CITY OF CLEARWATER EMPLOYEES' PENSION PLAN

GASB STATEMENT NOS. 67 AND 68 ACCOUNTING AND FINANCIAL REPORTING FOR PENSIONS

SEPTEMBER 30, 2020

GRS

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January 12, 2021

Board of Trustees
City of Clearwater Employees' Pension Plan
Clearwater, Florida

Dear Board Members:

This report provides accounting and financial reporting information that is intended to comply with the Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 for the City of Clearwater Employees' Pension Plan ("Plan"). These calculations have been made on a basis that is consistent with our understanding of these Statements.

GASB Statement Nos. 67 and 68 establish accounting and financial reporting standards for state and local government employers who provide their employees (including former employees) pension benefits through a trust.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of providing reporting and disclosure information that satisfies the requirements of GASB Statement Nos. 67 and 68. The Net Pension Liability is not an appropriate measure for measuring the sufficiency of plan assets to cover the estimated cost of settling the employer's benefit obligation. The Net Pension Liability is not an appropriate measure for assessing the need for or amount of future employer contributions. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than the Board only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

This report is based upon information, furnished to us by the City, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not audited. We are not responsible for the accuracy or completeness of the information provided by the City.

This report complements the actuarial valuation report that was provided to the Board of Trustees and should be considered in conjunction with that report. Please see the actuarial valuation report as of January 1, 2020 for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions.

The findings in this report are based on data through January 1, 2020 and financial information through September 30, 2020. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the

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methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of this report does not include an analysis of the potential range of such future measurements.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

To the best of our knowledge, the information contained with this report is accurate and fairly represents the actuarial position of the City of Clearwater Employees' Pension Plan. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

Peter Strong and Jeffrey Amrose are members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The signing actuaries are independent of the plan sponsor.

This actuarial valuation and/or cost determination was prepared and completed by us or under our direct supervision, and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate. In our opinion, the techniques and assumptions used are reasonable and are based on generally accepted actuarial principles and practices. 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.

Respectfully submitted,

By ______________________
Peter N. Strong, FSA, EA, MAAA, FCA
Senior Consultant and Actuary

By ______________________
Jeffrey Amrose, EA, MAAA
Senior Consultant and Actuary

Auditor's Note – This information is presented in draft form for review by the Plan's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the Plan's financial statements.

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY
AS OF SEPTEMBER 30, 2020

Actuarial Valuation Date	January 1, 2020
Measurement Date of the Net Pension Liability	September 30, 2020
Employer's Fiscal Year Ending Date (Reporting Date)	September 30, 2020

Membership as of Actuarial Valuation Date

Number of		
- Retirees and Beneficiaries		1,321
- Inactive, Nonretired Members		80
- Active Members		1,571
- Total		2,972
Covered Payroll	$	89,845,375

Net Pension Liability

Total Pension Liability	$	1,042,461,593
Plan Fiduciary Net Position		1,132,560,858
Net Pension Liability	$	(90,099,265)
Plan Fiduciary Net Position as a Percentage of Total Pension Liability		108.64%
Net Pension Liability as a Percentage of Covered Payroll		(100.28)%

Development of the Single Discount Rate

Single Discount Rate	6.65%
Long-Term Expected Rate of Investment Return	6.65%
Long-Term Municipal Bond Rate*	2.41%
Last year ending September 30 in the 2020 to 2119 projection period for which projected benefit payments are fully funded	2119

Total Pension Expense $ (2,767,421)

Deferred Outflows and Deferred Inflows of Resources by Source to be recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	$ 6,808,840	$ 4,745,703
Changes in assumptions	23,914,096	-
Net difference between projected and actual earnings on pension plan investments	9,721,847	44,829,815
Total	$ 40,444,783	$ 49,575,518

***Source:** *Fidelity General Obligation AA rate as of September 30, 2020. This is the rate for Fixed Income Market Data/Yield Curve/Data Municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Investments' "20-Year Municipal GO AA Index." In describing this index, Fidelity Investments notes that the municipal curves are constructed using option adjusted analytics of a diverse population of over 10,000 tax exempt securities.*

Discussion

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67 establishes standards of financial reporting for pension plans and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report and the retirement system and/or plan sponsor will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state or local governments to recognize the net pension liability and the pension expense on their financial statements. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

The pension expense recognized each fiscal year is equal to the change in the net pension liability from the beginning of the year to the end of the year, not including the impact of employer contributions, adjusted for deferred recognition of the liability and investment experience.

Pension plans are also required to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position – in accordance with GASB Statement No. 67. The *statement of fiduciary net position* presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The *statement of changes in fiduciary net position* presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the fiduciary net position.

Notes to Financial Statements

GASB Statement No. 68 requires the notes of the employer's financial statements to disclose the total pension expense, the pension plan's liabilities and assets, and deferred outflows and inflows of resources related to pensions.

GASB Statement Nos. 67 and 68 require the notes of the financial statements for the employers and pension plans to include certain additional information. The list of disclosure items should include:

- a description of benefits provided by the plan;
- the type of employees and number of members covered by the pension plan;
- a description of the plan's funding policy, which includes member and employer contribution requirements;
- the pension plan's investment policies;
- the pension plan's fiduciary net position, net pension liability, and the pension plan's fiduciary net position as a percentage of the total pension liability;
- the net pension liability using a discount rate that is 1% higher and 1% lower than used to calculate the total pension liability and net pension liability for financial reporting purposes;
- significant assumptions and methods used to calculate the total pension liability;
- inputs to the discount rates;
- certain information about mortality assumptions and the dates of experience studies; and
- annual money-weighted rate of return.

Required Supplementary Information

GASB Statement No. 67 requires a 10-year fiscal history (which may be built prospectively) of:

- sources of changes in the net pension liability;
- information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percent of covered payroll; and
- comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. The net pension liability and pension expense should be measured as of the pension plan's fiscal year end (measurement date) on a date that is within the employer's prior fiscal year. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total pension liability shown in this report is based on an actuarial valuation performed as of January 1, 2020 and a measurement date of September 30, 2020. The actuarial valuation of the liabilities was determined as of January 1, 2020 (based on the actuarial valuation results as reported in the January 1, 2020 actuarial valuation report dated April 29, 2020) and rolled forward to the September 30, 2020 measurement date.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by Fidelity Investments) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.65%; the municipal bond rate is 2.41% (based on the daily rate closest to but not later than the measurement date of the rate for Fixed Income Market Data/Yield Curve/Data Municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Investments' "20-Year Municipal GO AA Index"); and the resulting Single Discount Rate is 6.65%.

SECTION B

FINANCIAL STATEMENTS

Auditor's Note – This information is presented in draft form for review by the Plan's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the Plan's financial statements.

