

CITY OF EDGEWATER
POLICE RETIREMENT PLAN

ACTUARIAL VALUATION
AS OF OCTOBER 1, 2019

CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2021

GASB 67/68 DISCLOSURE INFORMATION
AS OF SEPTEMBER 30, 2019



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

March 9, 2020

Board of Trustees
City of Edgewater
Police Officers' Pension Board
P.O. Box 100
Edgewater, FL 33617

Re: City of Edgewater Police Retirement Plan

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Edgewater Police Retirement Plan. 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 185, 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 valuations, 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 Edgewater, 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, 2018. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2019 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.

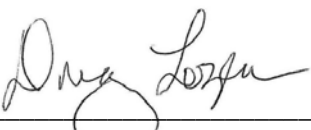
The undersigned are familiar with the immediate and long-term aspects of pension valuations, and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the 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 Edgewater, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Police Retirement Plan. 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 us at 239-433-5500.

Respectfully submitted,

Foster & Foster, Inc.

By: 

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

By: 

Julie E. Franken, EA, MAAA
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Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Edgewater Police Retirement Plan, performed as of October 1, 2019, 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, 2021.

The contribution requirements, compared with those set forth in the October 1, 2018 actuarial valuation report, are as follows:

Valuation Date Applicable to Fiscal Year Ending	10/1/2019 <u>9/30/2021</u>	10/1/2018 <u>9/30/2020</u>
Minimum Required Contribution % of Projected Annual Payroll	61.4%	60.1%
Member Contributions (Est.) % of Projected Annual Payroll	6.0%	6.0%
City And State Required Contribution % of Projected Annual Payroll	55.4%	54.1%
State Contribution (Est.) ¹ % of Projected Annual Payroll	\$0 0.0%	\$0 0.0%
City Required Contribution ² % of Projected Annual Payroll	55.4%	54.1%

¹ Represents the amount received in calendar 2019. As per a Mutual Consent Agreement between the Membership and the City, all State Monies received each year will be allocated to the Share Plan established with Ordinance 2016-O-34.

As you can see, the Minimum Required Contribution shows an increase when compared to the results determined in the October 1, 2018 actuarial valuation report. The increase attributable to more disablements than expected and lower than expected inactive mortality experience. The increase was offset in part by lower than expected salary increases and the complete amortization of 1989 benefit change bases.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of actuarial loss included the disablements of 2 active employees, less turnover than expected, and inactive mortality experience. These losses were offset in part by gains associated with an average salary increase of 6.06% which fell short of the 6.48% assumption and an investment return of 7.59% (Actuarial Asset Basis) which exceeded the 7.50% assumption.

CHANGES SINCE PRIOR VALUATION

Plan Changes

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

Actuarial Assumption/Method Changes

There have been no changes of actuarial assumptions or methods since the prior valuation.

CONTRIBUTION IMPACT OF ANNUAL CHANGES

(1) Contribution Determined as of October 1, 2018	54.1%
(2) Summary of Contribution Impact by component:	
Change in State Contribution Percentage	0.0%
Change in Normal Cost Rate	-0.5%
Change in Administrative Expense Percentage	0.4%
Payroll Change Effect on UAAL Amortization	-0.4%
Investment Return (Actuarial Asset Basis)	-0.1%
Salary Increases	-0.5%
Active Decrements/Inactive Retirement	2.1%
Inactive Mortality	0.5%
Full Amortization of 1989 Benefit Change Bases	-0.6%
Other	<u>0.4%</u>
Total Change in Contribution	1.3%
(3) Contribution Determined as of October 1, 2019	55.4%

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>10/1/2019</u>	<u>10/1/2018</u>
A. Participant Data		
Actives	28	28
Service Retirees	25	24
Beneficiaries	1	1
Disability Retirees	6	4
Terminated Vested	<u>14</u>	<u>14</u>
 Total	 74	 71
 Total Annual Payroll	 \$1,541,533	 \$1,526,739
Payroll Under Assumed Ret. Age	1,541,533	1,526,739
 Annual Rate of Payments to:		
Service Retirees	788,934	761,513
Beneficiaries	20,793	20,793
Disability Retirees	139,275	95,498
Terminated Vested	73,956	96,325
 B. Assets		
Actuarial Value (AVA) ¹	10,875,395	10,150,404
Market Value (MVA) ¹	10,732,918	10,313,580
 C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	4,421,713	4,428,607
Disability Benefits	242,446	258,236
Death Benefits	19,711	21,925
Vested Benefits	252,514	221,263
Refund of Contributions	45,086	43,247
Accumulated Leave	154,760	155,001
Service Retirees	9,020,183	8,780,188
Beneficiaries	250,739	252,659
Disability Retirees	1,749,839	1,207,915
Terminated Vested	623,370	956,199
Share Plan Balances ¹	<u>596,653</u>	<u>449,675</u>
 Total	 17,377,014	 16,774,915

C. Liabilities - (Continued)	<u>10/1/2019</u>	<u>10/1/2018</u>
Present Value of Future Salaries	12,174,552	12,418,118
Present Value of Future Member Contributions	730,473	745,087
Normal Cost (Retirement)	192,769	199,044
Normal Cost (Disability)	16,312	17,218
Normal Cost (Death)	909	1,086
Normal Cost (Vesting)	27,541	24,810
Normal Cost (Refunds)	<u>14,205</u>	<u>13,953</u>
Total Normal Cost	251,736	256,111
Present Value of Future Normal Costs	1,948,571	2,052,591
Accrued Liability (Retirement)	2,900,770	2,803,027
Accrued Liability (Disability)	115,094	118,462
Accrued Liability (Death)	12,983	13,390
Accrued Liability (Vesting)	144,364	127,009
Accrued Liability (Refunds)	14,448	13,800
Accrued Liability (Inactives)	11,644,131	11,196,961
Share Plan Balances ¹	<u>596,653</u>	<u>449,675</u>
Total Actuarial Accrued Liability (EAN AL)	15,428,443	14,722,324
Unfunded Actuarial Accrued Liability (UAAL)	4,553,048	4,571,920
Funded Ratio (AVA / EAN AL)	70.5%	68.9%

D. Actuarial Present Value of Accrued Benefits	<u>10/1/2019</u>	<u>10/1/2018</u>
Vested Accrued Benefits		
Inactives + Share Plan Balances ¹	12,240,784	11,646,636
Actives	458,770	459,351
Member Contributions	<u>474,868</u>	<u>457,003</u>
Total	13,174,422	12,562,990
Non-vested Accrued Benefits	<u>763,881</u>	<u>706,296</u>
Total Present Value		
Accrued Benefits (PVAB)	13,938,303	13,269,286
Funded Ratio (MVA / PVAB)	77.0%	77.7%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
Plan Experience	741,292	
Benefits Paid	(1,028,888)	
Interest	956,613	
Other	<u>0</u>	
Total	669,017	

