

CITY OF NAPLES
GENERAL RETIREMENT SYSTEM
ACTUARIAL VALUATION
AS OCTOBER 1, 2018
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2020
GASB 67/68 DISCLOSURE INFORMATION
AS OF SEPTEMBER 30, 2018



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

December 20, 2018

Board of Trustees
City of Naples General Retirement System
c/o City of Naples Finance Department
735 8th Street, South
Naples, FL 34102

Re: City of Naples General Retirement System

Dear Board:

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

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

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

The total pension liability, net pension liability, and certain sensitivity information shown in this report are based on an actuarial valuation performed as of October 1, 2017. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2018 using generally accepted actuarial principles. It is our opinion that the assumptions used for this purpose are internally consistent, reasonable, and comply with the requirements under GASB No. 67 and No. 68.

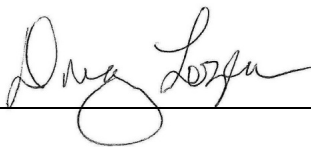
The undersigned is familiar with the immediate and long-term aspects of pension valuations, and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the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

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

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

Respectfully submitted,

Foster & Foster, Inc.

By: 

Douglas H. Lozen, EA, MAAA
Enrolled Actuary #17-7778

DHL/lke

Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Naples General Retirement System, performed as of October 1, 2018, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ending September 30, 2020. Funding requirements are projected for a lump sum deposit on October 1, 2019, based on the Board's adoption of a Beginning of Year Funding Method.

The contribution requirements, compared with those set forth in the October 1, 2017 actuarial valuation report, are as follows:

Valuation Date	10/1/2018	10/1/2017
Applicable to Fiscal Year Ending	<u>9/30/2020</u>	<u>9/30/2019</u>
Minimum Required Contribution		
% of Projected Annual Payroll	16.02%	16.35%
Member Contributions (Est.)		
% of Projected Annual Payroll	4.04%	4.13%
City Required Contribution ¹		
% of Projected Annual Payroll	11.98%	12.22%

¹ Please note that the City has access to a prepaid contribution of \$73,901.10 that is available to offset a portion of the above stated requirements for the fiscal year ending September 30, 2019.


Plan experience was favorable overall on the basis of the plan's actuarial assumptions. Sources of favorable experience included an investment return of 8.92% (Actuarial Asset Basis) which exceeded the 7.50% assumption, fewer retirements than expected, and more inactive mortality than expected.

As you can see, the Total Recommended Contribution has decreased when compared to the results determined in the October 1, 2017 actuarial valuation report. The decrease is attributable to the favorable plan experience. The decrease was partly offset due to reductions in the Unfunded Actuarial Accrued Liability amortization periods as described on page 7.

The balance of this Report presents additional details of the actuarial valuation and the general operation of the Fund. The undersigned would be pleased to meet with the Board of Trustees in order to discuss the Report and any pending questions concerning its contents.

Respectfully submitted,

FOSTER & FOSTER, INC.

By: 
Douglas H. Lozen, EA, MAAA

By: 
Sara E. Carlson, ASA, EA, MAAA

CHANGES SINCE PRIOR VALUATION

Plan Changes

There have been no changes in benefits since the prior valuation.

Actuarial Assumption/Method Changes

Assumptions

In conjunction with this valuation of the Plan, all recommended assumption changes from the August 4, 2017 Experience Study have been incorporated. Additionally, the investment return assumption will reduce from 7.5% to 7.0% according to the following schedule:

<u>Valuation Date</u>	<u>Assumption</u>
October 1, 2018	7.4%
October 1, 2019	7.3%
October 1, 2020	7.2%
October 1, 2021	7.1%
October 1, 2022	7.0%

Methods

As of the October 1, 2018 valuation, the remaining amortization period of any component of the Unfunded Actuarial Accrued Liability (UAAL) will not exceed 15 years. Additionally, future changes to the UAAL will be amortized as a level dollar according to the following:

- Experience Gains/Losses – 10 years
- Assumption/Method Changes – 20 years
- Benefit Changes – 30 years

All changes described above were approved by the Board at the April 26, 2018 Workshop, with the exception of the investment return assumption schedule. The proposed investment return reduction was approved by the Board at the December 12, 2018 meeting.

CONTRIBUTION IMPACT OF ANNUAL CHANGES

(1) Contribution Determined as of October 1, 2017	12.22%
(2) Summary of Contribution Impact by component:	
Change in Normal Cost Rate	-0.2%
Change in Administrative Expense Percentage	0.0%
Payroll Change Effect on UAAL Amortization	-0.1%
Investment Return (Actuarial Asset Basis)	-0.3%
Salary Increases	0.0%
Active Decrements	-0.1%
Inactive Mortality	-0.1%
Assumption and Method Changes	0.3%
Other	0.3%
Total Change in Contribution	-0.24%
(3) Contribution Determined as of October 1, 2018	11.98%

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump New Method <u>10/1/2018</u>	Old Assump Old Method <u>10/1/2018</u>	<u>10/1/2017</u>
A. Participant Data			
Actives	310	310	301
Service Retirees	232	232	228
DROP Retirees	0	0	0
Beneficiaries	19	19	18
Disability Retirees	1	1	1
Terminated Vested	<u>88</u>	<u>88</u>	<u>77</u>
Total	650	650	625
 Total Annual Payroll	 16,959,524	 16,798,705	 16,199,103
 Annual Rate of Payments to:			
Service Retirees	3,988,650	3,988,650	3,857,483
DROP Retirees	0	0	0
Beneficiaries	187,538	187,538	179,445
Disability Retirees	10,171	10,171	10,171
Terminated Vested	345,981	345,981	405,261
 B. Assets			
Actuarial Value (AVA) ¹	57,679,493	57,679,493	55,002,953
Market Value (MVA) ¹	59,892,801	59,892,801	56,221,282
 C. Liabilities			
 Present Value of Benefits			
Actives			
Retirement Benefits	29,694,507	31,615,430	30,803,611
Disability Benefits	609,052	518,288	523,164
Death Benefits	440,299	398,567	381,110
Vested Benefits	1,919,669	1,341,045	1,277,716
Refund of Contributions	1,784,232	1,409,447	1,158,674
Service Retirees	39,263,414	38,962,943	37,940,626
DROP Retirees ¹	0	0	0
Beneficiaries	1,693,125	1,681,357	1,658,129
Disability Retirees	71,815	71,415	72,860
Terminated Vested	<u>2,431,979</u>	<u>2,398,959</u>	<u>2,777,567</u>
Total	77,908,092	78,397,451	76,593,457

C. Liabilities - (Continued)	New Assump New Method <u>10/1/2018</u>	Old Assump Old Method <u>10/1/2018</u>	<u>10/1/2017</u>
Present Value of Future Salaries	122,222,193	118,304,306	112,301,462
Present Value of Future Member Contributions	4,934,704	4,776,519	4,634,206
Normal Cost (Retirement)	960,722	1,036,975	1,046,902
Normal Cost (Disability)	26,197	26,155	26,189
Normal Cost (Death)	25,210	25,777	24,564
Normal Cost (Vesting)	131,102	91,812	83,730
Normal Cost (Refunds)	<u>191,805</u>	<u>162,893</u>	<u>140,928</u>
Total Normal Cost	1,335,036	1,343,612	1,322,313
Present Value of Future Normal Costs	8,378,218	8,372,582	8,137,650
Accrued Liability (Retirement)	23,673,600	25,113,086	24,345,111
Accrued Liability (Disability)	456,193	363,448	368,204
Accrued Liability (Death)	273,697	221,776	212,140
Accrued Liability (Vesting)	1,086,818	760,527	729,881
Accrued Liability (Refunds)	579,233	451,358	351,289
Accrued Liability (Inactives) ¹	<u>43,460,333</u>	<u>43,114,674</u>	<u>42,449,182</u>
Total Actuarial Accrued Liability (EAN AL)	69,529,874	70,024,869	68,455,807
Unfunded Actuarial Accrued Liability (UAAL)	11,850,381	12,345,376	13,452,854
Funded Ratio (AVA / EAN AL)	83.0%	82.4%	80.3%