PENSION EXPENSE UNDER GASB STATEMENT NO. 68
FISCAL YEAR ENDED SEPTEMBER 30, 2020

Pension Expense		
1. Service Cost	$	16,934,015
2. Interest on the Total Pension Liability		66,061,748
3. Current-Period Benefit Changes		6,428,217
4. Employee Contributions (made negative for addition here)		(7,925,645)
5. Projected Earnings on Plan Investments (made negative for addition here)		(69,628,011)
6. Pension Plan Administrative Expense		288,079
7. Other Changes in Plan Fiduciary Net Position		0
8. Recognition of Outflow (Inflow) of Resources due to Liabilities		7,744,468
9. Recognition of Outflow (Inflow) of Resources due to Assets		(22,670,292)
10. Total Pension Expense	**$**	**(2,767,421)**

Statement of Outflows and Inflows arising from Current Reporting Period
Fiscal Year Ended September 30, 2020

A. Outflows (Inflows) of Resources due to Liabilities		
1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	$	5,473,272
2. Assumption Changes (gains) or losses	$	11,877,993
3. Recognition period for Liabilities: Average of the expected remaining service lives of all members (active and inactive) {in years}		4.9
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the Difference between expected and actual experience of the Total Pension Liability	$	1,116,994
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for Assumption Changes	$	2,424,080
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	$	3,541,074
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the Difference between expected and actual experience of the Total Pension Liability	$	4,356,278
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for Assumption Changes	$	9,453,913
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	$	13,810,191
B. Outflows (Inflows) of Resources due to Assets		
1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	$	(32,960,447)
2. Recognition period for Assets {in years}		5.0
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	$	(6,592,089)
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	$	(26,368,358)

Statement of Outflows and Inflows arising from Current and Prior Reporting Periods

Fiscal Year Ended September 30, 2020

A. Outflows and Inflows of Resources due to Liabilities and Assets to be recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	$ 11,626,750	$ 3,882,282	$ 7,744,468
2. Due to Assets	3,240,616	25,910,908	(22,670,292)
3. Total	$ 14,867,366	$ 29,793,190	$ (14,925,824)

B. Outflows and Inflows of Resources by Source to be recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	$ 3,577,223	$ 3,175,045	$ 402,178
2. Assumption Changes	8,049,527	707,237	7,342,290
3. Net Difference between projected and actual earnings on pension plan investments	3,240,616	25,910,908	(22,670,292)
4. Total	$ 14,867,366	$ 29,793,190	$ (14,925,824)

C. Deferred Outflows and Deferred Inflows of Resources by Source to be recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	$ 6,808,840	$ 4,745,703	$ 2,063,137
2. Assumption Changes	23,914,096	-	23,914,096
3. Net Difference between projected and actual earnings on pension plan investments	9,721,847	44,829,815	(35,107,968)
4. Total	$ 40,444,783	$ 49,575,518	$ (9,130,735)

D. Deferred Outflows and Deferred Inflows of Resources by Year to be recognized in Future Pension Expenses

Year Ending September 30	Net Deferred Outflows of Resources
2021	$ (8,466,818)
2022	78,333
2023	2,662,872
2024	(3,405,122)
2025	-
Thereafter	-
Total	$ (9,130,735)

Summary of Remaining Deferred Outflows and Inflows of Resources

Date Established	Source	Recognition Period (years)	Original Amount	Years Remaining	Remaining Amount	Amount Recognized in Current Expense
Deferred Outflows of Resources						
9/30/2016	Liability Experience	4.7	$ 6,832,090	0.7	$ 1,017,546	$ 1,017,546
9/30/2017	Assumption Changes	4.6	381,755	1.6	132,785	82,990
9/30/2018	Liability Experience	4.7	6,780,611	2.7	3,895,245	1,442,683
9/30/2019	Investment Experience	5.0	16,203,079	4.0	12,962,463	3,240,616
9/30/2019	Assumption Change	4.6	25,495,302	3.6	19,952,845	5,542,457
9/30/2020	Assumption Changes	4.9	11,877,993	4.9	11,877,993	2,424,080
9/30/2020	Liability Experience	4.9	5,473,272	4.9	5,473,272	1,116,994
		SUBTOTAL:	73,044,102		55,312,149	14,867,366
Deferred Inflows of Resources						
9/30/2016	Investment Experience	5.0	(30,503,136)	1.0	(6,100,628)	(6,100,628)
9/30/2016	Assumption Changes	4.7	(4,748,597)	0.7	(707,237)	(707,237)
9/30/2017	Investment Experience	5.0	(39,874,630)	2.0	(15,949,852)	(7,974,926)
9/30/2017	Liability Experience	4.6	(8,071,653)	1.6	(2,807,532)	(1,754,707)
9/30/2018	Investment Experience	5.0	(26,216,326)	3.0	(15,729,796)	(5,243,265)
9/30/2019	Liability Experience	4.6	(6,533,554)	3.6	(5,113,216)	(1,420,338)
9/30/2020	Investment Experience	5.0	(32,960,447)	5.0	(32,960,447)	(6,592,089)
		SUBTOTAL:	(148,908,343)		(79,368,708)	(29,793,190)
		GRAND TOTAL:	**(75,864,241)**		**(24,056,559)**	**(14,925,824)**

Statement of Fiduciary Net Position

as of September 30, 2020

		2020
Assets		
Cash and Deposits	$	32,685,919
Receivables		
Accounts Receivable - Sale of Investments	$	3,040,334
Accrued Interest and Other Dividends		2,963,944
Contributions		-
Accounts Receivable - Other		23,175
Total Receivables	$	6,027,453
Investments		
Fixed Income	$	302,906,314
Domestic Equities		485,410,631
International Equities		179,472,971
Real Estate		95,586,317
Other/Alternatives		42,851,468
Total Investments	$	1,106,227,701
Total Assets	$	1,144,941,073
Liabilities		
Payables		
Accounts Payable - Purchase of Investments	$	11,422,139
Accrued Expenses		958,076
Accounts Payable - Other		-
Total Liabilities	$	12,380,215
Net Position Restricted for Pensions	$	1,132,560,858

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR YEAR ENDED SEPTEMBER 30, 2020

		2020
Additions		
Contributions		
Employer	$	10,364,100
Employee		7,925,645
State		12,000
Total Contributions	$	18,301,745
Investment Income		
Net Appreciation in Fair Value of Investments	$	90,104,295
Interest, Dividends and Other Income		18,888,450
Less Investment Expense		(6,404,287)
Net Investment Income	$	102,588,458
Other	$	-
Total Additions	$	120,890,203
Deductions		
Benefit Payments	$	50,966,931
Refunds of Employee Contributions		1,177,456
Pension Plan Administrative Expense		288,079
Other		-
Total Deductions	$	52,432,466
Net Increase in Net Position	$	68,457,737
Net Position Restricted for Pensions		
Beginning of Year	$	1,064,103,121
End of Year	$	1,132,560,858

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Auditor's Note – This information is presented in draft form for review by the Plan's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the Plan's financial statements.

