service, Member contributions to the beneficiary with 3% simple interest, or
- if the Member had ten (10) or more years of Continuous Service, benefit otherwise payable to the Member at the Member's Normal Retirement Date, if applicable, for ten years certain.

2. Non-Service Incurred:

- Less than five (5) years of Continuous Service, the designated beneficiary receives a lump sum of \$2,500 or return of Member contributions with 3% interest, whichever is greater.
- Five (5) or more years of Continuous Service, the designated beneficiary receives a lump sum of the greater of Member contributions (without interest) or \$2,500, plus, if married, the spouse receives a monthly benefit equal to 50% of the Accrued Benefit as of Member's date of death but not less than 20% of the monthly Earnings rate. To unmarried children of the deceased Member, same benefits as are payable for Service Incurred death. Combined monthly benefit not to exceed 50% of AME, or 35% of AME after the death or remarriage of spouse.

Benefit above reduced by the actuarial equivalent of payment of:

- if the Member had ten (10) or more years of Continuous Service, benefit otherwise payable to the Member at the Member's Normal Retirement Date, if applicable, for ten years certain.

L. Employee Contributions:

10.4% (6% prior to April 1, 1991) of annual earnings until completion of 26 2/3 years of Continuous Service.

For Firefighters and Police Officers hired on or after May 1, 2010 but before October 1, 2018, 7% of annual earnings until completion of 26 2/3 years of Continuous Service.

For Firefighters and Police Officers hired on or after October 1, 2018, 3% of annual earnings until completion of 26 2/3 years of Continuous Service.



**Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2019)**

M. Vested Benefit Upon Termination:

1. Eligibility:

Completion of at least ten (10) years of Continuous Service at date of termination.

2. Benefit:

Accrued benefit based upon AME and years of Continuous Service as of date of termination payable at attainment of age 50.

3. Alternate Benefit:

In lieu of the above, deferred benefit payable at Normal Retirement Date; otherwise, a Member can elect to withdraw his employee contributions plus 3% simple interest per annum.

N. Termination Benefit:

1. Eligibility:

Termination of service prior to eligibility for vested benefit upon termination.

2. Benefit:

Refund of Member contributions plus 3% simple interest per annum.

O. Normal Form of Payment of Retirement Income:

For Firefighters and Police Officers hired before October 1, 2018, monthly accrued benefit payable for ten (10) years certain and life thereafter with 100% of benefit continuing to spouse for one year and 50% of benefit payable to spouse thereafter until death.

For Firefighters and Police Officers hired on or after October 1, 2018, monthly accrued benefit payable for ten (10) years certain and life thereafter.

Other Options:

Actuarially equivalent joint and survivor or joint and last survivor at 25%, 50%, 66 2/3%, 75%, 100%; life annuity; or ten years certain and life; or other option (except lump sum), subject to Board approval.



**Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2019)**

P. Deferred Retirement Option Plan (DROP):

1. Eligibility:

A Member who has reached Normal Retirement Date is eligible to elect to participate in DROP. A Firefighter who reaches Normal Retirement Date before age 50 may participate for the lesser of eight years or until age 58, provided that Firefighters employed as of December 20, 2000 and hired after their 30th birthday, may participate in the DROP no later than completion of 20 years of Continuous Service in order to participate in the DROP for a full eight years. A Police Officer hired after his 25th birthday may participate in the DROP no later than completion of 25 years of Continuous Service in order to participate in the DROP for a full eight years. An election to participate in the DROP is irrevocable.

2. Benefit:

Accrued benefit as of entry into DROP.

3. Interest Credits:

Members entering the DROP prior to May 1, 2010, may elect annually in advance interest credits of (1) fixed 8% per annum or (2) net Fund return.

Members hired before May 1, 2010 entering the DROP after April 30, 2010:

- Credits for the first five years of DROP participation (*Bucket 1*) - may elect annually in advance DROP interest credits based upon either (1) gross Fund return or (2) gross Fund return subject to a minimum of 5% and a maximum of 8% per annum.
- If DROP participation exceeds five years, members may continue to elect annually in advance DROP interest credits based upon either (1) gross Fund return or (2) gross Fund return subject to a minimum of 5% and a maximum of 8% per annum for Bucket 1 until the tenth anniversary of separation of service from the City, after which DROP interest credits for Bucket 1 will be based on net Fund return.
- Credits for years six through eight of DROP participation (*Bucket 2*) - gross Fund return until the tenth anniversary of separation of service from the City, after which DROP interest credits for Bucket 2 will be based on net Fund return.