D. Actuarial Present Value of Accrued Benefits	New Assump New Method <u>10/1/2018</u>	Old Assump Old Method <u>10/1/2018</u>	<u>10/1/2017</u>
Vested Accrued Benefits			
Inactives ¹	43,460,333	43,114,674	42,449,182
Actives	12,059,779	13,427,489	13,620,993
Member Contributions	<u>8,126,511</u>	<u>8,126,511</u>	<u>7,659,655</u>
Total	63,646,623	64,668,674	63,729,830
Non-vested Accrued Benefits	<u>1,129,340</u>	<u>1,261,287</u>	<u>1,073,794</u>
Total Present Value			
Accrued Benefits (PVAB)	64,775,963	65,929,961	64,803,624
Funded Ratio (MVA / PVAB)	92.5%	90.8%	86.8%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	(1,153,998)	0	
New Accrued Benefits	0	1,039,814	
Benefits Paid	0	(4,601,204)	
Interest	0	4,687,727	
Other	<u>0</u>	<u>0</u>	
Total	(1,153,998)	1,126,337	

	New Assump New Method	Old Assump Old Method	
Valuation Date	10/1/2018	10/1/2018	10/1/2017
Applicable to Fiscal Year Ending	<u>9/30/2020</u>	<u>9/30/2020</u>	<u>9/30/2019</u>

E. Pension Cost

Normal Cost (with interest)			
% of Total Annual Payroll ²	7.87	8.00	8.16
Administrative Expenses (with interest)			
% of Total Annual Payroll ²	0.90	0.91	0.94
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 20 years (as of 10/1/2018, with interest)			
% of Total Annual Payroll ²	7.25	6.77	7.25
Minimum Required Contribution			
% of Total Annual Payroll ²	16.02	15.68	16.35
Expected Member Contributions			
% of Total Annual Payroll ²	4.04	4.04	4.13
Expected City Contribution			
% of Total Annual Payroll ²	11.98	11.64	12.22

F. Past Contributions

Plan Years Ending:	<u>9/30/2018</u>
City Requirement	1,943,363
Actual Contributions Made:	
Members (excluding buyback)	667,203
City	<u>1,943,363</u>
Total	2,610,566

G. Net Actuarial (Gain)/Loss (888,406)

² Contributions developed as of 10/1/2018 are expressed as a percentage of total annual payroll at 10/1/2018 of \$16,959,524 after assumption changes and of \$16,798,705 before assumption changes.

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

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2018	11,850,381
2019	11,406,146
2020	10,929,040
2025	7,958,683
2029	4,559,524
2032	968,637
2038	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2018	3.82%	5.28%
Year Ended 9/30/2017	3.87%	5.30%
Year Ended 9/30/2016	3.30%	5.28%
Year Ended 9/30/2015	3.21%	5.27%
Year Ended 9/30/2014	2.66%	7.00%

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

	<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended 9/30/2018	10.34%	8.92%	7.50%
Year Ended 9/30/2017	12.00%	9.09%	7.50%
Year Ended 9/30/2016	7.93%	10.36%	7.50%
Year Ended 9/30/2015	0.79%	9.76%	7.50%
Year Ended 9/30/2014	12.72%	11.55%	7.50%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2018	\$17,343,516
	10/1/2008	15,779,980
(b) Total Increase		9.91%
(c) Number of Years		10.00
(d) Average Annual Rate		0.95%

STATEMENT BY ENROLLED ACTUARY

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



Douglas H. Lozen, EA, MAAA
Enrolled Actuary #17-7778

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

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

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES
(PRIOR ASSUMPTIONS AND AMORIZATION METHOD)

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2017	\$13,452,854
(2)	Sponsor Normal Cost developed as of October 1, 2017	653,290
(3)	Expected administrative expenses for the year ended September 30, 2018	153,053
(4)	Expected interest on (1), (2) and (3)	1,063,700
(5)	Sponsor contributions to the System during the year ended September 30, 2018	1,943,363
(6)	Expected interest on (5)	145,752
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2018 (1)+(2)+(3)+(4)-(5)-(6)	13,233,782
(8)	Change to UAAL due to Actuarial (Gain)/Loss	(888,406)
(9)	Unfunded Actuarial Accrued Liability as of October 1, 2018	12,345,376

	Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2018 <u>Amount</u>	Amortization <u>Amount</u>
	Experience Loss	10/1/2002	14	1,828,819	183,740
	Experience Loss	10/1/2003	15	681,597	65,494
	Experience Loss	10/1/2004	16	3,124,378	288,337
	Amendment	10/1/2004	16	26,463	2,442
	Experience Gain	10/1/2005	17	(2,061,805)	(183,416)
	Experience Gain	10/1/2006	18	(201,876)	(17,367)
	Amendment	10/1/2006	18	68,315	5,877
	Experience Loss	10/1/2007	19	808,506	67,453
Method/Assump Change		10/1/2007	19	4,779,027	398,711
	Experience Loss	10/1/2008	20	5,951,414	482,742
	Assump Changes	10/1/2009	21	(33,786)	(2,670)
	Experience Loss	10/1/2009	21	7,458,186	589,499
	Experience Loss	10/1/2010	22	665,106	51,330
	Benefit Change	10/1/2010	22	(9,482,881)	(731,853)
	Experience Loss	10/1/2011	23	2,909,878	219,676
	Benefit Change	10/1/2011	23	374,724	28,289
	Experience Loss	10/1/2012	24	1,105,631	81,782
	Experience Gain	10/1/2013	25	(351,218)	(25,493)
	Experience Gain	10/1/2014	26	(1,128,665)	(80,498)
	Assump Change	10/1/2014	26	159,051	11,344
	Actuarial Gain	10/1/2015	27	(2,575,054)	(180,686)

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2018 <u>Amount</u>	Amortization <u>Amount</u>
Actuarial Gain	10/1/2016	28	(1,076,858)	(74,423)
Assump Change	10/1/2016	28	2,508,394	173,359
Experience Gain	10/1/2017	29	(2,303,564)	(156,969)
Actuarial Gain	10/1/2018	30	<u>(888,406)</u>	<u>(59,746)</u>
			12,345,376	1,136,954

**RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES
(NEW ASSUMPTIONS AND AMORIZATION METHOD)**

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2017	\$13,452,854
(2)	Sponsor Normal Cost developed as of October 1, 2017	653,290
(3)	Expected administrative expenses for the year ended September 30, 2018	153,053
(4)	Expected interest on (1), (2) and (3)	1,063,700
(5)	Sponsor contributions to the System during the year ended September 30, 2018	1,943,363
(6)	Expected interest on (5)	145,752
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2018 (1)+(2)+(3)+(4)-(5)-(6)	13,233,782
(8)	Change to UAAL due to Assumption Change	(494,995)
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(888,406)
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2018	11,850,381

	Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2018 <u>Amount</u>	Amortization <u>Amount</u>
	Experience Loss	10/1/2002	14	1,828,819	199,404
	Experience Loss	10/1/2003	15	681,597	71,450
	Experience Loss	10/1/2004	15	3,124,378	327,521
	Amendment	10/1/2004	15	26,463	2,774
	Experience Gain	10/1/2005	15	(2,061,805)	(216,134)
	Experience Gain	10/1/2006	15	(201,876)	(21,162)
	Amendment	10/1/2006	15	68,315	7,161
	Experience Loss	10/1/2007	15	808,506	84,754
Method/Assump Change		10/1/2007	15	4,779,027	500,973
	Experience Loss	10/1/2008	15	5,951,414	623,872
	Assump Changes	10/1/2009	15	(33,786)	(3,542)
	Experience Loss	10/1/2009	15	7,458,186	781,823
	Experience Loss	10/1/2010	15	665,106	69,721
	Benefit Change	10/1/2010	15	(9,482,881)	(994,066)
	Experience Loss	10/1/2011	15	2,909,878	305,035
	Benefit Change	10/1/2011	15	374,724	39,281
	Experience Loss	10/1/2012	15	1,105,631	115,901
	Experience Gain	10/1/2013	15	(351,218)	(36,817)
	Experience Gain	10/1/2014	15	(1,128,665)	(118,315)

Type of <u>Base</u>	Date <u>Established</u>	Years <u>Remaining</u>	10/1/2018 <u>Amount</u>	Amortization <u>Amount</u>
Assump Change	10/1/2014	15	159,051	16,673
Actuarial Gain	10/1/2015	15	(2,575,054)	(269,936)
Actuarial Gain	10/1/2016	15	(1,076,858)	(112,884)
Assump Change	10/1/2016	15	2,508,394	262,949
Experience Gain	10/1/2017	15	(2,303,564)	(241,477)
Actuarial Gain	10/1/2018	10	(888,406)	(119,961)
Assump Change	10/1/2018	20	<u>(494,995)</u>	<u>(44,866)</u>
			11,850,381	1,230,132

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2017	\$13,452,854
(2) Expected UAAL as of October 1, 2018	13,233,782
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(768,356)
Salary Increases	(81,259)
Active Decrements	(209,124)
Inactive Mortality	(352,441)
Other	<u>522,774</u>
Increase in UAAL due to (Gain)/Loss	(888,406)
Assumption Changes	<u>(494,995)</u>
(4) Actual UAAL as of October 1, 2018	\$11,850,381

ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate

Healthy Active Lives:

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

Male: RP2000 Generational, 50% White Collar / 50% Blue Collar, Scale BB

Healthy Inactive Lives:

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

Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB

Disabled Lives:

Female: 100% RP2000 Disabled Female set forward two years

Male: 100% RP2000 Disabled Male setback four years

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

Interest Rate

7.40% (prior year 7.50%) per year compounded annually, net of investment related expenses. This assumption was covered and lowered as a result of our August 4, 2017 Actuarial Experience Study.