Schedule of Changes in Net Pension Liability and Related Ratios
Fiscal Year Ended September 30, 2020
Ultimately 10 Fiscal Years will be Displayed

Fiscal year ending September 30,	2020	2019	2018	2017	2016	2015	2014
Total Pension Liability							
Service Cost	$ 16,934,015	$ 15,240,018	$ 15,065,668	$ 14,770,113	$ 15,173,452	$ 14,585,979	$ 14,670,375
Interest on the Total Pension Liability	66,061,748	65,042,520	62,567,359	61,053,620	58,867,669	56,983,247	55,622,257
Benefit Changes	6,428,217	-	-	-	-	-	-
Difference between Expected and Actual Experience	5,473,272	(6,533,554)	6,780,611	(8,071,653)	6,832,090	(3,532,969)	(11,230,163)
Assumption Changes	11,877,993	25,495,302	-	381,755	(4,748,597)	-	-
Benefit Payments	(50,966,931)	(49,687,426)	(46,860,103)	(44,490,793)	(42,069,828)	(39,276,003)	(37,118,458)
Refunds	(1,177,456)	(1,017,365)	(892,181)	(1,366,008)	(1,060,187)	(1,000,827)	(1,675,419)
Net Change in Total Pension Liability	54,630,858	48,539,495	36,661,354	22,277,034	32,994,599	27,759,427	20,268,592
Total Pension Liability - Beginning	987,830,735	939,291,240	902,629,886	880,352,852	847,358,253	819,598,826	799,330,234
Total Pension Liability - Ending (a)	$ 1,042,461,593	$ 987,830,735	$ 939,291,240	$ 902,629,886	$ 880,352,852	$ 847,358,253	$ 819,598,826
Plan Fiduciary Net Position							
Contributions - Employer	$ 10,364,100	$ 10,901,645	$ 10,650,462	$ 11,898,912	$ 13,178,874	$ 14,923,098	$ 18,860,463
Contributions - Employer (from State)	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Contributions - Non-Employer Contributing Entity	-	-	-	-	-	-	-
Contributions - Employee	7,925,645	7,326,649	7,127,965	7,004,943	6,706,567	6,483,666	7,073,440
Net Investment Income	102,588,458	53,143,676	93,775,837	102,287,929	88,498,386	(4,165,092)	82,832,150
Benefit Payments	(50,966,931)	(49,687,426)	(46,860,103)	(44,490,793)	(42,069,828)	(39,276,003)	(37,118,458)
Refunds	(1,177,456)	(1,017,365)	(892,181)	(1,366,008)	(1,060,187)	(1,000,827)	(1,675,419)
Administrative Expense	(288,079)	(335,282)	(343,115)	(295,301)	(297,984)	(297,942)	(175,213)
Other	-	-	-	-	-	-	-
Net Change in Plan Fiduciary Net Position	68,457,737	20,343,897	63,470,865	75,051,682	64,967,828	(23,321,100)	69,808,963
Plan Fiduciary Net Position - Beginning	1,064,103,121	1,043,759,224	980,288,359	905,236,677	840,268,849	863,589,949	793,780,986
Plan Fiduciary Net Position - Ending (b)	$ 1,132,560,858	$ 1,064,103,121	$ 1,043,759,224	$ 980,288,359	$ 905,236,677	$ 840,268,849	$ 863,589,949
Net Pension Liability - Beginning	(76,272,386)	(104,467,984)	(77,658,473)	(24,883,825)	7,089,404	(43,991,123)	5,549,248
Net Pension Liability - Ending (a) - (b)	(90,099,265)	(76,272,386)	(104,467,984)	(77,658,473)	(24,883,825)	7,089,404	(43,991,123)
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	108.64 %	107.72 %	111.12 %	108.60 %	102.83 %	99.16 %	105.37 %
Covered Payroll	$ 89,845,375	$ 82,998,580	$ 80,852,451	$ 79,558,524	$ 76,942,048	$ 74,021,494	$ 75,629,669
Net Pension Liability as a Percentage of Covered Payroll	(100.28)%	(91.90)%	(129.21)%	(97.61)%	(32.34)%	9.58 %	(58.17)%

SCHEDULE OF THE NET PENSION LIABILITY
ULTIMATELY 10 FISCAL YEARS WILL BE DISPLAYED

FY Ending September 30,	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability	Plan Fiduciary Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2014	$ 819,598,826	$ 863,589,949	$ (43,991,123)	105.37%	$ 75,629,669	(58.17)%
2015	847,358,253	840,268,849	7,089,404	99.16%	74,021,494	9.58%
2016	880,352,852	905,236,677	(24,883,825)	102.83%	76,942,048	(32.34)%
2017	902,629,886	980,288,359	(77,658,473)	108.60%	79,558,524	(97.61)%
2018	939,291,240	1,043,759,224	(104,467,984)	111.12%	80,852,451	(129.21)%
2019	987,830,735	1,064,103,121	(76,272,386)	107.72%	82,998,580	(91.90)%
2020	1,042,461,593	1,132,560,858	(90,099,265)	108.64%	89,845,375	(100.28)%

SCHEDULE OF CONTRIBUTIONS

ULTIMATELY 10 FISCAL YEARS WILL BE DISPLAYED

FY Ending September 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2014	$ 19,608,078	$ 18,872,463 *	$ 735,615 *	$ 75,629,669	24.95%
2015	10,803,098	14,935,098	(4,132,000)	74,021,494	20.18%
2016	8,767,703	13,190,874	(4,423,171)	76,942,048	17.14%
2017	8,944,103	11,910,912	(2,966,809)	79,558,524	14.97%
2018	8,659,427	10,662,462	(2,003,035)	80,852,451	13.19%
2019	8,813,297	10,913,645	(2,100,348)	82,998,580	13.15%
2020	9,720,956	10,376,100	(655,144)	89,845,375	11.55%

** A portion of the Plan's Credit Balance was applied to meet the remainder of the actuarially determined contribution for the fiscal year ending September 30, 2014.*

NOTES TO SCHEDULE OF CONTRIBUTIONS

Valuation Date:	January 1, 2019
Notes	Actuarially determined contributions are calculated as of January 1, which is nine months prior to the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Dollar, Closed
Remaining Amortization Period	25 years (longest remaining period); 9 years (single equivalent period)
Asset Valuation Method	5-year smoothed market; 20% corridor
Inflation	2.25%
Salary Increases	2.75% to 7.60%, depending on employment classification and service, including inflation
Investment Rate of Return	6.75%
Retirement Age	Experience-based table of rates that are specific to the employment classification and type of eligibility condition.
Mortality	Hazardous Duty Employees: RP-2000 Mortality Table for Annuitants, with mortality improvements projected to all future years after 2000 using Scale BB. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment. For females, the base mortality rates include a 100% white collar adjustment. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in their July 1, 2018 valuation, as mandated by Chapter 112.63, Florida Statutes. Nonhazardous Duty Employees: RP-2000 Mortality Table for Annuitants, with mortality improvements projected to all future years after 2000 using Scale BB. For males, the base mortality rates include a 50% blue collar adjustment and a 50% white collar adjustment. For females, the base mortality rates include a 100% white collar adjustment. These are the same rates used for Regular Class members of the Florida Retirement System (FRS) in their July 1, 2018 valuation, as mandated by Chapter 112.63, Florida Statutes.

Other Information:

Notes	Effective with the January 1, 2019 valuation, the assumed investment return assumption was reduced from 7.00% to 6.75%, and the assumed rates of salary increase, retirement, withdrawal, and disability were revised, based on the Experience Investigation for the Five Years Ended December 31, 2017, dated December 6, 2018.