For Members hired after April 30, 2010, DROP interest credits will be based upon gross Fund return. If DROP participation exceeds five years, DROP interest credits will be based upon net Fund return after the tenth anniversary of separation of service from the City.

4. DROP Loan Program:

Current DROP participants or retirees may borrow against their DROP account balance up to the maximum amount permitted by the IRS.

No interest shall be earned or paid by the Plan on funds loaned from the DROP account until repaid.

The DROP loan program administered in accordance with loan policy adopted by the Board of Trustees and shall comply with all applicable IRS rules and regulations governing such loans.



**Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2019)**

Q. 13th Check Program (Police Officers only)

1. Eligibility:

Service or disabled retired Police Officer or beneficiary receiving pension or DROP benefits.

2. Benefit:

For Police Officers retired prior to October 1, 2003, up to 2% of investment return in excess of 8% based upon present value of future pension payments of current Police Officer members, not to exceed outstanding balance of cumulative net actuarial gains. Any distributable amount allocated to eligible members based upon years of service with prorata share during first year of entitlement. See Item R. regarding election.

For Police Officers retired on or after October 1, 2003 but before October 1, 2006, up to 2% of investment return in excess of 9% based upon present value of future pension payments of current Police Officer members, not to exceed outstanding balance of cumulative net actuarial gains. Any distributable amount allocated to eligible members based upon years of service with prorata share during first year of entitlement. See Item R. regarding election.

For Police Officers retired on or after October 1, 2006 there is no 13th check.

R. Cost of Living Adjustment

For Firefighters, effective April 1, 2005 and each April 1st thereafter, retirees, beneficiaries and DROP participants who were receiving benefits on June 18, 2003 will receive either a 2% cost of living adjustment or an adjustment equal to the total percentage increase in base wages, excluding performance or merit adjustments, whichever is greater.

For Firefighters, effective April 1, 2005 and each April 1st thereafter, retirees, beneficiaries and DROP participants who were hired on or before June 18, 2003 and retire or enter the DROP prior to May 1, 2010 and anytime on or after attaining age 50 with 10 years of service but no later than attainment of 20 years of service will receive either a 2% cost of living adjustment or an adjustment equal to the total percentage increase in base wages, excluding performance or merit adjustments, whichever is greater. For those receiving for less than one year the increase shall be prorated.

**Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2019)**

R. Cost of Living Adjustment (cont'd)

Firefighter members who were hired prior to April 1, 2006 who retire prior to May 1, 2010, current retirees and DROP participants shall have the option within sixty (60) days of the effective date of Ordinance 2006-10 to irrevocably elect to receive the cost of living adjustment provided above in lieu of their current cost of living adjustment.

For Firefighters, effective April 1, 2011 and each April 1st thereafter, retirees, beneficiaries and DROP participants who were hired before May 1, 2010 and retire or enter the DROP after April 30, 2010 at their normal retirement age receive a 2% cost of living adjustment – prorated for less than one year receipt of benefits.

For Firefighters hired after April 30, 2010 but before October 1, 2018, the cost of living adjustment is 1.5%.

For Firefighters hired on or after October 1, 2018, there is no cost of living adjustment.

Police Officer retirees, DROPs, disabilities and their beneficiaries who retired prior to October 1, 2003 eligible for any supplemental benefit based upon an 8% Fund return threshold subject to cumulative actuarial gains may elect within 60 days to replace this supplemental benefit eligibility entitlement with an annual 2.0% cost of living adjustment retroactive to October 1, 2004.

Police Officer retirees, DROPs, disabilities and their beneficiaries who retired on or after October 1, 2003 but not later than September 30, 2006 or were in the DROP on or after October 1, 2003 and entered the DROP not later than September 30, 2006 eligible for any supplemental benefit based upon a 9% Fund return threshold subject to cumulative actuarial gains along with a 1.5% cost of living adjustment effective October 1, 2009 and each October 1st thereafter may elect within 60 days to replace this supplemental benefit eligibility and 1.5% deferred cost of living adjustment entitlement with an annual 2.5% cost of living adjustment retroactive to October 1, 2004.

Police Officer retirees, DROPs, disabilities and their beneficiaries who retire or enter the DROP on or after October 1, 2006 but not later than April 30, 2010 will receive a 3.0% cost of living adjustment effective October 1, 2009 and each October 1st thereafter.

For Police Officers, effective October 1, 2010 and each October 1st thereafter, retirees, beneficiaries and DROP participants who were hired before May 1, 2010 and retire or enter the DROP after April 30, 2010 at their normal retirement age receive a 2% cost of living adjustment – prorated for less than one year receipt of benefits.

For Police Officers hired after April 30, 2010 but before October 1, 2018, the cost of living adjustment is 1.5%.

For Police Officers hired on or after October 1, 2018, there is no cost of living adjustment.



**Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2019)**

S. Excess Benefit Plan

An excess benefits plan is established to pay retirement benefits above the limits permitted by the Internal Revenue Code. Excess Benefit Plan benefits are not included in this actuarial valuation.

T. Share Plan

A Share Plan has been adopted. The Share Plan is currently unfunded.

U. Additional Benefits Upon Rehire

Retired members receiving benefits who are rehired as certified police officers or firefighters who work 30 or more hours per week and 52 weeks per year will again become contributing members of the Fund and accrue benefits during their period of reemployment.

Rehired members shall continue to receive retirement benefit, earnings on DROP accounts and may elect to receive payments from DROP accounts.

V. Changes Since Previous Valuation

1. Disability Retirement Eligibility was:

Totally and permanently disabled meaning incapacity to perform regular duty as Firefighter or Police Officer (and completion of at least 10 years of continuous service for non-service incurred disability).

SECTION C

ACTUARIAL ASSUMPTIONS AND COST METHODS USED FOR FUNDING

**Actuarial Assumptions and Actuarial Cost Methods
(as of October 1, 2019)**

A. Mortality

For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

Sample Ages (2019)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Men	Women	Men	Women
	55	30.37	34.25	27.50
60	25.43	29.19	22.93	26.31
62	23.51	27.18	21.21	24.48

Sample Ages (2039)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Men	Women	Men	Women
	55	32.00	35.73	29.39
60	27.00	30.63	24.70	28.04
62	25.04	28.60	22.92	26.16

B. Investment Return

7.75%, compounded annually, net of investment expenses - includes inflation at 2.75%.

C. Allowances for Expenses or Contingencies

Average of actual administrative expenses during prior three (3) years.

**Actuarial Assumptions and Actuarial Cost Methods
(as of October 1, 2019)**

D. Employee Withdrawal Rates

Withdrawal rates for males and for females were used in accordance with the following illustrative example:

<u>Age</u>	<u>Withdrawal Rates Per 100 Employees</u>			
	<u>Males</u>		<u>Females</u>	
	<u>First 5 Years</u>	<u>5+ Years</u>	<u>First 5 Years</u>	<u>5+ Years</u>
20	2.50	2.19	5.75	3.93
25	2.50	1.59	5.75	2.58
30	2.50	1.16	5.75	1.79
35	2.50	0.68	5.75	1.08
40	2.50	0.38	5.75	0.76
45	2.50	0.18	5.75	0.41
50	2.50	0.03	5.75	0.23
55	2.50	0.02	5.75	0.14
60	2.50	0.00	5.75	0.04
62 & Over	0.00	0.00	0.00	0.00

E. Disability Rates

1. The 1985 Disability Study - Class 2, with separate rate for males and females.
2. 90% of Firefighter disabilities are assumed to be service incurred - 10% non-service incurred.
3. 80% of Police Officer disabilities are assumed to be service incurred - 20% non-service incurred.

F. Payroll Growth Assumption

5.3%, per annum - not greater than historical 10-year average (0.1% as of October 1, 2019).

G. Load for Future Rehires

The normal cost and accrued liabilities are loaded 0.1% for assumed future rehired members.

**Actuarial Assumptions and Actuarial Cost Methods
(as of October 1, 2019)**

H. Salary Increase Factors

Current salary is assumed to increase at a rate based on the table below per year until retirement - includes wage inflation of 3.0%.