Salary Increases

<u>Years of Service</u>	<u>Increase</u>
1 – 2	6.0%
3	5.5%
4	5.5%
5	5.5%
6	5.5%
7 – 8	5.5%
9	5.5%
10 – 19	5.0%
20+	4.0%

The above rates were incorporated with the October 1, 2014 valuation as the result of an Experience Study.

Payroll Growth

0.00% (prior year 1.60%) for purposes of amortizing the Unfunded Actuarial Accrued Liability. This assumption cannot exceed the ten-year average payroll growth, in compliance with Part VII of Chapter 112, Florida Statutes.

Administrative Expenses

\$152,500 annually, based on actual expenses incurred in the prior fiscal year.

Normal Retirement Rates

For Members hired prior to October 1, 2011:

<u>Age</u>	<u>Probability of Retirement</u>
50 – 54	0.0%
55 – 58	17.0%
59 – 60	25.0%
61 – 62	17.0%
63 – 64	25.0%
65+	100%

This assumption was covered and changed as a result of our August 4, 2017 Actuarial Experience Study. Previously, the rates in the table below were utilized.

<u>Number of Years After First Eligibility For Normal Retirement</u>	<u>Probability of Retirement</u>
0	25%
1	25%
2	50%
3	50%
4	60%
5	80%
6	100%

The above rates were incorporated with the October 1, 2007 valuation as the result of a prior Experience Study.

For Members hired after September 30, 2011, 100% retirement is assumed at the earlier of 1) Age 65 with 8 years of Credited Service, and 2) the completion of 33 years of Credited Service, regardless of Age. This assumption is reasonable, based on Plan provisions and historical experience.

Early Retirement Rates

For Members hired prior to October 1, 2011:

<u>Age</u>	<u>Probability of Retirement</u>
55	4.5%
56	9.0%
57	9.0%
58	9.0%
59	13.0%

This assumption was covered and changed as a result of our August 4, 2017 Actuarial Experience Study.

Previously, Members were assumed to retire with an immediate subsidized benefit at the rate of 5% per year.

For Members hired after September 3, 2011, they are assumed to retire with an immediate subsidized benefit at the rate of 5% per year. This assumption was incorporated with the October 1, 2007 valuation as the result of a prior Experience Study.

Termination Rates

<u>Years of Service</u>	<u>% of Active Members Separating Within Next Year</u>
0	14.0%
1	14.0%
2	14.0%
3	9.0%
4	9.0%
5 – 9	7.5%
10 – 14	6.0%
15 – 19	6.0%
20+	2.5%

This assumption was covered and changed as a result of our August 4, 2017 Actuarial Experience Study.

Previously, the rates in the table on the following page were utilized.

<u>Sample Ages</u>	<u>Years of Service</u>	<u>% of Active Members Separating Within Next Year</u>
ALL	0	20.0%
	1	18.0%
	2	16.0%
	3	10.0%
	4	6.0%
20	5+	16.2%
25		13.2%
30		10.8%
35		9.4%
40		7.8%
45		5.8%
50		3.2%
55		0.8%

The above rates were incorporated with the October 1, 2007 valuation as the result of a prior Experience Study.

Disability Rates

<u>Sample Ages</u>	<u>% Becoming Disabled During the Year</u>
20	0.05%
25	0.05%
30	0.06%
35	0.09%
40	0.12%
45	0.28%
50	0.43%

Actuarial Asset Method

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

Funding Method

Entry Age Actuarial Cost Method.

GLOSSARY

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

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

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

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

- (a) The normal cost accrual rate equals:
 - (i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by
 - (ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.
- (b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.
- (c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.

- (d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

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

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

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Checking Account	6,482.88	6,482.88
Money Market	1,083,153.00	1,083,153.00
Cash	49,268.65	49,268.65
Total Cash and Equivalents	1,138,904.53	1,138,904.53
Receivables:		
Member Contributions in Transit	24,458.51	24,458.51
Total Receivable	24,458.51	24,458.51
Investments:		
Fixed Income	9,626,786.04	9,465,022.50
Equities	32,365,208.16	41,641,727.89
Mutual Funds:		
Fixed Income	705,930.91	717,438.98
Pooled/Common/Commingled Funds:		
Hedge	1,330,000.00	1,528,922.94
Real Estate	4,670,429.14	5,525,695.28
Total Investments	48,698,354.25	58,878,807.59
Total Assets	49,861,717.29	60,042,170.63
<u>LIABILITIES</u>		
Payables:		
Administrative Expenses	75,306.93	75,306.93
Prepaid Member Contribution	162.00	162.00
Prepaid City Contribution	73,901.10	73,901.10
Total Liabilities	149,370.03	149,370.03
NET POSITION RESTRICTED FOR PENSIONS	49,712,347.26	59,892,800.60

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2018
Market Value Basis

ADDITIONS

Contributions:

Member	667,203.18	
City	1,943,362.62	
Total Contributions		2,610,565.80
Investment Income:		
Net Realized Gain (Loss)	3,523,708.73	
Unrealized Gain (Loss)	1,208,004.76	
Net Increase in Fair Value of Investments	4,731,713.49	
Interest & Dividends	1,372,478.51	
Less Investment Expense ¹	(289,535.24)	
Net Investment Income		5,814,656.76
Total Additions		8,425,222.56

DEDUCTIONS

Distributions to Members:

Benefit Payments	4,129,169.20	
Lump Sum DROP Distributions	0.00	
Refunds of Member Contributions	472,034.86	
Total Distributions		4,601,204.06
Administrative Expense		152,500.14
Total Deductions		4,753,704.20
Net Increase in Net Position		3,671,518.36
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		56,221,282.24
End of the Year		59,892,800.60

¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION

September 30, 2018

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

Plan Year Ending	Gain/(Loss)	<u>Gains/Losses Not Yet Recognized</u>				
		Amounts Not Yet Recognized by Valuation Year				
		2018	2019	2020	2021	2022
09/30/2014	2,414,626	0	0	0	0	0
09/30/2015	(3,380,710)	(676,142)	0	0	0	0
09/30/2016	277,664	111,065	55,532	0	0	0
09/30/2017	2,401,361	1,440,817	960,545	480,273	0	0
09/30/2018	1,671,960	1,337,568	1,003,176	668,784	334,392	0
Total		2,213,308	2,019,253	1,149,057	334,392	0

<u>Development of Investment Gain/(Loss)</u>	
Market Value of Assets, including Prepaid Contributions, 09/30/2017	56,319,703
Contributions Less Benefit Payments & Admin Expenses	(2,167,496)
Expected Investment Earnings*	4,142,697
Actual Net Investment Earnings	5,814,657
2018 Actuarial Investment Gain/(Loss)	<u>1,671,960</u>

*Expected Investment Earnings = $0.075 * [56,319,703 + 0.5 * (2,167,496)]$

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 09/30/2018	59,892,801
(2) Gains/(Losses) Not Yet Recognized	2,213,308
(3) Actuarial Value of Assets, 09/30/2018, (1) - (2)	<u>57,679,493</u>

(A) 09/30/2017 Actuarial Assets, including Prepaid Contributions: 55,101,374

(I) Net Investment Income:	
1. Interest and Dividends	1,372,479
2. Realized Gains (Losses)	3,523,709
3. Change in Actuarial Value	213,026
4. Investment Expenses	(289,535)
Total	<u>4,819,678</u>

