

CITY OF VERO BEACH
POLICE OFFICERS' RETIREMENT FUND
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

February 14, 2020

Board of Trustees
City of Vero Beach
Police Officers' Pension Board

Re: City of Vero Beach Police Officers' Retirement Fund

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Vero Beach Police Officers' Retirement 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 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 Vero Beach, 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 the GASB results are based on an actuarial valuation performed as of the valuation date.

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 Vero Beach, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Police Officers' Retirement 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 us at 239-433-5500.

Respectfully submitted,

Foster & Foster, Inc.

By:



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

By:



Tyler A. Koftan, EA, MAAA
Enrolled Actuary #17-8685

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Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Vero Beach Police Officers' Retirement Fund, 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 (as prepared by Freiman Little Actuaries, LLC) are as follows:

Valuation Date	10/1/2019	10/1/2018
Assumed City Contribution Date	10/1/2020	10/1/2019
Applicable to Fiscal Year Ending	<u>9/30/2021</u>	<u>9/30/2020</u>
Minimum Required Contribution	\$1,275,054	\$1,234,149
Member Contributions (Est.)	239,732	176,703
City And State Required Contribution	1,035,322	1,057,446
State Contribution (Est.) ¹	280,231	280,231
City Required Contribution ²	\$755,091	\$777,215

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 available to offset the City's required contribution.

² Please note that the City has access to a prepaid contribution of \$38,885.93 that is available to offset a portion of the above stated requirements for the fiscal year ending September 30, 2020.

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 is attributable to net unfavorable experience realized by the plan during the year.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of actuarial loss included an average salary increase of 12.03% which exceeded the 4.97% assumption and an investment return of 7.21% (Actuarial Asset Basis) which fell short of the 7.65% assumption. There were no significant sources of actuarial gain.

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 since the prior valuation. The method for determining contribution requirements has changed to include a load associated with assumed salary increases. The load associated with assumed interest has been removed.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>10/1/2019</u>	<u>10/1/2018</u> ³
A. Participant Data		
Actives	49	46
Service Retirees	41	40
DROP Retirees	4	6
Beneficiaries	6	5
Disability Retirees	2	2
Terminated Vested	<u>2</u>	<u>2</u>
 Total	 104	 101
 Total Annual Payroll	 \$3,571,094	 \$3,259,812
Payroll Under Assumed Ret. Age	3,464,723	3,118,977
 Annual Rate of Payments to:		
Service Retirees	2,065,063	1,915,069
DROP Retirees	328,300	486,902
Beneficiaries	159,983	126,415
Disability Retirees	27,732	27,458
Terminated Vested	39,635	39,635
 B. Assets		
Actuarial Value (AVA) ¹	43,847,237	42,393,706
Market Value (MVA) ¹	43,697,336	43,682,138
 C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	19,110,087	16,494,104
Disability Benefits	852,744	807,042
Death Benefits	256,104	200,596
Vested Benefits	576,234	638,175
Refund of Contributions	123,925	0 ³
Service Retirees	25,655,454	31,268,557 ³
DROP Retirees ¹	5,109,347	0 ³
Beneficiaries	1,455,692	1,134,532
Disability Retirees	202,526	206,215
Terminated Vested	226,061	209,214
Share Plan Balances ¹	<u>0</u>	<u>0</u>
 Total	 53,568,174	 50,958,435

C. Liabilities - (Continued)	<u>10/1/2019</u>	<u>10/1/2018</u> ³
Present Value of Future Salaries	24,543,111	N/A
Present Value of Future Member Contributions	1,557,152	N/A
Normal Cost (Retirement)	489,118	465,571
Normal Cost (Disability)	59,836	56,523
Normal Cost (Death)	18,002	13,927
Normal Cost (Vesting)	29,461	67,140
Normal Cost (Refunds)	<u>21,213</u>	<u>0</u> ³
Total Normal Cost	617,630	603,161
Present Value of Future Normal Costs	4,296,262	4,111,484
Accrued Liability (Retirement)	15,629,165	13,326,490
Accrued Liability (Disability)	453,302	427,849
Accrued Liability (Death)	138,345	108,221
Accrued Liability (Vesting)	382,367	165,873
Accrued Liability (Refunds)	19,653	0 ³
Accrued Liability (Inactives) ¹	32,649,080	32,818,518
Share Plan Balances ¹	<u>0</u>	<u>0</u>
Total Actuarial Accrued Liability (EAN AL)	49,271,912	46,846,951
Unfunded Actuarial Accrued Liability (UAAL)	5,424,675	4,453,245
Funded Ratio (AVA / EAN AL)	89.0%	90.5%

D. Actuarial Present Value of		
Accrued Benefits	<u>10/1/2019</u>	<u>10/1/2018</u> ³
Vested Accrued Benefits		
Inactives + Share Plan Balances ¹	32,649,080	32,818,518
Actives	10,198,632	10,992,562
Member Contributions	<u>1,515,598</u>	<u>0</u> ³
Total	44,363,310	43,811,080
Non-vested Accrued Benefits	<u>862,740</u>	<u>250,591</u>
Total Present Value		
Accrued Benefits (PVAB)	45,226,050	44,061,671
Funded Ratio (MVA / PVAB)	96.6%	99.1%
Increase (Decrease) in Present Value of		
Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
Plan Experience	636,649	
Benefits Paid	(2,738,250)	
Interest	3,265,980	
Other	<u>0</u>	
Total	1,164,379	

Valuation Date	10/1/2019	10/1/2018 ³
Applicable to Fiscal Year Ending	<u>9/30/2021</u>	<u>9/30/2020</u>
E. Pension Cost		
Normal Cost ²	\$648,759	\$662,537
Administrative Expenses ²	119,472	138,727
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 25 years (as of 10/1/2019) ²	506,823	432,885
Minimum Required Contribution	1,275,054	1,234,149
Expected Member Contributions ²	239,732	176,703
Expected City and State Contribution	1,035,322	1,057,446
F. Past Contributions		
Plan Years Ending:	<u>9/30/2019</u>	
City and State Requirement	1,069,223	
Actual Contributions Made:		
Members (excluding buyback)	212,777	
City	788,992	
State	<u>280,231</u>	
Total	1,282,000	
G. Net Actuarial (Gain)/Loss	1,170,836	

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

² Contributions developed as of 10/1/2019 displayed above have been adjusted to account for assumed interest before the method change. They are adjusted for assumed salary increases after the method change.