<u>Service</u>	<u>Salary Increase</u>
0 years	8%
1	8%
2	7%
3	6%
4	5%
5	4%
6	4%
7 + years	3%

For members hired before May 1, 2010, average monthly earnings for retirements and DROPs are increased between 5.5% and 28.0% to reflect additional earnings during the averaging period including the inclusion in pensionable earnings of up to 1,000 hours of accrued unused leave as of April 30, 2010 payable at retirement or DROP entry.

The increase is calculated as follows:

$$5.5\% + \frac{\text{Total Hours of Accrued Unused Leave (1,000 maximum)}}{1,000} \times 22.5\%$$

For members hired on or after May 1, 2010, average monthly earnings for retirements and DROPs are increased 5.5% to reflect additional earnings during the averaging period.

The assumed salary increase rate after 7+ years of service reflects frozen longevity pay as of April 30, 2010.

I. Assumed Retirement Age

The retirement rates **for members hired before May 1, 2010 who are expected to reach the 80% of AME maximum benefit in the 21st year of service** are as follows:

1. 75% of members are assumed to retire the first year after attaining age fifty (50) and ten (10) years of credited service.
2. 50% of members are assumed to retire each year thereafter until reaching twenty (20) years of credited service.
3. 60% of members are assumed to retire after completing twenty (20) years of credited service.
4. 100% of members are assumed to retire upon attainment of twenty-one (21) years of credited service.

**Actuarial Assumptions and Actuarial Cost Methods
(as of October 1, 2019)**

I. Assumed Retirement Age (cont'd)

The retirement rates **for members hired before May 1, 2010 who are expected to reach the 80% of AME maximum benefit in the 22nd year of service** are as follows:

1. 70% of members are assumed to retire the first year after attaining age fifty (50) and ten (10) years of credited service.
2. 20% of members are assumed to retire each year thereafter until reaching twenty (20) years of credited service.
3. 60% of members are assumed to retire after completing twenty (20) years of credited service.
4. 15% of members are assumed to retire after completing twenty-one (21) years of credited service.
5. 100% of members are assumed to retire upon attainment of twenty-two (22) years of credited service.

The retirement rates **for members hired before May 1, 2010 who are expected to reach the 80% of AME maximum benefit in the 23rd year of service** are as follows:

1. 60% of members are assumed to retire the first year after attaining age fifty (50) and ten (10) years of credited service.
2. 18% of members are assumed to retire each year thereafter until reaching twenty (20) years of credited service.
3. 40% of members are assumed to retire after completing twenty (20) years of credited service.
4. 15% of members are assumed to retire after completing twenty-one (21) years of credited service.
5. 15% of members are assumed to retire after completing twenty-two (22) years of credited service.
6. 100% of members are assumed to retire upon attainment of twenty-three (23) years of credited service.

For Firefighters hired after June 18, 2003 but before May 1, 2010 who are expected to reach age 50 before completion of twenty (20) years of service, 100% are assumed to retire upon reaching the same multiplier (% of AME) they would have reached under the Plan in effect prior to April 30, 2010.

The retirement rates **for members hired on or after May 1, 2010** are as follows:

1. 50% of members who complete ten (10) years of service after reaching age 50 are assumed to retire upon completion of ten (10) years of credited service.
2. 15% of members who reach age 50 after completion of ten (10) years of credited service are assumed to retire upon reaching age 50.
3. 15% of members are assumed to retire each year thereafter, until reaching twenty (20) years of credited service.
4. 20% of members are assumed to retire upon reaching twenty (20) years of credited service.
5. 15% of members are assumed to retire each year thereafter, until reaching twenty-five (25) years of credited service.
6. 100% of members are assumed to retire upon reaching twenty-five (25) years of credited service.

**Actuarial Assumptions and Actuarial Cost Methods
(as of October 1, 2019)**

J. Marital Assumptions

1. 50% of deaths are assumed to be service incurred - 50% non-service incurred.
2. There are no children eligible for benefits.
3. 100% of participants are married.
4. Spouses are assumed to be the same age as members.

K. Cost of Living Adjustment

Firefighters: For Firefighters who retired or entered the DROP prior to May 1, 2010, 2.0% for those who elected the fluctuating COLA and 3.0% for those who elected the fixed COLA. 2.0% for Firefighters hired before May 1, 2010 who are expected to retire or enter the DROP after April 30, 2010. 1.5% for Firefighters hired after April 30, 2010 but before October 1, 2018.