(B) 09/30/2018 Actuarial Assets, including Prepaid Contributions: 57,753,556

Actuarial Assets Rate of Return = $2I/(A+B-I)$: 8.92%
 Market Value of Assets Rate of Return: 10.34%

Actuarial Gain/(Loss) due to Investment Return (actuarial Asset Basis) 768,356

10/01/2018 Limited Actuarial Assets (not including Prepaid): 57,679,493

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
SEPTEMBER 30, 2018
Actuarial Asset Basis

REVENUES

Contributions:		
Member	667,203.18	
City	1,943,362.62	
Total Contributions		2,610,565.80
Earnings from Investments:		
Interest & Dividends	1,372,478.51	
Net Realized Gain (Loss)	3,523,708.73	
Change in Actuarial Value	213,025.76	
Total Earnings and Investment Gains		5,109,213.00

EXPENDITURES

Distributions to Members:		
Benefit Payments	4,129,169.20	
Lump Sum DROP Distributions	0.00	
Refunds of Member Contributions	472,034.86	
Total Distributions		4,601,204.06
Expenses:		
Investment related ¹	289,535.24	
Administrative	152,500.14	
Total Expenses		442,035.38
Change in Net Assets for the Year		2,676,539.36
Net Assets Beginning of the Year		55,002,953.24
Net Assets End of the Year ²		57,679,492.60

¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

²Net Assets may be limited for actuarial consideration.

RECONCILIATION OF CITY'S SHORTFALL/(PREPAID) CONTRIBUTION
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2018

(1) City Required Contribution Rate	11.84%
(2) Pensionable Payroll Derived from Member Contributions	\$16,413,535.60
(3) City Required Contribution (1) X (2)	1,943,362.62
(4) Less 2017 Prepaid Contribution	(97,262.72)
(5) Less Actual City Contributions	<u>(1,920,001.00)</u>
(6) Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2018	(73,901.10)

STATISTICAL DATA

	<u>10/1/2015</u>	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>
<u>Actives - Hired before October 1, 2011</u>				
Number	191	170	149	136
Average Current Age	51.6	52.4	52.9	53.0
Average Age at Employment	38.2	38.0	37.7	36.7
Average Past Service	13.4	14.5	15.2	16.3
Average Annual Salary	\$55,822	\$55,939	\$56,865	\$60,100
<u>Actives - Hired after September 30, 2011</u>				
Number	108	132	152	174
Average Current Age	41.1	42.9	43.6	43.0
Average Age at Employment	39.1	40.6	40.8	39.9
Average Past Service	2.0	2.3	2.8	3.1
Average Annual Salary	\$49,513	\$50,807	\$50,831	\$50,494
<u>Service Retirees</u>				
Number	219	221	228	232
Average Current Age	70.6	71.1	71.4	71.9
Average Annual Benefit	\$15,883	\$16,292	\$16,919	\$17,192
<u>DROP Retirees</u>				
Number	0	0	0	0
Average Current Age	N/A	N/A	N/A	N/A
Average Annual Benefit	N/A	N/A	N/A	N/A
<u>Beneficiaries</u>				
Number	17	21	18	19
Average Current Age	70.8	71.6	73.3	74.5
Average Annual Benefit	\$7,845	\$9,115	\$9,969	\$9,870
<u>Disability Retirees</u>				
Number	1	1	1	1
Average Current Age	66.2	67.2	68.2	69.2
Average Annual Benefit	\$10,171	\$10,171	\$10,171	\$10,171
<u>Terminated Vested</u>				
Number	38	53	77	88
Average Current Age	50.3	50.5	44.4	51.3
Average Annual Benefit ¹	\$13,172	\$14,331	\$15,010	\$13,839

¹ The Average Annual Benefit excludes participants awaiting a refund of contributions.

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	4	3	0	0	0	0	0	0	0	0	0	7
25 - 29	6	5	3	0	1	2	0	0	0	0	0	17
30 - 34	9	6	2	3	3	6	3	0	0	0	0	32
35 - 39	5	2	2	4	3	10	7	1	0	0	0	34
40 - 44	6	2	3	8	3	7	2	3	1	0	0	35
45 - 49	2	4	2	3	1	9	8	3	1	0	0	33
50 - 54	1	1	7	1	3	12	7	2	7	1	1	43
55 - 59	2	6	2	2	2	10	14	9	5	5	2	59
60 - 64	0	2	2	2	2	5	4	7	2	3	4	33
65+	1	1	1	0	0	3	9	0	1	0	1	17
Total	36	32	24	23	18	64	54	25	17	9	8	310

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2017	301
b. Terminations	
i. Vested (partial or full) with deferred benefits	(11)
ii. Non-vested or full lump sum distribution received	(8)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	(9)
f. DROP	<u>0</u>
g. Continuing participants	273
h. New entrants	<u>37</u>
i. Total active life participants in valuation	310

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

	Service Retirees, Vested Receiving <u>Benefits</u>	DROP <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested Deferred	<u>Total</u>
a. Number prior valuation	228	0	18	1	77	324
Retired	12	0	0	0	(3)	9
DROP	0	0	0	0	0	0
Vested Deferred	0	0	0	0	19	19
Death, With Survivor	(1)	0	1	0	0	0
Death, No Survivor	(6)	0	0	0	0	(6)
Disabled	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	(4)	(4)
Rehires	0	0	0	0	(1)	(1)
Expired Annuities	(1)	0	0	0	0	(1)
Data Corrections	0	0	0	0	0	0
b. Number current valuation	232	0	19	1	88	340

SUMMARY OF CURRENT PLAN
(Through Ordinance 12-13142)

<u>Eligibility</u>	Full-time General Employees hired prior to 3/1/95 enter the Plan on employment. Those hired after 2/28/95 enter following 6 months of service.
<u>Compensation</u>	Base pay, including holiday, vacation, longevity, and sick pay, but excluding overtime and all other pay.
<u>Final Average Compensation</u>	Average of Compensation paid during the eight (8) highest consecutive years of service. The average cannot be less than the three-year average determined as of September 30, 2011.
<u>Credited Service</u>	Years and completed months of service as a General Employee. Service for which the member received a refund of contributions shall not be counted.
<u>Normal Retirement</u>	
Date	Earlier of 1) the attainment of age 60 and the completion of 5 years of service, or 2) the date when age plus service equals 85 (Rule of 85). For Members hired after September 30, 2011, the Normal Retirement Date is the earlier of 1) Age 65 with 8 years of Credited Service, or 2) the completion of 33 years of Credited Service, regardless of Age.
Benefit	The sum of the following: a.) 2.5% of Final Average Compensation (using a three-year average, determined as of September 30, 2011) for each year of Credited Service as of September 30, 2011, plus b.) 1.6% of Final Average Compensation (using an eight-year average) for Credited Service after September 30, 2011.
Form of Benefit	Life annuity, ceasing upon death (options available).

Early Retirement

Date	The attainment of age 55 and the completion of 5 years of service.
Benefit	Determined as for Normal Retirement, reduced 3% per year for each year that the Early Retirement Date precedes age 60. The reduction is prorated monthly. For Members hired after September 30, 2011, the reduction is 5% per year, for each year that the Early Retirement Date precedes age 65. The reduction is prorated monthly.

Termination of Employment

Members hired before
October 1, 2011

Less Than 5 Years	Return of member contributions with interest.
5 to 10 Years, But Less Than Age 50	Return of member contributions with interest plus an amount equal to the accumulated contributions that would have existed had the member contributed at the rate contributed by the City.
10 or More Years or Upon Attaining Age 50 and 5 Years	Accrued monthly benefit payable at Normal or Early (reduced basis) Retirement Date, or return of member contributions with interest.

Members hired after
September 30, 2011

Less Than 8 Years	Return of member contributions with interest.
8 or More Years	The accrued benefit, payable at the Normal (unreduced), or Early (reduced) Retirement Date.

Pre-Retirement Death

Less Than 5 Years and 6 Months	Return of member contributions with interest.
More than 5 Years and 6 Months	Return of member contributions with interest plus an amount equal to the accumulated contributions that would have existed had the member contributed at the rate contributed by the City.

Deferred Retirement Option Plan

Eligibility	Non-union members who had 30 years of service in June, 2005.
Participation	Not to exceed 84 months.
Rate of Return	Actual net rate of investment return realized by the system from the short term investment fund or money market fund in which the DROP account is invested.
Form of Distribution	Cash lump sum at termination of employment.

