

NORTH BAY FIRE DISTRICT
FIREFIGHTERS' PENSION TRUST FUND

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

November 29, 2018

Board of Trustees
North Bay Fire Control District
1024 White Point Road Niceville,
FL 32578-4218

Re: North Bay Fire District Firefighters' Pension Trust Fund

Dear Board:

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

The valuations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflect laws and regulations issued to date pursuant to the provisions of Chapters 112 and 175, 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 North Bay Fire District, 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 North Bay Fire District, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Firefighters' Pension Trust Fund. 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.

A handwritten signature in black ink, appearing to read 'Drew D. Ballard', written over a horizontal line.

By:

Drew D. Ballard, EA, MAAA
Enrolled Actuary #17-8193

DDB/lke

Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the North Bay Fire District Firefighters' Pension Trust Fund, 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.

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

Valuation Date Applicable to Fiscal Year Ending	10/1/2018 <u>9/30/2020</u>	10/1/2017 <u>9/30/2019</u>
Minimum Required Contribution % of Projected Annual Payroll	26.0%	26.8%
Member Contributions (Est.) % of Projected Annual Payroll	5.0%	5.0%
District And State Required Contribution % of Projected Annual Payroll	21.0%	21.8%
State Contribution (Est.) ¹ % of Projected Annual Payroll	\$69,083 6.9%	\$69,083 6.9%
District Required Contribution ² % of Projected Annual Payroll	14.1%	14.9%

¹ Represents the amount received in calendar 2018. As per a Mutual Consent Agreement between the Membership and the District, all State Monies received each year will be available to offset the District's required contribution.

² The required contribution from the combination of District and State sources for the year ending September 30, 2020, is 21.0% of the actual payroll realized in that year. As a budgeting tool, the District may contribute 14.1% of each Member's Salary and then make a one-time adjustment to account for the actual State Monies received. Please note that the District has access to a prepaid contribution of \$5,784.34 that is available to offset a portion of the above stated requirements for the fiscal year ending September 30, 2019.

CHANGES SINCE PRIOR VALUATION

Plan Changes

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

Actuarial Assumption/Method Changes

In conjunction with this actuarial valuation, a "fresh-start" of the actuarial asset value has been implemented to be equal to the market value of assets. Effective October 1, 2018, the asset valuation method is such that all assets are valued at market value with an adjustment to uniformly spread investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period. The fresh-start in conjunction with the change to the actuarial asset method has been implemented in order to align with the investment gain-loss recognition required by GASB and to eliminate necessary periodic adjustments that exist with the prior actuarial asset method.

CONTRIBUTION IMPACT OF ANNUAL CHANGES

(1) Contribution Determined as of October 1, 2017	14.1%
(2) Summary of Contribution Impact by component:	
Change in State Contribution Percentage	0.8%
Change in Normal Cost Rate	-0.3%
Change in Administrative Expense Percentage	0.0%
Payroll Change Effect on UAAL Amortization	0.0%
Investment Return (Actuarial Asset Basis)	0.5%
Salary Increases	0.5%
Active Decrements	0.0%
Inactive Mortality	0.1%
Method Change	-1.3%
Other	-0.3%
Total Change in Contribution	0.0%
(3) Contribution Determined as of October 1, 2018	14.1%

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	(177,798) ¹

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2018	11.24%	6.48%
Year Ended 9/30/2017	3.97%	6.00%
Year Ended 9/30/2016	6.77%	6.00%
Year Ended 9/30/2015	1.76%	6.00%
Year Ended 9/30/2014	1.79%	6.00%

(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	7.97%	6.53%	7.75%
Year Ended 9/30/2017	12.67%	6.98%	8.00%
Year Ended 9/30/2016	7.62%	7.08%	8.00%
Year Ended 9/30/2015	-1.63%	9.21%	8.00%
Year Ended 9/30/2014	9.82%	9.18%	8.00%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2018	\$1,004,426
	10/1/2008	763,435
(b) Total Increase		31.57%
(c) Number of Years		10.00
(d) Average Annual Rate		2.78%

¹ Based on current State law and the existing UAAL bases, the UAAL will never be positive.

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.



Drew D. Ballard, EA, MAAA
Enrolled Actuary #17-8193

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

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

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

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

(1)	Unfunded Actuarial Accrued Liability as of October 1, 2017	(\$116,878)
(2)	Sponsor Normal Cost developed as of October 1, 2017	161,581
(3)	Expected administrative expenses for the year ended September 30, 2018	38,287
(4)	Expected interest on (1), (2) and (3)	4,948
(5)	Sponsor contributions to the System during the year ended September 30, 2018	231,408
(6)	Expected interest on (5)	6,820
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2018 (1)+(2)+(3)+(4)-(5)-(6)	(150,290)
(8)	Change to UAAL due to Method Change	(134,899)
(9)	Change to UAAL due to Actuarial (Gain)/Loss	107,391
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2018	(177,798)

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2018 Amount</u>	<u>Amortization Amount</u>
Initial Base	10/1/2017	19	(150,290)	(14,264)
Actuarial Loss	10/1/2018	20	107,391	9,963
Method Change	10/1/2018	20	<u>(134,899)</u>	<u>(12,515)</u>
			(177,798)	(16,816)

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2017	(\$116,878)
(2) Expected UAAL as of October 1, 2018	(150,290)
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	53,848
Salary Increases	54,651
Active Decrements	806
Inactive Mortality	9,976
Other	<u>(11,890)</u>
Increase in UAAL due to (Gain)/Loss	107,391
Method Change	<u>(134,899)</u>
(4) Actual UAAL as of October 1, 2018	(\$177,798)

ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate

Healthy Active Lives:

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

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

Healthy Inactive Lives:

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

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

Disabled Lives:

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

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

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

Interest Rate

7.75% per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.

Salary Increases

8% for the first 4 years of Credited Service and 5.0% thereafter. This assumption was adopted based on the June 6, 2017 actuarial experience study.

Payroll Growth

0.00%. This assumption cannot exceed the ten-year average payroll growth, in compliance with Part VII of Chapter 112, Florida Statutes.

Administrative Expenses

\$42,334 annually, based on actual expenses incurred in the prior fiscal year.

GLOSSARY

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

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

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.

Entry Age Normal Cost Method (EAN) - 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.

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from Previous Year</u>
1998	12,899.20	_____%
1999	16,762.16	29.9%
2000	19,060.35	13.7%
2001	22,546.42	18.3%
2002	24,345.00	8.0%
2003	30,197.67	24.0%
2004	32,799.43	8.6%
2005	38,385.97	17.0%
2006	44,709.46	16.5%
2007	65,574.57	46.7%
2008	104,942.35	60.0%
2009	107,950.54	2.9%
2010	91,832.55	-14.9%
2011	117,749.32	28.2%
2012	96,458.03	-18.1%
2013	108,137.86	12.1%
2014	122,408.31	13.2%
2015	103,271.36	-15.6%
2016	92,377.22	-10.5%
2017	70,246.48	-24.0%
2018	69,082.65	-1.7%