SCHEDULE OF INVESTMENT RETURNS
ULTIMATELY 10 FISCAL YEARS WILL BE DISPLAYED

FY Ending September 30,	Annual Return*
2014	10.90 %
2015	(0.03)%
2016	10.63 %
2017	11.28 %
2018	9.69 %
2019	5.11 %
2020	9.73 %

** Annual money-weighted rate of return, net of investment expenses, as provided by the Investment Consultant.*

SECTION D

NOTES TO FINANCIAL STATEMENTS

Auditor's Note – This information is presented in draft form for review by the Plan's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the Plan's financial statements.

Long-Term Expected Return on Plan Assets

The assumed rate of investment return was adopted by the Plan's trustees after considering input from the plan's investment consultant and actuary. Additional information about the assumed rate of investment return is included in our actuarial valuation report as of January 1, 2020 and the January 1, 2013 – December 31, 2017 five-year experience study. The assumed rate of investment return falls within a reasonable range of the long-term expected rate of return.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These real rates of return 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. For each major asset class that is included in the pension plan's target asset allocation as of September 30, 2020, these best estimates are summarized in the following table:

ASSET ALLOCATION

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return	Allocation-Weighted Long-Term Expected Real Rate of Return
U.S. Large Cap Equities	26%	5.50%	1.43%
U.S. Mid Cap Equities	8%	5.75%	0.46%
U.S. Small Cap Equities	5%	5.75%	0.29%
International Equities	14%	5.25%	0.74%
Emerging Markets Equities	4%	6.00%	0.24%
U.S. Short Term T-Bills	1%	-0.50%	-0.01%
U.S. Long Term Treasury Bonds	4%	0.25%	0.01%
U.S. Core Fixed Income	13%	0.35%	0.05%
U.S. Investment Grade Corporate Bonds	8%	1.35%	0.11%
U.S. Municipal Bonds	1%	1.65%	0.02%
Global Bonds	1%	-0.40%	0.00%
U.S. Private Real Estate and Infrastructure	15%	3.75%	0.56%
Total	100%		3.90%
Expected Inflation (Per Investment Consultant)			1.75%
Total Expected Return			5.65%

The figures in the above table were based on information supplied by the Investment Consultant. Gabriel, Roeder, Smith & Company does not provide investment advice.

Single Discount Rate

A Single Discount Rate of 6.65% was used to measure the total pension liability. This Single Discount Rate was based on the expected rate of return on pension plan investments of 6.65%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these 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.

Regarding the sensitivity of the net pension liability to changes in the Single Discount Rate, the following presents the plan's net pension liability, calculated using a Single Discount Rate of 6.65%, as well as what the plan's net pension liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

SENSITIVITY OF NET PENSION LIABILITY TO THE SINGLE DISCOUNT RATE ASSUMPTION

1% Decrease 5.65%	Current Single Discount Rate Assumption 6.65%	1% Increase 7.65%
$44,338,720	($90,099,265)	($200,928,770)

SUMMARY OF POPULATION STATISTICS
(AS OF JANUARY 1, 2020)

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	1,321
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	80
Active Plan Members	1,571
Total Plan Members	2,972

SECTION E

SUMMARY OF BENEFITS

SUMMARY OF BENEFITS

A. Ordinances

The Plan was established under the Code of Ordinances for the City of Clearwater, Florida, Chapter 2, Article V, Division 3 and was most recently amended under Ordinance No. 9380-20 passed and adopted on March 5, 2020. The Plan is also governed by certain provisions of Part VII, Chapter 112, Florida Statutes (F.S.) and the Internal Revenue Code.

B. Effective Date

Restated Plan Effective Date: January 1, 2013 (previous restated Plan Effective Date was January 1, 1996).

C. Plan Year

January 1 through December 31.

D. Type of Plan

Qualified, governmental defined benefit retirement plan; for GASB purposes it is a single employer plan.

E. Eligibility Requirements

All full-time permanent employees of the City are required to participate and become participants on their date of hire.

F. Grandfathered Members

Members who are eligible for normal retirement as of January 1, 2013 are grandfathered in the plan provisions in effect before Ordinance No. 8333-12.

G. Credited Service

Credited Service is measured as the total number of years and fractional parts of years from the date of employment to the date of termination or retirement. No service is credited for any periods of employment for which a participant received a refund of their contributions.

H. Compensation

The total compensation for services rendered to the City reportable on the participant's W-2 form, plus all tax deferred, tax sheltered or tax exempt items of income derived from elective employee payroll deductions or salary reductions, but excluding any lump sum payments of unused vacation and sick leave, pay for off-duty employment, and clothing, car or meal allowances.

Effective January 1, 2013: For non-grandfathered hazardous duty members, the amount of overtime included in Compensation is limited to 300 hours per year; For non-grandfathered non-hazardous duty members, Compensation excludes overtime and additional pay above the base rate of pay.

I. Average Monthly Compensation (AMC)

One-twelfth of the average of Compensation during the highest 5 years out of the last 10 years preceding termination or retirement.

J. Normal Retirement

Eligibility: <u>For Non-Hazardous Duty Employment</u>

A participant hired before January 1, 2013 may retire on the first day of the month coincident with or next following the earliest of:

(1) age 55 with 20 years of Credited Service, or
(2) 30 years of Credited Service regardless of age, or
(3) age 65 with 10 years of Credited Service.

A participant hired on or after January 1, 2013 may retire on the first day of the month coincident with or next following the earliest of:

(1) age 60 with 25 years of Credited Service, or
(2) age 65 with 10 years of Credited Service

<u>For Hazardous Duty Employment-Police Officers and Firefighters</u>

A participant may retire on the first day of the month coincident with or next following the earlier of:

(1) age 55 with 10 years of Credited Service, or
(2) 20 years of Credited Service regardless of age.

Benefit: 2.75% of AMC multiplied by years of Credited Service.

For Non-Hazardous Duty participants hired on or after January 1, 2013, 2.00% of AMC multiplied by years of Credited Service.

Normal Form of Benefit: For Non-Hazardous Duty Employment (Non-Grandfathered)

A monthly annuity is paid for the life of the participant.

For Hazardous Duty Employment-Police Officers and Firefighters (and Grandfathered Non-Hazardous Duty Employment)

A monthly annuity is paid for the life of the participant. After the participant's death, 100% of the Normal Retirement Benefit shall be paid as a survivor annuity to the spouse for 5 years. After 5 years, such survivor annuity is reduced to 50% of the original amount. The survivor annuity ceases upon death or remarriage of the spouse. 120 monthly payments are guaranteed for police officers and firefighters. Optional forms of benefits are available.

COLA: For Non-Hazardous Duty and Hazardous Duty Police Officers

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is a five-year delay (after the retirement date) until this COLA is applied to benefits accrued after January 1, 2013. For Police Officers, the COLA with a 5-year delay (applicable to post-January 1, 2013 benefit accruals) only applies to Police Officers employed by the City on or after January 1, 2020.

For Hazardous Duty Firefighters

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is no COLA for benefits accrued after January 1, 2013.

K. Early Retirement

Eligibility: Police Officers and Firefighters may elect to retire earlier than the Normal Retirement Eligibility upon the attainment of age 50 with 10 years of Credited Service.