Valuation Date	10/1/2019	10/1/2018
Applicable to Fiscal Year Ending	<u>9/30/2021</u>	<u>9/30/2020</u>

E. Pension Cost

Normal Cost (with interest) % of Total Annual Payroll ²	16.9	17.4
Administrative Expenses (with interest) % of Total Annual Payroll ²	3.9	3.5
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 30 years (as of 10/1/2019, with interest) % of Total Annual Payroll ²	40.6	39.2
Minimum Required Contribution % of Total Annual Payroll ²	61.4	60.1
Expected Member Contributions % of Total Annual Payroll ²	6.0	6.0
Expected City and State Contribution % of Total Annual Payroll ²	55.4	54.1

F. Past Contributions

Plan Years Ending:	<u>9/30/2019</u>
Total Required Contribution	871,804
City and State Requirement	781,148
Actual Contributions Made:	
Members (excluding buyback)	90,656
City	781,147
State	<u>0</u>
Total	871,803

G. Net Actuarial (Gain)/Loss 219,043

¹ The asset values and liabilities include accumulated Share Plan Balances as of 9/30/2019 and 9/30/2018.

² Contributions developed as of 10/1/2019 are expressed as a percentage of total annual payroll at 10/1/2019 of \$1,541,533.

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

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2019	4,553,048
2020	4,245,784
2021	3,930,290
2028	1,179,050
2035	23,675
2036	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2019	6.06%	6.48%
Year Ended 9/30/2018	5.43%	6.81%
Year Ended 9/30/2017	5.66%	6.80%
Year Ended 9/30/2016	6.57%	6.74%
Year Ended 9/30/2015	9.44%	6.77%

(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 9/30/2019	4.52%	7.59%	7.50%
Year Ended 9/30/2018	7.78%	6.68%	7.50%
Year Ended 9/30/2017	11.26%	6.85%	7.50%
Year Ended 9/30/2016	7.05%	6.71%	7.50%
Year Ended 9/30/2015	-0.19%	9.90%	7.50%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2019	\$1,541,533
	10/1/2009	1,105,895
(b) Total Increase		39.39%
(c) Number of Years		10.00
(d) Average Annual Rate		3.38%

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 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, 2018	\$4,571,920
(2) Sponsor Normal Cost developed as of October 1, 2018	164,507
(3) Expected administrative expenses for the year ended September 30, 2019	50,878
(4) Expected interest on (1), (2) and (3)	357,140
(5) Sponsor contributions to the System during the year ended September 30, 2019	781,147
(6) Expected interest on (5)	29,293
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2019 (1)+(2)+(3)+(4)-(5)-(6)	4,334,005
(8) Change to UAAL due to Assumption Change	0
(9) Change to UAAL due to Actuarial (Gain)/Loss	219,043
(10) Unfunded Actuarial Accrued Liability as of October 1, 2019	4,553,048

Type of <u>Base</u>	<u>Date</u> <u>Established</u>	<u>Years</u> <u>Remaining</u>	<u>10/1/2019</u> <u>Amount</u>	<u>Amortization</u> <u>Amount</u>
Benefit Change	10/1/1990	1	13,778	13,778
Benefit Change	10/1/1999	10	799,880	108,401
Benefit Change	10/1/2003	14	125,981	13,805
Method Change	10/1/2011	12	2,386,549	287,003
Assump Change	10/1/2011	12	87,804	10,559
Experience Loss	10/1/2012	3	20,474	7,324
Experience Loss	10/1/2013	4	54,428	15,117
Experience Gain	10/1/2014	5	(75,806)	(17,429)
Experience Loss	10/1/2015	6	65,579	12,997
Experience Loss	10/1/2016	7	132,404	23,254
Assump Change	10/1/2016	17	240,091	23,674
Experience Loss	10/1/2017	8	377,268	59,916
Experience Loss	10/1/2018	9	105,575	15,396
Actuarial Loss	10/1/2019	10	<u>219,043</u>	<u>29,685</u>
			4,553,048	603,480

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2018	\$4,571,920
(2) Expected UAAL as of October 1, 2019	4,334,005
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(9,262)
Salary Increases	(57,483)
Active Decrements/Inactive Retirements	226,753
Inactive Mortality	51,140
Other	<u>7,895</u>
Increase in UAAL due to (Gain)/Loss	219,043
(4) Actual UAAL as of October 1, 2019	\$4,553,048

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, 2018 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

Interest Rate

7.50% 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

Credited Service	Assumption
Less than 10 Years	7.50%
10 Years and Greater	4.20%

This assumption was adopted based on the September 12, 2013 experience study.

Payroll Growth

0.00% 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

\$57,437 annually, based on the average of actual expenses incurred in the prior two fiscal years. Previously, the actual expense in the prior fiscal year was used. Using a two-year average results in a less volatile estimate than the prior method.

Normal Retirement

Years Eligible for Normal Retirement	Retirement Probability
0	50%
1	0%
2	33%
3	60%
4	60%
5	60%
6 and greater	100%

It is assumed that no one works past age 58 if they are eligible to retire. The retirement assumptions were adopted based on the September 12, 2013 experience study.

Early Retirement

None assumed. This assumption is based on results of the September 12, 2013 experience study.

Termination Rates

Credited Service	Assumption
Less than 5 Years	18%
5-9 Years	14%
10 Years and Greater	0%

This assumption was adopted based on the September 12, 2013 experience study.

Disability Rates

Age	Assumption
40	0.33%
45	0.57%
50	1.09 %
55	1.69%

80% of disablements are assumed to be service-related. This assumption is based on results of the September 12, 2013 experience study.

Funding Method

Entry Age Normal Actuarial Cost Method.

Amortization Method

New UAAL amortization amounts are established according to the following amortization periods:

Experience: 10 Years.

Assumption/Method Changes: 20 Years.

Benefit Changes: 30 Years.

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 four-year period.

GLOSSARY

Total Annual Payroll is the projected annual rate of pay for the fiscal year beginning 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.

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 a liability which arises when a pension plan is initially established or improved and such establishment or improvement is applicable to all years of past service. Under the Entry Age Normal Actuarial Cost Method, there is also a new UAAL created each year equal to the actuarial gain or loss for that year.

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.

DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined using various actuarial assumptions. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- Investment Return: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.
- Salary Increases: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.
- Demographic Assumptions: Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, closed plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature closed plans with a substantial inactive liability. Similarly, mature closed plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled “Plan Maturity Measures and Other Risk Metrics”. Highlights of this information are discussed below:

- The Support Ratio, determined as the ratio of active to inactive members, has decreased from 71.1% on October 1, 2016 to 66.7% on October 1, 2019, indicating that the plan has been maturing during the period.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 75.5%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors may result in larger increases in contribution requirements than would be needed for a less mature plan. Please note Chapter 112, Florida Statutes, requires that the plan sponsor contributes the minimum required contribution; thus, there is minimal solvency risk to the plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 66.5% on October 1, 2016 to 70.5% on October 1, 2019, due to paying off of the plan’s unfunded liability during the period.
- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, increased from -2.0% on October 1, 2016 to -0.4% on October 1, 2019. The current Net Cash Flow Ratio of -0.4% indicates that contributions are not currently covering the plan's benefit payments and administrative expenses.

It is important to note that the actuary has identified the risks in this section as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

PLAN MATURITY MEASURES AND OTHER RISK METRICS

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Support Ratio</u>				
Total Actives	27	28	28	28
Total Inactives ¹	38	38	39	42
Actives / Inactives ¹	71.1%	73.7%	71.8%	66.7%
 <u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	8,545,786	9,463,990	10,313,580	10,732,918
Total Annual Payroll	1,462,787	1,578,352	1,526,739	1,541,533
MVA / Total Annual Payroll	584.2%	599.6%	675.5%	696.2%
 <u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability	9,955,788	10,257,574	11,196,961	11,644,131
Total Accrued Liability (EAN)	13,278,098	14,079,972	14,722,324	15,428,443
Inactive AL / Total AL	75.0%	72.9%	76.1%	75.5%
 <u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)	8,833,738	9,405,638	10,150,404	10,875,395
Total Accrued Liability (EAN)	13,278,098	14,079,972	14,722,324	15,428,443
AVA / Total Accrued Liability (EAN)	66.5%	66.8%	68.9%	70.5%
 <u>Net Cash Flow Ratio</u>				
Net Cash Flow ²	(172,792)	(31,901)	112,754	(43,906)
Market Value of Assets (MVA)	8,545,786	9,463,990	10,313,580	10,732,918
Ratio	-2.0%	-0.3%	1.1%	-0.4%

¹ Excludes terminated participants awaiting a refund of member contributions.

² Determined as total contributions minus benefit payments and administrative expenses.

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from Previous Year</u>
1998	62,640.03	_____%
1999	73,930.98	18.0%
2000	66,743.47	-9.7%
2001	70,794.89	6.1%
2002	83,308.98	17.7%
2003	94,334.37	13.2%
2004	108,374.65	14.9%
2005	114,652.41	5.8%
2006	119,224.68	4.0%
2007	126,824.09	6.4%
2008	126,189.05	-0.5%
2009	131,228.05	4.0%
2010	125,155.52	-4.6%
2011	125,638.65	0.4%
2012	122,039.14	-2.9%
2013	121,374.86	-0.5%
2014	125,386.65	3.3%
2015	127,668.11	1.8%
2016	138,244.76	8.3%
2017	147,326.57	6.6%
2018	163,282.12	10.8%
2019	177,174.44	8.5%

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2019

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Short Term Investments	279,859.19	279,859.19
Total Cash and Equivalents	279,859.19	279,859.19
Receivables:		
Investment Income	24,247.43	24,247.43
Total Receivable	24,247.43	24,247.43
Investments:		
U. S. Bonds and Bills	485,781.83	534,701.05
Federal Agency Guaranteed Securities	614,088.24	622,420.10
Corporate Bonds	1,923,301.55	1,974,186.14
Mutual Funds:		
Equity	4,858,167.19	6,236,606.15
Pooled/Common/Commingled Funds:		
Real Estate	1,063,084.85	1,076,553.38
Total Investments	8,944,423.66	10,444,466.82
Total Assets	9,248,530.28	10,748,573.44
 <u>LIABILITIES</u>		
Payables:		
Refunds of Member Contributions	2,671.68	2,671.68
Investment Expenses	8,218.37	8,218.37
Administrative Expenses	4,765.70	4,765.70
Total Liabilities	15,655.75	15,655.75
NET POSITION RESTRICTED FOR PENSIONS	9,232,874.53	10,732,917.69

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2019
Market Value Basis

ADDITIONS

Contributions:		
Member		90,655.51
City		781,147.18
State		177,174.44
Total Contributions		1,048,977.13
Investment Income:		
Net Realized Gain (Loss)	(24,731.17)	
Unrealized Gain (Loss)	162,625.11	
Net Increase in Fair Value of Investments		137,893.94
Interest & Dividends		369,566.61
Less Investment Expense ¹		(44,217.51)
Net Investment Income		463,243.04
Total Additions		1,512,220.17

DEDUCTIONS

Distributions to Members:		
Benefit Payments		920,227.69
Lump Sum DROP Distributions		0.00
Lump Sum Share Distributions		50,138.79
Refunds of Member Contributions		58,521.67
Total Distributions		1,028,888.15
Administrative Expense		63,994.55
Total Deductions		1,092,882.70
Net Increase in Net Position		419,337.47
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		10,313,580.22
End of the Year		10,732,917.69

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

ACTUARIAL ASSET VALUATION
September 30, 2019

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a four year period. In the first year, 25% of the gain or loss is recognized. In the second year 50%, in the third year 75%, and in the fourth 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	Gains/Losses	<u>Gains/Losses Not Yet Recognized</u>			2022
		Amounts Not Yet Recognized by Valuation Year			
		2019	2020	2021	
09/30/2016	(36,452)	0	0	0	0
09/30/2017	310,367	77,591	0	0	0
09/30/2018	22,808	11,404	5,702	0	0
09/30/2019	(308,629)	(231,472)	(154,315)	(77,158)	0
Total		(142,477)	(148,613)	(77,158)	0

<u>Development of Investment Gain/Loss</u>	
Actual Return Net of Investment Expenses	463,243
Expected Investment Earnings*	771,872
2019 Actuarial Investment Gain/(Loss)	(308,629)

*Expected Investment Earnings = $0.075 * [10,313,580 + 0.5 * (43,906)]$

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 09/30/2019	10,732,918
(2) Gain/(Loss) Not Yet Recognized	(142,477)
(3) Actuarial Value of Assets, 09/30/2019, (1) - (2)	10,875,395
(A) 09/30/2018 Actuarial Assets:	10,150,404
(I) Net Investment Income:	
1. Interest and Dividends	369,566.61
2. Realized Gain (Loss)	(24,731.17)
3. Unrealized Gain (Loss)	162,625.11
4. Change in Actuarial Value	305,653.00
5. Investment Expenses	(44,217.51)
Total	768,896.04
(B) 09/30/2019 Actuarial Assets:	10,875,395
Actuarial Assets Rate of Return = $2I/(A+B-I)$	7.59%
Market Value of Assets Rate of Return:	4.52%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	9,262
10/01/2019 Limited Actuarial Assets:	10,875,395

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
 SEPTEMBER 30, 2019
 Actuarial Asset Basis

REVENUES

Contributions:		
Member	90,655.51	
City	781,147.18	
State	177,174.44	
Total Contributions		1,048,977.13
Earnings from Investments:		
Interest & Dividends	369,566.61	
Net Realized Gain (Loss)	(24,731.17)	
Unrealized Gain (Loss)	162,625.11	
Change in Actuarial Value	305,653.00	
Total Earnings and Investment Gains		813,113.55

EXPENDITURES

Distributions to Members:		
Benefit Payments	920,227.69	
Lump Sum DROP Distributions	0.00	
Lump Sum Share Distributions	50,138.79	
Refunds of Member Contributions	58,521.67	
Total Distributions		1,028,888.15
Expenses:		
Investment related ¹	44,217.51	
Administrative	63,994.55	
Total Expenses		108,212.06
Change in Net Assets for the Year		724,990.47
Net Assets Beginning of the Year		10,150,404.22
Net Assets End of the Year²		10,875,394.69

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

²Net Assets may be limited for actuarial consideration.