EXCESS STATE MONIES RESERVE

	Regular Distribution			Special Distribution		
	<u>Actual State Contribution</u>	<u>Applicable "Frozen" Amount</u>	<u>Excess State Monies Reserve</u>	<u>Actual State Contribution</u>	<u>Applicable "Frozen" Amount</u>	<u>Excess State Monies Reserve</u>
1999	\$16,762.16	\$12,899.20	\$3,862.96	\$0.00	\$0.00	\$0.00
2000	19,060.35	12,899.20	6,161.15	0.00	0.00	0.00
2001	22,546.42	12,899.20	9,647.22	0.00	0.00	0.00
2002	24,345.00	12,899.20	11,445.80	0.00	0.00	0.00
2003	27,289.56	12,899.20	14,390.36	2,908.11	0.00	2,908.11
2004	27,556.80	12,899.20	14,657.60	5,242.63	0.00	5,242.63
2005	33,356.11	12,899.20	20,456.91	5,029.86	0.00	5,029.86
2006	36,014.94	12,899.20	23,115.74	8,694.52	0.00	8,694.52
2007	48,324.73	46,582.20	1,742.53	17,249.84	0.00	17,249.84
2008	63,785.35	46,582.20	17,203.15	41,157.00	0.00	41,157.00
2009	57,884.45	46,582.20	11,302.25	50,066.09	0.00	50,066.09
2010	61,001.04	61,001.04	0.00	30,831.51	25,276.16	5,555.35
2011	61,546.42	61,546.42	0.00	56,202.90	24,730.78	31,472.12
2012	62,513.71	62,513.71	0.00	33,944.32	23,763.49	10,180.83
2013	70,175.15	70,175.15	0.00	37,962.71	16,102.05	21,860.66
2014	78,818.70	78,818.70	0.00	43,589.61	7,458.50	36,131.11
2015	71,929.79	71,929.79	0.00	31,341.57	14,347.41	16,994.16
2016	73,789.47	71,929.79	1,859.68	18,587.75	14,347.41	4,240.34
2017	66,621.75	71,929.79	0.00	3,624.73	14,347.41	0.00
2018	66,343.88	66,343.88	<u>0.00</u>	2,738.77	2,738.77	<u>0.00</u>
			135,845.35			256,782.62
Accumulated Regular Excess			135,845.35			
Accumulated Special Excess			<u>256,782.62</u>			
Total Excess State Monies			392,627.97			
Less Excess Used in Funding Res. No. 07-01 (3.0% BR)			(93,822.60)			
Less Excess Used in Funding Res. No. 10-01 (3.5% BR, 3Yr AFC)			<u>(170,511.12)</u>			
Equals Current State Monies Reserve			\$128,294.25			

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2018

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Short Term Investments	33,118.25	33,118.25
Total Cash and Equivalents	33,118.25	33,118.25
Receivables:		
State Contributions	69,082.65	69,082.65
Investment Income	3,249.60	0.00
Total Receivable	72,332.25	69,082.65
Investments:		
Mutual Funds:		
Fixed Income	1,612,041.70	1,553,453.88
Equity	2,632,920.71	3,270,324.95
Total Investments	4,244,962.41	4,823,778.83
Total Assets	4,350,412.91	4,925,979.73
<u>LIABILITIES</u>		
Prepaid District Contribution	5,784.34	5,784.34
Total Liabilities	5,784.34	5,784.34
NET POSITION RESTRICTED FOR PENSIONS	4,344,628.57	4,920,195.39

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

ADDITIONS

Contributions:			
Member		48,009.90	
District		162,325.07	
State		69,082.65	
Total Contributions			279,417.62
Investment Income:			
Net Realized Gain (Loss)	29,738.07		
Unrealized Gain (Loss)	207,098.43		
Net Increase in Fair Value of Investments		236,836.50	
Interest & Dividends		134,181.28	
Less Investment Expense ¹		(14,702.46)	
Net Investment Income			356,315.32
Total Additions			635,732.94
<u>DEDUCTIONS</u>			
Distributions to Members:			
Benefit Payments		68,230.44	
Refunds of Member Contributions		3,976.43	
Total Distributions			72,206.87
Administrative Expense			42,334.36
Total Deductions			114,541.23
Net Increase in Net Position			521,191.71
NET POSITION RESTRICTED FOR PENSIONS			
Beginning of the Year			4,399,003.68
End of the Year			4,920,195.39

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 increasing the Actuarial Assets used in the most recent actuarial valuation of the Fund by the average annual market value rate of return (net of investment related expenses) for the past four years. Actuarial Assets shall not be less than 80% nor greater than 120% of Market Value of Assets.

Details of the derivation are set forth as follows:

Plan Year End	Rate of Return ¹	
09/30/2015	-1.63%	
09/30/2016	7.62%	
09/30/2017	12.67%	
09/30/2018	7.97%	
Annualized Rate of Return for prior four (4) years:		6.53%
(A) 10/01/2017 Actuarial Assets:		\$4,332,199.93
(I) Net Investment Income:		
1. Interest and Dividends	134,181.28	
2. Realized Gains (Losses)	29,738.07	
3. Change in Actuarial Value	139,003.07	
4. Investment Related Expenses	(14,702.46)	
Total		288,219.96
(B) 10/01/2018 Actuarial Assets:		\$4,785,296.28
Actuarial Asset Rate of Return = $2I/(A+B-I)$:		6.53%
10/01/2018 Limited Actuarial Assets ² :		\$4,785,296.28
10/01/2018 Market Value of Assets:		\$4,920,195.39
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)		(\$53,848.14)

¹Market Value Basis, net of investment related expenses.

²Due to the asset method change, the Actuarial Value of Assets reflected in this valuation is \$4,920,195.39.

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

REVENUES

Contributions:		
Member	48,009.90	
District	162,325.07	
State	69,082.65	
Total Contributions		279,417.62
Earnings from Investments:		
Interest & Dividends	134,181.28	
Net Realized Gain (Loss)	29,738.07	
Change in Actuarial Value	139,003.07	
Total Earnings and Investment Gains		302,922.42
EXPENDITURES		
Distributions to Members:		
Benefit Payments	68,230.44	
Refunds of Member Contributions	3,976.43	
Total Distributions		72,206.87
Expenses:		
Investment related ¹	14,702.46	
Administrative	42,334.36	
Total Expenses		57,036.82
Change in Net Assets for the Year		453,096.35
Net Assets Beginning of the Year		4,332,199.93
Net Assets End of the Year ²		4,785,296.28

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

²Net Assets may be limited for actuarial consideration. Due to the asset method change, the Actuarial Value of Assets reflected in this valuation is \$4,920,195.39.

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

(1) Total Required Contribution Rate	29.1%
(2) Pensionable Payroll Derived from Member Contributions	\$960,198.00
(3) Total Required Contribution (1) x (2)	279,417.62
(4) Less Actual Member Contributions	(48,009.90)
(5) Less Allowable State Contribution	<u>(69,082.65)</u>
(6) Equals Required District Contribution for Fiscal 2018	162,325.07
(7) Less 2017 Prepaid Contribution	(13,679.48)
(8) Less Actual District Contributions	<u>(154,429.93)</u>
(9) Equals District's Shortfall/(Prepaid) Contribution as of September 30, 2018	(\$5,784.34)

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	0	0	0	0	0	0	0	0	0	0	0	0
25 - 29	0	3	0	0	0	0	0	0	0	0	0	3
30 - 34	1	2	2	0	0	0	2	0	0	0	0	7
35 - 39	0	1	0	0	0	0	1	0	0	0	0	2
40 - 44	0	0	0	1	0	0	0	0	1	0	0	2
45 - 49	0	0	0	0	0	0	1	0	0	0	0	1
50 - 54	0	0	0	0	0	0	0	0	1	0	0	1
55 - 59	0	0	0	0	0	0	0	0	1	0	0	1
60 - 64	0	0	0	0	0	0	0	0	0	0	0	0
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	6	2	1	0	0	4	0	3	0	0	17

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2017	17
b. Terminations	
i. Vested (partial or full) with deferred benefits	(1)
ii. Non-vested or full lump sum distribution received	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. Continuing participants	16
g. New entrants	<u>1</u>
h. Total active life participants in valuation	17

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

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	1	0	2	9	12
Retired	0	0	0	0	0
Vested Deferred	0	0	0	1	1
Death, With Survivor	0	0	0	0	0
Death, No Survivor	0	0	0	0	0
Disabled	0	0	0	0	0
Refund of Contributions	0	0	0	(1)	(1)
Rehires	0	0	0	0	0
Expired Annuities	0	0	0	0	0
Data Corrections	0	0	0	0	0
b. Number current valuation	1	0	2	9	12

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Payroll Increase: None.
Funding Method: Aggregate Actuarial Cost Method.
Asset Valuation Method: Each year, the prior Actuarial Value of Assets is brought forward utilizing the historical geometric 4-year average Market Value return. It is possible that over time this technique will produce an insignificant bias above or below Market Value.

Termination and Disability Rate Table:

Age	% Becoming Disabled During the Year	% Terminating During the Year
20	0.030%	6.0%
30	0.040%	5.0%
40	0.070%	2.6%
50	0.180%	0.8%

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2018	7.97%
09/30/2017	12.67%
09/30/2016	7.62%
09/30/2015	-1.63%
09/30/2014	9.82%
09/30/2013	13.07%

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 District appointees,
- b. Two Members of the Department elected by the membership, and
- c. Fifth Member elected by other four and appointed by District.

Full-time employees who are classified as full-time Firefighters shall participate in the System as a condition of employment.

Plan Membership as of October 1, 2017:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	3
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	9
Active Plan Members	17
	29

Benefits Provided

The Plan provides retirement, termination, disability and death benefits.

Normal Retirement:

Date: Earlier of: 1) age 55 and 10 years of Credited Service, or 2) age 52 and 25 years of Credited Service.

Benefit: 3.5% of Average Final Compensation times Credited Service.

Early Retirement:

Eligibility: Age 50 and 10 Years of Credited Service.

Benefit: Accrued benefit, reduced 3% per year prior to Normal Retirement Date.

Vesting:

Schedule: 100% after 10 years of Credited Service.

Benefit Amount: Member will receive the vested portion of his (her) accrued benefit payable at the otherwise Normal Retirement Date.

Disability:

Eligibility: Service Incurred Covered from Date of Employment. Non-Service Incurred 10 years of Credited Service.

Benefit: Benefit accrued to date of disability but not less than 42% of Average Final Compensation (Service Incurred), or 25% of Average Final Compensation (Non-Service Incurred).

Pre-Retirement Death Benefits:

Vested: Monthly accrued benefit payable to designated beneficiary for 10 years.

Non-Vested: Refund of accumulated contributions without interest.

Share Plan:

A Share Plan exists, but is not currently funded.

Contributions

Member Contributions: 5.0% of Salary.

District/State Contributions: Remaining amounts required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Part VII of Chapter 112, Florida Statutes.

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	2.50%
Salary Increases	Service based
Discount Rate	7.75%
Investment Rate of Return	7.75%

Mortality Rate Healthy Inactive Lives:

Female: RP 2000 Generational, 100% Annuitant White Collar, Scale BB.

Male: RP 2000 Generational, 10% Annuitant White Collar / 90% Annuitant Blue Collar, Scale BB.

Mortality Rate Healthy Active Lives:

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

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

Mortality Rate Disabled Lives:

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

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

The most recent actuarial experience study used to review the other significant assumptions was dated June 6, 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 2.50%.

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	55%	7.50%
International Equity	10%	8.50%
Broad Market Fixed Income	30%	2.50%
Global Fixed Income	5%	3.50%
Total	100%	

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.75 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	\$ 4,526,031	\$ 4,412,683	\$ 113,348
Changes for a Year:			
Service Cost	208,848	-	208,848
Interest	354,212	-	354,212
Differences between Expected and Actual Experience	(363,536)	-	(363,536)
Changes of assumptions	-	-	-
Changes of benefit terms	-	-	-
Contributions - Employer	-	154,430	(154,430)
Contributions - State	-	69,083	(69,083)
Contributions - Employee	-	48,010	(48,010)
Net Investment Income	-	356,315	(356,315)
Benefit Payments, including Refunds of Employee Contributions	(72,207)	(72,207)	-
Administrative Expense	-	(42,334)	42,334
Net Changes	127,317	513,297	(385,980)
Reporting Period Ending September 30, 2019	\$ 4,653,348	\$ 4,925,980	\$ (272,632)

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.75%	7.75%	8.75%
Sponsor's Net Pension Liability	\$ 360,753	\$ (272,632)	\$ (794,294)

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 \$182,297.

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	-	288,362
Changes of assumptions	91,818	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	11,427
Employer and State contributions subsequent to the measurement date	223,513	-
Total	\$ 315,331	\$ 299,789

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State 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	\$ (12,188)
2020	\$ (12,187)
2021	\$ (2,713)
2022	\$ (67,318)
2023	\$ (70,670)
Thereafter	\$ (42,895)

**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 \$150,040.

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

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	-	555,787
Changes of assumptions	76,515	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	41,206
Employer and State contributions subsequent to the measurement date	TBD	-
Total	TBD	\$ 596,993

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State 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	\$	(49,805)
2021	\$	(114,410)
2022	\$	(117,762)
2023	\$	(82,457)
2024	\$	(65,160)
Thereafter	\$	(90,884)

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	208,848	169,516	194,390
Interest	354,212	339,525	307,655
Change in Excess State Money	-	-	6,100
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	(363,536)	(168,931)	(87,107)
Changes of assumptions	-	29,167	89,089
Benefit Payments, including Refunds of Employee Contributions	(72,207)	(92,168)	(69,396)
Net Change in Total Pension Liability	127,317	277,109	440,731
Total Pension Liability - Beginning	4,526,031	4,248,922	3,808,191
Total Pension Liability - Ending (a)	<u>\$ 4,653,348</u>	<u>\$ 4,526,031</u>	<u>\$ 4,248,922</u>
Plan Fiduciary Net Position			
Contributions - Employer	154,430	109,387	146,262
Contributions - State	69,083	70,246	92,377
Contributions - Employee	48,010	42,447	43,268
Net Investment Income	356,315	486,920	261,709
Benefit Payments, including Refunds of Employee Contributions	(72,207)	(92,168)	(69,396)
Administrative Expense	(42,334)	(38,287)	(29,383)
Net Change in Plan Fiduciary Net Position	513,297	578,545	444,837
Plan Fiduciary Net Position - Beginning	4,412,683	3,834,138	3,389,301
Plan Fiduciary Net Position - Ending (b)	<u>\$ 4,925,980</u>	<u>\$ 4,412,683</u>	<u>\$ 3,834,138</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ (272,632)</u>	<u>\$ 113,348</u>	<u>\$ 414,784</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	105.86%	97.50%	90.24%
Covered Employee Payroll ¹	\$ 960,198	\$ 864,568	\$ 849,729
Net Pension Liability as a percentage of Covered Employee Payroll	-28.39%	13.11%	48.81%

Notes to Schedule:

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82.

Changes of benefit terms:

For measurement date 09/30/2016, Ordinance 16-05 was adopted which amended the plan to comply with changes in the Internal Revenue Code and added a Share Plan.

Changes of assumptions:

For measurement date 09/30/2017, the Board adopted the following changes in assumptions in methods in conjunction with the June 6, 2017 actuarial experience study:

1. The actuarial cost method was changed from the Aggregate Cost Method to the Entry Age Normal Cost Method.
2. The investment return assumption was decreased from 8.00% to 7.75% net of investment related expenses.
3. The salary scale was changed from a flat 6.0% to 8.0% for the first 5 years and 5.0% thereafter.
4. The mortality rates were changed from those used in the July 1, 2015 Florida Retirement System (FRS) actuarial valuation report to those used in the July 1, 2106 FRS actuarial valuation report for special risk lives.

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

The inflation assumption rate was lowered from 3.00% to 2.50%, 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	09/30/2013
Total Pension Liability			
Service Cost	160,148	189,022	175,020
Interest	284,836	255,849	225,154
Change in Excess State Money	16,994	36,131	-
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	(125,177)	-	-
Changes of assumptions	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(68,230)	(39,086)	(21,896)
Net Change in Total Pension Liability	268,571	441,916	378,278
Total Pension Liability - Beginning	3,539,620	3,097,704	2,719,426
Total Pension Liability - Ending (a)	<u>\$ 3,808,191</u>	<u>\$ 3,539,620</u>	<u>\$ 3,097,704</u>
Plan Fiduciary Net Position			
Contributions - Employer	120,598	157,744	137,845
Contributions - State	103,271	122,408	108,138
Contributions - Employee	39,937	43,420	42,771
Net Investment Income	(54,317)	276,480	302,022
Benefit Payments, including Refunds of Employee Contributions	(68,230)	(39,086)	(21,896)
Administrative Expense	(25,984)	(17,294)	(18,740)
Net Change in Plan Fiduciary Net Position	115,275	543,672	550,140
Plan Fiduciary Net Position - Beginning	3,274,026	2,730,354	2,180,214
Plan Fiduciary Net Position - Ending (b)	<u>\$ 3,389,301</u>	<u>\$ 3,274,026</u>	<u>\$ 2,730,354</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 418,890</u>	<u>\$ 265,594</u>	<u>\$ 367,350</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	89.00%	92.50%	88.14%
Covered Employee Payroll ¹	\$ 798,745	\$ 868,403	\$ 855,429
Net Pension Liability as a percentage of Covered Employee Payroll	52.44%	30.58%	42.94%

Notes to Schedule:

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82.

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	\$ 231,408	\$ 223,513	\$ 7,895	\$ 960,198	23.28%
09/30/2017	\$ 196,257	\$ 179,633	\$ 16,624	\$ 864,568	20.78%
09/30/2016	\$ 202,236	\$ 232,539	\$ (30,303)	\$ 849,729	27.37%
09/30/2015	\$ 206,875	\$ 206,875	\$ -	\$ 798,745	25.90%
09/30/2014	\$ 244,021	\$ 244,021	\$ -	\$ 868,403	28.10%
09/30/2013	\$ 224,122	\$ 224,122	\$ -	\$ 855,429	26.20%

¹ The Covered Employee Payroll numbers shown are in compliance with GASB 82.

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:

Healthy Lives:

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

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

Disabled Lives:

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

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

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

Interest Rate: 8.0% per year compounded annually, net of investment related expenses. This assumption is in line with the national average utilized for public pension programs.

Retirement Age: Earlier of Age 55 and 10 years of service or Age 52 and 25 years of service. Also, any Member who has reached Normal Retirement is assumed to continue employment for one additional year. We feel this assumption is reasonable based on the plan provisions.

Early Retirement: Commencing with the earliest Early Retirement Age (50), Members are assumed to retire with an immediate subsidized benefit at the rate of 5% per year. We feel this assumption is reasonable based on the plan provisions.

Disability Rates: See table below (1201). It is assumed that 75% of disablements and active Member deaths are service related.

Termination Rates: See table below (1302).

Salary Increases: 6% per year until the assumed retirement age.

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Payroll Increase: None.
Funding Method: Aggregate Actuarial Cost Method.
Asset Valuation Method: Each year, the prior Actuarial Value of Assets is brought forward utilizing the historical geometric 4-year average Market Value return. It is possible that over time this technique will produce an insignificant bias above or below Market Value.

Termination and Disability Rate Table:

Age	% Becoming Disabled During the Year	% Terminating During the Year
20	0.030%	6.0%
30	0.040%	5.0%
40	0.070%	2.6%
50	0.180%	0.8%

EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

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

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	\$ (125,177)	8	\$ (15,647)	\$ (15,647)	\$ (15,647)	\$ (15,647)	\$ (15,647)	\$ (15,647)	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (87,107)	8	\$ (10,889)	\$ (10,889)	\$ (10,888)	\$ (10,888)	\$ (10,888)	\$ (10,888)	\$ (10,888)	\$ -	\$ -	\$ -	\$ -
2017	\$ (168,931)	7	\$ (24,133)	\$ (24,133)	\$ (24,133)	\$ (24,133)	\$ (24,133)	\$ (24,133)	\$ (24,133)	\$ -	\$ -	\$ -	\$ -
2018	\$ (363,536)	8	\$ -	\$ (45,442)	\$ (45,442)	\$ (45,442)	\$ (45,442)	\$ (45,442)	\$ (45,442)	\$ (45,442)	\$ (45,442)	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (50,669)	\$ (96,111)	\$ (96,110)	\$ (96,110)	\$ (96,110)	\$ (96,110)	\$ (80,463)	\$ (45,442)	\$ (45,442)	\$ -	\$ -