Contributions

Members	5.0% of Compensation. The contribution rate is 3% for Members hired after September 30, 2011.
City	Remaining amount necessary to fund the Normal Cost and amortize the Unfunded Actuarial Accrued Liability over not more than 30 years.

Board of Trustees

Two Council appointees, three City Manager appointees, one retiree of the Plan elected by the membership, and a seventh Member elected by the other 6 who is a City resident.

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Checking Account	6,483
Money Market	1,083,153
Cash	49,269
Total Cash and Equivalents	1,138,905
Receivables:	
Member Contributions in Transit	24,458
Total Receivable	24,458
Investments:	
Fixed Income	9,465,023
Equities	41,641,728
Mutual Funds:	
Fixed Income	717,439
Pooled/Common/Commingled Funds:	
Hedge	1,528,923
Real Estate	5,525,695
Total Investments	58,878,808
Total Assets	60,042,171
<u>LIABILITIES</u>	
Payables:	
Administrative Expenses	75,307
Total Liabilities	75,307
NET POSITION RESTRICTED FOR PENSIONS	59,966,864

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2018
Market Value Basis

ADDITIONS

Contributions:

Member	666,208	
City	1,920,001	
Total Contributions		2,586,209
Investment Income:		
Net Increase in Fair Value of Investments	4,731,713	
Interest & Dividends	1,372,478	
Less Investment Expense ¹	(289,535)	
Net Investment Income		5,814,656
Total Additions		8,400,865

DEDUCTIONS

Distributions to Members:

Benefit Payments	4,129,169	
Lump Sum DROP Distributions	0	
Lump Sum PLOP Distributions	0	
Refunds of Member Contributions	472,035	
Total Distributions		4,601,204
Administrative Expense		152,500
Total Deductions		4,753,704
Net Increase in Net Position		3,647,161
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		56,319,703
End of the Year		59,966,864

¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2018)

Plan Description

Plan Administration

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of:

- a. Two Council appointees;
- b. Three City Manager appointees;
- c. One retiree of the Plan elected by the Membership, and a
- d. Seventh Member elected by the other six who is a City resident.

Plan Membership as of October 1, 2017:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	247
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	77
Active Plan Members	301
	625

Benefits Provided

The Plan provides retirement, termination, and death benefits.

Normal Retirement:

Date: Earlier of 1) the attainment of age 60 and the completion of 5 years of service, or 2) the date when age plus service equals 85 (Rule of 85). For Members hired after September 30, 2011, the Normal Retirement Date is the earlier of 1) Age 65 with 8 years of Credited Service, or 2) the completion of 33 years of Credited Service, regardless of Age.

Benefit: The sum of the following:

- a.) 2.5% of Final Average Compensation (using a three-year average, determined as of September 30, 2011) for each year of Credited Service as of September 30, 2011, plus
- b.) 1.6% of Final Average Compensation (using an eight-year average) for Credited Service after September 30, 2011.

Early Retirement:

Date: The attainment of age 55 and the completion of 5 years of service.

Benefit: Determined as for Normal Retirement, reduced 3% per year for each year that the Early Retirement Date precedes age 60. The reduction is prorated monthly.

For Members hired after September 30, 2011, the reduction is 5% per year, for each year that the Early Retirement Date precedes age 65. The reduction is prorated monthly.

Termination of Employment:

Members hired before October 1, 2011:

Less Than 5 Years: Return of Member contributions with interest.

5 to 10 Years, But Less Than Age 50: Return of Member contributions with interest plus an amount equal to the accumulated contributions that would have existed had the Member contributed at the rate contributed by the City.

10 or More Years or Upon Attaining Age 50 and 5 Years: Accrued monthly benefit payable at Normal or Early (reduced basis) Retirement Date, or return of Member contributions with interest.

Members hired after September 30, 2011:

Less Than 8 Years: Return of Member contributions with interest.

8 or More Years: The accrued benefit, payable at the Normal (unreduced), or Early (reduced) Retirement Date.

Pre-Retirement Death Benefits:

Less Than 5 Years and 6 Months: Return of Member contributions with interest.

More than 5 Years and 6 Months: Return of Member contributions with interest plus an amount equal to the accumulated contributions that would have existed had the Member contributed at the rate contributed by the City.

Contributions

Members: 5% of Compensation. The contribution rate is 3% for Members hired after September 30, 2011.

City: Remaining amount necessary to fund the Normal Cost and amortize the Unfunded Actuarial Accrued Liability over not more than 30 years.

*Investments**Investment Policy:*

The following was the Board's adopted asset allocation policy as of September 30, 2018:

<u>Asset Class</u>	<u>Target Allocation</u>
Domestic Equity	52.50%
International Equity	10.00%
Fixed Income	17.50%
Real Estate	10.00%
Hedge Funds	5.00%
MLPs	5.00%
<u>Total</u>	<u>100.00%</u>

Concentrations:

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

Rate of Return:

For the year ended September 30, 2018, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 10.34 percent.

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Deferred Retirement Option Program

Eligibility: Non-union members who had 30 years of service in June, 2005.

Participation: Not to exceed 84 months.

Rate of Return: Actual net rate of investment return realized by the system from the short term investment fund or money market fund in which the DROP account is invested.

The DROP balance as September 30, 2018 is \$0.

NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2018 were as follows:

Total Pension Liability	\$ 67,889,022
Plan Fiduciary Net Position	\$ (59,966,864)
Sponsor's Net Pension Liability	<u>\$ 7,922,158</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	88.33%

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2017 updated to September 30, 2018 using the following actuarial assumptions:

Inflation	2.30%
Salary Increases	Service based
Discount Rate	7.40%
Investment Rate of Return	7.40%

Mortality Rate Healthy Inactive Lives:

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

Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB.

Mortality Rate Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy (previously Annuitant) White Collar, Scale BB.

Male: RP2000 Generational, 50% Combined Healthy White Collar / 50% Combined Healthy Blue Collar, Scale BB.

Mortality Rate Disabled Lives:

Female: 100% RP2000 Disabled Female set forward two years.

Male: 100% RP2000 Disabled Male setback four years.

The most recent actuarial experience study used to review the other significant assumptions was dated August 4, 2017.

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

For 2018 the inflation rate assumption of the investment advisor was 2.10%.

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

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2018 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Domestic Equity	6.66%
International Equity	6.10%
Fixed Income	2.42%
Real Estate	3.36%
Hedge Funds	3.00%
MLPs	5.25%

Discount Rate:
The Discount Rate used to measure the Total Pension Liability was 7.40 percent.
The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will be made at rates equal to the difference between actuarially determined contribution rates and the Member rate. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

	1% Decrease	Current	1% Increase
	6.40%	Discount Rate	8.40%
	7.40%		
Sponsor's Net Pension Liability	\$ 14,945,089	\$ 7,922,158	\$ 1,956,375

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2018	09/30/2017	09/30/2016
Total Pension Liability			
Service Cost	1,502,866	1,550,588	1,515,025
Interest	5,093,386	4,929,787	4,717,437
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	(1,752,760)	172,717	(1,619,494)
Changes of assumptions	(1,062,814)	-	2,509,683
Benefit Payments, including Refunds of Employee Contributions	(4,601,204)	(4,246,896)	(4,406,881)
Net Change in Total Pension Liability	(820,526)	2,406,196	2,715,770
Total Pension Liability - Beginning	68,709,548	66,303,352	63,587,582
Total Pension Liability - Ending (a)	<u>\$ 67,889,022</u>	<u>\$ 68,709,548</u>	<u>\$ 66,303,352</u>
Plan Fiduciary Net Position			
Contributions - Employer	1,920,001	1,882,709	1,969,372
Contributions - Employee	666,208	670,753	712,547
Net Investment Income	5,814,656	6,227,518	3,947,936
Benefit Payments, including Refunds of Employee Contributions	(4,601,204)	(4,246,896)	(4,406,881)
Administrative Expense	(152,500)	(153,053)	(145,459)
Net Change in Plan Fiduciary Net Position	3,647,161	4,381,031	2,077,515
Plan Fiduciary Net Position - Beginning	56,319,703	51,938,672	49,861,157
Plan Fiduciary Net Position - Ending (b)	<u>\$ 59,966,864</u>	<u>\$ 56,319,703</u>	<u>\$ 51,938,672</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 7,922,158</u>	<u>\$ 12,389,845</u>	<u>\$ 14,364,680</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	88.33%	81.97%	78.33%
Covered Employee Payroll ¹	\$ 16,413,536	\$ 16,012,972	\$ 16,535,449
Net Pension Liability as a percentage of Covered Employee Payroll	48.27%	77.37%	86.87%

Notes to Schedule:

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period.