SUPPLEMENTAL CHAPTER 185 SHARE PLAN ACTIVITY
October 1, 2018 through September 30, 2019

9/30/2018 Balance	449,675.00
Prior Year Adjustment	2,431.28
Plus Additions	177,174.44
Investment Return Earned	17,511.26
Administrative Fees	0.00
Less Distributions	(50,138.79)
9/30/2019 Balance	596,653.19

RECONCILIATION OF CITY'S SHORTFALL/(PREPAID) CONTRIBUTION
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2019

(1)	Total Required Contribution Rate	57.7%
(2)	Pensionable Payroll Derived from Member Contributions	\$1,510,925.17
(3)	Total Required Contribution (1) x (2)	871,803.82
(4)	Less Actual Member Contributions	(90,655.51)
(5)	Less Allowable State Contribution	<u>0.00</u>
(6)	Equals Required City Contribution for Fiscal 2019	781,148.31
(7)	Less 2018 Prepaid Contribution	0.00
(8)	Less Actual City Contributions	<u>(781,147.18)</u>
(9)	Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2019	\$1.13

STATISTICAL DATA

	<u>10/1/2016</u>	<u>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Actives</u>				
Number	27	28	28	28
Average Current Age	32.7	33.4	32.5	32.1
Average Age at Employment	27.1	27.1	26.6	26.1
Average Past Service	5.6	6.3	5.9	6.0
Average Annual Salary	\$54,177	\$56,370	\$54,526	\$55,055
<u>Service Retirees</u>				
Number	23	23	24	25
Average Current Age	59.5	60.5	61.2	61.8
Average Annual Benefit	\$29,840	\$29,840	\$31,730	\$31,557
<u>Beneficiaries</u>				
Number	1	1	1	1
Average Current Age	51.6	52.6	53.6	54.6
Average Annual Benefit	\$20,793	\$20,793	\$20,793	\$20,793
<u>Disability Retirees</u>				
Number	2	4	4	6
Average Current Age	44.2	45.5	46.5	44.4
Average Annual Benefit	\$25,691	\$23,875	\$23,875	\$23,213
<u>Terminated Vested</u>				
Number	12	10	14	14
Average Current Age ¹	46.8	48.2	49.2	49.5
Average Annual Benefit ¹	\$10,445	\$9,633	\$9,633	\$7,396

¹ The Average Current Age and Average Annual Benefit exclude 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
20 - 24	2			1								3
25 - 29	1	2	1	2	2	2						10
30 - 34	1				2	2	1					6
35 - 39						1	1					2
40 - 44		1		1		1	1	1				5
45 - 49							1		1			2
50 - 54												0
55 - 59												0
60 - 64												0
65+												0
Total	4	3	1	4	4	6	4	1	1	0	0	28

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2018	28
b. Terminations	
i. Vested (partial or full) with deferred annuity	(1)
ii. Vested in refund of member contributions only	0
iii. Refund of member contributions or full lump sum distributio	(1)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	(2)
e. Retired	0
f. Continuing participants	24
g. New entrants	4
h. Total active life participants in valuation	28

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 (Deferred Annuity)	Vested (Due Refund)	<u>Total</u>
a. Number prior valuation	24	1	4	10	4	43
Retired	1	0	0	(1)	0	0
Vested (Deferred Annuity)	0	0	0	1	0	1
Vested (Due Refund)	0	0	0	0	0	0
Hired/Terminated in Same Year	0	0	0	0	2	2
Death, With Survivor	0	0	0	0	0	0
Death, No Survivor	0	0	0	0	0	0
Disabled	0	0	2	0	0	2
Refund of Contributions	0	0	0	0	(2)	(2)
Rehires	0	0	0	0	0	0
Expired Annuities	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	0
b. Number current valuation	25	1	6	10	4	46

SUMMARY OF CURRENT PLAN
(Through Ordinance 2017-O-21)

<u>Eligibility</u>	Full-time police officers shall participate in the system as a condition of employment.
<u>Salary</u>	Total Compensation.
<u>Average Final Compensation (AFC)</u>	Average Salary for the highest 3 years during the 5 years immediately preceding retirement or termination.
<u>Credited Service</u>	Total years and fractional parts of years of service with the City as a Police Officer.
<u>Member Contributions</u>	6.00% of Salary.
<u>City and State Contributions</u>	Remaining amount necessary to pay current costs and amortize past service cost, if any, as provided in Part VII of Florida Statutes, Chapter 112.
<u>Normal Retirement</u>	
Date	The earlier of: 1) age 55 and the completion of 5 years of Credited Service, or 2) the completion of 20 years of Credited Service, regardless of age.
Benefit	2.00% of Average Final Compensation times Credited Service as of 10/1/1987 plus 3.00% of Average Final Compensation times Credited Service after 10/1/1987.
Form of Benefit	Ten Year Certain and Life Annuity (options available).
<u>Early Retirement</u>	
Date	Age 50 and 5 years of Credited Service.
Benefit	Determined as for Normal Retirement and reduced 3.00% for each year that Early Retirement precedes Normal Retirement.
<u>Disability Benefit</u>	
Eligibility	
Service Incurred	Covered from Date of Employment.
Non-Service Incurred	5 years of Credited Service.
Exclusions	Disability resulting from use of drugs, illegal participation in riots, service in military, etc.

Benefit	Benefit accrued to date of disability. Minimum benefit for Service Incurred is 42% of AFC, for Non-Service Incurred is 25% of AFC.
Duration	Payable for life (with 120 monthly payments guaranteed), or until recovery (as determined by the Board).

Death Benefits

Pre-Retirement

Vested	A monthly benefit determined assuming the participant terminated employment on his date of death, survived to his earliest retirement date, elected a 100% qualified joint and survivor annuity and then died the next day.
--------	---

Not Vested	Refund of accumulated contributions without interest.
------------	---

Post-Retirement	According to optional form of benefit selected.
-----------------	---

Termination of Employment

Benefit

Less than 5 years	Refund of accumulated contributions without interest.
-------------------	---

5 or more	Refund of Contributions or Accrued benefit payable at retirement age.
-----------	---

Board of Trustees

- a. Two Council appointees,
- b. Two Members of the Department elected by the membership, and
- c. Fifth Member elected by the other 4 and appointed by Council.

Deferred Retirement Option Plan

Eligibility	Eligibility for Normal Retirement.
-------------	------------------------------------

Participation	Not to exceed 60 months.
---------------	--------------------------

Rate of Return	Actual net rate of investment return (total return net of brokerage commissions, management fees and transaction costs) credited each fiscal quarter.
----------------	---

Form of Distribution	Cash lump sum at termination of employment.
----------------------	---

Chapter 185 Share Plan

Established with Ordinance 2016-11-14. By way of Mutual Consent under Chapter 2015-39, Laws of Florida, all Chapter 185 Premium Tax Monies are allocated to a Share Plan for the active Membership, beginning with the fiscal year ended September 30, 2016.

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2019

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Short Term Investments	279,859
Total Cash and Equivalents	279,859
Receivables:	
Investment Income	24,248
Total Receivable	24,248
Investments:	
U. S. Bonds and Bills	534,701
Federal Agency Guaranteed Securities	622,420
Corporate Bonds	1,974,186
Mutual Funds:	
Equity	6,236,606
Real Estate	1,076,554
Total Investments	10,444,467
Total Assets	10,748,574
<u>LIABILITIES</u>	
Payables:	
Refunds of Member Contributions	2,672
Investment Expenses	8,218
Administrative Expenses	4,766
Total Liabilities	15,656
NET POSITION RESTRICTED FOR PENSIONS	10,732,918

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2019
Market Value Basis

ADDITIONS

Contributions:

Member	90,656	
City	781,147	
State	177,174	
 Total Contributions		 1,048,977
 Investment Income:		
Net Increase in Fair Value of Investments	137,894	
Interest & Dividends	369,567	
Less Investment Expense ¹	(44,218)	
 Net Investment Income		 463,243
 Total Additions		 1,512,220

DEDUCTIONS

Distributions to Members:

Benefit Payments	920,228	
Lump Sum DROP Distributions	0	
Lump Sum Share Distributions	50,139	
Refunds of Member Contributions	58,521	
 Total Distributions		 1,028,888
 Administrative Expense		 63,994
 Total Deductions		 1,092,882
 Net Increase in Net Position		 419,338
 NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		10,313,580
 End of the Year		 10,732,918

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

NOTES TO THE FINANCIAL STATEMENTS
(For the Year Ended September 30, 2019)

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. Two Members of the Department elected by the membership, and
- c. Fifth Member elected by the other 4 and appointed by Council.

Plan Membership as of October 1, 2018:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	29
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	14
Active Plan Members	28
	71

Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2018 Actuarial Valuation Report for the City of Edgewater Police Retirement Plan prepared by Foster & Foster Actuaries and Consultants.

Contributions

Member Contributions: 6.00% of Salary.

City and State Contributions: Remaining amount necessary to pay current costs and amortize past service cost, if any, as provided in Part VII of Florida Statutes, Chapter 112.

Investments

Investment Policy:

The following was the Board's adopted asset allocation policy as of September 30, 2019:

Asset Class	Target Allocation
Domestic Equity	45.0%
International Equity	15.0%
Domestic Fixed Income	25.0%
Global Fixed Income	5.0%
Real Estate	10.0%
Total	100.0%

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, 2019, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 4.52 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: Eligibility for Normal Retirement.

Participation: Not to exceed 60 months.

Rate of Return: Actual net rate of investment return (total return net of brokerage commissions, management fees and transaction costs) credited each fiscal quarter.

The DROP balance as September 30, 2019 is \$0.

NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2019 were as follows:

Total Pension Liability	\$ 15,000,506
Plan Fiduciary Net Position	\$ (10,732,918)
Sponsor's Net Pension Liability	\$ 4,267,588
Plan Fiduciary Net Position as a percentage of Total Pension Liability	71.55%

Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2018 updated to September 30, 2019 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	4.20% - 7.50%
Discount Rate	7.50%
Investment Rate of Return	7.50%

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 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.

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 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, 2018 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

The most recent actuarial experience study used to review the other significant assumptions was dated September 13, 2013.

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 2019 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, 2019 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Domestic Equity	7.5%
International Equity	8.5%
Domestic Fixed Income	2.5%
Global Fixed Income	3.5%
Real Estate	4.5%

GASB 67

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.50 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 Discount Rate	1% Increase
	6.50%	7.50%	8.50%
Sponsor's Net Pension Liability	\$ 6,042,014	\$ 4,267,588	\$ 2,802,097

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

	09/30/2019	09/30/2018	09/30/2017
Total Pension Liability			
Prior Period Adjustment	-	-	-
Service Cost	256,785	264,098	241,471
Interest	1,066,672	989,631	939,389
Share Plan Allocation	177,174	163,282	147,327
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	48,813	565,564	148,378
Changes of assumptions	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(1,028,888)	(867,226)	(791,362)
Net Change in Total Pension Liability	520,556	1,115,349	685,203
Total Pension Liability - Beginning	14,479,950	13,364,601	12,679,398
Total Pension Liability - Ending (a)	<u>\$ 15,000,506</u>	<u>\$ 14,479,950</u>	<u>\$ 13,364,601</u>
Plan Fiduciary Net Position			
Contributions - Employer	781,147	777,360	578,155
Contributions - State	177,174	163,282	147,327
Contributions - Employee	90,656	86,174	96,436
Net Investment Income	463,243	736,836	950,106
Benefit Payments, including Refunds of Employee Contributions	(1,028,888)	(867,226)	(791,362)
Administrative Expense	(63,994)	(50,878)	(58,416)
Net Change in Plan Fiduciary Net Position	419,338	845,548	922,246
Plan Fiduciary Net Position - Beginning	10,313,580	9,468,032	8,545,786
Plan Fiduciary Net Position - Ending (b)	<u>\$ 10,732,918</u>	<u>\$ 10,313,580</u>	<u>\$ 9,468,032</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 4,267,588</u>	<u>\$ 4,166,370</u>	<u>\$ 3,896,569</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	71.55%	71.23%	70.84%
Covered Payroll ¹	\$ 1,510,925	\$ 1,503,600	\$ 1,539,919
Net Pension Liability as a percentage of Covered Payroll	282.45%	277.09%	253.04%

Notes to Schedule:

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

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

	<u>09/30/2016</u>	<u>09/30/2015</u>
Total Pension Liability		
Prior Period Adjustment	-	-
Service Cost	248,453	209,572
Interest	874,946	855,433
Share Plan Allocation	138,245	-
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	230,533	(19,907)
Changes of assumptions	244,939	-
Benefit Payments, including Refunds of Employee Contributions	<u>(950,417)</u>	<u>(697,208)</u>
Net Change in Total Pension Liability	786,699	347,890
Total Pension Liability - Beginning	<u>11,892,699</u>	<u>11,544,809</u>
Total Pension Liability - Ending (a)	<u>\$ 12,679,398</u>	<u>\$ 11,892,699</u>
Plan Fiduciary Net Position		
Contributions - Employer	621,470	618,054
Contributions - State	138,245	127,668
Contributions - Employee	84,939	79,610
Net Investment Income	568,335	(15,324)
Benefit Payments, including Refunds of Employee Contributions	(950,417)	(697,208)
Administrative Expense	<u>(67,029)</u>	<u>(49,324)</u>
Net Change in Plan Fiduciary Net Position	395,543	63,476
Plan Fiduciary Net Position - Beginning	<u>8,150,243</u>	<u>8,086,767</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 8,545,786</u>	<u>\$ 8,150,243</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 4,133,612</u>	<u>\$ 3,742,456</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	67.40%	68.53%
Covered Payroll ¹	\$ 1,415,650	\$ 1,396,624
Net Pension Liability as a percentage of Covered Payroll	291.99%	267.96%

Notes to Schedule:

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

Changes of assumptions:

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

	<u>09/30/2014</u>	<u>09/30/2013</u>
Total Pension Liability		
Prior Period Adjustment	(386,259)	-
Service Cost	206,976	192,536
Interest	859,397	836,080
Share Plan Allocation	-	-
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	-	-
Changes of assumptions	-	-
Benefit Payments, including Refunds of Employee Contributions	<u>(773,904)</u>	<u>(690,444)</u>
Net Change in Total Pension Liability	(93,790)	338,172
Total Pension Liability - Beginning	<u>11,638,599</u>	<u>11,300,427</u>
Total Pension Liability - Ending (a)	<u>\$ 11,544,809</u>	<u>\$ 11,638,599</u>
Plan Fiduciary Net Position		
Contributions - Employer	534,795	768,448
Contributions - State	125,387	121,375
Contributions - Employee	76,054	70,431
Net Investment Income	759,444	769,004
Benefit Payments, including Refunds of Employee Contributions	(773,904)	(690,444)
Administrative Expense	<u>(36,404)</u>	<u>(82,988)</u>
Net Change in Plan Fiduciary Net Position	685,372	955,826
Plan Fiduciary Net Position - Beginning	<u>7,401,395</u>	<u>6,445,569</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 8,086,767</u>	<u>\$ 7,401,395</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 3,458,042</u>	<u>\$ 4,237,204</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	70.05%	63.59%
Covered Payroll ¹	\$ 1,267,568	\$ 1,173,844
Net Pension Liability as a percentage of Covered Payroll	272.81%	360.97%

Notes to Schedule:

¹ The Covered 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 Payroll ¹	Contributions as a percentage of Covered Payroll
09/30/2019	\$ 781,148	\$ 781,147	\$ 1	\$ 1,510,925	51.70%
09/30/2018	\$ 777,361	\$ 777,360	\$ 1	\$ 1,503,600	51.70%
09/30/2017	\$ 742,241	\$ 578,155	\$ 164,086	\$ 1,539,919	37.54%
09/30/2016	\$ 746,047	\$ 621,470	\$ 124,577	\$ 1,415,650	43.90%
09/30/2015	\$ 768,235	\$ 745,722	\$ 22,513	\$ 1,396,624	53.39%
09/30/2014	\$ 766,878	\$ 660,182	\$ 106,696	\$ 1,267,568	52.08%
09/30/2013	\$ 874,513	\$ 768,448	\$ 106,065	\$ 1,173,844	65.46%

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

Notes to Schedule

Valuation Date: 10/01/2017

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 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:

7.50% per year compounded annually, net of investment related expenses. This assumption is supported by the Plan’s investment policy and long-term expected returns by asset class.

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Normal Retirement:

Years Eligible for Normal Retirement	Retirement Probability
0	50%
1	0%
2	33%
3	60%
4	60%
5	60%
6 and greater	100%

It is assumed that no one works past age 58 if they are eligible to retire. The retirement assumptions were adopted based on the September 12, 2013 experience study.

Early Retirement:

None assumed.

Salary Increases:

Credited Service	Assumption
Less than 10 Years	7.50%
10 Years or Greater	4.20%

This assumption was adopted based on the September 12, 2013 experience study. Level dollar.

Amortization Method:

Entry Age Normal Actuarial Cost Method.

Funding Method:

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 four-year period.

Termination Rates:

Credited Service	Assumption
Less than 5 Years	18%
5-9 Years	14%
10 Years and Greater	0%

This assumption was adopted based on the September 12, 2013 experience study. See sample rates below; 80% of disablements are assumed to be service-related.

Disability Rates:

Age	% Becoming Disabled During the Year
40	0.33%
45	0.57%
50	1.09%
55	1.69%

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2019	4.52%
09/30/2018	7.78%
09/30/2017	11.26%
09/30/2016	7.05%
09/30/2015	-0.19%
09/30/2014	10.40%
09/30/2013	10.40%

NOTES TO THE FINANCIAL STATEMENTS
(For the Year Ended September 30, 2020)

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. Two Members of the Department elected by the membership, and
- c. Fifth Member elected by the other 4 and appointed by Council.

Full-time police officers shall participate in the system as a condition of employment.

Plan Membership as of October 1, 2018:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	29
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	14
Active Plan Members	28
	71
	71

Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2018 Actuarial Valuation Report for the City of Edgewater Police Retirement Plan prepared by Foster & Foster Actuaries and Consultants.

Contributions

Member Contributions: 6.00% of Salary.

City and State Contributions: Remaining amount necessary to pay current costs and amortize past service cost, if any, as provided in Part VII of Florida Statutes, Chapter 112.

Net Pension Liability

The measurement date is September 30, 2019.

The measurement period for the pension expense was October 1, 2018 to September 30, 2019.

The reporting period is October 1, 2019 through September 30, 2020.

The Sponsor's Net Pension Liability was measured as of September 30, 2019.

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, 2018 updated to September 30, 2019 using the following actuarial assumptions:

Inflation		2.50%
Salary Increases	4.20% - 7.50%	
Discount Rate		7.50%
Investment Rate of Return		7.50%

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 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.

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 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, 2018 FRS valuation report for special risk employees. We feel this assumption sufficiently accommodates future mortality improvements.

The most recent actuarial experience study used to review the other significant assumptions was dated September 13, 2013.

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 2019 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, 2019 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Domestic Equity	45.0%	7.5%
International Equity	15.0%	8.5%
Domestic Fixed Income	25.0%	2.5%
Global Fixed Income	5.0%	3.5%
Real Estate	10.0%	4.5%
Total	100.0%	

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.50 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, 2019	\$ 14,479,950	\$ 10,313,580	\$ 4,166,370
Changes for a Year:			
Service Cost	256,785	-	256,785
Interest	1,066,672	-	1,066,672
Share Plan Allocation	177,174	-	177,174
Differences between Expected and Actual Experience	48,813	-	48,813
Changes of assumptions	-	-	-
Changes of benefit terms	-	-	-
Contributions - Employer	-	781,147	(781,147)
Contributions - State	-	177,174	(177,174)
Contributions - Employee	-	90,656	(90,656)
Net Investment Income	-	463,243	(463,243)
Benefit Payments, including Refunds of Employee Contributions	(1,028,888)	(1,028,888)	-
Administrative Expense	-	(63,994)	63,994
Net Changes	520,556	419,338	101,218
Reporting Period Ending September 30, 2020	\$ 15,000,506	\$ 10,732,918	\$ 4,267,588

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.50%	7.50%	8.50%
Sponsor's Net Pension Liability	\$ 6,042,014	\$ 4,267,588	\$ 2,802,097

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, 2019**

For the year ended September 30, 2019, the Sponsor has recognized a Pension Expense of \$984,162.

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	555,996	-
Changes of assumptions	61,235	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	64,714
Employer and State contributions subsequent to the measurement date	958,321	-
Total	\$ 1,575,552	\$ 64,714

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, 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	\$	363,028	
2021	\$	119,203	
2022	\$	74,817	
2023	\$	(4,531)	
2024	\$	-	
Thereafter	\$	-	

**PRELIMINARY PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND
DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS
FISCAL YEAR SEPTEMBER 30, 2020**

For the year ended September 30, 2020, the Sponsor will recognize a Pension Expense of \$1,139,054.

On September 30, 2020, 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	356,486	-
Changes of assumptions	-	-
Net difference between Projected and Actual Earnings on Pension Plan investments	116,516	-
Employer and State contributions subsequent to the measurement date	TBD	-
Total	TBD	\$ -

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, 2020.

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:			
2021	\$	193,132	
2022	\$	148,746	
2023	\$	69,398	
2024	\$	61,726	
2025	\$	-	
Thereafter	\$	-	

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

Reporting Period Ending Measurement Date	09/30/2020 09/30/2019	09/30/2019 09/30/2018	09/30/2018 09/30/2017
Total Pension Liability			
Prior Period Adjustment	-	-	-
Service Cost	256,785	264,098	241,471
Interest	1,066,672	989,631	939,389
Share Plan Allocation	177,174	163,282	147,327
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	48,813	565,564	148,378
Changes of assumptions	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(1,028,888)	(867,226)	(791,362)
Net Change in Total Pension Liability	520,556	1,115,349	685,203
Total Pension Liability - Beginning	14,479,950	13,364,601	12,679,398
Total Pension Liability - Ending (a)	<u>\$ 15,000,506</u>	<u>\$ 14,479,950</u>	<u>\$ 13,364,601</u>
Plan Fiduciary Net Position			
Contributions - Employer	781,147	777,360	578,155
Contributions - State	177,174	163,282	147,327
Contributions - Employee	90,656	86,174	96,436
Net Investment Income	463,243	736,836	950,106
Benefit Payments, including Refunds of Employee Contributions	(1,028,888)	(867,226)	(791,362)
Administrative Expense	(63,994)	(50,878)	(58,416)
Net Change in Plan Fiduciary Net Position	419,338	845,548	922,246
Plan Fiduciary Net Position - Beginning	10,313,580	9,468,032	8,545,786
Plan Fiduciary Net Position - Ending (b)	<u>\$ 10,732,918</u>	<u>\$ 10,313,580</u>	<u>\$ 9,468,032</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 4,267,588</u>	<u>\$ 4,166,370</u>	<u>\$ 3,896,569</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	71.55%	71.23%	70.84%
Covered Payroll ¹	\$ 1,510,925	\$ 1,503,600	\$ 1,539,919
Net Pension Liability as a percentage of Covered Payroll	282.45%	277.09%	253.04%

Notes to Schedule:

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

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

Reporting Period Ending	09/30/2017	09/30/2016
Measurement Date	<u>09/30/2016</u>	<u>09/30/2015</u>
Total Pension Liability		
Prior Period Adjustment	-	-
Service Cost	248,453	209,572
Interest	874,946	855,433
Share Plan Allocation	138,245	-
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	230,533	(19,907)
Changes of assumptions	244,939	-
Benefit Payments, including Refunds of Employee Contributions	<u>(950,417)</u>	<u>(697,208)</u>
Net Change in Total Pension Liability	786,699	347,890
Total Pension Liability - Beginning	<u>11,892,699</u>	<u>11,544,809</u>
Total Pension Liability - Ending (a)	<u><u>\$ 12,679,398</u></u>	<u><u>\$ 11,892,699</u></u>
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Contributions - Employer	621,470	618,054
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Plan Fiduciary Net Position - Beginning	<u>8,150,243</u>	<u>8,086,767</u>
Plan Fiduciary Net Position - Ending (b)	<u><u>\$ 8,545,786</u></u>	<u><u>\$ 8,150,243</u></u>
Net Pension Liability - Ending (a) - (b)	<u><u>\$ 4,133,612</u></u>	<u><u>\$ 3,742,456</u></u>
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Covered Payroll ¹	\$ 1,415,650	\$ 1,396,624
Net Pension Liability as a percentage of Covered Payroll	291.99%	267.96%

Notes to Schedule:

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Changes of assumptions:

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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

Reporting Period Ending	09/30/2015	09/30/2014
Measurement Date	<u>09/30/2014</u>	<u>09/30/2013</u>
Total Pension Liability		
Prior Period Adjustment	(386,259)	-
Service Cost	206,976	192,536
Interest	859,397	836,080
Share Plan Allocation	-	-
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	-	-
Changes of assumptions	-	-
Benefit Payments, including Refunds of Employee Contributions	<u>(773,904)</u>	<u>(690,444)</u>
Net Change in Total Pension Liability	(93,790)	338,172
Total Pension Liability - Beginning	<u>11,638,599</u>	<u>11,300,427</u>
Total Pension Liability - Ending (a)	<u>\$ 11,544,809</u>	<u>\$ 11,638,599</u>
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Plan Fiduciary Net Position as a percentage of the Total Pension Liability	70.05%	63.59%
Covered Payroll ¹	\$ 1,267,568	\$ 1,173,844
Net Pension Liability as a percentage of Covered Payroll	272.81%	360.97%

Notes to Schedule:

¹ The Covered 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 Payroll ¹	Contributions as a percentage of Covered Payroll
09/30/2019	\$ 781,148	\$ 781,147	\$ 1	\$ 1,510,925	51.70%
09/30/2018	\$ 777,361	\$ 777,360	\$ 1	\$ 1,503,600	51.70%
09/30/2017	\$ 742,241	\$ 578,155	\$ 164,086	\$ 1,539,919	37.54%
09/30/2016	\$ 746,047	\$ 621,470	\$ 124,577	\$ 1,415,650	43.90%
09/30/2015	\$ 768,235	\$ 745,722	\$ 22,513	\$ 1,396,624	53.39%
09/30/2014	\$ 766,878	\$ 660,182	\$ 106,696	\$ 1,267,568	52.08%
09/30/2013	\$ 874,513	\$ 768,448	\$ 106,065	\$ 1,173,844	65.46%

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

Notes to Schedule

Valuation Date: 10/01/2017

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 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:

7.50% per year compounded annually, net of investment related expenses. This assumption is supported by the Plan’s investment policy and long-term expected returns by asset class.

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Normal Retirement:

Years Eligible for Normal Retirement	Retirement Probability
0	50%
1	0%
2	33%
3	60%
4	60%
5	60%
6 and greater	100%

It is assumed that no one works past age 58 if they are eligible to retire. The retirement assumptions were adopted based on the September 12, 2013 experience study. None assumed.

Early Retirement:

Salary Increases:

Credited Service	Assumption
Less than 10 Years	7.50%
10 Years or Greater	4.20%

This assumption was adopted based on the September 12, 2013 experience study. Level dollar.

Amortization Method:

Funding Method:

Actuarial Asset Method:

Entry Age Normal Actuarial Cost 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 four-year period.

Termination Rates:

Credited Service	Assumption
Less than 5 Years	18%
5-9 Years	14%
10 Years and Greater	0%

This assumption was adopted based on the September 12, 2013 experience study. See sample rates below; 80% of disablements are assumed to be service-related.

Disability Rates:

Age	% Becoming Disabled During the Year
40	0.33%
45	0.57%
50	1.09%
55	1.69%

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, 2019

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning Balance	\$ 3,896,569	\$ 294,572	\$ 1,561,450	\$ -
Employer and State contributions made after 09/30/2018	-	-	958,321	-
Total Pension Liability Factors:				
Service Cost	264,098	-	-	264,098
Interest	989,631	-	-	989,631
Share Plan Allocation	163,282	-	-	163,282
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	565,564	-	565,564	-
Current year amortization of experience difference	-	(4,977)	(236,119)	231,142
Current year amortization of change in assumptions	-	-	(61,235)	61,235
Benefit Payments, including Refunds of Employee Contributions	(867,226)	-	-	-
Net change	<u>1,115,349</u>	<u>(4,977)</u>	<u>1,226,531</u>	<u>1,709,388</u>
Plan Fiduciary Net Position:				
Contributions - Employer	777,360	-	(777,360)	-
Contributions - State	163,282	-	(163,282)	-
Contributions - Employee	86,174	-	-	(86,174)
Projected Net Investment Income	714,179	-	-	(714,179)
Difference between projected and actual earnings on Pension Plan investments	22,657	22,657	-	-
Current year amortization	-	(107,999)	(132,248)	24,249
Benefit Payments, including Refunds of Employee Contributions	(867,226)	-	-	-
Administrative Expenses	(50,878)	-	-	50,878
Net change	<u>845,548</u>	<u>(85,342)</u>	<u>(1,072,890)</u>	<u>(725,226)</u>
Ending Balance	<u>\$ 4,166,370</u>	<u>\$ 204,253</u>	<u>\$ 1,715,091</u>	<u>\$ 984,162</u>

PRELIMINARY COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2020

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 4,166,370	\$ 204,253	\$ 1,715,091	\$ -
Employer and State Contributions made after 09/30/2019	-	-	TBD*	-
Total Pension Liability Factors:				
Service Cost	256,785	-	-	256,785
Interest	1,066,672	-	-	1,066,672
Share Plan Allocation	177,174	-	-	177,174
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	48,813	-	48,813	-
Current year amortization of experience difference	-	-	(248,323)	248,323
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(61,235)	61,235
Benefit Payments, including Refunds of Employee Contributions	(1,028,888)	-	-	-
Net change	<u>520,556</u>	<u>-</u>	<u>(260,745)</u>	<u>1,810,189</u>
Plan Fiduciary Net Position:				
Contributions - Employer	781,147	-	(781,147)	-
Contributions - State	177,174	-	(177,174)	-
Contributions - Employee	90,656	-	-	(90,656)
Projected Net Investment Income	771,872	-	-	(771,872)
Difference between projected and actual earnings on Pension Plan investments	(308,629)	-	308,629	-
Current year amortization	-	(66,574)	(193,973)	127,399
Benefit Payments, including Refunds of Employee Contributions	(1,028,888)	-	-	-
Administrative Expenses	(63,994)	-	-	63,994
Net change	<u>419,338</u>	<u>(66,574)</u>	<u>(843,665)</u>	<u>(671,135)</u>
Ending Balance	<u>\$ 4,267,588</u>	<u>\$ 137,679</u>	<u>TBD</u>	<u>\$ 1,139,054</u>

* Employer and State Contributions subsequent to the measurement date made after September 30, 2019 but made on or before September 30, 2020 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 Expected and Actual Experience*	Recognition Period (Years)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019	\$ 308,629	5	\$ -	\$ 61,725	\$ 61,726	\$ 61,726	\$ 61,726	\$ 61,726	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (22,657)	5	\$ (4,533)	\$ (4,531)	\$ (4,531)	\$ (4,531)	\$ (4,531)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (310,217)	5	\$ (62,043)	\$ (62,043)	\$ (62,043)	\$ (62,043)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 36,454	5	\$ 7,291	\$ 7,291	\$ 7,291	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 624,787	5	\$ 124,957	\$ 124,957	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2014	\$ (207,117)	5	\$ (41,423)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 24,249	\$ 127,399	\$ 2,443	\$ (4,848)	\$ 57,195	\$ 61,726	\$ -	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEUDLE - 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)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2016	\$ 244,939	4	\$ 61,235	\$ 61,235	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 61,235	\$ 61,235	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019	\$ 48,813	4	\$ -	\$ 12,204	\$ 12,203	\$ 12,203	\$ 12,203	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 565,564	4	\$ 141,391	\$ 141,391	\$ 141,391	\$ 141,391	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 148,378	4	\$ 37,095	\$ 37,095	\$ 37,095	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 230,533	4	\$ 57,633	\$ 57,633	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ (19,907)	4	\$ (4,977)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 231,142	\$ 248,323	\$ 190,689	\$ 153,594	\$ 12,203	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -