

City of Clearwater Employees' Pension Plan

Actuarial Valuation Report as of January 1, 2018
Annual Employer Contribution for the Fiscal Year
Ending September 30, 2019



March 28, 2018

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

Dear Board Members:

The results of the January 1, 2018 Annual Actuarial Valuation of the City of Clearwater Employees' Pension Plan are presented in this report.

The computed contribution rate shown on page 1 may be considered as a minimum contribution rate that complies with the Board's funding policy. Users of this report should be aware that contributions made at that rate do not guarantee benefit security. Given the importance of benefit security to any retirement system, we suggest that contributions to the System in excess of those presented in this report be considered.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section B of this report. This report does not include an assessment of the risks of future experience not meeting the actuarial assumptions. Such an assessment of risks was outside the scope of this assignment. We encourage a review and assessment of investment and other significant risks that may have a material effect on the Plan's financial condition.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure the System's funding progress and to determine the employer contribution rate for the fiscal year ending September 30, 2019. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The findings in this report are based on data or other information through December 31, 2017. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

The scope of an actuarial valuation does not include an analysis of the potential range of such measurements.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this Plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The valuation was based upon information furnished by the City concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the City.

In addition, this report was prepared using certain assumptions approved by the Board and prescribed by the Florida Statutes as described in the section of this report entitled Actuarial Assumptions and Methods. The prescribed assumptions are the assumed mortality rates detailed in the Actuarial Assumptions and Methods section in accordance with Florida Statutes, Chapter 112.63.

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 fairly presents the actuarial position of the Retirement System as of the valuation date. 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.

Peter N. Strong and Trisha Amrose are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions 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, meet the requirements and intent of Part VII, Chapter 112, Florida Statutes, 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.



Board of Trustees
March 28, 2018
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Gabriel, Roeder, Smith & Company will be pleased to review this valuation and Report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH AND COMPANY

Peter N. Strong, FSA, MAAA
Enrolled Actuary No. 17-6975

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SECTION A

DISCUSSION OF VALUATION RESULTS

DISCUSSION OF VALUATION RESULTS

Comparison of Required Employer Contributions

The required employer contribution developed in this year's valuation is compared below to last year's results:

	For FYE 9/30/2019 Based on 1/1/2018 Valuation	For FYE 9/30/2018 Based on 1/1/2017 Valuation	Increase (Decrease)
Required Employer/State Contribution	\$ 8,813,297	\$ 8,659,427	\$ 153,870
As % of Covered Payroll	10.71 %	10.92 %	(0.21) %
Estimated State Contribution	12,000	12,000	0
As % of Covered Payroll	0.02 %	0.01 %	0.01 %
Required Employer Contribution	8,801,297	8,647,427	153,870
As % of Covered Payroll	10.69 %	10.91 %	(0.22) %
Credit Balance	22,819,909	19,445,883	3,374,026

The contribution has been adjusted for interest on the basis that payments are made uniformly during the first two quarters of the City's fiscal year. The required employer contribution has been computed under the assumption that the amount to be received from the State on behalf of police officers and firefighters in 2018 and 2019 will be \$12,000. If the actual payment from the State falls below this amount, then the City must increase its contribution by the difference.

The actual Employer and State contributions during the year ending December 31, 2017 were \$10,660,241 and \$12,000, respectively, for a total of \$10,672,241, compared to the required contribution of \$8,659,427. The excess contribution of \$2,012,814 was used to increase the credit balance.

The minimum required City contribution is 7% of covered payroll.

Revisions in Benefits

There have been no revisions in benefits since the last valuation.

Revisions in Actuarial Assumptions or Methods

There have been no revisions in actuarial assumptions or methods since the last valuation. For informational purposes, if this year's valuation had been completed using the mortality rates assumed prior to January 1, 2016 (the RP-2000 Combined Healthy Participant Mortality Table for males and females with mortality improvements projected with Scale BB) rather than the mortality rates mandated by the Florida Statutes, the required City contribution for FY 2019 would have been \$9,046,197, or 10.99% of covered payroll, and the funded ratio (excluding the credit balance) as of January 1, 2018 would have been 104.06%.

Actuarial Experience

There was a net actuarial experience gain of \$11,075,148 during the year, which means that actual experience was more favorable than expected. The gain is primarily due to a recognized investment return (on the smoothed actuarial value of assets) above the assumed rate of 7.0%. The investment return on the market value of assets was 16.01%, and the investment return was 8.89% based on the actuarial value of assets. The investment gains were partially offset by liability-related experience losses. There were demographic experience gains resulting from fewer service retirements and more employment terminations than expected, but these gains were more than offset by experience losses due to higher than expected salary increases. Actual salary increases from 2016 to 2017 were 7.35%, on average, compared to an expected average increase of 4.16%. Actual mortality experience was also a source of experience loss, as there were fewer retiree deaths during the year than expected.

Under Chapter 112.66 of the Florida Statutes, the annual payment to amortize the UAL may not reduce the contribution required to fund the Normal Cost. As a result, since the annual payment to amortize the UAL is below \$0, the actuarial experience gain had no direct effect on the required employer contribution.

Analysis of Change in Employer Contribution

The components of change in the required City contribution are as follows:

Contribution Rate Last Year	10.91 %
Change in Benefits	0.00
Change in Assumptions and Methods	0.00
Amortization Payment on UAAL	0.00
Normal Cost	(0.19)
Experience Gain/Loss	0.00
Change in Administrative Expenses	(0.02)
Change in State Revenue	<u>(0.01)</u>
Contribution Rate This Year	10.69

Funded Ratio

One measure of the Plan's funding progress is the ratio of the actuarial value of assets to the actuarial accrued liability. Including the credit balance in the actuarial value of assets, the funded ratio is 106.96% this year compared to 105.38% last year. Not including the credit balance in the actuarial value of assets, the funded ratio is 104.47% this year compared to 103.17% last year.

Variability of Future Contribution Rates

The Actuarial Cost Method used to determine the contribution rate is intended to produce contribution rates which are generally level as a percent of payroll. Even so, when experience differs from the assumptions, as it often does, the employer's contribution rate can vary significantly from year-to-year.

The Market Value of Assets exceeds the Actuarial Value of Assets by \$38,975,741 as of the valuation date (see Section C). This difference will be phased in over the next few years in the absence of offsetting losses. If there are no experience losses and the return on the market value of assets is 7.0% in 2018 (net of investment expenses) as assumed, it is projected that the City contribution requirement as of January 1, 2019 for the fiscal year ending September 30, 2020 will remain in the range of approximately 10%-11% of covered payroll.

Relationship to Market Value

If Market Value had been the basis for the valuation, the City contribution rate would have remained at 10.69% of covered payroll (since the annual payment to amortize the UAL would have remained at \$0 due to Chapter 112.66 of the Florida Statutes), and the funded ratio (excluding the credit balance) would have been 108.73%. The funded ratio based on the market value of assets (excluding the credit balance) last year was 100.62%.

Measures of Plan Maturity/Risk Exposure

The following are measures of the Plan's maturity and risk exposure:

	<u>1/1/2018</u>	<u>1/1/2017</u>
Ratio of the Market Value of Assets to Total Payroll	12.38	11.42
Ratio of retired to active life liability	2.08	1.97
Net cash flow as a percentage of the Market Value of Assets	(2.82) %	(2.86) %

The higher the above benchmarks are, the more mature the Plan is, and the more risk exposure the Plan has (to asset fluctuations and longevity risk).

Conclusion

The remainder of this Report includes detailed actuarial valuation results, financial information, miscellaneous information and statistics, and a summary of plan provisions.