Police Officers: 0.0%, 2.0% or 2.5% based upon election for Police Officers who retired or entered the DROP prior to October 1, 2006. 3.0% for Police Officers who retired or entered the DROP on or after October 1, 2006 but before May 1, 2010. 2.0% for Police Officers hired before May 1, 2010 who are expected to retire or enter the DROP after April 30, 2010. 1.5% for Police Officers hired after April 30, 2010 but before October 1, 2018.

L. Smoothed Asset Valuation Method

Smoothed actuarial value of assets is equal to the expected smoothed actuarial value of assets adjusted by 20% of the difference between the expected smoothed actuarial value and market value.

M. Cost Methods

Normal Retirement, Termination, Disability, and Death Benefits: Entry Age Normal Cost Method

Under this method the normal cost for each active employee is the amount which is calculated to be a level percentage of pay that would be required annually from his entry age to his assumed retirement age to fund his estimated benefits, assuming the Fund had always been in effect. The normal cost for the Fund is the sum of such amounts for all employees. The actuarial accrued liability as of any valuation date for each active employee or inactive employee who is eligible to receive benefits under the Fund is the excess of the actuarial present value of estimated future benefits over the actuarial present value of current and future normal costs. The unfunded actuarial accrued liability as of any valuation date is the excess of the actuarial accrued liability over the assets of the Fund.

Vested Normal Retirement, Termination, Disability, and Death Benefits: Unit Credit Cost Method

Under this method, the actuarial present value of vested accrued benefits is an amount calculated to be the sum of the present values of each individual's vested accrued or earned benefit under the Fund as of the valuation date. Each individual's calculation is based on pay and service as of the valuation date.

The DROP accounts balance is included in the assets and liabilities as of the valuation date.

**Actuarial Assumptions and Actuarial Cost Methods
(as of October 1, 2019)**

N. Changes Since Previous Valuation

1. Investment Return was:

7.80%, compounded annually, net of investment expenses.

2. Mortality was:

For healthy participants during employment, RP 2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

For healthy participants post employment, RP 2000 Annuitant Mortality Tables, separate rates for males and females, with 90% Blue Collar Adjustment / 10% White Collar Adjustment and fully generational mortality improvements projected to each future decrement date with Scale BB.

For disabled male participants, 60% RP 2000 Disabled Male Mortality Table setback four years / 40% RP 2000 Annuitant Male Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements. For disabled female participants, 60% RP 2000 Disabled Female Mortality Table set forward two years / 40% RP 2000 Annuitant Female Mortality Table with White Collar Adjustment with no setback, without projected mortality improvements.

3. Disability Rates were:

80% of disabilities were assumed to be service incurred - 20% non-service incurred for both Firefighters and Police Officers.

4. Marital Assumption was:

95% of participants are married.

SECTION D

GLOSSARY

GLOSSARY

<i>Actuarial Accrued Liability</i>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<i>Actuarial Assumptions</i>	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members and other items.
<i>Actuarial Cost Method</i>	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.
<i>Actuarial Equivalent</i>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<i>Actuarial Present Value</i>	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
<i>Actuarial Present Value of Future Benefits</i>	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits and inactive, non-retired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
<i>Actuarial Valuation</i>	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67.
<i>Actuarial Value of Assets</i>	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially required contribution.

<i>Amortization Method</i>	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.
<i>Amortization Payment</i>	That portion of the plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
<i>Amortization Period</i>	The period used in calculating the Amortization Payment.
<i>Annual Required Contribution</i>	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The annual required contribution consists of the Employer Normal Cost and Amortization Payment plus interest adjustment.
<i>Closed Amortization Period</i>	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.
<i>Employer Normal Cost</i>	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
<i>Equivalent Single Amortization Period</i>	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
<i>Experience Gain/Loss</i>	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. Losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.
<i>Funded Ratio</i>	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.

<i>GASB</i>	Governmental Accounting Standards Board.
<i>GASB No. 67 and GASB No. 68</i>	These are the governmental accounting standards that set the accounting rules for public retirement plans and the employers that sponsor or contribute to them. Statement No. 67 sets the accounting rules for the plans themselves, while Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement plans.
<i>Normal Cost</i>	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
<i>Open Amortization Period</i>	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
<i>Unfunded Actuarial Accrued Liability</i>	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
<i>Valuation Date</i>	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.