³ Results as of 10/1/2018 are consistent with the report prepared by Freiman Little Actuaries, LLC. That report combined DROP and Service retiree liabilities as well as termination liabilities associated with deferred annuities and refunds. Accordingly, the liabilities for inactive DROP participants and for active refunds are shown as zero in the prior year results because they are included in another liability category. In Section D, vested liabilities due to member contributions shown as zero because they are included in another category.

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	5,424,675
2020	5,320,248
2021	5,207,830
2027	4,327,852
2033	2,958,375
2038	1,250,828
2044	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2019	12.03%	4.97%
Year Ended 9/30/2018	0.60%	4.80%
Year Ended 9/30/2017	10.40%	4.80%
Year Ended 9/30/2016	9.80%	4.90%
Year Ended 9/30/2015	-0.20%	4.80%

(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	3.60%	7.21%	7.65%
Year Ended 9/30/2018	10.30%	8.30%	7.75%
Year Ended 9/30/2017	11.80%	8.60%	N/A
Year Ended 9/30/2016	8.40%	9.60%	N/A
Year Ended 9/30/2015	1.10%	8.90%	N/A

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2019	\$3,464,723
	10/1/2009	3,869,093
(b) Total Increase		-10.45%
(c) Number of Years		10.00
(d) Average Annual Rate		-1.10%

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, 2018	\$4,453,245
(2) Sponsor Normal Cost developed as of October 1, 2018	426,458
(3) Expected administrative expenses for the year ended September 30, 2019	126,294
(4) Expected interest on (1), (2) and (3)	378,128
(5) Sponsor contributions to the System during the year ended September 30, 2019	1,069,223
(6) Expected interest on (5)	61,063
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2019 (1)+(2)+(3)+(4)-(5)-(6) ¹	4,253,839
(8) Change to UAAL due to Assumption Change	0
(9) Change to UAAL due to Actuarial (Gain)/Loss	1,170,836
(10) Unfunded Actuarial Accrued Liability as of October 1, 2019	5,424,675

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2019 Amount</u>	<u>Amortization Amount</u>
Fresh Start	10/1/2015	21	4,168,704	376,263
Actuarial Gain	10/1/2016	22	(529,525)	(46,894)
Assump Change	10/1/2016	22	637,384	56,446
Actuarial Gain	10/1/2017	23	(164,349)	(14,304)
Assump Change	10/1/2017	23	1,184	103
Actuarial Gain	10/1/2018	24	(335,288)	(28,723)
Assump Change	10/1/2018	24	475,729	40,755
Actuarial Loss	10/1/2019	25	<u>1,170,836</u>	<u>98,859</u>
			5,424,675	482,505

¹ Components of the Expected UAAL are consistent with the report prepared by Freiman Little Actuaries, LLC.

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2018	\$4,453,245
(2) Expected UAAL as of October 1, 2019	4,253,839
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	183,964
Salary Increases	671,559
Active Decrements	(14,083)
Inactive Mortality	130,414
Other	<u>198,982</u>
Increase in UAAL due to (Gain)/Loss	1,170,836
Assumption Changes	<u>0</u>
(4) Actual UAAL as of October 1, 2019	\$5,424,675

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.

75% of active deaths are assumed to be service-incurred.

Interest Rate

7.65% 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

See table later in this section. This assumption was used by the prior actuary and will be reviewed with the plan's next experience study.

<u>Payroll Growth</u>	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.
<u>Administrative Expenses</u>	\$113,740 annually, based on the average of actual expenses incurred in the prior two fiscal years.
<u>Amortization Method</u>	New UAAL amortization bases are established according to the following amortization periods: Experience: 25 Years. Assumption/Method Changes: 25 Years. Benefit Changes: 25 Years.
<u>Retirement Rates</u>	See tables later in this section. This assumption was used by the prior actuary and will be reviewed with the plan's next experience study.
<u>Termination Rates</u>	See table later in this section. This assumption was used by the prior actuary and will be reviewed with the plan's next experience study.
<u>Disability Rates</u>	See table later in this section. 75% of disability retirements are assumed to be service-related. This assumption was used by the prior actuary and will be reviewed with the plan's next experience study.
<u>Accrued Leave</u>	Retirement benefits are loaded 1% to account for sick leave over 120 days. Members are also assumed to include accrued sick leave under 120 days and accrued vacation under 60 days as 0.6923 in Credited Service for Normal Retirement eligibility and benefits. This method was used by the prior actuary and will be reviewed with the plan's next experience study.
<u>Liability Load</u>	Liabilities are loaded by 0.9% to reflect the exclusion of the COLA in the determination of optional forms of benefit. This method was used by the prior actuary and will be reviewed with the plan's next experience study.
<u>Funding Method</u>	Entry Age Normal Actuarial Cost Method. The following load is applied for determination of the City dollar funding requirement: Salary – A full year, based on the current 5.04% assumption.

Assumption Tables

% Retiring During the Year (Normal Retirement)		% Retiring During the Year (Early Retirement)	
Years Eligible for Normal Retirement	Rate	Age	Rate
0	80%	Any	5%
1-4	40%		
5+	100%		

% Terminating During the Year		% Becoming Disabled During the Year	
Service	Rate	Age	Rate
0-5	12.00%	20	0.14%
6-10	4.00%	25	0.15%
11-15	3.00%	30	0.18%
16-19	2.00%	35	0.23%
20+	1.00%	40	0.30%
		45	0.51%
		50	1.00%
		55	1.55%
		60+	2.09%

Salary Scale			
Service	Rate	Service	Rate
0	6.250%	16	4.625%
1	5.850%	17	4.600%
2	5.600%	18	4.575%
3	5.500%	19	4.550%
4	5.350%	20	4.525%
5	5.250%	21	4.500%
6	5.150%	22	4.475%
7	5.100%	23	4.450%
8	5.000%	24	4.425%
9	4.950%	25	4.400%
10	4.900%	26	4.375%
11	4.850%	27	4.350%
12	4.800%	28	4.325%
13	4.750%	29	4.300%
14	4.700%	30+	4.275%
15	4.650%		

GLOSSARY

Total Annual Payroll is the projected annual rate of pay for the fiscal year following 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 the current year's cost for benefits yet to be funded.

Unfunded Actuarial Accrued Liability 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.

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.

Total Required Contribution is equal to the Normal Cost plus administrative expenses and an amount sufficient to amortize the Unfunded Actuarial Accrued Liability over a period determined by the plan's Amortization Method. The required amount is adjusted to account for assumed salary increases 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 92.3% on October 1, 2017 to 89.1% 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 66.3%. 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 decreased from 90.0% on October 1, 2017 to 89.0% on October 1, 2019.
- 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, decreased from -2.4% on October 1, 2017 to -3.5% on October 1, 2019. The current Net Cash Flow Ratio of -3.5% 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>10/1/2017</u>	<u>10/1/2018</u>	<u>10/1/2019</u>
<u>Support Ratio</u>			
Total Actives	48	46	49
Total Inactives ¹	52	55	55
Actives / Inactives ¹	92.3%	83.6%	89.1%
 <u>Asset Volatility Ratio</u>			
Market Value of Assets (MVA)	40,539,658	43,682,138	43,697,336
Total Annual Payroll	3,261,894	3,259,812	3,571,094
MVA / Total Annual Payroll	1,242.8%	1,340.0%	1,223.6%
 <u>Accrued Liability (AL) Ratio</u>			
Inactive Accrued Liability	28,673,818	32,818,518	32,649,080
Total Accrued Liability (EAN)	44,533,618	46,846,951	49,271,912
Inactive AL / Total AL	64.4%	70.1%	66.3%
 <u>Funded Ratio</u>			
Actuarial Value of Assets (AVA)	40,081,886	42,393,706	43,847,237
Total Accrued Liability (EAN)	44,533,618	46,846,951	49,271,912
AVA / Total Accrued Liability (EAN)	90.0%	90.5%	89.0%
 <u>Net Cash Flow Ratio</u>			
Net Cash Flow ²	(973,887)	(977,000)	(1,548,122)
Market Value of Assets (MVA)	40,539,658	43,682,138	43,697,336
Ratio	-2.4%	-2.2%	-3.5%

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>
2008	358,178.97	N/A
2009	271,043.25	-24.3%
2010	259,330.70	-4.3%
2011	265,180.96	2.3%
2012	252,274.99	-4.9%
2013	236,381.32	-6.3%
2014	233,451.27	-1.2%
2015	228,138.58	-2.3%
2016	252,593.93	10.7%
2017	241,345.27	-4.5%
2018	258,540.21	7.1%
2019	280,231.14	8.4%

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2019

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Short Term Investments	946,251.82	946,251.82
Prepaid Expenses	1,500.00	1,500.00
Total Cash and Equivalents	947,751.82	947,751.82
Receivables:		
Distribution	26,017.16	26,017.16
Investment Income	90,171.70	90,171.70
Total Receivable	116,188.86	116,188.86
Investments:		
U. S. Bonds and Bills	4,202,053.86	4,522,595.45
Federal Agency Guaranteed Securities	184,455.10	178,884.04
Corporate Bonds	7,220,564.20	7,297,392.25
Stocks	18,638,036.57	24,119,095.61
Mutual Funds:		
Equity	2,082,010.83	2,429,068.97
Pooled/Common/Commingled Funds:		
Real Estate	4,285,081.05	4,199,607.86
Total Investments	36,612,201.61	42,746,644.18
Total Assets	37,676,142.29	43,810,584.86
<u>LIABILITIES</u>		
Payables:		
Refunds of Member Contributions	12,728.20	12,728.20
Investment Expenses	56,646.51	56,646.51
Prior Refunds	4,987.59	4,987.59
Prepaid City Contribution	38,885.93	38,885.93
Total Liabilities	113,248.23	113,248.23
NET POSITION RESTRICTED FOR PENSIONS	37,562,894.06	43,697,336.63

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

ADDITIONS

Contributions:			
Member		212,776.68	
City		788,991.86	
State		280,231.14	
Total Contributions			1,281,999.68
Investment Income:			
Net Realized Gain (Loss)	(10,798.60)		
Unrealized Gain (Loss)	808,107.03		
Net Increase in Fair Value of Investments		797,308.43	
Interest & Dividends		1,074,547.28	
Less Investment Expense ¹		(308,534.64)	
Net Investment Income			1,563,321.07
Total Additions			2,845,320.75
<u>DEDUCTIONS</u>			
Distributions to Members:			
Benefit Payments		2,131,012.74	
Lump Sum DROP Distributions		575,788.51	
Refunds of Member Contributions		31,448.91	
Total Distributions			2,738,250.16
Administrative Expense			91,872.21
Total Deductions			2,830,122.37
Net Increase in Net Position			15,198.38
NET POSITION RESTRICTED FOR PENSIONS			
Beginning of the Year			43,682,138.25
End of the Year			43,697,336.63

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 five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of Market Value of Assets.

Plan Year Ending	Gain/Loss	<u>Gains/(Losses) Not Yet Recognized</u>				
		Amounts Not Yet Recognized by Valuation Year				
		2019	2020	2021	2022	2023
09/30/2015	(2,361,133)	0	0	0	0	0
09/30/2016	200,305	40,061	0	0	0	0
09/30/2017	1,473,499	589,399	294,699	0	0	0
09/30/2018	995,547	597,329	398,220	199,111	0	0
09/30/2019	(1,720,863)	(1,376,690)	(1,032,517)	(688,344)	(344,171)	0
Total		(149,901)	(339,598)	(489,233)	(344,171)	0

<u>Development of Investment Gain/(Loss)</u>	
Market Value of Assets, including Prepaid Contributions, 09/30/2018	43,688,084
Contributions Less Benefit Payments & Admin Expenses	(1,515,183)
Expected Investment Earnings*	3,284,184
Actual Net Investment Earnings	1,563,321
2019 Actuarial Investment Gain/(Loss)	<u>(1,720,863)</u>

*Expected Investment Earnings = $0.0765 * [43,688,084 + 0.5 * (1,515,183)]$

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 09/30/2019	43,697,336
(2) Gain/(Loss) Not Yet Recognized	(149,901)
(3) Actuarial Value of Assets, 09/30/2019, (1) - (2)	<u>43,847,237</u>
(A) 09/30/2018 Actuarial Assets, including Prepaid Contributions:	42,399,652
(I) Net Investment Income:	
1. Interest and Dividends	1,074,547
2. Realized Gain (Loss)	(10,799)
3. Unrealized Gain (Loss)	808,107
4. Change in Actuarial Value	1,438,332
5. Investment Expenses	(308,536)
Total	<u>3,001,652</u>
(B) 09/30/2019 Actuarial Assets, including Prepaid Contributions:	43,886,123
Actuarial Assets Rate of Return = $2I/(A+B-I)$:	7.21%
Market Value of Assets Rate of Return:	3.60%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(183,964.00)
10/01/2019 Limited Actuarial Assets (not including Prepaid):	43,847,237

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

REVENUES

Contributions:		
Member	212,776.68	
City	788,991.86	
State	280,231.14	
 Total Contributions		 1,281,999.68
Earnings from Investments:		
Interest & Dividends	1,074,547.28	
Net Realized Gain (Loss)	(10,798.60)	
Unrealized Gain (Loss)	808,107.03	
Change in Actuarial Value	1,438,332.25	
 Total Earnings and Investment Gains		 3,310,187.96

EXPENDITURES

Distributions to Members:		
Benefit Payments	2,131,012.74	
Lump Sum DROP Distributions	575,788.51	
Refunds of Member Contributions	31,448.91	
 Total Distributions		 2,738,250.16
Expenses:		
Investment related ¹	308,534.64	
Administrative	91,872.21	
 Total Expenses		 400,406.85
 Change in Net Assets for the Year		 1,453,530.63
 Net Assets Beginning of the Year		 42,393,706.00
 Net Assets End of the Year ²		 43,847,236.63

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

²Net Assets may be limited for actuarial consideration.

DEFERRED RETIREMENT OPTION PLAN ACTIVITY
October 1, 2018 to September 30, 2019

Beginning of the Year Balance	850,680.25
Plus Additions	425,701.25
Investment Return Earned	41,027.17
Less Distributions	(575,788.51)
End of the Year Balance	741,620.16

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

(1) Required City and State Contributions	\$1,069,223.00
(2) Less Allowable State Contribution	<u>(280,231.14)</u>
(3) Required City Contribution for Fiscal 2019	788,991.86
(4) Less 2018 Prepaid Contribution	(5,946.00)
(5) Less Actual City Contributions	<u>(821,931.79)</u>
(6) Equals City's Shortfall/(Prepaid) Contribution as of September 30, 2019	(\$38,885.93)

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		48	46	49
Average Current Age		38.7	38.0	38.0
Average Age at Employment		26.9	26.7	26.9
Average Past Service		11.8	11.3	11.1
Average Annual Salary		\$69,380	\$67,804	\$72,879
<u>Service Retirees</u> ¹				
Number		N/A	40	41
Average Current Age		N/A	N/A	65.6
Average Annual Benefit		N/A	N/A	\$50,367
<u>DROP Retirees</u> ¹				
Number		N/A	6	4
Average Current Age		N/A	N/A	54.1
Average Annual Benefit		N/A	N/A	\$82,075
<u>Beneficiaries</u>				
Number		5	5	6
Average Current Age		66.9	67.9	68.9
Average Annual Benefit		\$25,033	\$25,283	\$26,664
<u>Disability Retirees</u>				
Number		2	2	2
Average Current Age		71.5	72.5	73.5
Average Annual Benefit		\$13,593	\$13,729	\$13,866
<u>Terminated Vested</u>				
Number		3	2	2
Average Current Age ²		44.6	43.2	44.2
Average Annual Benefit		\$22,066	\$19,818	\$19,818

¹ Statistical information was combined for retired and DROP participants in the 2018 valuation report and prior.

² The Average Current Age excludes participants awaiting a refund of contributions.

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

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

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2018	46
b. Terminations	
i. Vested (partial or full) with deferred annuity	0
ii. Vested in refund of member contributions only	0
iii. Refund of member contributions or full lump sum distribution received	(4)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. DROP	<u>0</u>
g. Continuing participants	42
h. New entrants	<u>7</u>
i. Total active life participants in valuation	49

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

	Service Retirees, Vested Receiving <u>Benefits</u>	DROP <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested (Deferred Annuity)	Vested (Due Refund)	<u>Total</u>
a. Number prior valuation	40	6	5	2	2	0	55
Retired	2	(2)	0	0	0	0	0
DROP	0	0	0	0	0	0	0
Vested (Deferred Annuity)	0	0	0	0	0	0	0
Vested (Due Refund)	0	0	0	0	0	0	0
Hired/Terminated in Same Year	0	0	0	0	0	0	0
Death, With Survivor	(1)	0	1	0	0	0	0
Death, No Survivor	0	0	0	0	0	0	0
Disabled	0	0	0	0	0	0	0
Refund of Contributions	0	0	0	0	0	0	0
Rehires	0	0	0	0	0	0	0
Expired Annuities	0	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	0	0
b. Number current valuation	41	4	6	2	2	0	55

SUMMARY OF CURRENT PLAN
(Through Ordinance 2018-14)

<u>Eligibility</u>	Full-time employees who are classified as full-time sworn Police Officers shall participate in the Plan as a condition of employment.
<u>Credited Service</u>	Total years and fractional parts of years of employment with the City as a Police Officer. Unless prohibited by Florida law, a Police Officer may elect to count all of his or her unused accrued annual and medical leave days as Credited Service and count such Credited Service to achieve continuous service for eligibility for Normal Retirement and health insurance benefits but not for meeting eligibility for participation in the Deferred Retirement Option Program.
<u>Salary</u>	<p>Total compensation reportable on Form W-2 plus all tax deferred, tax sheltered or tax exempt items of income, except that accrued unused sick or annual leave may not be included.</p> <p>For service earned on or after October 1, 2012, Salary shall not include more than 300 hours of overtime per calendar year.</p>
<u>Average Final Compensation</u>	Average Salary for the highest 5 years preceding retirement or termination.
<u>Member Contributions</u>	For Members hired before October 1, 2012, 5.5% of Salary; for Members hired on or after October 1, 2012, 8.0% of Salary.
<u>City and State Contributions</u>	Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Part VII Chapter 112, Florida Statutes.
<u>Normal Retirement</u>	
Date	Earlier of the following: 1) age 55 and 10 years of Credited Service, or 2) the completion of 25 years of Credited Service, regardless of age.
Benefit	3% of Average Final Compensation times Credited Service, plus \$5 times Credited Service.
Form of Benefit	Ten Year Certain and Life Annuity (options available).

Early Retirement

Eligibility Age 50 and 10 years of Credited Service.
Benefit Accrued benefit, reduced 2.5% for each year that Early Retirement precedes Normal Retirement.

Vesting

Schedule 100% after 10 years of Credited Service.
Benefit Amount Member will receive the vested portion of his (her) accrued benefit at the otherwise Normal Retirement Date.

Disability

Eligibility
In Line of Duty Covered from Date of Employment.
Not in Line of Duty Ten years of Credited Service.
Benefit Benefit accrued to date of disability but not less than 50% of Average Final Compensation (Line of Duty).
Duration Payable as a 10 Year Certain and Life Annuity (Options available).

Pre-Retirement Death Benefits

Eligibility
In Line of Duty Covered from Date of Employment.
Not in Line of Duty One year of Credited Service.
Benefit Accrued benefit but not less than 25% of Average Final Compensation.

Board of Trustees

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

Deferred Retirement Option Program

Eligibility	Satisfaction of Normal Retirement requirements.
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 (options available) payable at termination of employment.

Share Plan

Pursuant to Chapter 2015-39, Laws of Florida, a supplemental benefit component for special benefits exists but is not currently funded per mutual consent between the City and membership.

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2019

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Short Term Investments	946,252
Prepaid Expenses	1,500
Total Cash and Equivalents	947,752
Receivables:	
Distribution	26,017
Investment Income	90,172
Total Receivable	116,189
Investments:	
U. S. Bonds and Bills	4,522,595
Federal Agency Guaranteed Securities	178,884
Corporate Bonds	7,297,392
Stocks	24,119,096
Mutual Funds:	
Equity	2,429,069
Pooled/Common/Commingled Funds:	
Real Estate	4,199,608
Total Investments	42,746,644
Total Assets	43,810,585
<u>LIABILITIES</u>	
Payables:	
Refunds of Member Contributions	12,728
Investment Expenses	56,647
Prior Refunds	4,988
Unearned Revenue	38,886
Total Liabilities	113,249
NET POSITION RESTRICTED FOR PENSIONS	43,697,336

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

ADDITIONS

Contributions:

Member	212,777	
City	788,992	
State	280,231	
 Total Contributions		 1,282,000
 Investment Income:		
Net Increase in Fair Value of Investments	797,308	
Interest & Dividends	1,074,547	
Less Investment Expense ¹	(308,534)	
 Net Investment Income		 1,563,321
 Total Additions		 2,845,321

DEDUCTIONS

Distributions to Members:

Benefit Payments	2,131,013	
Lump Sum DROP Distributions	575,789	
Refunds of Member Contributions	31,449	
 Total Distributions		 2,738,251
 Administrative Expense		 91,872
 Total Deductions		 2,830,123
 Net Increase in Net Position		 15,198
 NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		43,682,138
 End of the Year		 43,697,336

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 City of Vero Beach Police Officers' Retirement Fund is a single-employer defined benefit pension Plan administered by a Board of Trustees which acts as the administrator of the Plan. The Board consists of 5 Trustees:

- (a) Two members who are legal residents of the city appointed by city council,
- (b) Two are police officer members (either one or both of whom may be DROP participants as stated in Ordinance No. 2018-10 adopted effective August 21, 2018) elected by a majority of the active police officer members of this fund, and
- (c) The fifth member is chosen by a majority of the previous four members and will be appointed to the Board of Trustees by city council, as a ministerial duty.

Plan Membership as of October 1, 2019:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	53
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	2
Active Plan Members	49
	104

Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2019 Actuarial Valuation Report for the City of Vero Beach Police Officers' Retirement Fund prepared by Foster & Foster Actuaries and Consultants.

Contributions

Member Contributions:

- For Members hired before October 1, 2012, 5.5% of Salary;
- For Members hired on or after October 1, 2012, 8.0% of Salary;

City and State Contributions:

Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Part VII Chapter 112, Florida Statutes.

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 Bond	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 3.60 percent.

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

GASB 67

Deferred Retirement Option Program

Eligibility: Satisfaction of Normal Retirement requirements.

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 of September 30, 2019 is \$741,620.

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	\$ 48,288,930
Plan Fiduciary Net Position	\$ (43,697,336)
Sponsor's Net Pension Liability	\$ 4,591,594
Plan Fiduciary Net Position as a percentage of Total Pension Liability	90.49%

Actuarial Assumptions:

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

Inflation	2.50%
Salary Increases	Service based
Discount Rate	7.65%
Investment Rate of Return	7.65%

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.

75% of active deaths are assumed to be service-incurred.

The most recent actuarial experience study done by the prior actuary and used to review the other significant assumptions was dated November 26, 2012.

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	7.50%
International Equity	8.50%
Domestic Fixed Income	2.50%
Global Bond	3.50%
Real Estate	4.50%

GASB 67

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.65 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 6.65%	Current Discount Rate 7.65%	1% Increase 8.65%
Sponsor's Net Pension Liability	\$ 10,387,413	\$ 4,591,594	\$ (226,058)

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2019	09/30/2018 ¹	09/30/2017 ¹
Total Pension Liability			
Service Cost	605,715	637,288	575,896
Interest	3,525,391	3,416,827	3,264,313
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	49,124	(149,084)	133,676
Changes of assumptions	-	495,820	1,274
Contributions - Buy Back	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(2,738,251)	(2,087,518)	(2,063,153)
Net Change in Total Pension Liability	1,441,979	2,313,333	1,912,006
Total Pension Liability - Beginning	46,846,951	44,533,618	42,621,612
Total Pension Liability - Ending (a)	<u>\$ 48,288,930</u>	<u>\$ 46,846,951</u>	<u>\$ 44,533,618</u>
Plan Fiduciary Net Position			
Contributions - Employer	788,992	773,856	756,381
Contributions - State	280,231	258,540	241,345
Contributions - Employee	212,777	213,729	208,521
Net Investment Income	1,563,321	4,119,480	4,336,908
Benefit Payments, including Refunds of Employee Contributions	(2,738,251)	(2,087,518)	(2,063,153)
Administrative Expense	(91,872)	(135,607)	(116,981)
Net Change in Plan Fiduciary Net Position	15,198	3,142,480	3,363,021
Plan Fiduciary Net Position - Beginning	43,682,138	40,539,658	37,176,637
Plan Fiduciary Net Position - Ending (b)	<u>\$ 43,697,336</u>	<u>\$ 43,682,138</u>	<u>\$ 40,539,658</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 4,591,594</u>	<u>\$ 3,164,813</u>	<u>\$ 3,993,960</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	90.49%	93.24%	91.03%
Covered Payroll ¹	\$ 3,363,227	\$ 3,259,812	\$ 3,261,894
Net Pension Liability as a percentage of Covered Payroll	136.52%	97.09%	122.44%

Notes to Schedule:¹ Results provided by the prior actuary, Freiman Little Actuaries.

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

	09/30/2016 ¹	09/30/2015 ¹	09/30/2014 ¹
Total Pension Liability			
Service Cost	543,187	550,357	478,211
Interest	3,086,536	3,009,258	2,881,001
Changes of benefit terms	-	-	118,425
Differences between Expected and Actual Experience	26,221	(642,610)	96,146
Changes of assumptions	710,848	44,151	41,761
Contributions - Buy Back	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(2,141,125)	(1,793,418)	(2,248,284)
Net Change in Total Pension Liability	2,225,667	1,167,738	1,367,260
Total Pension Liability - Beginning	40,395,945	39,228,207	37,860,947
Total Pension Liability - Ending (a)	<u>\$ 42,621,612</u>	<u>\$ 40,395,945</u>	<u>\$ 39,228,207</u>
Plan Fiduciary Net Position			
Contributions - Employer	853,491	852,721	869,837
Contributions - State	252,594	228,139	233,451
Contributions - Employee	191,664	191,782	167,975
Net Investment Income	2,915,646	385,598	3,088,757
Benefit Payments, including Refunds of Employee Contributions	(2,141,125)	(1,793,418)	(2,248,284)
Administrative Expense	(107,071)	(86,344)	(86,354)
Net Change in Plan Fiduciary Net Position	1,965,199	(221,522)	2,025,382
Plan Fiduciary Net Position - Beginning	35,211,438	35,432,960	33,407,578
Plan Fiduciary Net Position - Ending (b)	<u>\$ 37,176,637</u>	<u>\$ 35,211,438</u>	<u>\$ 35,432,960</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 5,444,975</u>	<u>\$ 5,184,507</u>	<u>\$ 3,795,247</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	87.22%	87.17%	90.33%
Covered Payroll ¹	\$ 3,169,645	\$ 2,938,951	\$ 2,899,869
Net Pension Liability as a percentage of Covered Payroll	171.78%	176.41%	130.88%

Notes to Schedule:

¹ Results provided by the prior actuary, Freiman Little Actuaries.

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	\$ 1,069,223	\$ 1,069,223	\$ -	\$ 3,363,227	31.79%
09/30/2018 ¹	\$ 1,032,396	\$ 1,032,396	\$ -	\$ 3,259,812	31.67%
09/30/2017 ¹	\$ 997,726	\$ 997,726	\$ -	\$ 3,261,894	30.59%
09/30/2016 ¹	\$ 1,106,085	\$ 1,106,085	\$ -	\$ 3,169,645	34.90%
09/30/2015 ¹	\$ 1,080,860	\$ 1,080,860	\$ -	\$ 2,938,951	36.78%
09/30/2014 ¹	\$ 1,103,288	\$ 1,103,288	\$ -	\$ 2,899,869	38.05%
09/30/2013 ¹	\$ 1,124,361	\$ 1,124,361	\$ -	\$ 2,947,305	38.15%
09/30/2012 ¹	\$ 1,069,836	\$ 1,069,836	\$ -	\$ 3,013,887	35.50%
09/30/2011 ¹	\$ 1,003,043	\$ 1,003,043	\$ -	\$ 3,297,317	30.42%
09/30/2010 ¹	\$ 808,241	\$ 808,241	\$ -	\$ 3,577,177	22.59%

¹ Results provided by the prior actuary, Freiman Little Actuaries.

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:

Healthy Mortality (Pre-retirement):

Males: 10% RP-00 Combined Healthy White Collar+
90% RP-00 Combined Healthy Blue Collar
Females: 100% RP-00 Combined Healthy White Collar
Both male and female rates fully generational using Scale BB.

Healthy Mortality (Post-retirement):

Males: 10% RP-00 Annuitant White Collar+
90% RP-00 Combined Healthy Blue Collar
Females: 100% RP-00 Annuitant White Collar
Both male and female rates fully generational using Scale BB.

Disabled Mortality:

Males: 60% RP-00 Disabled Retiree Set Back 4 Years +
40% RP-00 Annuitant White Collar
Females: 60% RP-00 Disabled Retiree Set Forward 2 Yrs +
40% RP-00 Annuitant White Collar
No mortality improvement is assumed for disabled lives.
75% of active deaths are assumed to be service connected.

Assumed Rate of Investment Return: 7.75% per year net of investment related expenses.

Assumptions: All other assumptions and methods used for determining the Actuarially Determined Contribution can be found in the October 1, 2017 Actuarial Valuation Report for the City of Vero Beach Police Officers' Retirement Fund prepared by the prior actuary Freiman Little Actuaries.

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2019	3.60%
09/30/2018 ¹	10.16%
09/30/2017 ¹	11.45%
09/30/2016 ¹	7.99%
09/30/2015 ¹	0.87%
09/30/2014 ¹	9.08%
09/30/2013 ¹	14.17%
09/30/2012 ¹	19.27%
09/30/2011 ¹	-1.69%
09/30/2010 ¹	9.89%

¹ Results provided by the prior actuary, Freiman Little Actuaries.

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

General Information about the Pension Plan

Plan Description

The City of Vero Beach Police Officers' Retirement Fund is a single-employer defined benefit pension Plan administered by a Board of Trustees which acts as the administrator of the Plan. The Board consists of 5 Trustees:

- (a) Two members who are legal residents of the city appointed by city council,
- (b) Two are police officer members (either one or both of whom may be DROP participants as stated in Ordinance No. 2018-10 adopted effective August 21, 2018) elected by a majority of the active police officer members of this fund, and
- (c) The fifth member is chosen by a majority of the previous four members and will be appointed to the Board of Trustees by city council, as a ministerial duty.

Plan Membership as of October 1, 2019:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	53
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	2
Active Plan Members	49
	104
	104

Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2019 Actuarial Valuation Report for the City of Vero Beach Police Officers' Retirement Fund prepared by Foster & Foster Actuaries and Consultants.

Contributions

Member Contributions:

- For Members hired before October 1, 2012, 5.5% of Salary;
- For Members hired on or after October 1, 2012, 8.0% of Salary;

City and State Contributions:

Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Part VII Chapter 112, Florida Statutes.

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, 2018 through September 30, 2019.

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, 2019 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	Service based
Discount Rate	7.65%
Investment Rate of Return	7.65%

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.

75% of active deaths are assumed to be service-incurred.

The most recent actuarial experience study done by the prior actuary and used to review the other significant assumptions was dated November 26, 2012.

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%	7.50%
International Equity	15.0%	8.50%
Domestic Fixed Income	25.0%	2.50%
Global Bond	5.0%	3.50%
Real Estate	10.0%	4.50%
Total	100.0%	

Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.65 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)
Balances at September 30, 2018	\$ 46,846,951	\$ 43,682,138	\$ 3,164,813
Changes for a Year:			
Service Cost	605,715	-	605,715
Interest	3,525,391	-	3,525,391
Differences between Expected and Actual Experience	49,124	-	49,124
Changes of assumptions	-	-	-
Changes of benefit terms	-	-	-
Contributions - Employer	-	788,992	(788,992)
Contributions - State	-	280,231	(280,231)
Contributions - Employee	-	212,777	(212,777)
Net Investment Income	-	1,563,321	(1,563,321)
Benefit Payments, including Refunds of Employee Contributions	(2,738,251)	(2,738,251)	-
Administrative Expense	-	(91,872)	91,872
Net Changes	1,441,979	15,198	1,426,781
Balances at September 30, 2019	\$ 48,288,930	\$ 43,697,336	\$ 4,591,594

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

	Current Discount		
	1% Decrease	Rate	1% Increase
	6.65%	7.65%	8.65%
Sponsor's Net Pension Liability	\$ 10,387,413	\$ 4,591,594	\$ (226,058)

Pension Plan Fiduciary Net Position.

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

**PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED
INFLOWS OF RESOURCES RELATED TO PENSIONS**

For the year ended September 30, 2019, the Sponsor will recognize a Pension Expense of \$1,332,317.

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	67,691	70,618
Changes of assumptions	235,155	-
Net difference between Projected and Actual Earnings on Pension Plan investments	148,527	-
Total	\$ 451,373	\$ 70,618

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	\$	(55,373)
2021	\$	(64,700)
2022	\$	156,999
2023	\$	343,829
2024	\$	-
Thereafter	\$	-

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2019	09/30/2018 ¹	09/30/2017 ¹
Total Pension Liability			
Service Cost	605,715	637,288	575,896
Interest	3,525,391	3,416,827	3,264,313
Changes of benefit terms	-	-	-
Differences between Expected and Actual Experience	49,124	(149,084)	133,676
Changes of assumptions	-	495,820	1,274
Contributions - Buy Back	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(2,738,251)	(2,087,518)	(2,063,153)
Net Change in Total Pension Liability	1,441,979	2,313,333	1,912,006
Total Pension Liability - Beginning	46,846,951	44,533,618	42,621,612
Total Pension Liability - Ending (a)	<u>\$ 48,288,930</u>	<u>\$ 46,846,951</u>	<u>\$ 44,533,618</u>
Plan Fiduciary Net Position			
Contributions - Employer	788,992	773,856	756,381
Contributions - State	280,231	258,540	241,345
Contributions - Employee	212,777	213,729	208,521
Contributions - Buy Back	-	-	-
Net Investment Income	1,563,321	4,119,480	4,336,908
Benefit Payments, including Refunds of Employee Contributions	(2,738,251)	(2,087,518)	(2,063,153)
Administrative Expense	(91,872)	(135,607)	(116,981)
Net Change in Plan Fiduciary Net Position	15,198	3,142,480	3,363,021
Plan Fiduciary Net Position - Beginning	43,682,138	40,539,658	37,176,637
Plan Fiduciary Net Position - Ending (b)	<u>\$ 43,697,336</u>	<u>\$ 43,682,138</u>	<u>\$ 40,539,658</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 4,591,594</u>	<u>\$ 3,164,813</u>	<u>\$ 3,993,960</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	90.49%	93.24%	91.03%
Covered Payroll ¹	\$ 3,363,227	\$ 3,259,812	\$ 3,261,894
Net Pension Liability as a percentage of Covered Payroll	136.52%	97.09%	122.44%

Notes to Schedule:¹ Results provided by the prior actuary, Freiman Little Actuaries.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS

Last 10 Fiscal Years

	09/30/2016 ¹	09/30/2015 ¹	09/30/2014 ¹
Total Pension Liability			
Service Cost	543,187	550,357	478,211
Interest	3,086,536	3,009,258	2,881,001
Changes of benefit terms	-	-	118,425
Differences between Expected and Actual Experience	26,221	(642,610)	96,146
Changes of assumptions	710,848	44,151	41,761
Contributions - Buy Back	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(2,141,125)	(1,793,418)	(2,248,284)
Net Change in Total Pension Liability	2,225,667	1,167,738	1,367,260
Total Pension Liability - Beginning	40,395,945	39,228,207	37,860,947
Total Pension Liability - Ending (a)	<u>\$ 42,621,612</u>	<u>\$ 40,395,945</u>	<u>\$ 39,228,207</u>
Plan Fiduciary Net Position			
Contributions - Employer	853,491	852,721	869,837
Contributions - State	252,594	228,139	233,451
Contributions - Employee	191,664	191,782	167,975
Contributions - Buy Back	-	-	-
Net Investment Income	2,915,646	385,598	3,088,757
Benefit Payments, including Refunds of Employee Contributions	(2,141,125)	(1,793,418)	(2,248,284)
Administrative Expense	(107,071)	(86,344)	(86,354)
Net Change in Plan Fiduciary Net Position	1,965,199	(221,522)	2,025,382
Plan Fiduciary Net Position - Beginning	35,211,438	35,432,960	33,407,578
Plan Fiduciary Net Position - Ending (b)	<u>\$ 37,176,637</u>	<u>\$ 35,211,438</u>	<u>\$ 35,432,960</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 5,444,975</u>	<u>\$ 5,184,507</u>	<u>\$ 3,795,247</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	87.22%	87.17%	90.33%
Covered Payroll ¹	\$ 3,169,645	\$ 2,938,951	\$ 2,899,869
Net Pension Liability as a percentage of Covered Payroll	171.79%	176.41%	130.88%

Notes to Schedule:¹ Results provided by the prior actuary, Freiman Little Actuaries.

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	\$ 1,069,223	\$ 1,069,223	\$ -	\$ 3,363,227	31.79%
09/30/2018 ¹	\$ 1,032,396	\$ 1,032,396	\$ -	\$ 3,259,812	31.67%
09/30/2017 ¹	\$ 997,726	\$ 997,726	\$ -	\$ 3,261,894	30.59%
09/30/2016 ¹	\$ 1,106,085	\$ 1,106,085	\$ -	\$ 3,169,645	34.90%
09/30/2015 ¹	\$ 1,080,860	\$ 1,080,860	\$ -	\$ 2,938,951	36.78%
09/30/2014 ¹	\$ 1,103,288	\$ 1,103,288	\$ -	\$ 2,899,869	38.05%
09/30/2013 ¹	\$ 1,124,361	\$ 1,124,361	\$ -	\$ 2,947,305	38.15%
09/30/2012 ¹	\$ 1,069,836	\$ 1,069,836	\$ -	\$ 3,013,887	35.50%
09/30/2011 ¹	\$ 1,003,043	\$ 1,003,043	\$ -	\$ 3,297,317	30.42%
09/30/2010 ¹	\$ 808,241	\$ 808,241	\$ -	\$ 3,577,177	22.59%

¹ Results provided by the prior actuary, Freiman Little Actuaries.

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:

Healthy Mortality (Pre-retirement):

Males: 10% RP-00 Combined Healthy White Collar+
90% RP-00 Combined Healthy Blue Collar
Females: 100% RP-00 Combined Healthy White Collar
Both male and female rates fully generational using Scale BB.

Healthy Mortality (Post-retirement):

Males: 10% RP-00 Annuitant White Collar+
90% RP-00 Combined Healthy Blue Collar
Females: 100% RP-00 Annuitant White Collar
Both male and female rates fully generational using Scale BB.

Disabled Mortality:

Males: 60% RP-00 Disabled Retiree Set Back 4 Years +
40% RP-00 Annuitant White Collar
Females: 60% RP-00 Disabled Retiree Set Forward 2 Yrs +
40% RP-00 Annuitant White Collar
No mortality improvement is assumed for disabled lives.

75% of active deaths are assumed to be service connected.

Assumed Rate of Investment Return: 7.75% per year net of investment related expenses.

Assumptions: All other assumptions and methods used for determining the Actuarially Determined Contribution can be found in the October 1, 2017 Actuarial Valuation Report for the City of Vero Beach Police Officers' Retirement Fund prepared by the prior actuary Freiman Little Actuaries.

EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

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

COMPONENTS OF PENSION EXPENSE
FISCAL YEAR SEPTEMBER 30, 2019

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 3,164,813	\$ 1,870,510	\$ 1,087,578	\$ -
Total Pension Liability Factors:				
Service Cost	605,715	-	-	605,715
Interest	3,525,391	-	-	3,525,391
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	49,124	-	49,124	-
Current year amortization of experience difference	-	(39,233)	(53,113)	13,880
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(308,518)	308,518
Benefit Payments	(2,738,251)	-	-	-
Net change	<u>1,441,979</u>	<u>(39,233)</u>	<u>(312,507)</u>	<u>4,453,504</u>
Plan Fiduciary Net Position:				
Contributions - Employer	788,992	-	-	-
Contributions - State	280,231	-	-	-
Contributions - Employee	212,777	-	-	(212,777)
Projected Net Investment Income	3,282,468	-	-	(3,282,468)
Difference between projected and actual earnings on Pension Plan investments	(1,719,147)	-	1,719,147	-
Current year amortization	-	(533,870)	(816,056)	282,186
Benefit Payments	(2,738,251)	-	-	-
Administrative Expenses	(91,872)	-	-	91,872
Net change	<u>15,198</u>	<u>(533,870)</u>	<u>903,091</u>	<u>(3,121,187)</u>
Ending Balance	<u>\$ 4,591,594</u>	<u>\$ 1,297,407</u>	<u>\$ 1,678,162</u>	<u>\$ 1,332,317</u>

AMORTIZATION SCHEDULE - INVESTMENTS

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

Plan Year Ending	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019	\$ 1,719,147	5	\$ 343,831	\$ 343,829	\$ 343,829	\$ 343,829	\$ 343,829	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (995,547)	5	\$ (199,109)	\$ (199,109)	\$ (199,109)	\$ (199,111)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (1,473,499)	5	\$ (294,700)	\$ (294,700)	\$ (294,699)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (200,305)	5	\$ (40,061)	\$ (40,061)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 2,361,133	5	\$ 472,225	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 282,186	\$ (190,041)	\$ (149,979)	\$ 144,718	\$ 343,829	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

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

Plan Year Ending	Changes of Assumptions	Recognition Period (Years)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2018	\$ 495,820	3.8	\$ 130,479	\$ 130,479	\$ 104,383	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 1,274	3.9	\$ 327	\$ 293	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 710,848	4.0	\$ 177,712	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 308,518	\$ 130,772	\$ 104,383	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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		Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience												
	Expected and Actual Experience	Recognition Period (Years)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
2019	\$ 49,124	4	\$ 12,281	\$ 12,281	\$ 12,281	\$ 12,281	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2018	\$ (149,084)	3.8	\$ (39,233)	\$ (39,233)	\$ (31,385)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2017	\$ 133,676	3.9	\$ 34,276	\$ 30,848	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
2016	\$ 26,221	4.0	\$ 6,556	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Net Increase (Decrease) in Pension Expense			\$ 13,880	\$ 3,896	\$ (19,104)	\$ 12,281	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		