SECTION B

VALUATION RESULTS

PARTICIPANT DATA		
	January 1, 2018	January 1, 2017
ACTIVE MEMBERS		
Number	1,523	1,520
Covered Annual Payroll	\$ 82,317,307	\$ 79,276,100
Average Annual Payroll	\$ 54,049	\$ 52,155
Average Age	44.0	44.3
Average Past Service	10.6	10.9
Average Age at Hire	33.4	33.4
RETIREES & BENEFICIARIES		
Number	1,123	1,078
Annual Benefits	\$ 42,029,629	\$ 39,298,148
Average Annual Benefit	\$ 37,426	\$ 36,455
Average Age	66.7	66.3
DISABILITY RETIREES		
Number	136	134
Annual Benefits	\$ 4,040,807	\$ 3,889,865
Average Annual Benefit	\$ 29,712	\$ 29,029
Average Age	63.9	63.2
TERMINATED VESTED MEMBERS		
Number	75	66
Annual Benefits	\$ 1,407,716	\$ 1,254,568
Average Annual Benefit	\$ 18,770	\$ 19,009
Average Age	49.4	50.1

ACTUARIALLY DETERMINED CONTRIBUTION (ADC)		
A. Valuation Date	January 1, 2018	January 1, 2017
B. ADC to Be Paid During Fiscal Year Ending	9/30/2019	9/30/2018
C. Assumed Date of Employer Contrib.	Evenly during first two quarters of fiscal year	Evenly during first two quarters of fiscal year
D. Annual Payment to Amortize Unfunded Actuarial Liability	\$ 0 *	\$ 0 *
E. Employer Normal Cost	8,236,726	8,092,922
F. ADC if Paid on the Valuation Date: D+E	8,236,726	8,092,922
G. ADC Adjusted for Frequency of Payments	8,813,297	8,659,427
H. ADC as % of Covered Payroll	10.71 %	10.92 %
I. Assumed Rate of Increase in Covered Payroll to Contribution Year	0.00 %	0.00 %
J. Covered Payroll for Contribution Year	82,317,307	79,276,100
K. ADC for Contribution Year: H x J	8,813,297	8,659,427
L. Estimate of State Revenue in Contribution Year	12,000	12,000
M. Required Employer Contribution (REC) in Contribution Year	8,801,297	8,647,427
N. REC as % of Covered Payroll in Contribution Year: M ÷ J	10.69 %	10.91 %
O. Credit Balance	22,819,909	19,445,883

** The annual payment to amortize the UAL is less than \$0; however, under Chapter 112.66 of the Florida Statutes, the annual payment to amortize the UAL may not reduce the contribution below the amount required to fund the Normal Cost.*

ACTUARIAL VALUE OF BENEFITS AND ASSETS

	January 1, 2018	January 1, 2017
A. Valuation Date		
B. Actuarial Present Value of All Projected Benefits for		
1. Active Members		
a. Service Retirement Benefits	\$ 349,500,746	\$ 344,686,807
b. Vesting Benefits	34,245,751	34,490,262
c. Disability Benefits	14,192,268	13,745,145
d. Preretirement Death Benefits	5,977,601	5,984,099
e. Return of Member Contributions	3,004,156	2,778,269
f. Total	<u>406,920,522</u>	<u>401,684,582</u>
2. Inactive Members		
a. Service Retirees & Beneficiaries	556,713,663	524,368,640
b. Disability Retirees	51,685,695	50,425,996
c. Terminated Vested Members	14,735,991	14,083,542
d. Total	<u>623,135,349</u>	<u>588,878,178</u>
3. Total for All Members	1,030,055,871	990,562,760
C. Actuarial Accrued (Past Service) Liability	916,334,666	880,316,652
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35	866,723,368	835,933,687
E. Plan Assets		
1. Market Value	1,019,110,192	905,261,405
2. Actuarial Value	980,134,451	927,675,129
3. Actuarial Value Excluding Credit Balance	957,314,542	908,229,246
F. Actuarial Present Value of Projected Covered Payroll	628,628,623	601,882,706
G. Actuarial Present Value of Projected Member Contributions	55,880,281	53,377,255
H. Accumulated Value of Active Member Contributions	60,969,115	60,655,020
I. Unfunded Actuarial Accrued Liability (UAAL) Based on EAN Method = C. - E.3.	(40,979,876)	(27,912,594)
J. Funded Ratio = E.2. / C.	106.96%	105.38%
K. Funded Ratio Excluding Credit Balance = E.3. / C.	104.47%	103.17%

**CALCULATION OF EMPLOYER NORMAL COST
ENTRY AGE NORMAL METHOD**

A. Valuation Date	January 1, 2018	January 1, 2017
B. Normal Cost for		
1. Service Retirement Benefits	\$ 10,742,727	\$ 10,431,629
2. Vesting	2,058,733	2,024,528
3. Disability Benefits	1,410,003	1,335,018
4. Death Benefits	253,393	248,588
5. Refund of Contributions	<u>714,178</u>	<u>695,405</u>
6. Total for Future Benefits	15,179,034	14,735,168
7. Assumed Amount for Administrative Expenses	<u>294,925</u>	<u>301,781</u>
8. Total Normal Cost	15,473,959	15,036,949
C. Expected Member Contributions	7,237,233	6,944,027
D. Employer Normal Cost: B8 - C	8,236,726	8,092,922
E. Employer Normal Cost as % of Covered Payroll	10.01%	10.21%

Reconciliation of Credit Balance	
Credit Balance at Beginning of Year	\$ 19,445,883
Required Employer Contribution	- 8,647,427
Employer Contribution Made	+ 10,660,241
Interest on Credit Balance	+ <u>1,361,212</u>
Credit Balance at End of Year	22,819,909

LIQUIDATION OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)

UAAL Amortization Period and Payments					
Original UAAL			Current UAAL		
Date Established	Source	Amount	Years Remaining	Amount	Payment
1/1/2015	Fresh Start	\$ (5,212,649)	20	\$ (6,463,582)	\$ (570,202)
1/1/2016	(Gain)/Loss	475,313	13	547,648	61,240
1/1/2016	Assumption Change	(4,280,409)	23	(4,924,867)	(408,322)
1/1/2017	(Gain)/Loss	(18,096,188)	14	(19,389,495)	(2,072,047)
1/1/2017	Assumption Change	303,943	24	325,568	26,529
1/1/2018	(Gain)/Loss	<u>(11,075,148)</u>	15	<u>(11,075,148)</u>	<u>(1,136,441)</u>
		(37,885,138)		(40,979,876)	(4,099,243)

Amortization Schedule

The UAAL is being liquidated as a level dollar amount over the number of years remaining in the amortization period. The expected amortization schedule is as follows:

Amortization Schedule	
Year	Expected UAAL
2018	\$ (40,979,876)
2019	(39,462,272)
2020	(37,838,442)
2021	(36,100,942)
2022	(34,241,818)
2023	(32,252,556)
2028	(20,012,044)
2033	(4,925,542)
2038	(1,050,426)
2042	-

ACTUARIAL GAINS AND LOSSES

The assumptions used to anticipate mortality, employment turnover, investment income, expenses, salary increases, and other factors have been based on long range trends and expectations. Actual experience can vary from these expectations. The variance is measured by the gain and loss for the period involved. If significant long term experience reveals consistent deviation from what has been expected and that deviation is expected to continue, the assumptions should be modified. The net actuarial gain (loss) for the past year is computed as follows:

A. Derivation of the Current UAAL	
1. Last Year's UAAL	\$ (27,912,594)
2. Employer Normal Cost for Contribution Year	8,092,922
3. Last Year's Contributions	8,659,427 *
4. Interest at the Assumed Rate on:	
a. 1 and 2 for one year	(1,387,377)
b. 3 from dates paid	<u>38,252</u>
c. a - b	<u>(1,425,629)</u>
5. This Year's Expected UAAL: 1 + 2 - 3 + 4c	(29,904,728)
6. This Year's Actual UAAL (Before any changes in benefits and assumptions)	(40,979,876)
7. Net Actuarial Gain (Loss): (5) - (6)	11,075,148
8. Gain (Loss) Due to Investments	17,467,169
9. Gain (Loss) Due to other sources	(6,392,021)

** Excludes the portion of the actual contribution above the required contribution that was used to increase the credit balance.*

Gains (losses) in previous years have been as follows:

Year Ending 12/31	Gain (Loss)	Change in Employer Cost Rate*
2009	\$32,358,262	(4.89) %
2010	2,311,412	(0.37)
2011	(13,721,771)	2.28
2012	(7,015,253)	1.15
2013	62,452,347	(11.02)
2014	34,213,347	(6.01)
2015	(475,313)	0.07 **
2016	18,096,188	(2.51) **
2017	11,075,148	(1.48) **

* Before 2015, Change in Normal Cost Rate.

** Before reflecting Chapter 112.66 of the Florida Statutes. Since the annual payment to amortize the UAL is less than \$0, the net effect of the 2016 gain on the required employer contribution is \$0 after reflecting Chapter 112.66 of the Florida Statutes (the requirement to fund at least the normal cost).

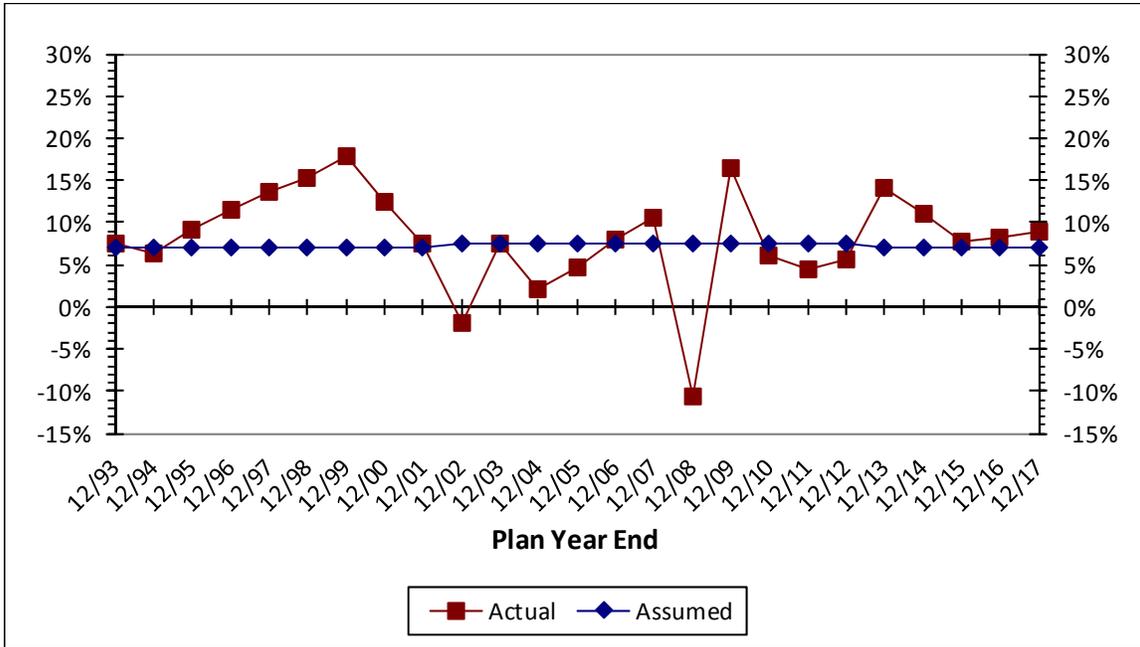
The fund earnings and salary increase assumptions have considerable impact on the cost of the Plan so it is important that they are in line with the actual experience. The following table shows the actual fund earnings and salary increase rates compared to the assumed rates for the last few years:

Year Ending	Investment Return		Salary Increases	
	Actual	Assumed	Actual	Assumed
12/31/1986	N/A	7.00 %	7.40 %	5.00 %
12/31/1987	N/A	7.00	5.90	5.00
12/31/1988	N/A	7.00	9.10	5.00
12/31/1989	N/A	7.00	8.70	5.00
12/31/1990	N/A	7.00	5.30	5.00
12/31/1991	N/A	7.00	6.10	5.00
12/31/1992	N/A	7.00	6.80	5.00
12/31/1993	7.42 %	7.00	1.20	5.00
12/31/1994	6.28	7.00	4.40	5.00
12/31/1995	9.14	7.00	6.40	5.00
12/31/1996	11.54	7.00	6.70	5.00
12/31/1997	13.74	7.00	5.60	5.00
12/31/1998	15.28	7.00	7.40	5.00
12/31/1999	17.96	7.00	4.20	5.00
12/31/2000	12.42	7.00	5.80	5.00
12/31/2001	7.40	7.00	5.90	5.00
12/31/2002	(1.85)	7.50	5.80	6.00
12/31/2003	7.45	7.50	6.40	6.00
12/31/2004	2.18	7.50	6.38	6.00
12/31/2005	4.58	7.50	5.49	6.00
12/31/2006	7.87	7.50	5.15	6.00
12/31/2007	10.68	7.50	6.62	6.00
12/31/2008	(10.61)	7.50	4.25	6.00
12/31/2009	16.53	7.50	3.29	6.00
12/31/2010	5.98	7.50	1.27	6.00
12/31/2011	4.46	7.50	2.56	6.00
12/31/2012	5.50	7.50	4.48	6.00
12/31/2013	14.04	7.00	3.16	4.07
12/31/2014	11.04	7.00	3.38	4.04
12/31/2015	7.64	7.00	8.65 *	4.09
12/31/2016	8.22	7.00	1.23 *	4.13
12/31/2017	8.89	7.00	7.35	4.16
Averages	7.98 %	---	5.37 %	---

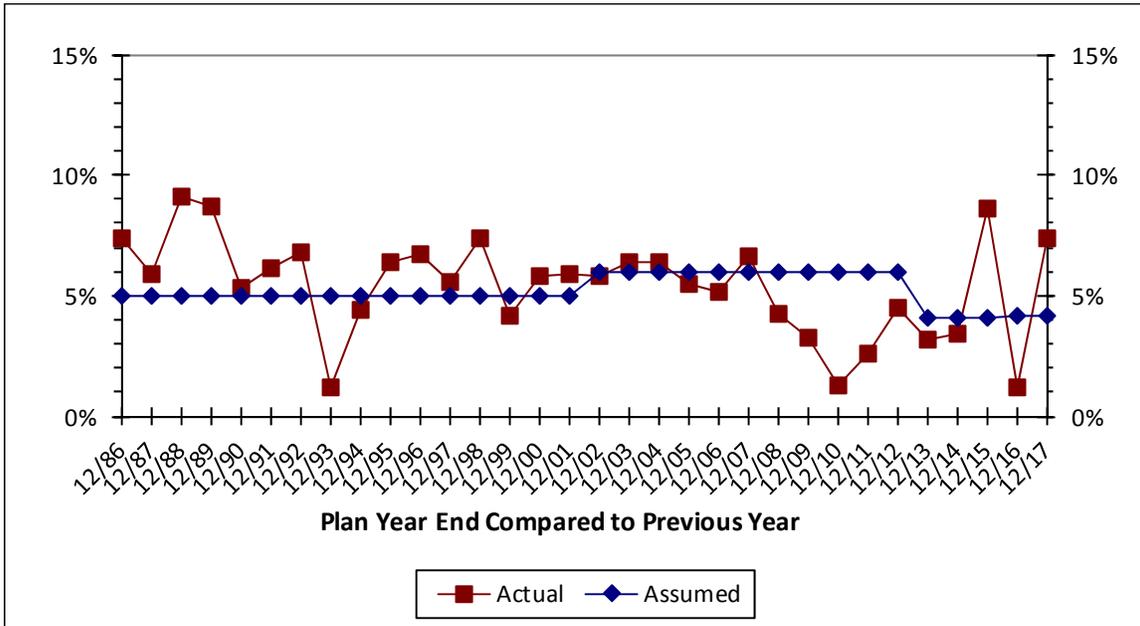
* Salary for the year ending 12/31/2015 included 27 pay periods rather than 26.

The actual investment return rates shown above are based on the actuarial value of assets. The actual salary increase rates shown above are the increases received by those active members who were included in the actuarial valuations both at the beginning and the end of each year.

History of Investment Return Based on Actuarial Value of Assets



History of Salary Increases



**Actual (A) Compared to Expected (E) Decrements
Among Active Employees**

Year Ended	Number Added During Year		Service Retirement		Disability Retirement		Death		Terminations				Active Members End of Year
	A	E	A	E	A	E	A	E	Vested	Other	Totals		
									A	A	A	E	
12/31/2009	49	110	54	57	0	6	0	2	10	46	56	93	1,567
12/31/2010	78	137	68	51	2	6	3	2	15	49	64	85	1,508
12/31/2011	84	124	43	49	6	6	0	2	11	64	75	84	1,468
12/31/2012	119	113	51	52	3	6	1	2	18	40	58	81	1,474
12/31/2013	102	98	27	42	2	3	4	2	11	54	65	79	1,478
12/31/2014	135	131	45	51	5	3	2	2	21	58	79	78	1,482
12/31/2015	145	122	43	52	7	3	1	2	18	53	71	82	1,505
12/31/2016	159	144	49	60	4	3	2	3	18	71	89	89	1,520
12/31/2017	164	161	47	59	2	3	2	2	25	85	110	91	1,523
12/31/2018				65		3		2				92	
9 Yr Totals *	1035	1140	427	473	31	39	15	19	147	520	667	762	

**Actual (A) Compared to Expected (E) Deaths
Among Retirees and Beneficiaries**

Year Ended	Actual During Year		Expected During Year	
	Number	Annual Pensions	Number	Annual Pensions
12/31/2009	12	\$ 142,606	16	\$ 313,189
12/31/2010	12	139,508	18	363,242
12/31/2011	13	220,877	19	416,467
12/31/2012	12	232,755	20	466,010
12/31/2013	20	401,192	20	480,787
12/31/2014	16	275,728	21	510,892
12/31/2015	19	385,405	22	558,603
12/31/2016	20	498,746	25	708,907
12/31/2017	15	288,110	26	753,482
12/31/2018			28	831,241

RECENT HISTORY OF VALUATION RESULTS									
Valuation Date	Number of		Covered Annual Payroll	Actuarial Value of Assets	Actuarial Accrued Liability (Entry Age)	Unfunded Actuarial Liability (Entry Age)*	Funded Ratio	Employer Normal Cost*	
	Active Members	Inactive Members						Amount	% of Payroll
1/1/07	1,692	819	\$ 79,385,090	\$ 559,830,590	N/A	N/A	N/A	\$ 9,192,407	11.58 %
1/1/08	1,641	878	80,371,617	610,979,087	N/A	N/A	N/A	6,920,400	8.61
1/1/09	1,628	903	82,104,837	536,834,473	N/A	N/A	N/A	20,005,238	24.37
1/1/10	1,567	955	80,443,199	618,444,906	\$ 647,167,565	\$ 28,722,659	95.6 %	15,879,628	19.74
1/1/11	1,508	1,024	76,505,599	646,956,800	672,786,812	25,830,012	96.2	15,461,725	20.21
1/1/12	1,468	1,072	74,765,020	664,087,199	702,438,432	38,351,233	94.5	17,064,100	22.82
1/1/13	1,474	1,127	74,422,344	688,731,221	774,749,811	86,018,590	88.9	12,845,501	17.26
1/1/14	1,478	1,144	74,254,159	772,411,068	795,927,127	23,516,059	97.0	4,626,039	6.23
1/1/15	1,482	1,194	75,078,542	829,486,793	824,274,144	(5,212,649)	100.6	8,194,115	10.91
1/1/16	1,505	1,237	80,250,993	866,598,975	857,177,619	(9,421,356)	101.1	8,358,975	10.42
1/1/17	1,520	1,278	79,276,100	908,229,246	880,316,652	(27,912,594)	103.2	8,092,922	10.21
1/1/18	1,523	1,334	82,317,307	957,314,542	916,334,666	(40,979,876)	104.5	8,236,726	10.01

* Starting with the January 1, 2015 valuation, the Employer Normal Cost is calculated under the Entry Age Normal Method and the Credit Balance is excluded from the Actuarial Value of Assets.

Results before January 1, 2010 are from the January 1, 2009 Report prepared by PricewaterhouseCoopers.

RECENT HISTORY OF REQUIRED AND ACTUAL CONTRIBUTIONS

Valuation Date	End of Year To Which Valuation Applies	Required Contributions						Actual Contributions		
		Employer & State		Estimated State		Net Employer		Employer	State	Total
		Amount	% of Payroll	Amount	% of Payroll	Amount	% of Payroll			
1/1/07	9/30/08	\$ 12,532,399	15.79 %	\$ 12,000	0.02 %	\$ 12,520,399	15.77 %	\$ 12,520,399	\$ 12,000	\$ 12,532,399
1/1/08	9/30/09	10,086,978	12.55	12,000	0.01	10,074,978	12.54	10,074,978	12,000	10,086,978
1/1/09	9/30/10	23,960,586	29.18	12,000	0.01	23,948,586	29.17	23,948,586	12,000	23,960,586
1/1/10	9/30/11	19,373,992	24.08	12,000	0.01	19,361,992	24.07	19,361,992	12,000	19,373,992
1/1/11	9/30/12	18,898,567	24.70	12,000	0.01	18,886,567	24.69	18,886,567	12,000	18,898,567
1/1/12	9/30/13	20,925,720	27.99	12,000	0.02	20,913,720	27.97	20,913,720	12,000	20,925,720
1/1/13	9/30/14	19,608,078	26.35	12,000	0.02	19,596,078	26.33	19,596,078	12,000	19,608,078
1/1/14	9/30/15	10,803,098	14.55	12,000	0.02	10,791,098	14.53	10,791,098	12,000	10,803,098
1/1/15	9/30/16	8,767,703	11.68	12,000	0.02	8,755,703	11.66	8,755,703	12,000	8,767,703
1/1/16	9/30/17	8,944,103	11.15	12,000	0.02	8,932,103	11.13	8,932,103	12,000	8,944,103
1/1/17	9/30/18	8,659,427	10.92	12,000	0.01	8,647,427	10.91	8,647,427	12,000	8,659,427
1/1/18	9/30/19	8,813,297	10.71	12,000	0.02	8,801,297	10.69	---	---	---

Results before January 1, 2010 are from the January 1, 2009 Report prepared by PricewaterhouseCoopers.

ACTUARIAL ASSUMPTIONS AND COST METHOD

Valuation Methods

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;
- (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 Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities - Unfunded Actuarial Accrued Liabilities (full funding credit if assets exceed liabilities) were amortized by level (principal & interest combined) dollar amount contributions over a reasonable period of future years.

Actuarial Value of Assets - The Actuarial Value of Assets phase in the difference between the expected and actual return on market value of assets at the rate of 20% per year. The Actuarial Value of Assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the Market Value of plan assets and whose upper limit is 120% of the Market Value of plan assets. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than assumed rate, Actuarial Value of Assets will tend to be greater than Market Value.

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 Study Report as of January 1, 2012 covering the five years ending December 31, 2011.

Economic Assumptions

The investment return rate assumed in the valuations is 7.00% per year, compounded annually (net rate after investment expenses).

The **Wage Inflation Rate** assumed in this valuation is 2.50% per year. The Wage Inflation Rate is defined to be the portion of total pay increases for an individual that are due to macroeconomic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes related to individual merit and seniority effects.

The **Price Inflation Rate** assumed in this valuation is 2.50% per year. The Price 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 7.00% investment return rate translates to an assumed real rate of return over inflation of 4.50%.

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 2.50% recognizes inflation, including price inflation and other macroeconomic forces. 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	5.40%	2.50%	7.90%
2	5.20%	2.50%	7.70%
3	4.50%	2.50%	7.00%
4	2.75%	2.50%	5.25%
5 - 14	1.75%	2.50%	4.25%
15 and Higher	1.00%	2.50%	3.50%

% Increase in Salary - Non-Hazardous Duty

Years of Service	Merit and Seniority	Inflation	Total Increase
1	5.40%	2.50%	7.90%
2	3.25%	2.50%	5.75%
3	2.50%	2.50%	5.00%
4	2.00%	2.50%	4.50%
5 - 9	1.50%	2.50%	4.00%
10 and Higher	1.00%	2.50%	3.50%

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), as required under Florida Statutes, Chapter 112.63.

FRS Healthy Post-Retirement Mortality for Special Risk Class Members

Sample Attained Ages (in 2018)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
	50	0.53 %	0.23 %	34.01
55	0.67	0.32	29.37	33.39
60	0.90	0.47	24.80	28.48
65	1.29	0.73	20.40	23.74
70	1.98	1.22	16.26	19.27
75	3.21	2.07	12.52	15.19
80	5.29	3.47	9.30	11.56

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 2018)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
	50	0.22 %	0.15 %	35.00
55	0.39	0.24	29.88	33.61
60	0.71	0.39	25.00	28.59
65	1.21	0.70	20.44	23.76
70	1.98	1.22	16.26	19.27
75	3.21	2.07	12.52	15.19
80	5.29	3.47	9.30	11.56

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 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), as required under Florida Statutes, Chapter 112.63.

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), as required under Florida Statutes, Chapter 112.63.

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

Sample Attained Ages (in 2018)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.55 %	0.23 %	34.77	38.40
55	0.60	0.32	30.14	33.39
60	0.76	0.47	25.48	28.48
65	1.13	0.73	20.95	23.74
70	1.75	1.22	16.69	19.27
75	2.92	2.07	12.82	15.19
80	4.95	3.47	9.47	11.56

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 2018)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.21 %	0.15 %	35.69	38.75
55	0.36	0.24	30.57	33.61
60	0.61	0.39	25.64	28.59
65	1.07	0.70	20.99	23.76
70	1.75	1.22	16.69	19.27
75	2.92	2.07	12.82	15.19
80	4.95	3.47	9.47	11.56

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), as required under Florida Statutes, Chapter 112.63.

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 - 59	10 %
	60 - 64	50
	65 & Over	100
20 & Over	Under 45	20
	45 - 49	15
	50 - 54	25
	55 - 59	35
	60 - 64	50
	65 & Over	100

Non-Hazardous Duty Retirement

Years of Service	Age	Probability of Retirement
10 - 19	65 - 69	45 %
	70 - 74	50
	75 & Over	100
20 - 29	55 - 59	20
	60 - 64	25
	65 - 69	45
	70 & Over	100
30 & Over	Under 65	40
	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 remaining in employment.

Hazardous Duty Withdrawal - Males and Females

Years of Service	Age	% of Active Members Separating Within Next Year
Under 1	All Ages	12.8 %
1	All Ages	5.7
2	All Ages	4.8
3 & Over	Under 30	4.0
	30 - 49	1.0
	50 & Over	0.0

Non-Hazardous Duty Withdrawal - Males

Years of Service	Age	% of Active Members Separating Within Next Year
Under 1	Under 30	25.0 %
	30 - 34	20.0
	35 - 49	15.0
	50 - 59	10.0
	60 & Over	5.0
1	Under 60	15.0
	60 & Over	10.0
2	Under 45	10.0
	45 & Over	5.0
3	Under 25	15.0
	25 - 34	12.5
	35 & Over	5.0
4	Under 30	15.0
	30 - 44	10.0
	45 & Over	5.0
5 & Over	Under 30	12.5
	30 - 34	7.0
	35 - 39	6.0
	40 - 44	5.0
	45 - 49	3.5
	50 - 54	4.0
	55 - 59	5.0
60 & Over	7.5	

Non-Hazardous Duty Withdrawal - Females

Years of Service	Age	% of Active Members Separating Within Next Year
Under 1	Under 25	35.0 %
	25 - 34	30.0
	35 - 39	25.0
	40 - 49	20.0
	50 - 59	15.0
	60 & Over	5.0
1	Under 30	25.0
	30 - 59	15.0
	60 & Over	10.0
2	Under 45	15.0
	45 - 59	7.5
	60 & Over	6.5
3	Under 30	20.0
	30 - 59	10.0
	60 & Over	5.0
4	Under 30	15.0
	30 - 34	12.5
	35 - 44	10.0
	45 & Over	5.0
5 & Over	Under 30	7.5
	30 - 39	6.5
	40 - 44	5.0
	45 & Over	4.0

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

Hazardous Duty Disability		
Sample Ages	% of Active Members Becoming Disabled Within Next Year	
	Males	Females
20	0.25 %	0.375 %
25	0.25	0.375
30	0.25	0.375
35	0.30	0.450
40	0.40	0.600
45	0.50	0.750
50	0.55	0.825
55	0.60	0.900
60	0.75	1.125
65	1.00	1.500
70	1.75	2.625

Non-Hazardous Duty Disability		
Sample Ages	% of Active Members Becoming Disabled Within Next Year	
	Males	Females
20	0.05 %	0.05 %
25	0.05	0.05
30	0.05	0.05
35	0.06	0.06
40	0.07	0.07
45	0.09	0.09
50	0.12	0.12
55	0.17	0.17
60	0.27	0.27
65	0.42	0.42
70	0.67	0.67

Miscellaneous and Technical Assumptions

<i>Administrative & Investment Expenses</i>	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.
<i>Benefit Service</i>	Exact fractional service is used to determine the amount of benefit payable.
<i>Cost of Living Increases</i>	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 for benefits accrued after January 1, 2013. There is no COLA for non-grandfathered hazardous duty members for benefits accrued after January 1, 2013.
<i>Decrement Operation</i>	Disability and mortality decrements operate during retirement eligibility.
<i>Decrement Timing</i>	Decrement of all types are assumed to occur at the beginning of the year.
<i>Eligibility Testing</i>	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.
<i>Forfeitures</i>	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.
<i>Incidence of Contributions</i>	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

85% of males and 85% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be five years older than female spouses for all active members and for members who became inactive after January 1, 2009. For members who became inactive on or before January 1, 2009, spouses ages are based on the assumed beneficiary dates of birth provided by the prior actuary.

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.

GLOSSARY

<i>Actuarial Accrued Liability (AAL)</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 (APV)</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 (APVFB)</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, nonretired 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 the Funded Ratio and the Actuarially Determined Contribution (ADC).
<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 Determined Contribution (ADC).

<i>Actuarially Determined Contribution (ADC)</i>	The employer’s periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The ADC consists of the Employer Normal Cost and Amortization Payment.
<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 or ADC 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>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 the normal cost rate from last year and the normal cost rate from this year.
<i>Funded Ratio</i>	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.
<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.

SECTION C

PENSION FUND INFORMATION

Statement of Plan Assets at Market Value

Item	December 31	
	2017	2016
A. Cash and Cash Equivalents (Operating Cash)	\$ -	\$ -
B. Receivables		
1. Member Contributions	\$ -	\$ -
2. Employer Contributions	4,898,468	5,462,001
3. Investment Income and Other Receivables	5,736,629	2,476,889
4. Total Receivables	<u>\$ 10,635,097</u>	<u>\$ 7,938,890</u>
C. Investments		
1. Short-Term Investments	\$ 28,627,149	\$ 30,857,465
2. Domestic Equities	432,388,268	389,773,760
3. International Equities	185,785,460	159,375,680
4. Domestic Fixed Income	280,945,411	254,108,019
5. International Fixed Income	-	-
6. Real Estate	88,936,244	84,706,678
7. Infrastructure	31,973,181	-
8. Private Equity	-	-
9. Total Investments	<u>\$ 1,048,655,713</u>	<u>\$ 918,821,602</u>
D. Liabilities		
1. Benefits Payable	\$ -	\$ -
2. Accrued Expenses and Other Payables	(40,180,618)	(21,499,087)
3. Total Liabilities	<u>\$ (40,180,618)</u>	<u>\$ (21,499,087)</u>
E. Total Market Value of Assets Available for Benefits	\$ 1,019,110,192	\$ 905,261,405
F. Allocation of Investments		
1. Short-Term Investments	2.73%	3.36%
2. Domestic Equities	41.23%	42.42%
3. International Equities	17.72%	17.35%
4. Domestic Fixed Income	26.79%	27.65%
5. International Fixed Income	0.00%	0.00%
6. Real Estate	8.48%	9.22%
7. Infrastructure	3.05%	0.00%
8. Private Equity	0.00%	0.00%
9. Total Investments	<u>100.00%</u>	<u>100.00%</u>

Reconciliation of Plan Assets

Item	December 31	
	2017	2016
A. Market Value of Assets at Beginning of Year	\$ 905,261,405	\$ 873,505,080
B. Revenues and Expenditures		
1. Contributions		
a. Employee Contributions	\$ 7,070,641	\$ 6,745,883
b. Employer Contributions	10,660,241	11,717,548
c. State Contributions	12,000	12,000
d. Total	\$ 17,742,882	\$ 18,475,431
2. Investment Income		
a. Interest, Dividends, and Other Income	\$ 18,750,403	\$ 17,968,591
b. Net Realized Gains/(Losses)	53,515,048	37,295,825
c. Net Unrealized Gains/(Losses)	76,499,841	7,582,732
d. Investment Expenses	(6,169,286)	(5,165,139)
e. Net Investment Income	\$ 142,596,006	\$ 57,682,009
3. Benefits and Refunds		
a. Refunds	\$ (1,028,495)	\$ (1,226,578)
b. Regular Monthly Benefits	(44,639,425)	(41,584,416)
c. Partial Lump-Sum Benefits Paid	(527,256)	(1,288,340)
d. Total	\$ (46,195,176)	\$ (44,099,334)
4. Administrative and Miscellaneous Expenses	\$ (294,925)	\$ (301,781)
5. Transfers	\$ -	\$ -
C. Market Value of Assets at End of Year	\$ 1,019,110,192	\$ 905,261,405

Development of Actuarial Value of Assets

Valuation Date - December 31	2016	2017	2018	2019	2020	2021
A. Actuarial Value of Assets Beginning of Year	\$ 882,169,478	\$ 927,675,129				
B. Market Value End of Year	905,261,405	1,019,110,192				
C. Market Value Beginning of Year	873,505,080	905,261,405				
D. Non-Investment/Administrative Net Cash Flow	(25,925,684)	(28,747,219)				
E. Investment Income						
E1. Actual Market Total: B-C-D	57,682,009	142,596,006				
E2. Assumed Rate of Return	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
E3. Assumed Amount of Return	60,007,730	62,170,412				
E4. Amount Subject to Phase-In: E1-E3	(2,325,721)	80,425,594				
F. Phase-In Recognition of Investment Income						
F1. Current Year: 0.2 x E4	(465,144)	16,085,119				
F2. First Prior Year	(12,846,426)	(465,144)	16,085,119			
F3. Second Prior Year	1,723,554	(12,846,426)	(465,144)	16,085,119		
F4. Third Prior Year	14,539,026	1,723,554	(12,846,426)	(465,144)	16,085,119	
F5. Fourth Prior Year	8,472,595	14,539,026	1,723,552	(12,846,427)	(465,145)	16,085,118
F6. Total Phase-Ins	11,423,605	19,036,129	4,497,101	2,773,548	15,619,974	16,085,118
G. Actuarial Value of Assets End of Year						
G1. Preliminary Actuarial Value of Assets	\$ 927,675,129	\$ 980,134,451				
G2. Upper Corridor Limit: 120%*B	\$ 1,086,313,686	\$ 1,222,932,230				
G3. Lower Corridor Limit: 80%*B	\$ 724,209,124	\$ 815,288,154				
G4. Funding Value End of Year	\$ 927,675,129	\$ 980,134,451				
G5. Credit Balance	\$ 19,445,883	\$ 22,819,909				
G6. Final Actuarial Value of Assets	\$ 908,229,246	\$ 957,314,542				
H. Recognized Investment Earnings	\$ 71,431,335	\$ 81,206,541				
I. Difference between Market & Actuarial Value	\$ (22,413,724)	\$ 38,975,741				
J. Actuarial Rate of Return	8.22%	8.89%				
K. Market Value Rate of Return	6.70%	16.01%				
L. Ratio of Actuarial Value of Assets to Market Value	102.48%	96.18%				

The Actuarial Value of Assets recognizes assumed investment return (line E3) fully each year. Differences between actual and assumed investment income (Line E4) are phased-in over a closed 5-year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than Market Value. If assumed rates are exactly realized for 5 consecutive years, Actuarial Value of Assets will become equal to Market Value.

Investment Rate of Return

Plan Year Ending December 31	Market*	Actuarial*
1986	13.21 %	N/A
1987	10.78	N/A
1988	9.12	N/A
1989	20.84	N/A
1990	6.21	N/A
1991	28.52	N/A
1992	6.49	N/A
1993	9.29	7.42 %
1994	0.89	6.28
1995	23.36	9.14
1996	14.80	11.54
1997	17.49	13.74
1998	16.74	15.28
1999	18.61	17.96
2000	(3.43)	12.42
2001	(5.16)	7.40
2002	(8.83)	(1.85)
2003	20.08	7.45
2004	9.73	2.18
2005	6.67	4.58
2006	11.80	7.87
2007	7.29	10.68
2008	(27.01)	(10.61)
2009	30.93	16.53
2010	17.50	5.98
2011	(0.32)	4.46
2012	13.92	5.50
2013	16.90	14.04
2014	7.99	11.04
2015	(0.28)	7.64
2016	6.70	8.22
2017	16.01	8.89

Average returns:

Last five years:	9.28 %	9.94 %
Last ten years:	7.11 %	6.93 %
All years:	9.27 %	7.98 %

**Before investment expenses prior to 2013.*

The above rates are based on the retirement system's financial information reported to the actuary. They may differ from figures that the investment consultant reports, in part because of differences in the handling of administrative and investment expenses, and in part because of differences in the handling of cash flows.

SECTION D

FINANCIAL ACCOUNTING INFORMATION

FASB NO. 35 INFORMATION

A. Valuation Date	January 1, 2018	January 1, 2017
B. Actuarial Present Value of Accumulated Plan Benefits		
1. Vested Benefits		
a. Members Currently Receiving Payments	\$ 608,399,358	\$ 574,794,636
b. Terminated Vested Members	14,735,991	14,083,542
c. Other Members	<u>230,918,891</u>	<u>233,198,125</u>
d. Total	854,054,240	822,076,303
2. Non-Vested Benefits	12,669,128	13,857,384
3. Total Actuarial Present Value of Accumulated Plan Benefits: 1d + 2	866,723,368	835,933,687
4. Accumulated Contributions of Active Members	60,969,115	60,655,020
C. Changes in the Actuarial Present Value of Accumulated Plan Benefits		
1. Total Value at Beginning of Year	835,933,687	807,130,603
2. Increase (Decrease) During the Period Attributable to:		
a. Plan Amendment	0	0
b. Change in Actuarial Assumptions	0	(134,124)
c. Latest Member Data, Benefits Accumulated and Decrease in the Discount Period	76,984,857	73,036,542
d. Benefits Paid	<u>(46,195,176)</u>	<u>(44,099,334)</u>
e. Net Increase	30,789,681	28,803,084
3. Total Value at End of Period	866,723,368	835,933,687
D. Market Value of Assets	1,019,110,192	905,261,405
E. Actuarial Assumptions - See page entitled Actuarial Assumptions and Methods		

SECTION E

MISCELLANEOUS INFORMATION

RECONCILIATION OF MEMBERSHIP DATA		
	From 1/1/2017 To 1/1/2018	From 1/1/2016 To 1/1/2017
A. Active Members		
1. Number Included in Last Valuation	1,520	1,505
2. New Members Included in Current Valuation	163	158
3. Non-Vested Employment Terminations	(85)	(71)
4. Vested Employment Terminations	(25)	(18)
5. Service Retirements	(47)	(49)
6. Disability Retirements	(2)	(4)
7. Deaths	(2)	(2)
8. Pending Disabilities	0	0
9. Rehired Members/Data Corrections	<u>1</u>	<u>1</u>
10. Number Included in This Valuation	1,523	1,520
B. Terminated Vested Members		
1. Number Included in Last Valuation	66	63
2. Additions from Active Members	25	18
3. Lump Sum Payments/Refund of Contributions	(3)	(6)
4. Payments Commenced	(13)	(9)
5. Deaths	0	0
6. Conversion from Disability/Rehired Members	(1)	(1)
7. Data Corrections	<u>1</u>	<u>1</u>
8. Number Included in This Valuation	75	66
C. Service Retirees, Disability Retirees and Beneficiaries		
1. Number Included in Last Valuation	1,212	1,174
2. Additions from Active Members	48	53
3. Additions from Terminated Vested Members	13	9
4. Deaths Resulting in No Further Payments	(13)	(20)
5. Deaths Resulting in New Survivor Benefits	1	1
6. Pending Disabilities	0	0
7. End of Certain Period - No Further Payments	(2)	(3)
8. Data Correction/Waiver of Benefits	<u>0</u>	<u>(2)</u>
9. Number Included in This Valuation	1,259	1,212

ACTIVE PARTICIPANT DISTRIBUTION ALL ACTIVE MEMBERS

Age Group	Years of Service to Valuation Date												Totals
	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35+	
15-19 NO.	1	0	0	0	0	0	0	0	0	0	0	0	1
TOT PAY	23,309	0	0	0	0	0	0	0	0	0	0	0	23,309
AVG PAY	23,309	0	0	0	0	0	0	0	0	0	0	0	23,309
20-24 NO.	29	19	12	3	1	0	0	0	0	0	0	0	64
TOT PAY	884,106	832,263	383,983	94,703	28,441	0	0	0	0	0	0	0	2,223,496
AVG PAY	30,486	43,803	31,999	31,568	28,441	0	0	0	0	0	0	0	34,742
25-29 NO.	43	32	29	20	13	12	0	0	0	0	0	0	149
TOT PAY	1,589,433	1,314,400	1,295,550	915,277	538,732	612,634	0	0	0	0	0	0	6,266,026
AVG PAY	36,964	41,075	44,674	45,764	41,441	51,053	0	0	0	0	0	0	42,054
30-34 NO.	31	28	21	19	15	40	35	0	0	0	0	0	189
TOT PAY	1,217,698	1,182,949	1,036,078	955,118	752,146	2,047,755	2,244,913	0	0	0	0	0	9,436,657
AVG PAY	39,281	42,248	49,337	50,269	50,143	51,194	64,140	0	0	0	0	0	49,929
35-39 NO.	15	16	7	12	13	21	68	9	0	0	0	0	161
TOT PAY	579,602	726,625	294,676	577,792	666,210	1,229,269	4,111,762	617,201	0	0	0	0	8,803,137
AVG PAY	38,640	45,414	42,097	48,149	51,247	58,537	60,467	68,578	0	0	0	0	54,678
40-44 NO.	16	6	7	8	10	29	62	61	8	0	0	0	207
TOT PAY	537,341	204,701	268,754	329,584	528,566	1,410,578	4,113,062	4,112,773	692,246	0	0	0	12,197,605
AVG PAY	33,584	34,117	38,393	41,198	52,857	48,641	66,340	67,423	86,531	0	0	0	58,926
45-49 NO.	12	9	9	11	5	27	49	54	40	7	0	0	223
TOT PAY	437,085	360,349	446,920	485,384	198,992	1,453,369	3,013,722	4,265,328	3,167,434	596,438	0	0	14,425,021
AVG PAY	36,424	40,039	49,658	44,126	39,798	53,828	61,505	78,988	79,186	85,205	0	0	64,686
50-54 NO.	6	9	8	5	2	21	30	37	42	25	3	0	188
TOT PAY	232,674	344,595	387,456	218,466	106,941	866,872	1,658,499	2,332,310	2,984,920	1,904,102	249,171	0	11,286,006
AVG PAY	38,779	38,288	48,432	43,693	53,470	41,280	55,283	63,035	71,070	76,164	83,057	0	60,032
55-59 NO.	8	7	3	8	4	20	41	33	33	11	10	1	179
TOT PAY	326,043	266,616	114,327	407,311	130,995	904,245	1,912,413	1,783,771	1,823,901	849,851	661,300	46,824	9,227,597
AVG PAY	40,755	38,088	38,109	50,914	32,749	45,212	46,644	54,054	55,270	77,259	66,130	46,824	51,551
60-64 NO.	1	1	2	1	3	12	25	24	21	12	8	2	112
TOT PAY	23,309	84,114	64,590	53,769	114,480	561,786	1,229,114	1,101,385	1,145,990	860,408	561,662	98,235	5,898,842
AVG PAY	23,309	84,114	32,295	53,769	38,160	46,816	49,165	45,891	54,571	71,701	70,208	49,118	52,668
65+ NO.	1	1	2	1	0	7	15	11	6	2	3	1	50
TOT PAY	24,321	29,282	84,869	44,464	0	315,428	692,322	651,955	323,493	103,930	213,085	46,462	2,529,611
AVG PAY	<u>24,321</u>	<u>29,282</u>	<u>42,434</u>	<u>44,464</u>	<u>0</u>	<u>45,061</u>	<u>46,155</u>	<u>59,269</u>	<u>53,916</u>	<u>51,965</u>	<u>71,028</u>	<u>46,462</u>	<u>50,592</u>
TOT NO.	163	128	100	88	66	189	325	229	150	57	24	4	1,523
TOT AMT	5,874,921	5,345,894	4,377,203	4,081,868	3,065,503	9,401,936	18,975,807	14,864,723	10,137,984	4,314,729	1,685,218	191,521	82,317,307
AVG AMT	36,042	41,765	43,772	46,385	46,447	49,746	58,387	64,911	67,587	75,697	70,217	47,880	54,049

ACTIVE PARTICIPANT DISTRIBUTION HAZARDOUS DUTY MEMBERS

Age Group	Years of Service to Valuation Date												Totals	
	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35+		
15-19 NO.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOT PAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG PAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-24 NO.	4	7	1	0	0	0	0	0	0	0	0	0	0	12
TOT PAY	202,246	435,582	62,838	0	0	0	0	0	0	0	0	0	0	700,666
AVG PAY	50,562	62,226	62,838	0	0	0	0	0	0	0	0	0	0	58,389
25-29 NO.	14	10	10	8	3	4	0	0	0	0	0	0	0	49
TOT PAY	714,705	608,585	655,081	503,149	195,939	288,861	0	0	0	0	0	0	0	2,966,320
AVG PAY	51,050	60,859	65,508	62,894	65,313	72,215	0	0	0	0	0	0	0	60,537
30-34 NO.	8	6	9	8	6	13	16	0	0	0	0	0	0	66
TOT PAY	415,035	379,118	571,917	555,481	384,882	988,079	1,412,782	0	0	0	0	0	0	4,707,294
AVG PAY	51,879	63,186	63,546	69,435	64,147	76,006	88,299	0	0	0	0	0	0	71,323
35-39 NO.	1	4	1	5	5	10	30	4	0	0	0	0	0	60
TOT PAY	51,275	251,744	67,421	313,304	322,138	754,783	2,463,424	412,585	0	0	0	0	0	4,636,674
AVG PAY	51,275	62,936	67,421	62,661	64,428	75,478	82,114	103,146	0	0	0	0	0	77,278
40-44 NO.	1	0	1	0	4	6	34	28	5	0	0	0	0	79
TOT PAY	56,530	0	59,249	0	280,139	417,305	2,813,933	2,654,581	553,353	0	0	0	0	6,835,090
AVG PAY	56,530	0	59,249	0	70,035	69,551	82,763	94,806	110,671	0	0	0	0	86,520
45-49 NO.	2	0	1	1	0	6	21	34	20	3	0	0	0	88
TOT PAY	124,131	0	83,358	65,493	0	456,050	1,807,412	3,186,732	2,082,180	384,414	0	0	0	8,189,770
AVG PAY	62,066	0	83,358	65,493	0	76,008	86,067	93,727	104,109	128,138	0	0	0	93,066
50-54 NO.	0	1	2	0	0	1	8	9	14	11	1	0	0	47
TOT PAY	0	83,157	157,717	0	0	93,064	706,871	1,013,526	1,401,881	1,088,336	117,657	0	0	4,662,209
AVG PAY	0	83,157	78,859	0	0	93,064	88,359	112,614	100,134	98,940	117,657	0	0	99,196
55-59 NO.	0	0	0	2	0	2	4	1	2	4	2	0	0	17
TOT PAY	0	0	0	216,522	0	206,049	381,630	98,299	194,153	421,758	242,654	0	0	1,761,065
AVG PAY	0	0	0	108,261	0	103,025	95,408	98,299	97,077	105,440	121,327	0	0	103,592
60-64 NO.	0	1	0	0	0	0	2	1	0	1	1	0	0	6
TOT PAY	0	84,114	0	0	0	0	211,479	85,342	0	99,037	111,778	0	0	591,750
AVG PAY	0	84,114	0	0	0	0	105,740	85,342	0	99,037	111,778	0	0	98,625
65+ NO.	0	0	0	0	0	0	1	0	0	0	0	0	0	1
TOT PAY	0	0	0	0	0	0	92,567	0	0	0	0	0	0	92,567
AVG PAY	0	0	0	0	0	0	92,567	0	0	0	0	0	0	92,567
TOT NO.	30	29	25	24	18	42	116	77	41	19	4	0	0	425
TOT AMT	1,563,922	1,842,300	1,657,581	1,653,949	1,183,098	3,204,191	9,890,098	7,451,065	4,231,567	1,993,545	472,089	0	0	35,143,405
AVG AMT	52,131	63,528	66,303	68,915	65,728	76,290	85,259	96,767	103,209	104,923	118,022	0	0	82,690

ACTIVE PARTICIPANT DISTRIBUTION NON-HAZARDOUS DUTY MEMBERS

Age Group	Years of Service to Valuation Date												Totals	
	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35+		
15-19 NO.	1	0	0	0	0	0	0	0	0	0	0	0	0	1
TOT PAY	23,309	0	0	0	0	0	0	0	0	0	0	0	0	23,309
AVG PAY	23,309	0	0	0	0	0	0	0	0	0	0	0	0	23,309
20-24 NO.	25	12	11	3	1	0	0	0	0	0	0	0	0	52
TOT PAY	681,860	396,681	321,145	94,703	28,441	0	0	0	0	0	0	0	0	1,522,830
AVG PAY	27,274	33,057	29,195	31,568	28,441	0	0	0	0	0	0	0	0	29,285
25-29 NO.	29	22	19	12	10	8	0	0	0	0	0	0	0	100
TOT PAY	874,728	705,815	640,469	412,128	342,793	323,773	0	0	0	0	0	0	0	3,299,706
AVG PAY	30,163	32,083	33,709	34,344	34,279	40,472	0	0	0	0	0	0	0	32,997
30-34 NO.	23	22	12	11	9	27	19	0	0	0	0	0	0	123
TOT PAY	802,663	803,831	464,161	399,637	367,264	1,059,676	832,131	0	0	0	0	0	0	4,729,363
AVG PAY	34,898	36,538	38,680	36,331	40,807	39,247	43,796	0	0	0	0	0	0	38,450
35-39 NO.	14	12	6	7	8	11	38	5	0	0	0	0	0	101
TOT PAY	528,327	474,881	227,255	264,488	344,072	474,486	1,648,338	204,616	0	0	0	0	0	4,166,463
AVG PAY	37,738	39,573	37,876	37,784	43,009	43,135	43,377	40,923	0	0	0	0	0	41,252
40-44 NO.	15	6	6	8	6	23	28	33	3	0	0	0	0	128
TOT PAY	480,811	204,701	209,505	329,584	248,427	993,273	1,299,129	1,458,192	138,893	0	0	0	0	5,362,515
AVG PAY	32,054	34,117	34,918	41,198	41,405	43,186	46,397	44,188	46,298	0	0	0	0	41,895
45-49 NO.	10	9	8	10	5	21	28	20	20	4	0	0	0	135
TOT PAY	312,954	360,349	363,562	419,891	198,992	997,319	1,206,310	1,078,596	1,085,254	212,024	0	0	0	6,235,251
AVG PAY	31,295	40,039	45,445	41,989	39,798	47,491	43,083	53,930	54,263	53,006	0	0	0	46,187
50-54 NO.	6	8	6	5	2	20	22	28	28	14	2	0	0	141
TOT PAY	232,674	261,438	229,739	218,466	106,941	773,808	951,628	1,318,784	1,583,039	815,766	131,514	0	0	6,623,797
AVG PAY	38,779	32,680	38,290	43,693	53,471	38,690	43,256	47,099	56,537	58,269	65,757	0	0	46,977
55-59 NO.	8	7	3	6	4	18	37	32	31	7	8	1	0	162
TOT PAY	326,043	266,616	114,327	190,789	130,995	698,196	1,530,783	1,685,472	1,629,748	428,093	418,646	46,824	0	7,466,532
AVG PAY	40,755	38,088	38,109	31,798	32,749	38,789	41,373	52,671	52,573	61,156	52,331	46,824	0	46,090
60-64 NO.	1	0	2	1	3	12	23	23	21	11	7	2	0	106
TOT PAY	23,309	0	64,590	53,769	114,480	561,786	1,017,635	1,016,043	1,145,990	761,371	449,884	98,235	0	5,307,092
AVG PAY	23,309	0	32,295	53,769	38,160	46,816	44,245	44,176	54,571	69,216	64,269	49,118	0	50,067
65+ NO.	1	1	2	1	0	7	14	11	6	2	3	1	0	49
TOT PAY	24,321	29,282	84,869	44,464	0	315,428	599,755	651,955	323,493	103,930	213,085	46,462	0	2,437,044
AVG PAY	<u>24,321</u>	<u>29,282</u>	<u>42,435</u>	<u>44,464</u>	<u>0</u>	<u>45,061</u>	<u>42,840</u>	<u>59,269</u>	<u>53,916</u>	<u>51,965</u>	<u>71,028</u>	<u>46,462</u>	0	<u>49,736</u>
TOT NO.	133	99	75	64	48	147	209	152	109	38	20	4	0	1,098
TOT AMT	4,310,999	3,503,594	2,719,622	2,427,919	1,882,405	6,197,745	9,085,709	7,413,658	5,906,417	2,321,184	1,213,129	191,521	0	47,173,902
AVG AMT	32,414	35,390	36,262	37,936	39,217	42,162	43,472	48,774	54,187	61,084	60,656	47,880	0	42,963

INACTIVE PARTICIPANT DISTRIBUTION

Age Group	Terminated Vested		Disabled		Retired		Deceased with Beneficiary	
	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits
Under 20	-	-	-	-	-	-	3	33,564
20-24	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-
30-34	2	27,437	1	37,310	-	-	1	34,125
35-39	10	177,615	2	88,302	-	-	-	-
40-44	11	227,465	4	175,091	3	122,602	1	51,685
45-49	18	372,341	11	459,395	24	1,007,916	4	80,400
50-54	17	352,147	7	249,756	64	2,928,955	6	179,642
55-59	7	121,014	21	677,292	137	6,081,888	12	373,699
60-64	10	129,697	23	627,931	214	9,179,868	17	329,957
65-69	-	-	25	709,930	248	9,782,094	12	339,474
70-74	-	-	22	520,553	160	5,719,703	27	615,966
75-79	-	-	11	297,663	62	2,408,548	22	500,680
80-84	-	-	8	174,108	44	1,298,759	23	321,564
85-89	-	-	1	23,476	15	350,598	4	56,268
90-94	-	-	-	-	7	115,428	10	90,160
95-99	-	-	-	-	1	21,380	2	4,706
100 & Over	-	-	-	-	-	-	-	-
Total	75	1,407,716	136	4,040,807	979	39,017,739	144	3,011,890
Average Age		49		64		66		71

SECTION F

SUMMARY OF PLAN PROVISIONS

SUMMARY OF PLAN PROVISIONS

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. 8333-12 passed and adopted on July 19, 2012 and enacted by public referendum in November 2012. 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: For Non-Hazardous Duty Employment

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

For Hazardous Duty Employment-Police Officers and Firefighters

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 Employment

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

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 Hazardous Duty Employment-Police Officers and 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.

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: 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 Employment

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 Hazardous Duty Employment-Police Officers and 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 Employment

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 Hazardous Duty Employment-Police Officers and 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 Employment

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 Hazardous Duty Employment-Police Officers and 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: 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 Employment

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 Hazardous Duty Employment-Police Officers and 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.

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

For Non-Hazardous Duty Employment

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 Hazardous Duty Employment-Police Officers and 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.

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 no changes from the previous valuation.