Benefit: The Normal Retirement Benefit is reduced by 3.0% for each year by which the Early Retirement date precedes age 55.

Normal Form of Benefit: A monthly annuity is paid for the life of the participant. After the participant's death, 100% of the Normal Retirement Benefit shall be paid as a survivor annuity to the spouse for 5 years. After 5 years, such survivor annuity is reduced to 50% of the original amount. The survivor annuity ceases upon death or remarriage of the spouse. 120 monthly payments are guaranteed for police officers and firefighters. Optional forms of benefits are available.

COLA: For Hazardous Duty Police Officers

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is a five-year delay (after the retirement date) until this COLA is applied to benefits accrued after January 1, 2013. For Police Officers, the COLA with a 5-year delay (applicable to post-January 1, 2013 benefit accruals) only applies to Police Officers employed by the City on or after January 1, 2020.

For Hazardous Duty Firefighters

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is no COLA for benefits accrued after January 1, 2013.

L. Delayed Retirement

Same as Normal Retirement taking into account Compensation earned and service credited until the date of actual retirement.

M. Service Connected Disability

Eligibility: Any participant who becomes totally and permanently disabled due to an illness or injury contracted in the line of duty and is deemed to be unable to perform useful and efficient service to the City is immediately eligible for a disability benefit.

Benefit: For Non-Hazardous Duty Employment

Participant's accrued Normal Retirement Benefit taking into account Compensation earned and service credited until the date of disability. Benefit is guaranteed to be no less than 42% of the participant's AMC (66 2/3% of the participant's AMC if grandfathered). Disability benefits, when combined with Worker's Compensation benefits, cannot exceed and will be limited to 100% of the participant's AMC on the date of disability.

For Hazardous Duty Employment-Police Officers and Firefighters

Participant's accrued Normal Retirement Benefit taking into account Compensation earned and service credited until the date of disability. Benefit is guaranteed to be no less than 66 2/3% of the participant's AMC. Disability benefits, when combined with Worker's Compensation benefits, cannot exceed and will be limited to 100% of the participant's AMC on the date of disability.

Normal Form of Benefit: For Non-Hazardous Duty Employment (Non-Grandfathered)

A monthly annuity is paid for the life of the participant.

For Hazardous Duty Employment-Police Officers and Firefighters (and Grandfathered Non-Hazardous Duty Employment)

A monthly annuity is paid for the life of the participant. After the participant's death, 100% of the Normal Retirement Benefit shall be paid as a survivor annuity to the spouse for 5 years. After 5 years, such survivor annuity is reduced to 50% of the original amount. The survivor annuity ceases upon death or remarriage of the spouse. 120 monthly payments are guaranteed for police officers and firefighters. Optional forms of benefits are available.

COLA: <u>For Non-Hazardous Duty and Hazardous Duty Police Officers</u>

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is a five-year delay (after the retirement date) until this COLA is applied to benefits accrued after January 1, 2013. For Police Officers, the COLA with a 5-year delay (applicable to post-January 1, 2013 benefit accruals) only applies to Police Officers employed by the City on or after January 1, 2020.

<u>For Hazardous Duty Firefighters</u>

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is no COLA for benefits accrued after January 1, 2013.

N. Non-Service Connected Disability

Eligibility: Any participant who has 10 or more years of Credited Service and becomes totally and permanently disabled and is deemed to be unable to perform useful and efficient service to the City is immediately eligible for a disability benefit.

Benefit: Participant's accrued Normal Retirement Benefit taking into account Compensation earned and service credited until the date of disability. Disability benefits, when combined with Worker's Compensation benefits, cannot exceed and will be limited to 100% of the participant's AMC on the date of disability.

Normal Form of Benefit: <u>For Non-Hazardous Duty Employment (Non-Grandfathered)</u>

A monthly annuity is paid for the life of the participant.

<u>For Hazardous Duty Employment-Police Officers and Firefighters (and Grandfathered Non-Hazardous Duty Employment)</u>

A monthly annuity is paid for the life of the participant. After the participant's death, 100% of the Normal Retirement Benefit shall be paid as a survivor annuity to the spouse for 5 years. After 5 years, such survivor annuity is reduced to 50% of the original amount. The survivor annuity ceases upon death or remarriage of the spouse. 120 monthly payments are guaranteed for police officers and firefighters. Optional forms of benefits are available.

COLA: For Non-Hazardous Duty and Hazardous Duty Police Officers

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is a five-year delay (after the retirement date) until this COLA is applied to benefits accrued after January 1, 2013. For Police Officers, the COLA with a 5-year delay (applicable to post-January 1, 2013 benefit accruals) only applies to Police Officers employed by the City on or after January 1, 2020.

For Hazardous Duty Firefighters

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is no COLA for benefits accrued after January 1, 2013.

O. Death in the Line of Duty

Eligibility: Any participant whose employment is terminated by reason of death in the line of duty is eligible for survivor benefits.

Benefit: Beneficiary will be paid the participant's accrued benefit based upon Credited Service and AMC as of the date of death. Benefit is guaranteed to be no less than 66 2/3% of the participant's AMC.

Normal Form of Benefit: 100% of the participant's accrued benefit shall be paid as a survivor annuity to the spouse for 5 years. After 5 years, such survivor annuity is reduced to 50% of the original amount. The survivor annuity ceases upon death or remarriage of the spouse. 120 monthly payments are guaranteed for police officers and firefighters.

COLA: For Non-Hazardous Duty and Hazardous Duty Police Officers

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is a five-year delay (after the retirement date) until this COLA is applied to benefits accrued after January 1, 2013. For Police Officers, the COLA with a 5-year delay (applicable to post-January 1, 2013 benefit accruals) only applies to Police Officers employed by the City on or after January 1, 2020.

For Hazardous Duty Firefighters

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is no COLA for benefits accrued after January 1, 2013.

In lieu of the benefits described above, the participant's beneficiary can elect to receive a refund of participant's accumulated contributions with interest.

P. Other Pre-Retirement Death

Eligibility: Any participant who dies with 10 or more years of Credited Service is eligible for survivor benefits.

Benefit: Beneficiary will be paid the participant's accrued benefit based upon Credited Service and AMC as of the date of death.

Normal Form of Benefit: 100% of the participant's accrued benefit shall be paid as a survivor annuity to the spouse for 5 years. After 5 years, such survivor annuity is reduced to 50% of the original amount. The survivor annuity ceases upon death or remarriage of the spouse. 120 monthly payments are guaranteed for police officers and firefighters.

COLA: For Non-Hazardous Duty and Hazardous Duty Police Officers

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is a five-year delay (after the retirement date) until this COLA is applied to benefits accrued after January 1, 2013. For Police Officers, the COLA with a 5-year delay (applicable to post-January 1, 2013 benefit accruals) only applies to Police Officers employed by the City on or after January 1, 2020.

For Hazardous Duty Firefighters

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is no COLA for benefits accrued after January 1, 2013.

In lieu of the benefits described above, a participant's beneficiary can elect to receive a refund of the participant's accumulated contributions with interest. Accumulated contributions, plus interest, will be refunded for all participants with less than 10 years of Credited Service.

Q. Post-Retirement Death

Benefit determined by the form of benefit elected upon retirement.

R. Optional Forms

In lieu of electing the Normal Form of benefit, the optional forms of benefits available to all retirees are a Single Life Annuity, a 10 Year Certain and Life Annuity, or the 50%, 66 2/3% (for police officers and firefighters), 75% or 100% Joint and Survivor options. Members may also elect a partial lump sum equal to 10%, 20%, or 30% of the value of the normal retirement benefit with the remaining monthly retirement benefit reduced accordingly.

S. Vested Termination

Eligibility: A participant has earned a non-forfeitable right to Plan benefits after the completion of 10 years of Credited Service provided employee contributions are not refunded.

Vesting is determined in accordance with the following table.

Years of Credited Service	% of Normal Retirement Benefits
Less Than 10	0%
10 or more	100%

Benefit: The participant's accrued Normal Retirement Benefit as of the date of termination. Benefit begins on the member's Normal Retirement date.

Alternatively, police officers and firefighters may elect to receive an actuarially reduced Early Retirement Benefit any time after age 50.

Normal Form of Benefit: <u>For Non-Hazardous Duty Employment (Non-Grandfathered)</u>

A monthly annuity is paid for the life of the participant.

<u>For Hazardous Duty Employment-Police Officers and Firefighters (and Grandfathered Non-Hazardous Duty Employment)</u>

A monthly annuity is paid for the life of the participant. After the participant's death, 100% of the Normal Retirement Benefit shall be paid as a survivor annuity to the spouse for 5 years. After 5 years, such survivor annuity is reduced to 50% of the original amount. The survivor annuity ceases upon death or remarriage of the spouse. 120 monthly payments are guaranteed for police officers and firefighters. Optional forms of benefits are available.

COLA: <u>For Non-Hazardous Duty and Hazardous Duty Police Officers</u>

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is a five-year delay (after the retirement date) until this COLA is applied to benefits accrued after January 1, 2013. For Police Officers, the COLA with a 5-year delay (applicable to post-January 1, 2013 benefit accruals) only applies to Police Officers employed by the City on or after January 1, 2020.

<u>For Hazardous Duty Firefighters</u>

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is no COLA for benefits accrued after January 1, 2013.

Plan participants with less than 10 years of Credited Service will receive a refund of their own accumulated contributions with interest.

T. Refunds

Eligibility: All participants terminating employment with less than 10 years of Credited Service are eligible. Optionally, vested members (those with 10 or more years of credited service) may elect a refund in lieu of the vested benefits otherwise due.

Benefit: Refund of the member's contributions with 5% simple interest paid in a single lump sum.

U. Member Contributions

8% of Compensation for Non-Hazardous Duty participants.
10% of Compensation for Hazardous Duty participants (8% of Compensation if grandfathered).

V. Employer Contributions

Each plan year, the Employer must contribute a minimum of 7% of the Compensation of all employees participating in the plan, plus any additional amount determined by the actuary needed to fund the plan properly according to State laws.

W. Cost of Living Increases

<u>For Non-Hazardous Duty and Hazardous Duty Police Officers</u>

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is a five-year delay (after the retirement date) until this COLA is applied to benefits accrued after January 1, 2013. For Police Officers, the COLA with a 5-year delay (applicable to post-January 1, 2013 benefit accruals) only applies to Police Officers employed by the City on or after January 1, 2020.

<u>For Hazardous Duty Firefighters</u>

1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. For non-grandfathered members (not eligible for normal retirement on January 1, 2013), there is no COLA for benefits accrued after January 1, 2013.

X. 13th Check

Not Applicable

Y. Deferred Retirement Option Plan

Not Applicable

Z. Other Ancillary Benefits

There are no ancillary retirement type benefits not required by statutes but which might be deemed a City of Clearwater Employees’ Pension Plan liability if continued beyond the availability of funding by the current funding source.

AA. Changes from Previous Valuation

There have been the following revisions in benefits since the previous valuation:

- Ordinance No. 9380-20 was passed and adopted on March 5, 2020. This Ordinance provides a 1.5% Cost of Living Adjustment (COLA) annually on all benefits for Police Officers including any benefits accrued after January 1, 2013 (instead of only for benefits accrued prior to January 1, 2013). For any non-grandfathered members (not eligible for normal retirement on January 1, 2013), there will be a five-year delay (after the retirement date) until this COLA is applied to benefits accrued after January 1, 2013. This change applies to all Police Officers who are actively employed on or after January 1, 2020.

- In compliance with newly adopted Florida Statutes Chapter 112.1816:
  If a firefighter is initially diagnosed with cancer while employed as a firefighter, and as a result of the diagnosis of cancer or circumstances arising from the treatment of such cancer, he or she is determined to be wholly prevented from rendering useful and efficient service as a firefighter, and likely to remain so disabled continuously and permanently, the disability or death shall be considered in the line-of-duty.

- In compliance with newly adopted Florida Statutes Chapter 112.181:
  Disability or death resulting from a condition or impairment of health that is caused by hepatitis, meningococcal meningitis, tuberculosis, hypertension or heart disease resulting in a member being determined to be wholly prevented from rendering useful and efficient service as a firefighter, and likely to remain so disabled continuously and permanently shall be presumed to have been accidental and suffered in the line of duty unless the contrary is shown by competent evidence.

SECTION F

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Actuarial Assumptions and Cost Method

Valuation Methods for GASB Statement Nos. 67 and 68

Actuarial Cost Method - Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

(i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and

(ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce (increase) the Net Pension Liability (the Unfunded Actuarial Accrued Liability).

Asset Method - The Plan Fiduciary Net Position is the fair value of assets.

Valuation Assumptions

The actuarial assumptions used in the valuation are shown in this Section. Both the economic and decrement assumptions were established following the Experience Investigation for the Five Years Ended December 31, 2017, dated December 6, 2018. The mortality assumption is mandated by Chapter 112.63, Florida Statutes.

Economic Assumptions

The investment return rate assumed in the valuation is 6.65% per year, compounded annually (net rate after investment expenses). This assumption was changed this year from 6.75%.

The **Inflation Rate** assumed in this valuation is 2.25% per year. The Inflation Rate is defined to be the expected long-term rate of increases in the prices of goods and services.

The assumed **real rate of return** over inflation is defined to be the portion of total investment return that is more than the assumed inflation rate. Considering other economic assumptions, the 6.65% investment return rate translates to an assumed real rate of return over inflation of 4.40%.

The rate of salary increase used for individual members can be seen in the tables below. Part of the assumption is for merit and/or seniority increases and productivity increases, and 2.25% recognizes inflation. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

% Increase in Salary - Hazardous Duty

Years of Service	Merit and Seniority	Inflation	Total Increase
1 - 2	5.35%	2.25%	7.60%
3 - 4	4.00%	2.25%	6.25%
5 - 9	3.25%	2.25%	5.50%
10 - 14	3.00%	2.25%	5.25%
15 and Higher	2.25%	2.25%	4.50%

% Increase in Salary - Non-Hazardous Duty

Years of Service	Merit and Seniority	Inflation	Total Increase
1	4.25%	2.25%	6.50%
2	3.35%	2.25%	5.60%
3	2.25%	2.25%	4.50%
4 - 9	1.50%	2.25%	3.75%
10 - 14	1.30%	2.25%	3.55%
15 - 19	0.80%	2.25%	3.05%
20 and Higher	0.50%	2.25%	2.75%

Demographic Assumptions

The mortality table for Hazardous Duty members is the RP-2000 Combined Healthy Participant Mortality Table (for pre-retirement mortality) and the RP-2000 Mortality Table for Annuitants (for post-retirement mortality) with future improvements in mortality projected to all future years using Scale BB. For females, the base mortality rates include a 100% white collar adjustment. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in the July 1, 2018 FRS Actuarial Valuation Report. Florida Statutes Chapter 112.63(1)(f) mandates the use of the same mortality tables used by the FRS in either of its two most recently published actuarial valuation reports.

FRS Healthy Post-Retirement Mortality for Special Risk Class Members

Sample Attained Ages (in 2020)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.53 %	0.23 %	34.24	38.59
55	0.66	0.32	29.60	33.58
60	0.88	0.46	25.03	28.68
65	1.26	0.72	20.62	23.92
70	1.92	1.19	16.46	19.44
75	3.12	2.02	12.70	15.34
80	5.13	3.38	9.44	11.68

This assumption is used to measure the probabilities of each benefit payment being made after retirement.

FRS Healthy Pre-Retirement Mortality for Special Risk Class Members

Sample Attained Ages (in 2020)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.22 %	0.15 %	35.22	38.94
55	0.39	0.23	30.11	33.80
60	0.70	0.38	25.23	28.78
65	1.19	0.68	20.67	23.95
70	1.92	1.19	16.46	19.44
75	3.12	2.02	12.70	15.34
80	5.13	3.38	9.44	11.68

This assumption is used to measure the probabilities of active members dying prior to retirement. All Police and 90% of Firefighters' deaths before retirement are assumed to be non-service connected.

For disabled retirees, the mortality table used was 60% of the RP-2000 Mortality Table for Disabled Annuitants with ages set back 4 years for males and set forward 2 years for females, and 40% of the RP-2000 Annuitants Mortality Table with a white collar adjustment with no age set back, both with no provision being made for future mortality improvements. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in the July 1, 2018 FRS Actuarial Valuation Report. Florida Statutes Chapter 112.63(1)(f) mandates the use of the same mortality tables used by the FRS in either of its two most recently published actuarial valuation reports.

FRS Disabled Mortality for Special Risk Class Members

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	1.67 %	0.91 %	23.74	27.06
55	2.03	1.26	20.77	23.37
60	2.47	1.67	17.91	19.90
65	3.07	2.24	15.15	16.62
70	3.90	3.18	12.52	13.58
75	5.30	4.60	10.02	10.86
80	7.59	6.66	7.80	8.48

The mortality table for Nonhazardous Duty members is the RP-2000 Combined Healthy Participant Mortality Table (for pre-retirement mortality) and the RP-2000 Mortality Table for Annuitants (for post-retirement mortality) with future improvements in mortality projected to all future years using Scale BB. For females, the base mortality rates include a 100% white collar adjustment. For males, the base mortality rates include a 50% blue collar adjustment and a 50% white collar adjustment. These are the same rates currently in use for Non-Special Risk Class members of the Florida Retirement System (FRS) in the July 1, 2018 FRS Actuarial Valuation Report. Florida Statutes Chapter 112.63(1)(f) mandates the use of the same mortality tables used by the FRS in either of its two most recently published actuarial valuation reports.

FRS Healthy Post-Retirement Mortality for Non-Special Risk Class Members

Sample Attained Ages (in 2020)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.55 %	0.23 %	34.99	38.59
55	0.60	0.32	30.37	33.58
60	0.75	0.46	25.70	28.68
65	1.11	0.72	21.17	23.92
70	1.70	1.19	16.89	19.44
75	2.84	2.02	12.99	15.34
80	4.80	3.38	9.61	11.68

This assumption is used to measure the probabilities of each benefit payment being made after retirement.

FRS Healthy Pre-Retirement Mortality for Non-Special Risk Class Members

Sample Attained Ages (in 2020)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.21 %	0.15 %	35.91	38.94
55	0.35	0.23	30.79	33.80
60	0.60	0.38	25.87	28.78
65	1.04	0.68	21.21	23.95
70	1.70	1.19	16.89	19.44
75	2.84	2.02	12.99	15.34
80	4.80	3.38	9.61	11.68

This assumption is used to measure the probabilities of active members dying prior to retirement. All deaths before retirement are assumed to be non-service connected.

For disabled retirees, the mortality table used was the RP-2000 mortality for disabled annuitants, set-back 4 years for males and set-forward 2 years for females, with no provision being made for future mortality improvements. These are the same rates currently in use for Non-Special Risk Class members of the Florida Retirement System (FRS) in the July 1, 2018 FRS Actuarial Valuation Report. Florida Statutes Chapter 112.63(1)(f) mandates the use of the same mortality tables used by the FRS in either of its two most recently published actuarial valuation reports.

FRS Disabled Mortality for Non-Special Risk Class Members

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	2.38 %	1.35 %	20.25	23.74
55	3.03	1.87	17.78	20.46
60	3.67	2.41	15.55	17.43
65	4.35	3.13	13.44	14.58
70	5.22	4.29	11.39	11.96
75	6.58	5.95	9.43	9.65
80	8.70	8.23	7.65	7.66

The rates of retirement used to measure the probability of eligible members retiring under normal and early retirement eligibility during the next year were as follows:

Hazardous Duty Retirement

Years of Service	Age	Probability of Retirement
10 - 19	50 - 54	5 %
	55 - 59	15
	60 - 64	40
	65 & Over	100
20 & Over	Under 55	15
	55 - 59	30
	60 - 64	40
	65 & Over	100

Non-Hazardous Duty Retirement

Years of Service	Age	Probability of Retirement
10 - 19	65 - 74	30 %
	75 & Over	100
20 - 29	55 - 64	20
	65 - 69	30
	70 & Over	100
30 & Over	Under 55	45
	55 - 59	20
	60 - 64	30
	65 - 69	50
	70 & Over	100

Rates of separation from active membership were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members separating from employment prior to becoming eligible for retirement.

Hazardous Duty Withdrawal - Males

Years of Service	Age	% of Active Members Separating Within Next Year
Under 1	All Ages	8.5 %
1	All Ages	7.5
2 - 5	Under 40	4.5
	40 & Over	2.5
6 & Over	Under 40	2.0
	40 & Over	1.5

Hazardous Duty Withdrawal - Females

Years of Service	Age	% of Active Members Separating Within Next Year
Under 1	All Ages	20.0 %
1 & Over	All Ages	4.0

Non-Hazardous Duty Withdrawal - Males

Years of Service	Age	% of Active Members Separating Within Next Year
Under 1	Under 35	25.0 %
	35 & Over	11.0
1 - 2	All Ages	16.0
3 - 4	Under 40	11.0
	40 & Over	5.0
5 - 9	Under 30	12.5
	30 - 49	5.0
	50 - 59	3.0
	60 & Over	7.5
10 & Over	Under 35	7.5
	35 - 39	4.0
	40 - 49	3.5
	50 - 54	2.0
	55 - 59	3.0
	60 & Over	4.5

Non-Hazardous Duty Withdrawal - Females

Years of Service	Age	% of Active Members Separating Within Next Year
Under 3	Under 30	22.0 %
	30 - 34	15.0
	35 - 44	5.0
	45 - 49	14.0
	50 - 59	18.0
	60 & Over	25.0
3 - 4	Under 30	18.0
	30 - 39	14.0
	40 - 59	5.0
	60 & Over	20.0
5 - 9	Under 35	5.0
	35 - 44	6.0
	45 - 59	4.5
	60 & Over	3.0
10 & Over	Under 40	6.0
	40 - 44	5.0
	45 - 49	3.75
	50 - 54	3.25
	55 - 59	2.75
	60 & Over	6.0

Rates of disability among active members (100% of disabilities are assumed to be service-connected).

Hazardous Duty Disability		
	% of Active Members Becoming Disabled Within Next Year	
Sample Ages	Males	Females
20	0.25 %	0.50 %
25	0.25	0.50
30	0.25	0.75
35	0.30	1.00
40	0.45	1.25
45	0.60	1.50
50	0.60	1.50
55	0.60	1.50
60	0.75	1.50
65	1.00	1.50
70	1.50	1.50

Non-Hazardous Duty Disability		
	% of Active Members Becoming Disabled Within Next Year	
Sample Ages	Males	Females
20	0.03 %	0.03 %
25	0.03	0.03
30	0.03	0.03
35	0.04	0.04
40	0.07	0.07
45	0.10	0.10
50	0.14	0.14
55	0.24	0.24
60	0.29	0.29
65	0.34	0.34
70	0.44	0.44

Miscellaneous and Technical Assumptions

Administrative & Investment Expenses	The investment return assumption is intended to be the net return after investment expenses. Annual administrative expenses are assumed to be equal to the administrative expenses of the previous year. Assumed administrative expenses are added to the Normal Cost.
Benefit Service	Exact fractional service is used to determine the amount of benefit payable.
Cost of Living Increases	The adjustment is 1.5% annually commencing on each April 1 for all retirees and beneficiaries who have received at least 6 monthly benefit payments. There is a five-year delay in the COLA for non-grandfathered non-hazardous duty members and hazardous duty police officers employed on or after January 1, 2020 for benefits accrued after January 1, 2013. There is no COLA for non-grandfathered hazardous duty firefighters for benefits accrued after January 1, 2013.
Decrement Operation	Disability and mortality decrements operate during retirement eligibility.
Decrement Timing	Decrements of all types are assumed to occur at the beginning of the year.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Forfeitures	For vested separations from service, it is assumed that 0% of members separating will withdraw their contributions and forfeit an employer financed benefit. It was further assumed that the liability at termination is the greater of the vested deferred benefit (if any) or the member's accumulated contributions.
Incidence of Contributions	Employer contributions are assumed to be made in equal installments during the first two quarters of the fiscal year. Member contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.

Marriage Assumption 75% of males and 75% of females are assumed to be married for purposes of death-in-service benefits and to determine the normal form of benefit when applicable. Male spouses are assumed to be three years older than female spouses for all active members and for members who became inactive before January 1, 2015. For members who became inactive on or after January 1, 2015, spouses ages are based on the beneficiary dates of birth provided by the Plan Administrator.

Normal Form of Benefit The normal form of benefit is a life annuity for non-grandfathered non-hazardous duty members. For all other members, the normal form of benefit is a life annuity that includes a survivor benefit where after the participant's death, 100% is payable to the spouse for five years, after which the benefit is reduced to 50%.

Pay Increase Timing End of fiscal year. This is equivalent to assuming that reported pays represent the annual rate of pay on the valuation date. The pay used for the valuation is equal to the greater of the actual pay for the plan year increased by the salary scale assumption rate (which varies by years of service) and the annual rate of pay on the valuation date.

Service Credit Accruals It is assumed that members accrue one year of service credit per year.

SECTION G

THE SINGLE DISCOUNT RATE

The Single Discount Rate

GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a “risk-free” rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating (which is published by Fidelity Investments) as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.65%; the municipal bond rate is 2.41%; and the resulting Single Discount Rate is 6.65%.

SECTION H

GLOSSARY OF TERMS

GLOSSARY OF TERMS

Actuarial Accrued Liability (AAL)	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
Actuarial Assumptions	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
Accrued Service	Service credited under the system which was rendered before the date of the actuarial valuation.
Actuarial Equivalent	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
Actuarial Gain (Loss)	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
Actuarial Present Value (APV)	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
Actuarial Valuation	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total pension liability, and related actuarial present value of projected benefit payments for pensions.
Actuarial Valuation Date	The date as of which an actuarial valuation is performed.

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Actuarially Determined Contribution (ADC)	A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically the Actuarially Determined Contribution has a normal cost payment and an amortization payment.
Amortization Payment	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
Amortization Method	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be "open" (meaning, reset each year) or "closed" (the number of years remaining will decline each year.
Cost-of-Living Adjustments	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
Covered Payroll	The payroll of covered employees, which is typically only the pensionable pay and does not include pay above any pay cap.
Deferred Retirement Option Program (DROP)	A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.
Deferred Inflows and Outflows	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.

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Discount Rate	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: 1. The benefit payments to be made while the pension plans' fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and 2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.
Entry Age Actuarial Cost Method (EAN)	The EAN is a funding method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit ages(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.
GASB	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
Fiduciary Net Position	The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.
Long-Term Expected Rate of Return	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
Money-Weighted Rate of Return	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
Multiple-Employer Defined Benefit Pension Plan	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.

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Municipal Bond Rate	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
Net Pension Liability (NPL)	The NPL is the liability of employers and non-employer contribution entities to plan members for benefits provided through a defined benefit pension plan.
Non-Employer Contribution Entities	Non-employer contribution entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contribution entities.
Normal Cost	The actuarial present value of the pension trust benefits allocated to the current year by the actuarial cost method.
Other Postemployment Benefits (OPEB)	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits regardless of the manner in which they are provided. Other post-employment benefits do not include termination benefits.
Real Rate of Return	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
Service Cost	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
Total Pension Expense	The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year: 1. Service Cost 2. Interest on the Total Pension Liability 3. Current-Period Benefit Changes 4. Employee Contributions (made negative for addition here) 5. Projected Earnings on Plan Investments (made negative for addition here) 6. Pension Plan Administrative Expense 7. Other Changes in Plan Fiduciary Net Position 8. Recognition of Outflow (Inflow) of Resources due to Liabilities 9. Recognition of Outflow (Inflow) of Resources due to Assets
Total Pension Liability (TPL)	The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.

Glossary of Terms

Unfunded Actuarial Accrued Liability (UAAL)	The UAAL is the difference between actuarial accrued liability and valuation assets.
Valuation Assets	The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 67 and 68, the valuation assets are equal to the market value of assets.