Changes of assumptions

For measurement date 09/30/2018, all recommended assumption changes from the August 4, 2017 Experience Study have been incorporated. Additionally, the investment return assumption will reduce from 7.5% to 7.0% according to the following schedule:

<u>Valuation Date</u>	<u>Assumption</u>
October 1, 2018	7.4%
October 1, 2019	7.3%
October 1, 2020	7.2%
October 1, 2021	7.1%
October 1, 2022	7.0%

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

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

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

	09/30/2015	09/30/2014
Total Pension Liability		
Service Cost	1,500,184	1,471,441
Interest	4,553,080	4,418,330
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	504,129	-
Changes of assumptions	-	-
Benefit Payments, including Refunds of Employee Contributions	(4,354,731)	(3,888,957)
Net Change in Total Pension Liability	2,202,662	2,000,814
Total Pension Liability - Beginning	61,384,920	59,384,106
Total Pension Liability - Ending (a)	<u>\$ 63,587,582</u>	<u>\$ 61,384,920</u>
Plan Fiduciary Net Position		
Contributions - Employer	2,023,395	1,924,183
Contributions - Employee	694,975	715,147
Net Investment Income	397,133	5,868,861
Benefit Payments, including Refunds of Employee Contributions	(4,354,731)	(3,888,957)
Administrative Expense	(135,760)	(128,474)
Net Change in Plan Fiduciary Net Position	(1,374,988)	4,490,760
Plan Fiduciary Net Position - Beginning	51,236,145	46,745,385
Plan Fiduciary Net Position - Ending (b)	<u>\$ 49,861,157</u>	<u>\$ 51,236,145</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 13,726,425</u>	<u>\$ 10,148,775</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	78.41%	83.47%
Covered Employee Payroll ¹	\$ 18,135,744	\$ 15,618,366
Net Pension Liability as a percentage of Covered Employee Payroll	75.69%	64.98%

Notes to Schedule:

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period.

SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll ¹	Contributions as a percentage of Covered Employee Payroll
09/30/2018	\$ 1,943,363	\$ 1,920,001	\$ 23,362	\$ 16,413,536	11.70%
09/30/2017	\$ 1,785,446	\$ 1,882,709	\$ (97,263)	\$ 16,012,972	11.76%
09/30/2016	\$ 1,969,372	\$ 1,969,372	\$ -	\$ 16,535,449	11.91%
09/30/2015	\$ 2,023,395	\$ 2,023,395	\$ -	\$ 18,135,744	11.16%
09/30/2014	\$ 1,924,183	\$ 1,924,183	\$ -	\$ 15,618,366	12.32%

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period.

Notes to Schedule

Valuation Date: 10/01/2016

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

Methods and assumptions used to determine contribution rates:

Mortality Rates:

Healthy Inactive Lives:

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

Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB.

Healthy Active Lives:

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

Male: RP2000 Generational, 50% Combined Healthy White Collar / 50% Combined Healthy Blue Collar, Scale BB.

Disabled Lives:

Female: 100% RP2000 Disabled Female set forward two years.

Male: 100% RP2000 Disabled Male setback four years.

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

Termination Rates:

Sample Ages	Years of Service	% of Active Members Separating Within Next Year
ALL	0	20.0%
	1	18.0%
	2	16.0%
	3	10.0%
	4	6.0%
20	5+	16.2%
25		13.2%
30		10.8%
35		9.4%
40		7.8%
45		5.8%
50		3.2%
55+		0.8%

The above rates were incorporated with the October 1, 2007 valuation as the result of a prior Experience Study.

Interest Rate: 7.50% per year, compounded annually, net of investment related expenses. This assumption was adopted by the Board in conjunction with a revision to the October 1, 2009 valuation and is supported by the Plan's investment policy and long-term expected returns by asset class.

Disability Rates:	Sample Ages	% Becoming Disabled During the Year
	20	0.05%
	25	0.05%
	30	0.06%
	35	0.09%
	40	0.12%
	45	0.28%
	50	0.43%

The above rates are consistent with the national average for general employee public pension plans.

Salary Increases:	Years of Service	Increase
	1 to 2	6.00%
	3	5.50%
	4	5.50%
	5	5.50%
	6	5.50%
	7 to 8	5.50%
	9	5.50%
	10 to 19	5.00%
	20+	4.00%

The above rates were incorporated with the October 1, 2014 valuation as the result of an Experience Study

Normal Retirement Rates:	Number of Years After First Eligibility For Normal	Probability of Retirement
	0	25%
	1	25%
	2	50%
	3	50%
	4	60%
	5	80%
	6	100%

The above rates were incorporated with the October 1, 2007 valuation as the result of a prior Experience Study.

For Members hired after September 30, 2011, 100% retirement is assumed at the earlier of 1) Age 65 with 8 years of Credited Service, and 2) the completion of 33 years of Credited Service, regardless of Age. This assumption is reasonable, based on Plan provisions and historical experience.

Early Retirement Rates: Members are assumed to retire with an immediate subsidized benefit at the rate of 5% per year. This assumption was incorporated with the October 1, 2007 valuation as the result of a prior Experience Study.

Payroll Growth: 1.6% per year for amortization of the Unfunded Actuarial Accrued Liability. This assumption is consistent limited by the ten-year payroll growth average as of October 1, 2017.

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

Funding Method: Entry Age Normal Cost Method.

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2018	10.34%
09/30/2017	12.00%
09/30/2016	7.93%
09/30/2015	0.79%
09/30/2014	12.72%

NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2019)

General Information about the Pension Plan

Plan Description

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of:

- a. Two Council appointees;
- b. Three City Manager appointees;
- c. One retiree of the Plan elected by the Membership, and a
- d. Seventh Member elected by the other six who is a City resident.

Full-time General Employees hired prior to 3/1/95 enter the Plan on employment. Those hired after 2/28/95 enter following 6 months of service.

Plan Membership as of October 1, 2017:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	247
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	77
Active Plan Members	301
	<u>625</u>

Benefits Provided

The Plan provides retirement, termination, and death benefits.

Normal Retirement:

Date: Earlier of 1) the attainment of age 60 and the completion of 5 years of service, or 2) the date when age plus service equals 85 (Rule of 85). For Members hired after September 30, 2011, the Normal Retirement Date is the earlier of 1) Age 65 with 8 years of Credited Service, or 2) the completion of 33 years of Credited Service, regardless of Age.

Benefit: The sum of the following:

- a.) 2.5% of Final Average Compensation (using a three-year average, determined as of September 30, 2011) for each year of Credited Service as of September 30, 2011, plus
- b.) 1.6% of Final Average Compensation (using an eight-year average) for Credited Service after September 30, 2011.

Early Retirement:

Date: The attainment of age 55 and the completion of 5 years of service.

Benefit: Determined as for Normal Retirement, reduced 3% per year for each year that the Early Retirement Date precedes age 60. The reduction is prorated monthly.

For Members hired after September 30, 2011, the reduction is 5% per year, for each year that the Early Retirement Date precedes age 65. The reduction is prorated monthly.

Termination of Employment:

Members hired before October 1, 2011:

Less Than 5 Years: Return of Member contributions with interest.

5 to 10 Years, But Less Than Age 50: Return of Member contributions with interest plus an amount equal to the accumulated contributions that would have existed had the Member contributed at the rate contributed by the City.

10 or More Years or Upon Attaining Age 50 and 5 Years: Accrued monthly benefit payable at Normal or Early (reduced basis) Retirement Date, or return of Member contributions with interest.

Members hired after September 30, 2011:

Less Than 8 Years: Return of Member contributions with interest.

8 or More Years: The accrued benefit, payable at the Normal (unreduced), or Early (reduced) Retirement Date.

Pre-Retirement Death Benefits:

Less Than 5 Years and 6 Months: Return of Member contributions with interest.

More than 5 Years and 6 Months: Return of Member contributions with interest plus an amount equal to the accumulated contributions that would have existed had the Member contributed at the rate contributed by the City.

Contributions

Members: 5% of Compensation. The contribution rate is 3% for Members hired after September 30, 2011.

City: Remaining amount necessary to fund the Normal Cost and amortize the Unfunded Actuarial Accrued Liability over not more than 30 years.

Net Pension Liability

The measurement date is September 30, 2018.

The measurement period for the pension expense was October 1, 2017 to September 30, 2018.

The reporting period is October 1, 2018 through September 30, 2019.

The Sponsor's Net Pension Liability was measured as of September 30, 2018.

The Total Pension Liability used to calculate the Net Pension Liability was determined as of that date.

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2017 updated to September 30, 2018 using the following actuarial assumptions:

Inflation	2.30%
Salary Increases	Service based
Discount Rate	7.40%
Investment Rate of Return	7.40%

Mortality Rate Healthy Inactive Lives:

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

Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB.

Mortality Rate Healthy Active Lives:

Female: RP2000 Generational, 100% Combined Healthy (previously Annuitant) White Collar, Scale BB.

Male: RP2000 Generational, 50% Combined Healthy White Collar / 50% Combined Healthy Blue Collar, Scale BB.

Mortality Rate Disabled Lives:

Female: 100% RP2000 Disabled Female set forward two years.

Male: 100% RP2000 Disabled Male setback four years.

The most recent actuarial experience study used to review the other significant assumptions was dated August 4, 2017.

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

For 2018 the inflation rate assumption of the investment advisor was 2.10%.

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

Best estimates of geometric real rates of return for each major asset class included in the Pension Plan's target asset allocation as of September 30, 2018 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Domestic Equity	52.50%	6.66%
International Equity	10.00%	6.10%
Fixed Income	17.50%	2.42%
Real Estate	10.00%	3.36%
Hedge Funds	5.00%	3.00%
MLPs	5.00%	5.25%
Total	100.00%	

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.40 percent.

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

CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Reporting Period Ending September 30, 2018	\$ 68,709,548	\$ 56,319,703	\$ 12,389,845
Changes for a Year:			
Service Cost	1,502,866	-	1,502,866
Interest	5,093,386	-	5,093,386
Differences between Expected and Actual Experience	(1,752,760)	-	(1,752,760)
Changes of assumptions	(1,062,814)	-	(1,062,814)
Changes of benefit terms	-	-	-
Contributions - Employer	-	1,920,001	(1,920,001)
Contributions - Employee	-	666,208	(666,208)
Net Investment Income	-	5,814,656	(5,814,656)
Benefit Payments, including Refunds of Employee Contributions	(4,601,204)	(4,601,204)	-
Administrative Expense	-	(152,500)	152,500
Net Changes	(820,526)	3,647,161	(4,467,687)
Reporting Period Ending September 30, 2019	\$ 67,889,022	\$ 59,966,864	\$ 7,922,158

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.40%	7.40%	8.40%
Sponsor's Net Pension Liability	\$ 14,945,089	\$ 7,922,158	\$ 1,956,375

Pension Plan Fiduciary Net Position.

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

**FINAL PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND
DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS
FISCAL YEAR SEPTEMBER 30, 2018**

For the year ended September 30, 2018, the Sponsor has recognized a Pension Expense of \$2,185,205.

On September 30, 2018, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	255,569	809,748
Changes of assumptions	1,254,842	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	1,219,459
Employer contributions subsequent to the measurement date	1,920,001	-
Total	<u>\$ 3,430,412</u>	<u>\$ 2,029,207</u>

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer contributions subsequent to the measurement date has been recognized as a reduction of the Net Pension Liability in the year ended September 30, 2018.

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

Year ended September 30:

2019	\$ 48,686
2020	\$ 405,581
2021	\$ (492,791)
2022	\$ (480,272)
2023	\$ -
Thereafter	\$ -

**PRELIMINARY PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND
DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS
FISCAL YEAR SEPTEMBER 30, 2019**

For the year ended September 30, 2019, the Sponsor will recognize a Pension Expense of \$950,250.

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

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences between Expected and Actual Experience	86,358	1,719,444
Changes of assumptions	627,421	797,112
Net difference between Projected and Actual Earnings on Pension Plan investments	-	2,213,955
Employer contributions subsequent to the measurement date	TBD	-
Total	<u>TBD</u>	<u>\$ 4,730,511</u>

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the year ended September 30, 2019.

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

Year ended September 30:

2020	\$ (632,705)
2021	\$ (1,531,077)
2022	\$ (1,518,558)
2023	\$ (334,392)
2024	\$ -
Thereafter	\$ -

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

Reporting Period Ending Measurement Date	09/30/2019 09/30/2018	09/30/2018 09/30/2017	09/30/2017 09/30/2016
Total Pension Liability			
Service Cost	1,502,866	1,550,588	1,515,025
Interest	5,093,386	4,929,787	4,717,437
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	(1,752,760)	172,717	(1,619,494)
Changes of assumptions	(1,062,814)	-	2,509,683
Benefit Payments, including Refunds of Employee Contributions	(4,601,204)	(4,246,896)	(4,406,881)
Net Change in Total Pension Liability	(820,526)	2,406,196	2,715,770
Total Pension Liability - Beginning	68,709,548	66,303,352	63,587,582
Total Pension Liability - Ending (a)	<u>\$ 67,889,022</u>	<u>\$ 68,709,548</u>	<u>\$ 66,303,352</u>
Plan Fiduciary Net Position			
Contributions - Employer	1,920,001	1,882,709	1,969,372
Contributions - Employee	666,208	670,753	712,547
Net Investment Income	5,814,656	6,227,518	3,947,936
Benefit Payments, including Refunds of Employee Contributions	(4,601,204)	(4,246,896)	(4,406,881)
Administrative Expense	(152,500)	(153,053)	(145,459)
Net Change in Plan Fiduciary Net Position	3,647,161	4,381,031	2,077,515
Plan Fiduciary Net Position - Beginning	56,319,703	51,938,672	49,861,157
Plan Fiduciary Net Position - Ending (b)	<u>\$ 59,966,864</u>	<u>\$ 56,319,703</u>	<u>\$ 51,938,672</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 7,922,158</u>	<u>\$ 12,389,845</u>	<u>\$ 14,364,680</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	88.33%	81.97%	78.33%
Covered Employee Payroll ¹	\$ 16,413,536	\$ 16,012,972	\$ 16,535,449
Net Pension Liability as a percentage of Covered Employee Payroll	48.27%	77.37%	86.87%

Notes to Schedule:

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period.

Changes of assumptions

For measurement date 09/30/2018, all recommended assumption changes from the August 4, 2017 Experience Study have been incorporated. Additionally, the investment return assumption will reduce from 7.5% to 7.0% according to the following schedule:

<u>Valuation Date</u>	<u>Assumption</u>
October 1, 2018	7.4%
October 1, 2019	7.3%
October 1, 2020	7.2%
October 1, 2021	7.1%
October 1, 2022	7.0%

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

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

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

Reporting Period Ending	09/30/2016	09/30/2015
Measurement Date	09/30/2015	09/30/2014
Total Pension Liability		
Service Cost	1,500,184	1,471,441
Interest	4,553,080	4,418,330
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	504,129	-
Changes of assumptions	-	-
Benefit Payments, including Refunds of Employee Contributions	(4,354,731)	(3,888,957)
Net Change in Total Pension Liability	2,202,662	2,000,814
Total Pension Liability - Beginning	61,384,920	59,384,106
Total Pension Liability - Ending (a)	<u>\$ 63,587,582</u>	<u>\$ 61,384,920</u>
Plan Fiduciary Net Position		
Contributions - Employer	2,023,395	1,924,183
Contributions - Employee	694,975	715,147
Net Investment Income	397,133	5,868,861
Benefit Payments, including Refunds of Employee Contributions	(4,354,731)	(3,888,957)
Administrative Expense	(135,760)	(128,474)
Net Change in Plan Fiduciary Net Position	(1,374,988)	4,490,760
Plan Fiduciary Net Position - Beginning	51,236,145	46,745,385
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Net Pension Liability - Ending (a) - (b)	<u>\$ 13,726,425</u>	<u>\$ 10,148,775</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	78.41%	83.47%
Covered Employee Payroll ¹	\$ 18,135,744	\$ 15,618,366
Net Pension Liability as a percentage of Covered Employee Payroll	75.69%	64.98%

Notes to Schedule:

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period.

SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll ¹	Contributions as a percentage of Covered Employee Payroll
09/30/2018	\$ 1,943,363	\$ 1,920,001	\$ 23,362	\$ 16,413,536	11.70%
09/30/2017	\$ 1,785,446	\$ 1,882,709	\$ (97,263)	\$ 16,012,972	11.76%
09/30/2016	\$ 1,969,372	\$ 1,969,372	\$ -	\$ 16,535,449	11.91%
09/30/2015	\$ 2,023,395	\$ 2,023,395	\$ -	\$ 18,135,744	11.16%
09/30/2014	\$ 1,924,183	\$ 1,924,183	\$ -	\$ 15,618,366	12.32%

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82, except for the 09/30/2015 measurement period.

Notes to Schedule

Valuation Date: 10/01/2016

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

Methods and assumptions used to determine contribution rates:

Mortality Rates:

Healthy Inactive Lives:

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

Male: RP2000 Generational, 50% Annuitant White Collar / 50% Annuitant Blue Collar, Scale BB.

Healthy Active Lives:

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

Male: RP2000 Generational, 50% Combined Healthy White Collar / 50% Combined Healthy Blue Collar, Scale BB.

Disabled Lives:

Female: 100% RP2000 Disabled Female set forward two years.

Male: 100% RP2000 Disabled Male setback four years.

The above assumption rates were mandated by Chapter 2015-157, Laws of Florida.

This law mandates the use of the assumption used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman's July 1, 2016 FRS valuation report. We feel this assumption sufficiently accommodates future mortality improvements.

Termination Rates:

Sample Ages	Years of Service	% of Active Members Separating Within Next Year
ALL	0	20.0%
0	1	18.0%
0	2	16.0%
0	3	10.0%
0	4	6.0%
20	5+	16.2%
25		13.2%
30		10.8%
35		9.4%
40		7.8%
45		5.8%
50		3.2%
55+		0.8%

The above rates were incorporated with the October 1, 2007 valuation as the result of a prior Experience Study.

Interest Rate: 7.50% per year, compounded annually, net of investment related expenses. This assumption was adopted by the Board in conjunction with a revision to the October 1, 2009 valuation and is supported by the Plan's investment policy and long-term expected returns by asset class.

Disability Rates:	% Becoming Disabled During	
	Sample Ages	the Year
	20	0.05%
	25	0.05%
	30	0.06%
	35	0.09%
	40	0.12%
	45	0.28%
	50	0.43%

The above rates are consistent with the national average for general employee public pension plans.

Salary Increases:	Years of	Increase
	Service	
	1 to 2	6.0%
	3	5.5%
	4	5.5%
	5	5.5%
	6	5.5%
	7 to 8	5.5%
	9	5.5%
	10 to 19	5.0%
	20+	4.0%

The above rates were incorporated with the October 1, 2014 valuation as the result of an Experience Study

Normal Retirement Rates:	Number of Years After First	Probability of
	Eligibility For Normal	
	0	25%
	1	25%
	2	50%
	3	50%
	4	60%
	5	80%
	6	100%

The above rates were incorporated with the October 1, 2007 valuation as the result of a prior Experience Study.

For Members hired after September 30, 2011, 100% retirement is assumed at the earlier of 1) Age 65 with 8 years of Credited Service, and 2) the completion of 33 years of Credited Service, regardless of Age. This assumption is reasonable, based on Plan provisions and historical experience.

Early Retirement Rates: Members are assumed to retire with an immediate subsidized benefit at the rate of 5% per year. This assumption was incorporated with the October 1, 2007 valuation as the result of a prior Experience Study.

Payroll Growth: 1.6% per year for amortization of the Unfunded Actuarial Accrued Liability. This assumption is consistent limited by the ten-year payroll growth average as of October 1, 2017.

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

Funding Method: Entry Age Normal Cost Method.

EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

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

FINAL COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2018

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 14,364,680	\$ 2,403,267	\$ 6,044,511	\$ -
Employer Contributions made after September 30, 2017	-	-	1,920,001	-
Total Pension Liability Factors:				
Service Cost	1,550,588	-	-	1,550,588
Interest	4,929,787	-	-	4,929,787
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	172,717	-	172,717	-
Current year amortization of experience difference	-	(404,873)	(169,212)	(235,661)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(627,421)	627,421
Benefit Payments, including Refunds of Employee Contributions	(4,246,896)	-	-	-
Net change	<u>2,406,196</u>	<u>(404,873)</u>	<u>1,296,085</u>	<u>6,872,135</u>
Plan Fiduciary Net Position:				
Contributions - Employer	1,882,709	-	(1,882,709)	-
Contributions - Employee	670,753	-	-	(670,753)
Projected Net Investment Income	3,826,157	-	-	(3,826,157)
Difference between projected and actual earnings on Pension Plan investments	2,401,361	2,401,361	-	-
Current year amortization	-	(1,018,898)	(675,825)	(343,073)
Benefit Payments, including Refunds of Employee Contributions	(4,246,896)	-	-	-
Administrative Expenses	(153,053)	-	-	153,053
Net change	<u>4,381,031</u>	<u>1,382,463</u>	<u>(2,558,534)</u>	<u>(4,686,930)</u>
Ending Balance	<u>\$ 12,389,845</u>	<u>\$ 3,380,857</u>	<u>\$ 4,782,062</u>	<u>\$ 2,185,205</u>

PRELIMINARY COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2019

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 12,389,845	\$ 3,380,857	\$ 4,782,062	\$ -
Employer Contributions made after September 30, 2018	-	-	TBD*	-
Total Pension Liability Factors:				
Service Cost	1,502,866	-	-	1,502,866
Interest	5,093,386	-	-	5,093,386
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	(1,752,760)	1,752,760	-	-
Current year amortization of experience difference	-	(843,064)	(169,211)	(673,853)
Change in assumptions about future economic or demographic factors or other inputs	(1,062,814)	1,062,814	-	-
Current year amortization of change in assumptions	-	(265,702)	(627,421)	361,719
Benefit Payments, including Refunds of Employee Contributions	(4,601,204)	-	-	-
Net change	<u>(820,526)</u>	<u>1,706,808</u>	<u>(796,632)</u>	<u>6,284,118</u>
Plan Fiduciary Net Position:				
Contributions - Employer	1,920,001	-	(1,920,001)	-
Contributions - Employee	666,208	-	-	(666,208)
Projected Net Investment Income	4,142,697	-	-	(4,142,697)
Difference between projected and actual earnings on Pension Plan investments	1,671,959	1,671,959	-	-
Current year amortization	-	(1,353,288)	(675,825)	(677,463)
Benefit Payments, including Refunds of Employee Contributions	(4,601,204)	-	-	-
Administrative Expenses	(152,500)	-	-	152,500
Net change	<u>3,647,161</u>	<u>318,671</u>	<u>(2,595,826)</u>	<u>(5,333,868)</u>
Ending Balance	<u>\$ 7,922,158</u>	<u>\$ 5,406,336</u>	<u>TBD</u>	<u>\$ 950,250</u>

* Employer Contributions subsequent to the measurement date made after September 30, 2018 but made on or before September 30, 2019 need to be added.

AMORTIZATION SCHEDULE - INVESTMENTS

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

Plan Year Ending	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2014	\$ (2,414,635)	5	\$ (482,927)	\$ (482,927)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 3,379,123	5	\$ 675,825	\$ 675,825	\$ 675,825	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (278,490)	5	\$ (55,698)	\$ (55,698)	\$ (55,698)	\$ (55,698)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (2,401,361)	5	\$ (480,273)	\$ (480,272)	\$ (480,272)	\$ (480,272)	\$ (480,272)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (1,671,959)	5	\$ -	\$ (334,391)	\$ (334,392)	\$ (334,392)	\$ (334,392)	\$ (334,392)	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (343,073)	\$ (677,463)	\$ (194,537)	\$ (870,362)	\$ (814,664)	\$ (334,392)	\$ -	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

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

Plan Year Ending	Changes of Assumptions	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2016	\$ 2,509,683	4	\$ 627,421	\$ 627,421	\$ 627,421	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (1,062,814)	4	\$ -	\$ (265,702)	\$ (265,704)	\$ (265,704)	\$ (265,704)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 627,421	\$ 361,719	\$ 361,717	\$ (265,704)	\$ (265,704)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - EXPERIENCE

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

Plan Year Ending	Differences Between Expected and Actual Experience	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2015	\$ 504,129	4	\$ 126,032	\$ 126,032	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (1,619,494)	4	\$ (404,873)	\$ (404,874)	\$ (404,874)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 172,717	4	\$ 43,180	\$ 43,179	\$ 43,179	\$ 43,179	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (1,752,760)	4	\$ -	\$ (438,190)	\$ (438,190)	\$ (438,190)	\$ (438,190)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (235,661)	\$ (673,853)	\$ (799,885)	\$ (395,011)	\$ (438,190)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -