# TOWN OF MEDLEY POLICE OFFICERS' RETIREMENT SYSTEM ACTUARIAL VALUATION

ACTUARIAL VALUATION AS OF OCTOBER 1, 2022

CONTRIBUTIONS APPLICABLE TO THE PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2024

GASB 67/68 DISCLOSURE INFORMATION AS OF SEPTEMBER 30, 2022





November 30, 2022

Board of Trustees Town of Medley Police Officers' Pension Board

Re: Town of Medley Police Officers' Retirement System

Dear Board:

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

The valuations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflect laws and regulations issued to date pursuant to the provisions of 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.

The funding percentages and unfunded accrued liability as measured based on the actuarial value of assets will differ from similar measures based on the market value of assets. These measures, as provided, are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of its liabilities. 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 Town of Medley, 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.

Additionally, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models that apply the funding and accounting rules to generate the results. All internally developed models are reviewed as part of the valuation process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

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, 2021. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2022 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 Town of Medley, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Police Officers' Retirement System. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

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

Respectfully submitted,

Foster & Foster, Inc.

By:

Patrick T. Donlan, EA, ASA, MAAA Enrolled Actuary #20-6595

By:

Sara E. Carlson, ASA, EA, MAAA Enrolled Actuary #20-8546

SEC/mw

Enclosures

## TABLE OF CONTENTS

Section	Title	Page
I	Introduction	
	a. Summary of Report	6
	b. Changes Since Prior Valuation	8
	c. Comparative Summary of Principal Valuation Results	9
II	Valuation Information	
	a. Reconciliation of Unfunded Actuarial Accrued Liabilities	16
	b. History of Funding Progress	17
	c. Actuarial Assumptions and Methods	18
	d. Glossary	22
	e. Discussion of Risk	24
	f. Partial History of Premium Tax Refunds	27
III	Trust Fund	28
IV	Member Statistics	
	a. Statistical Data	34
	b. Age and Service Distribution	35
	c. Valuation Participant Reconciliation	36
V	Summary of Current Plan	37
VI	Governmental Accounting Standards Board Statements No. 67 and No. 68 Disclosure Information	39

#### SUMMARY OF REPORT

The regular annual actuarial valuation of the Town of Medley Police Officers' Retirement System, performed as of October 1, 2022, 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, 2024.

The contribution requirements, compared with those set forth in the October 1, 2021 actuarial valuation report, are as follows:

Valuation Date	10/1/2022	10/1/2021
Applicable to Fiscal Year Ending	<u>9/30/2024</u>	<u>9/30/2023</u>
Town And State Required Contribution % of Projected Annual Payroll	20.4%	18.1%
State Contribution (Est.) <sup>1</sup>	\$225,066	\$225,066
% of Projected Annual Payroll	6.6%	6.6%
Town Required Contribution <sup>2</sup> % of Projected Annual Payroll	13.8%	11.5%

<sup>&</sup>lt;sup>1</sup> Represents the amount received in calendar 2022. As per a Mutual Consent Agreement between the Membership and the Town, all State Monies received each year will be available to offset the Town's required contribution.

As you can see, the Minimum Required Contribution shows an increase when compared to the results determined in the October 1, 2021 actuarial valuation report. The increase is attributable to both unfavorable actuarial experience as described in the next paragraph and the assumption and method changes made in conjunction with this valuation. The increase was offset in part by the Town making contributions in excess of the minimum actuarial requirement over the past year.

<sup>&</sup>lt;sup>2</sup> The required contribution from the combination of Town and State sources for the year ending September 30, 2024, is 20.4% of the actual payroll realized in that year. As a budgeting tool, the Town may contribute 13.8% of each Member's Salary and then make a one-time adjustment to account for the actual State Monies received.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of actuarial loss included an investment return of 5.81% (Actuarial Asset Basis) which fell short of the 7.50% assumption, less turnover than expected, and inactive mortality experience. 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

As a result of an Experience Study dated May 31, 2022, the Board approved the following changes in conjunction with this report:

- Actuarial Cost Method Changed from Frozen Entry Age to Entry Age Normal and the current Unfunded Actuarial Accrued Liability was consolidated into one base and amortized over 15 years. All future bases of any type will be amortized over 15 years as a level dollar amount.
- Investment Return Reduced from 7.50% to 7.25%, net of investment related expenses.
- Salary Increases Changed from an age-based table to a service-based table. Details are in the Actuarial Assumptions and Methods section of this report.
- Normal Retirement The assumption that Members eligible for Normal Retirement on the
  valuation date will work one more year was eliminated. Additionally, the assumption that
  Members who are at least age 55 with between 10 and 25 years of service will retire with a 100%
  probability was changed to 50% at first eligibility, and then 100% one year later.
- Withdrawal Rates Increased by 25% for Members below age 30.

A full description of the changes can be found in the Actuarial Assumptions and Methods section of this report and the impact on the funding requirements associated with these changes can be found in the Comparative Summary of Principal Valuation Results section.

### COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Asmp/Mthd 10/1/2022	Old Asmp/Mthd 10/1/2022	10/1/2021
A. Participant Data			
Actives	39	39	37
Service Retirees	24	24	24
DROP Retirees	0	0	0
Beneficiaries	2	2	2
Disability Retirees	0	0	0
Terminated Vested	<u>3</u>	<u>3</u>	<u>3</u>
Total	68	68	66
Payroll Under Assumed Ret. Age	3,397,412	3,790,242	3,428,807
Annual Rate of Payments to:			
Service Retirees	1,723,494	1,723,494	1,718,011
DROP Retirees	0	0	0
Beneficiaries	52,072	52,072	52,072
Disability Retirees	0	0	0
Terminated Vested	0	0	0
B. Assets			
Actuarial Value (AVA) <sup>1</sup>	33,462,458	33,462,458	32,042,163
Market Value (MVA) 1	29,330,892	29,330,892	35,646,537
C. Liabilities			
Present Value of Benefits			
Actives	17 600 214	17 401 744	15 444 510
Retirement Benefits	17,609,214	17,401,744 886,993	15,444,510
Disability Benefits  Death Benefits	910,445 55,753	56,466	822,588 51,205
Vested Benefits	907,301	893,275	791,323
Refund of Contributions	69,820	67,368	58,371
Service Retirees	19,751,338	19,323,611	19,553,048
DROP Retirees <sup>1</sup>	19,731,336	19,323,011	19,555,048
Beneficiaries	518,409	509,296	519,873
Disability Retirees	0	0	0
Terminated Vested	19,330	19,330	19,330
Terminated February			17,550
Total	39,841,610	39,158,083	37,260,248

C. Liabilities - (Continued)	New Asmp/Mthd <u>10/1/2022</u>	Old Asmp/Mthd <u>10/1/2022</u>	10/1/2021
Present Value of Future Salaries	29,145,421	29,130,405	26,899,557
Present Value of Future			
Member Contributions	1,457,271	1,456,520	1,344,978
Normal Cost (Retirement)	632,450	N/A	N/A
Normal Cost (Disability)	62,463	N/A	N/A
Normal Cost (Death)	2,954	N/A	N/A
Normal Cost (Vesting)	53,985	N/A	N/A
Normal Cost (Refunds)	11,608	N/A	N/A
Total Normal Cost	763,460	686,892	516,863
Sponsor Normal Cost	593,589	497,380	345,423
Present Value of Future			
Normal Costs (EAN)	6,092,909	6,281,398	5,925,092
Accrued Liability (Retirement)	12,539,496	12,161,581	10,463,722
Accrued Liability (Disability)	413,730	399,912	360,659
Accrued Liability (Death)	31,444	33,175	29,343
Accrued Liability (Vesting)	457,396	416,186	377,401
Accrued Liability (Refunds)	17,558	13,593	11,780
Accrued Liability (Inactives) 1	20,289,077	19,852,237	20,092,251
Total Actuarial Accrued Liability (EAN AL)	33,748,701	32,876,684	31,335,156
Total Actuarial Accrued Liability			
(FIL Method)	N/A	33,878,887	33,205,370
Unfunded Actuarial Accrued			
Liability (UAAL)	286,243	416,429	1,163,207
Funded Ratio (AVA / EAN AL)	99.2%	101.8%	102.3%
Funded Ratio (AVA / FIL AL)	N/A	98.8%	96.5%

D. Actuarial Present Value of	New Asmp/Mthd	Old Asmp/Mthd	
Accrued Benefits	10/1/2022	10/1/2022	<u>10/1/2021</u>
Vested Accrued Benefits			
Inactives <sup>1</sup>	20,289,077	19,852,237	20,092,251
Actives	7,062,362	6,607,230	5,771,404
Member Contributions	1,391,437	1,391,437	1,214,665
Total	28,742,876	27,850,904	27,078,320
Non-vested Accrued Benefits	1,717,660	1,671,874	1,227,352
Total Present Value		·	
Accrued Benefits (PVAB)	30,460,536	29,522,778	28,305,672
Funded Ratio (MVA / PVAB)	96.3%	99.4%	125.9%
Increase (Decrease) in Present Value of			
Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption/Method Changes	937,758	0	
Plan Experience	0	929,646	
Benefits Paid	0	(1,769,123)	
Interest	0	2,056,583	
Other	0	0	
Total	937,758	1,217,106	

VI C D	New Asmp/Mthd	Old Asmp/Mthd	10/1/2021
Valuation Date Applicable to Fiscal Year Ending	10/1/2022 9/30/2024	10/1/2022 9/30/2024	10/1/2021 9/30/2023
Applicable to Fiscal Teal Ending	<u>7/30/2024</u>	<u> </u>	<u>7/30/2023</u>
E. Pension Cost			
Sponsor Normal Cost (with interest)			
% of Total Annual Payroll <sup>2</sup>	18.1	13.6	10.5
Administrative Expenses (with interest)			
% of Total Annual Payroll <sup>2</sup>	1.4	1.3	1.3
Payment Required to Amortize			
Unfunded Actuarial Accrued			
Liability over 15 years			
(as of $10/1/2022$ , with interest)			
% of Total Annual Payroll <sup>2</sup>	0.9	2.3	6.3
Required Town and State Contribution			
% of Total Annual Payroll <sup>2</sup>	20.4	17.2	18.1
F. Past Contributions			
Plan Years Ending:	9/30/2022		
Town and State Requirement	835,944		
Actual Contributions Made:			
Members (excluding buyback)	175,619		
Town	987,082		
State	225,066		
Total	1,387,767		

N/A

G. Net Actuarial (Gain)/Loss

 $<sup>^{\</sup>rm 1}\,$  The asset values and liabilities include accumulated DROP Plan Balances as of 9/30/2022 and 9/30/2021.

 $<sup>^2</sup>$  Contributions developed as of 10/1/2022 are expressed as a percentage of total annual payroll at 10/1/2022 of \$3,397,412 after assumption changes and of \$3,790,242 before assumption changes.

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

	Projected Unfunded
<u>Year</u>	Actuarial Accrued Liability
2022	286,243
2023	275,069
2024	263,085
2027	221,664
2031	151,005
2034	83,398
2037	0

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

		<u>Actual</u>	Assumed
Year Ended	9/30/2022	6.73%	5.17%
Year Ended	9/30/2021	4.73%	5.15%
Year Ended	9/30/2020	5.19%	5.21%
Year Ended	9/30/2019	5.88%	5.36%
Year Ended	9/30/2018	7.14%	5.32%

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

		Market Value	Actuarial Value	Assumed
Year Ended	9/30/2022	-16.52%	5.81%	7.50%
Year Ended	9/30/2021	22.84%	10.59%	7.50%
Year Ended	9/30/2020	6.33%	7.71%	7.50%
Year Ended	9/30/2019	2.75%	8.45%	7.50%
Year Ended	9/30/2018	8.26%	7.65%	7.50%

### (iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2022 10/1/2012	\$3,397,412 2,688,574
(b) Total Increase		26.36%
(c) Number of Years		10.00
(d) Average Annual Rate		2.37%

#### 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.

Sara E. Carlson, ASA, EA, MAAA Enrolled Actuary #20-8546

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 (Before Method Change)

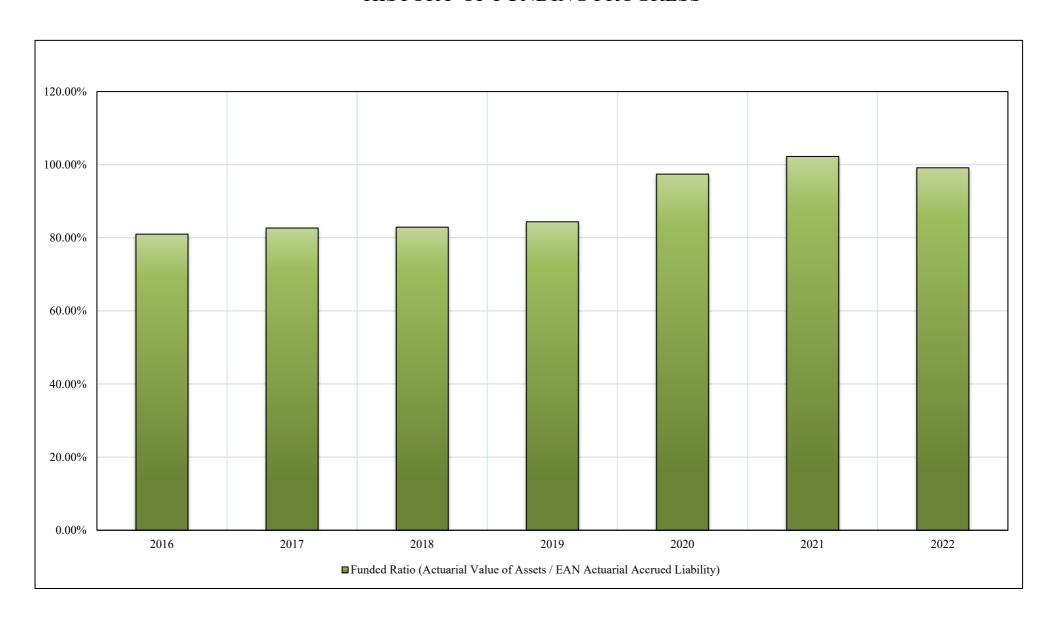
(1)	Unfunded Actuarial Accrued Liability as of October 1, 2021	\$1,163,207
(2)	Sponsor Normal Cost developed as of October 1, 2021	345,423
(3)	Expected administrative expenses for the year ended September 30, 2022	43,301
(4)	Expected interest on (1), (2) and (3)	114,771
(5)	Sponsor contributions to the System during the year ended September 30, 2022	1,212,148
(6)	Expected interest on (5)	38,125
(7)	Unfunded Actuarial Accrued Liability as of	
(,)	September 30, 2022 (1)+(2)+(3)+(4)-(5)-(6)	416,429
(8)	Change to UAAL due to Assumption Changes	872,017
(9)	Unfunded Actuarial Accrued Liability as of October 1, 2022	1,288,446

Type of	Date	Years	10/1/2022	Amortization
<u>Base</u>	<b>Established</b>	Remaining	<u>Amount</u>	<u>Amount</u>
Asmp/Mthd Change	10/1/2010	8	517,940	81,660
Benefits Change	10/1/2011	19	81,342	7,476
Benefits Change	10/1/2013	21	61,008	5,356
Assump Change	10/1/2016	24	117,818	9,789
Benefits Change	10/1/2017	25	26,795	2,192
Asmp/Mthd Change	10/1/2020	28	(672,766)	(52,936)
Benefits Chg. (3.25%)	10/1/2020	28	256,776	20,204
Benefits Chg. (Incentive)	10/1/2020	3	27,516	9,821
Asmp/Mthd Change	10/1/2022	15	872,017	90,685
			1,288,446	174,247

## RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES (After Method Change)

(1)	Unfunded Actuarial Acc	\$1,163,207			
(2)	Sponsor Normal Cost de	eveloped as of Octo	ober 1, 2021		345,423
(3)	Expected administrative	e expenses for the y	ear ended September 3	0, 2022	43,301
(4)	Expected interest on (1)	), (2) and (3)			114,771
(5)	Sponsor contributions to	o the System during	g the year ended Septen	nber 30, 2022	1,212,148
(6)	Expected interest on (5)	)			38,125
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2022 (1)+(2)+(3)+(4)-(5)-(6)				416,429
(8)	Change to UAAL due to Assumption Changes				872,017
(9)	Change to UAAL due to Method Change				(1,002,203)
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2022				286,243
	Type of  Base	Date Established	Years <u>Remaining</u>	10/1/2022 <u>Amount</u>	Amortization Amount
	Consolidation Base	10/1/2022	15	286,243	29,768

## HISTORY OF FUNDING PROGRESS



#### **ACTUARIAL ASSUMPTIONS AND METHODS**

#### Mortality Rate

Healthy Active Lives:

**Female:** PubS.H-2010 for Employees, set forward one year.

**Male:** PubS.H-2010 for Employees, set forward one year.

Healthy Retiree Lives:

**Female:** PubS.H-2010 for Healthy Retirees, set forward one year.

**Male:** PubS.H-2010 (Below Median) for Healthy Retirees, set forward one year.

Beneficiary Lives:

**Female:** PubG.H-2010 (Below Median) for Healthy Retirees.

**Male:** PubG.H-2010 (Below Median) for Healthy Retirees, set back one year.

Disabled Lives:

80% PubG.H-2010 for Disabled Retirees / 20% PubS.H-2010 for Disabled Retirees.

All rates are projected generationally with Mortality Improvement Scale MP-2018. We feel this assumption sufficiently accommodates future mortality improvements.

The previously described mortality 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, 2021 FRS valuation report for special risk employees, with appropriate adjustments made based on plan demographics.

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

7.25% (previously 7.50%) per year compounded annually, net of investment related expenses. This assumption is in line with other Florida municipal pension plans.

**Interest Rate** 

#### Salary Increases

#### **Current Assum**

Salary Scale			
Service	Rate		
<1	8.00%		
1-9	5.75%		
10-14	4.75%		
15+	4.00%		

Projected salary in the year of retirement is increased to account for non-regular compensation, based on census data provided by the Town for individual accrued sick and annual leave. This assumption was developed from the May 31, 2022 Experience Study.

#### **Prior Assum**

Salary Scale				
Age Rate				
20	6.78%			
25	6.78%			
30	6.16%			
35	5.72%			
40	5.29%			
45	4.98%			
50	4.67%			
55	4.37%			
60	4.06%			
62+	3.94%			

Payroll Growth

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

0.0% for purposes of amortizing the Unfunded Actuarial

Administrative Expenses

\$46,438 annually, based on the average of actual expenses incurred in the prior two fiscal years.

**Amortization Method** 

New UAAL amortization bases are amortized over 15 Years. Existing bases were consolidated as of October 1, 2022 and amortized over 15 years.

Bases established prior to the valuation date are adjusted proportionally to match the Expected Unfunded Actuarial Accrued Liability as of the valuation date, in order to align prior year bases with the portion of the current year UAAL associated with prior year sources.

## Funding Method

#### Retirement Age

Entry Age Normal Actuarial Cost Method (Previously Frozen Initial Liability Cost Method).

#### **Current Assum**

% Retiring During the

Year (>= 25 Years of Serv	rice)
---------------------------	-------

Age	Rate
50-51	5.0%
52+	100.0%

% Retiring During the

## Year (10-24 Years of Service)

Age	Service	Rate
50-54	10-24	5.0%
55	10-24	50.0%
56	11-24	100.0%

If age at 10 Years of Service > 55, then 50% at 10 Years and 100% at 11+ Years

#### **Prior Assum**

Earlier of Age 55 and 10 years of service or Age 52 and 25 years of service. Also, any member who has reached the above criteria is assumed to continue employment for one additional year.

The current assumption was developed from the May 31, 2022 Experience Study.

#### **Termination Rates**

% Terminating
During the Year

Sample Rates

Age	<b>Current Rate</b>	<b>Prior Rate</b>
20	8.25%	6.60%
30	5.50%	5.50%
40	2.86%	2.86%
50	0.88%	0.88%
56+	0.22%	0.22%

This assumption was developed based on an experience study preformed May 31, 2022.

### **Disability Rates**

% Becoming Disabled

	C				
During the Year					
Age	Rate				
20	0.14%				
30	0.18%				
40	0.30%				
50	1.00%				
60+	2.00%				

It is assumed that 75% of disablements and active Member deaths are service related. This assumption was developed from those used by other plans containing Florida municipal Police Officers.

Asset Valuation Method

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

#### **GLOSSARY**

Actuarial Value of Assets is the asset value used in the valuation to determine contribution requirements. It represents the plan's Market Value of Assets (see below), with adjustments according to the plan's Actuarial Asset Method. These adjustments produce a "smoothed" value that is likely to be less volatile from year to year than the Market Value of Assets.

<u>Entry Age Normal Cost Method</u> - 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.

<u>Market Value of Assets</u> is the fair market value of plan assets as of the valuation date. This amount may be adjusted to produce an Actuarial Value of Assets for plan funding purposes.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded. Under the Entry Age Normal cost method, it 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.

<u>Present Value of Benefits</u> is the single sum value on the valuation date of all future benefits to be paid to current plan participants.

<u>Total Annual Payroll</u> is the projected annual rate of pay for the fiscal year beginning on the valuation date of all covered Members.

<u>Total Required Contribution</u> 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.

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

#### 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.

- <u>Investment Return</u>: 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.
- <u>Salary Increases</u>: 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 309.1% on October 1, 2012 to 150.0% on October 1, 2022, 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 60.1%. 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 62.3% on October 1, 2012 to 99.2% on October 1, 2022.
- 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 6.8% on October 1, 2012 to -1.5% on October 1, 2022. The current Net Cash Flow Ratio of -1.5% 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

	10/1/2022	10/1/2021	10/1/2017	10/1/2012		
Support Ratio						
Total Actives Total Inactives <sup>1</sup> Actives / Inactives <sup>1</sup>	39 26 150.0%	37 26 142.3%	37 18 205.6%	34 11 309.1%		
Asset Volatility Ratio						
Market Value of Assets (MVA) Total Annual Payroll MVA / Total Annual Payroll	29,330,892 3,794,607 773.0%	35,646,537 3,428,807 1,039.6%	23,888,980 3,056,751 781.5%	13,222,908 2,688,574 491.8%		
Accrued Liability (AL) Ratio						
Inactive Accrued Liability Total Accrued Liability (EAN) Inactive AL / Total AL	20,289,077 33,748,701 60.1%	20,092,251 31,335,156 64.1%	14,717,900 25,837,498 57.0%	7,310,443 19,239,651 38.0%		
Funded Ratio						
Actuarial Value of Assets (AVA) Total Accrued Liability (EAN) AVA / Total Accrued Liability (EAN)	33,462,458 33,748,701 99.2%	32,042,163 31,335,156 102.3%	21,361,577 25,837,498 82.7%	11,981,793 19,239,651 62.3%		
Net Cash Flow Ratio						
Net Cash Flow <sup>2</sup> Market Value of Assets (MVA) Ratio	(429,473) 29,330,892 -1.5%	(424,256) 35,646,537 -1.2%	(46,963) 23,888,980 -0.2%	892,962 13,222,908 6.8%		

<sup>&</sup>lt;sup>1</sup> Excludes terminated participants awaiting a refund of member contributions.

<sup>&</sup>lt;sup>2</sup> Determined as total contributions minus benefit payments and administrative expenses.

### PARTIAL HISTORY OF PREMIUM TAX REFUNDS

Received During <u>Fiscal Year</u>	<u>Amount</u>	Increase from <u>Previous Year</u>
2006	50,461.55	%
2007	58,214.43	15.4%
2008	44,764.83	-23.1%
2009	73,584.94	64.4%
2010	64,298.13	-12.6%
2011	56,266.95	-12.5%
2012	72,718.45	29.2%
2013	73,866.06	1.6%
2014	109,520.58	48.3%
2015	120,320.93	9.9%
2016	110,856.60	-7.9%
2017	-	-100.0%
2018	262,555.72	N/A
2019	198,747.03	-24.3%
2020	149,539.83	-24.8%
2021	153,526.07	2.7%
2022	225,066.38	46.6%

## STATEMENT OF FIDUCIARY NET POSITION SEPTEMBER 30, 2022

<u>ASSETS</u>	MARKET VALUE
Receivables:	
Member Contributions in Transit	6,356.42
Member Buy-Back Contributions	144.24
Total Receivable	6,500.66
Investments:	
Mutual Funds:	
Fixed Income	9,155,838.28
Equity	20,168,552.80
Total Investments	29,324,391.08
Total Assets	29,330,891.74
<u>LIABILITIES</u>	
Total Liabilities	0.00

NET POSITION RESTRICTED FOR PENSIONS

29,330,891.74

#### STATEMENT OF CHANGES IN FIDUCIARY NET POSITION FOR THE YEAR ENDED SEPTEMBER 30, 2022 Market Value Basis

A	D	DI	T	'IO	NS	7
$A_{\rm J}$	נע	נט	ч	$\mathbf{I}$	זאזי	•

State

Contributions:	
Member	175,618.53
Buy-Back	1,153.92
Town	987,081.71

Total Contributions 1,388,920.54

225,066.38

**Investment Income:** 

Net Increase in Fair Value of Investments (5,884,172.88) Less Investment Expense<sup>1</sup> (2,000.00)

Net Investment Income (5,886,172.88)

Total Additions (4,497,252.34)

**DEDUCTIONS** 

Distributions to Members:

Benefit Payments 1,766,949.86 Lump Sum DROP Distributions 0.00 Refunds of Member Contributions 2,172.75

Total Distributions 1,769,122.61

Administrative Expense 49,270.65

Total Deductions 1,818,393.26

Net Increase in Net Position (6,315,645.60)

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 35,646,537.34

End of the Year 29,330,891.74

<sup>&</sup>lt;sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

### ACTUARIAL ASSET VALUATION September 30, 2022

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		Gains/Losses No Am		e <u>d</u> Recognized by V	aluation Year	
Ending	Gain/(Loss)	2022	2023	2024	2025	2026
09/30/2021	4,505,468	2,703,280	1,802,186	901,092	0	0
09/30/2022	(8,543,558)	(6,834,846)	(5,126,134)	(3,417,422)	(1,708,710)	0
Total		(4,131,566)	(3,323,948)	(2,516,330)	(1,708,710)	0

#### Development of Investment Gain/Loss

Market Value of Assets, 09/30/2021	35,646,537
Contributions Less Benefit Payments & Admin Expenses	(429,473)
Expected Investment Earnings*	2,657,385
Actual Net Investment Earnings	(5,886,173)
2022 Actuarial Investment Gain/(Loss)	(8,543,558)

<sup>\*</sup>Expected Investment Earnings = 0.075 \* (35,646,537 - 0.5 \* 429,473)

#### Development of Actuarial Value of Assets

Development of Actuarial value of A	ssets
(1) Market Value of Assets, 09/30/2022	29,330,892
(2) Gains/(Losses) Not Yet Recognized	(4,131,566)
(3) Actuarial Value of Assets, 09/30/2022, (1) - (2)	33,462,458
(A) 09/30/2021 Actuarial Assets:	32,042,163
(I) Net Investment Income:	
1. Earnings and Investment Gains	(5,884,173)
2. Change in Actuarial Value	7,735,940
3. Investment Expenses	(2,000)
Total	1,849,767
(B) 09/30/2022 Actuarial Assets:	33,462,458
Actuarial Assets Rate of Return = $2I/(A+B-I)$ :	5.81%
Market Value of Assets Rate of Return:	-16.52%
10/01/2022 Limited Actuarial Assets:	33,462,458
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(537,290)

### CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS SEPTEMBER 30, 2022 Actuarial Asset Basis

	REVENUES	
Contributions:		
Member	175,618.53	
Buy-Back	1,153.92	
Town	987,081.71	
State	225,066.38	
Total Contributions		1,388,920.54
Earnings from Investments:		
Earnings and Investment Gains	(5,884,172.88)	
Change in Actuarial Value	7,735,940.00	
-		
Total Earnings and Investment Gains		1,851,767.12
<b>.</b>		
Distributions to Members:	EXPENDITURES	
	1,766,949.86	
Benefit Payments Lump Sum DROP Distributions	0.00	
Refunds of Member Contributions	2,172.75	
retailed of Memori Continuations	2,172.73	
Total Distributions		1,769,122.61
		, ,
Expenses:		
Investment related <sup>1</sup>	2,000.00	
Administrative	49,270.65	
Total Expenses		51,270.65
		1 420 204 40
Change in Net Assets for the Year		1,420,294.40

Net Assets Beginning of the Year

Net Assets End of the Year<sup>2</sup>

32,042,163.34

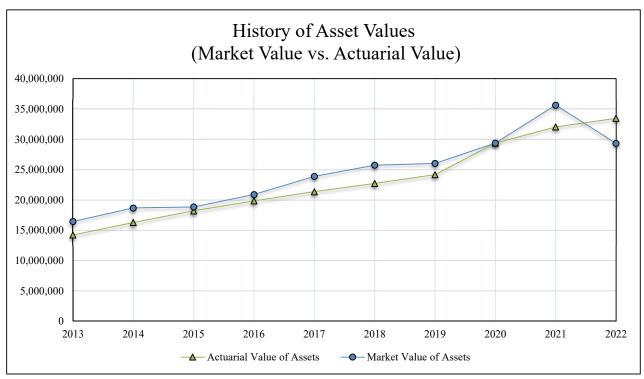
33,462,457.74

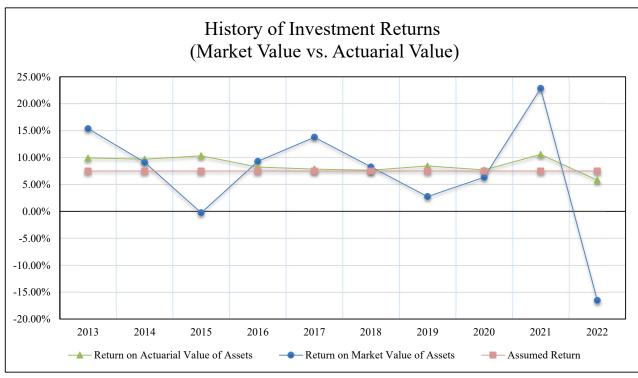
<sup>&</sup>lt;sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees. <sup>2</sup>Net Assets may be limited for actuarial consideration.

## TOWN CONTRIBUTIONS IN EXCESS OF MINIMUM REQUIREMENT FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2022

(1)	Town and State Required Contribution Rate	23.8%
(2)	Pensionable Payroll Derived from Member Contributions	\$3,512,370.60
(3)	Town and State Required Contribution (1) x (2)	835,944.20
(4)	Less Allowable State Contribution	(225,066.38)
(5)	Equals Required Town Contribution for Fiscal 2022	610,877.82
(6)	Plus 2021 Shortfall Contribution	12,918.29
(7)	Less Actual Town Contributions	(1,000,000.00)
(8)	Town Contributions in Excess of Minimum Requirement Applied to Reduce Unfunded Actuarial Accrued Liability as of September 30, 2022	(\$376,203.89)

### HISTORY OF ASSET VALUES AND INVESTMENT RETURNS





## STATISTICAL DATA

	10/1/2022	10/1/2021	10/1/2020	10/1/2019
Actives				
Number	39	37	36	37
Average Current Age	41.7	41.8	42.3	41.0
Average Age at Employment	31.6	32.2	31.9	31.9
Average Past Service	10.1	9.6	10.4	9.1
Average Annual Salary	\$97,298	\$92,670	\$91,868	\$86,721
Service Retirees				
Number	24	24	22	21
Average Current Age	63.1	62.1	62.1	61.3
Average Annual Benefit	\$71,812	\$71,584	\$71,202	\$69,516
DROP Retirees				
Number	0	0	0	1
Average Current Age	N/A	N/A	N/A	56.9
Average Annual Benefit	N/A	N/A	N/A	\$94,776
<u>Beneficiaries</u>				
Number	2	2	2	1
Average Current Age	51.5	50.5	49.5	67.3
Average Annual Benefit	\$26,036	\$26,036	\$26,036	\$52,072
Disability Retirees				
Number	0	0	0	0
Average Current Age	N/A	N/A	N/A	N/A
Average Annual Benefit	N/A	N/A	N/A	N/A
Terminated Vested				
Number	3	3	2	2
Average Current Age 1	N/A	N/A	N/A	N/A
Average Annual Benefit 1	N/A	N/A	N/A	N/A

<sup>&</sup>lt;sup>1</sup> The Average Current Age and Average Annual Benefit exclude participants awaiting a refund of contributions.

### AGE AND SERVICE DISTRIBUTION

## PAST SERVICE

A	<b>.</b> GE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 -	19												0
20 - 2	24	2	1										3
25 - 2	29		1										1
30 - 3	34		1		1	2	1	1					6
35 - 3	39		1			1	2	2					6
40 - 4	44					1	3	2	1				7
45 - 4	49						2	3	1				6
50 - 3	54						1	3	1	1			6
55 - 3	59						1	1			1		3
60 - 6	64										1		1
	65+												0
7	Γotal	2	4	0	1	4	10	12	3	1	2	0	39

### VALUATION PARTICIPANT RECONCILIATION

#### 1. Active lives

a. Number in prior valuation 10/1/2021	37
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	0
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	37
h. New entrants / Rehires	2
i. Total active life participants in valuation	39

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

Service

	201.100						
	Retirees,						
	Vested		Receiving	Receiving	Vested	Vested	
	Receiving	DROP	Death	Disability	(Deferred	(Due	
	<u>Benefits</u>	<u>Benefits</u>	<u>Benefits</u>	<u>Benefits</u>	Annuity)	Refund)	<u>Total</u>
a. Number prior valuation	24	0	2	0	0	3	29
Retired	0	0	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	0	0	0	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	24	0	2	0	0	3	29

#### SUMMARY OF CURRENT PLAN

Eligibility Employees who are classified as full-time sworn police

officers shall participate in the System as a condition of

employment.

<u>Credited Service</u> Total years and fractional parts of years of employment

with the Town as a Police Officer.

Salary Total W-2 compensation plus tax exempt, tax sheltered,

and tax deferred items of income (including overtime payments up to 300 hours per calendar year, but not including payments for extra duty or special detail work for second party employer). Additionally, Salary shall exclude payments for unused, accrued sick and annual leave hours earned on or after December 5, 2011.

<u>Average Final Compensation</u> Average Salary for the best 5 years during the 10 years

immediately preceding retirement or termination.

Member Contributions 5.0% of Salary.

<u>Town and State Contributions</u>

Remaining amount required in order to pay current costs

and amortize any unfunded past service cost over 30

years.

Normal Retirement

Date Earlier of: 1) age 55 and 10 years of Credited Service, or

2) age 52 and 25 years of Credited Service.

Benefit 3.25% of Average Final Compensation <u>times</u> Credited

Service (maximum 81.25% for those hired on and after

October 1, 2008).

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 3% for each year prior to

Normal Retirement.

Vesting

Schedule 100% after 10 years of Credited Service.

Benefit Amount Member will receive the vested portion of his (her)

accrued benefit payable at the otherwise Normal

Retirement Date (no imputing).

#### **Disability**

Eligibility

Service Incurred Covered from Date of Employment.

Non-Service Incurred 10 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 under 2.5% benefit

accrual rate but not less than 42% of Average Final Compensation (if Service Incurred) or 25% of Average

Final Compensation (if not in-line-of-duty).

Duration Payable for life and ten years certain or until recovery

(as determined by the Board). Options available.

**Death Benefits** 

Pre-Retirement

Vested Monthly accrued benefit payable to designated

beneficiary for 10 years at otherwise Normal Retirement

Date or Early Retirement Date (reduced).

Non-Vested Refund of accumulated contributions without interest.

Post-Retirement Benefits payable to beneficiary in accordance with

option selected at retirement.

<u>Cost-of-Living Adjustment (COLA)</u> Effective January 1, 2015, all future retirees, including

terminated vested members, disability retirees and preretirement death beneficiaries are entitled to a 1.0% annual COLA from benefit commencement date until the date the member attains or would have attained age 62 (the first COLA for members who retired under the Early Retirement Incentive in 2021 will be the date that

they would have otherwise reached their Normal

Retirement Date).

Deferred Retirement Option Plan

Eligibility Satisfaction of Normal Retirement requirements.

Participation Not to exceed 36 months.

Rate of Return Actual Net Investment Return for Plan assets.

Distribution Cash lump sum at termination of employment.

# STATEMENT OF FIDUCIARY NET POSITION SEPTEMBER 30, 2022

<u>ASSETS</u>	MARKET VALUE
Total Cash and Equivalents	0
Receivables:	
Member Contributions in Transit	6,357
Member Buy-Back Contributions	144
Total Receivable	6,501
Investments:	
Mutual Funds:	
Fixed Income	9,155,838
Equity	20,168,553
Total Investments	29,324,391
Total Assets	29,330,892
Total Liabilities	0
NET POSITION RESTRICTED FOR PENSIONS	29,330,892

## STATEMENT OF CHANGES IN FIDUCIARY NET POSITION FOR THE YEAR ENDED SEPTEMBER 30, 2022

#### Market Value Basis

AD	D	T	$\mathbf{O}$	NIC.
$\Delta \nu$	ועו	ш	W.	LND.

$\sim$		• •			
$\mathbf{C}$ o	ntı	٦h	11f1	Or	

Member	175,619
Buy-Back	1,154
Town	987,082
State	225,066

Total Contributions 1,388,921

**Investment Income:** 

Net Increase in Fair Value of Investments (5,884,173)
Interest & Dividends 0
Less Investment Expense<sup>1</sup> (2,000)

Net Investment Income (5,886,173)

Total Additions (4,497,252)

#### **DEDUCTIONS**

Distributions to Members:

Benefit Payments 1,766,950 Lump Sum DROP Distributions 0

Refunds of Member Contributions 2,172

Total Distributions 1,769,122

Administrative Expense 49,271

Total Deductions 1,818,393

Net Increase in Net Position (6,315,645)

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 35,646,537

End of the Year 29,330,892

<sup>&</sup>lt;sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

#### NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2022)

#### Plan Administration

The Plan is a single-employer defined benefit pension plan administered by the Board of Trustees of the Town of Medley Police Officers' Retirement System. The Plan Administrator is responsible for the overall administration of the Plan. It has discretionary authority to construe the terms of the Plan and make determinations on questions that may affect eligibility for benefits. The Plan Administrator may also retain the services of attorneys, accountants, actuaries, investment advisors and other professionals.

#### Plan Membership as of October 1, 2021:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	26
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	3
Active Plan Members	37
	66

#### Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2021 Actuarial Valuation Report for the Town of Medley Police Officers' Retirement System prepared by Foster & Foster Actuaries and Consultants.

#### **Contributions**

Member Contributions: 5.0% of Salary.

Town and State Contributions: Remaining amount required in order to pay current costs and amortize any unfunded past service cost over 30 years.

#### Investment Policy:

The following was the Board's adopted asset allocation policy as of September 30, 2022:

Asset Class	Target Allocation
Domestic Equity	60%
International Equity	10%
Fixed Income	10%
Cash	20%
Total	100%

#### 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, 2022, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was -16.52 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: Satisfaction of Normal Retirement requirements.

Participation: Not to exceed 36 months.

Rate of Return: Actual Net Investment Return for Plan assets.

The DROP balance as September 30, 2022 is \$0.

#### NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on September 30, 2022 were as follows:

Total Pension Liability \$ 33,282,651
Plan Fiduciary Net Position \$ (29,330,892)
Sponsor's Net Pension Liability \$ 3,951,759
Plan Fiduciary Net Position as a percentage of Total Pension Liability 88.13%

#### Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of October 1, 2021 updated to September 30, 2022 using the following actuarial assumptions:

Inflation2.50%Salary IncreasesService basedDiscount Rate7.25%Investment Rate of Return7.25%

Mortality Rate Healthy Active Lives:

Female: PubS.H-2010 for Employees, set forward one year. Male: PubS.H-2010 for Employees, set forward one year.

Mortality Rate Healthy Retiree Lives:

Female: PubS.H-2010 for Healthy Retirees, set forward one year.

Male: PubS.H-2010 (Below Median) for Healthy Retirees, set forward one year.

Mortality Rate Beneficiary Lives:

Female: PubG.H-2010 (Below Median) for Healthy Retirees.

Male: PubG.H-2010 (Below Median) for Healthy Retirees, set back one year.

Mortality Rate Disabled Lives:

80% PubG.H-2010 for Disabled Retirees / 20% PubS.H-2010 for Disabled Retirees.

All rates are projected generationally with Mortality Improvement Scale MP-2018.

The above described mortality 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, 2021 FRS valuation report for special risk employees.

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

The most recent actuarial experience study used to review the other significant assumptions was dated May 31, 2022.

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 2022 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, 2022 are summarized in the following table:

	Long Term Expected Real Rate of
Asset Class	Return <sup>1</sup>
Domestic Equity	4.25%
International Equity	4.50%
Fixed Income	0.50%
Cash	0.00%

<sup>&</sup>lt;sup>1</sup> Source: StanCorp Investment Advisers, Inc.

Please note that long term expected return of the total portfolio is greater than simply multiplying each of the above "Long Term Expected Real Rate of Returns" by their target allocation % and adding them together. Not only is the time horizon longer for an actuarial valuation relative to the time horizon over which the above projected returns were generated, but also there is an additional correlation resulting from a diversified portfolio that will provide additional returns.

#### Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.25 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.

				Current		
	19	% Decrease	Di	scount Rate	1%	6 Increase
		6.25%		7.25%		8.25%
Sponsor's Net Pension Liability	\$	7,710,445	\$	3,951,759	\$	795,729

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS Last 2 Fiscal Years

	(	09/30/2022	(	09/30/2021
Total Pension Liability				
Service Cost		799,802		773,184
Interest		2,344,504		2,242,316
Changes of benefit terms		-		1,009,199
Differences between Expected and Actual Experience		(141,271)		65,287
Changes of assumptions		702,770		-
Contributions - Buy Back		1,154		-
Benefit Payments, including Refunds of Employee Contributions		(1,769,122)		(1,720,673)
Net Change in Total Pension Liability		1,937,837		2,369,313
Total Pension Liability - Beginning		31,344,814		28,975,501
Total Pension Liability - Ending (a)	\$	33,282,651	\$	31,344,814
Plan Fiduciary Net Position				
Contributions - Employer		987,082		1,012,918
Contributions - State		225,066		153,526
Contributions - Employee		175,619		173,578
Contributions - Buy Back		1,154		-
Net Investment Income		(5,886,173)		6,692,900
Benefit Payments, including Refunds of Employee Contributions		(1,769,122)		(1,720,673)
Administrative Expense		(49,271)		(43,605)
Net Change in Plan Fiduciary Net Position		(6,315,645)		6,268,644
Plan Fiduciary Net Position - Beginning		35,646,537		29,377,893
Plan Fiduciary Net Position - Ending (b)	\$	29,330,892	\$	35,646,537
Net Pension Liability - Ending (a) - (b)	\$	3,951,759	\$	(4,301,723)
	9	3,731,737	Ψ	(1,501,725)
Plan Fiduciary Net Position as a percentage of the Total Pension Liability		88.13%		113.72%
Covered Payroll	\$	3,512,371	\$	3,471,561
Net Pension Liability as a percentage of Covered Payroll		112.51%		-123.91%

#### Notes to Schedule of Changes in Net Pension Liability and Related Ratios:

#### Changes of benefit terms:

For measurement date 09/30/2021, amounts reported as changes of benefit terms, resulted from Ordinance No. C-449. This ordinance was adopted on May 3, 2021 and provided the following benefit changes:

- 1.) Increase the benefit accrual rate from 3.00% to 3.25% of Average Final Compensation for each year of Credited Service. This improvement is for all years of service but only affects Members who terminate or enter DROP after May 3, 2021.
- 2.) Increase the maximum benefit from 75% to 81.25% of Average Final Compensation for those Members hired on or after October 1, 2008.
- 3.) Provide a 90-day window beginning May 3, 2021 for Police Officers who attain 20 years of Credited Service to allow them to retire immediately with no Early Retirement Reduction Factor. These Members will not be allowed to participate in the DROP and their first Cost of Living Adjustment will be when they would have reached their original Normal Retirement Date.
- 4.) Change the minimum age that distributions need to begin from age 70 ½ to age 72.

#### Changes of assumptions:

For measurement date 09/30/2022, amounts reported as changed of assumptions resulted from an Experience Study dated May 31, 2022, the following changes were made:

- Investment Return Reduced from 7.50% to 7.25%, net of investment related expenses.
- Salary Increases Changed from an age-based table to a service-based table.
- Normal Retirement The assumption that Members eligible for Normal Retirement on the valuation date will work one more year was eliminated. Additionally, the assumption that Members who are at least age 55 with between 10 and 25 years of service will retire with a 100% probability was changed to 50% at first eligibility, and then 100% one year later.
- Withdrawal Rates Increased by 25% for Members below age 30.

#### SCHEDULE OF CONTRIBUTIONS

Last 2 Fiscal Years

		Contributions in relation to			Contributions
	Actuarially	the Actuarially	Contribution		as a percentage
	Determined	Determined	Deficiency	Covered	of Covered
Fiscal Year Ended	Contribution Contributions		(Excess)	Payroll	Payroll
09/30/2022	\$ 835,944	\$ 1,212,148	\$ (376,204)	\$ 3,512,371	34.51%
09/30/2021	\$ 1 166 <i>444</i>	\$ 1 166 444	\$ _	\$ 3.471.561	33.60%

#### Notes to Schedule

Valuation Date: 10/01/2020 (AIS 03/16/2021)

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 can be found in the October 1, 2020 Actuarial Valuation for the Town of Medley Police Officers' Retirement System prepared by Foster & Foster Actuaries and Consultants.

## SCHEDULE OF INVESTMENT RETURNS

#### Last 2 Fiscal Years

	Annual Money-Weighted Rate of Return
Fiscal Year Ended	Net of Investment Expense
09/30/2022	-16.52%
09/30/2021	22.84%

#### NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2022)

#### Plan Description

The Plan is a single-employer defined benefit pension plan administered by the Board of Trustees of the Town of Medley Police Officers' Retirement System. The Plan Administrator is responsible for the overall administration of the Plan. It has discretionary authority to construe the terms of the Plan and make determinations on questions that may affect eligibility for benefits. The Plan Administrator may also retain the services of attorneys, accountants, actuaries, investment advisors and other professionals.

Employees who are classified as full-time sworn police officers shall participate in the System as a condition of employment.

#### Plan Membership as of October 1, 2021:

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	26
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	3
Active Plan Members	37
	66

#### Benefits Provided

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

A summary of the benefit provisions can be found in the October 1, 2021 Actuarial Valuation Report for the Town of Medley Police Officers' Retirement System prepared by Foster & Foster Actuaries and Consultants.

#### Contributions

Member Contributions: 5.0% of Salary.

Town and State Contributions: Remaining amount required in order to pay current costs and amortize any unfunded past service cost over 30 years.

#### **Net Pension Liability**

The measurement date is September 30, 2022.

The measurement period for the pension expense was October 1, 2021 to September 30, 2022.

The reporting period is October 1, 2021 through September 30, 2022.

The Sponsor's Net Pension Liability was measured as of September 30, 2022.

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, 2021 updated to September 30, 2022 using the following actuarial assumptions:

Inflation	2.50%
Salary Increases	Service based
Discount Rate	7.25%
Investment Rate of Return	7.25%

Mortality Rate Healthy Active Lives:

Female: PubS.H-2010 for Employees, set forward one year. Male: PubS.H-2010 for Employees, set forward one year.

Mortality Rate Healthy Retiree Lives:

Female: PubS.H-2010 for Healthy Retirees, set forward one year.

Male: PubS.H-2010 (Below Median) for Healthy Retirees, set forward one year.

Mortality Rate Beneficiary Lives:

Female: PubG.H-2010 (Below Median) for Healthy Retirees.

Male: PubG.H-2010 (Below Median) for Healthy Retirees, set back one year.

Mortality Rate Disabled Lives:

80% PubG.H-2010 for Disabled Retirees / 20% PubS.H-2010 for Disabled Retirees.

All rates are projected generationally with Mortality Improvement Scale MP-2018.

The above described mortality 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, 2021 FRS valuation report for special risk employees.

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

The most recent actuarial experience study used to review the other significant assumptions was dated May 31, 2022.

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 2022 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, 2022 are summarized in the following table:

		Long Term Expected
Asset Class	Target Allocation	Real Rate of Return <sup>1</sup>
Domestic Equity	60%	4.25%
International Equity	10%	4.50%
Fixed Income	10%	0.50%
Cash	20%	0.00%
Total	100%	

<sup>&</sup>lt;sup>1</sup> Source: StanCorp Investment Advisers, Inc.

Please note that long term expected return of the total portfolio is greater than simply multiplying each of the above "Long Term Expected Real Rate of Returns" by their target allocation % and adding them together. Not only is the time horizon longer for an actuarial valuation relative to the time horizon over which the above projected returns were generated, but also there is an additional correlation resulting from a diversified portfolio that will provide additional returns.

#### GASB 68

#### Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.25 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)									
	<b>Total Pension</b>	Plan Fiduciary	Net Pension							
	Liability	Net Position	Liability							
	(a)	(b)	(a)-(b)							
Balances as September 30, 2021	\$ 31,344,814	\$ 35,646,537	\$ (4,301,723)							
Changes for a Year:										
Service Cost	799,802	-	799,802							
Interest	2,344,504	-	2,344,504							
Differences between Expected and Actual Experience	(141,271)	-	(141,271)							
Changes of assumptions	702,770	-	702,770							
Changes of benefit terms	-	-	-							
Contributions - Employer	-	987,082	(987,082)							
Contributions - State	-	225,066	(225,066)							
Contributions - Employee	-	175,619	(175,619)							
Contributions - Buy Back	1,154	1,154	-							
Net Investment Income	-	(5,886,173)	5,886,173							
Benefit Payments, including Refunds of Employee Contributions	(1,769,122)	(1,769,122)	-							
Administrative Expense		(49,271)	49,271							
Net Changes	1,937,837	(6,315,645)	8,253,482							
Balances as September 30, 2022	\$ 33,282,651	\$ 29,330,892	\$ 3,951,759							

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

				Current		
	19	% Decrease	Di	scount Rate	1	% Increase
	6.25%		7.25%			8.25%
Sponsor's Net Pension Liability	\$	7,710,445	\$	3,951,759	\$	795,729

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

FISCAL YEAR SEPTEMBER 30, 2022

For the year ended September 30, 2022, the Sponsor will recognize a Pension Expense of \$1,550,039. On September 30, 2022, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of	Deferred Inflows of
	Resources	Resources
Differences between Expected and Actual Experience	194,765	155,395
Changes of assumptions	585,640	287,283
Net difference between Projected and Actual Earnings on Pension Plan investments	4,518,372	
Total	\$ 5,298,777	\$ 442,678

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:	
2023	\$ 1,181,241
2024	\$ 942,336
2025	\$ 825,763
2026	\$ 1,813,176
2027	\$ 93,583
Thereafter	\$ _

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS Last 2 Fiscal Years

Measurement Date		09/30/2022	(	09/30/2021
Total Pension Liability				
Service Cost		799,802		773,184
Interest		2,344,504		2,242,316
Changes of benefit terms		-		1,009,199
Differences between Expected and Actual Experience		(141,271)		65,287
Changes of assumptions		702,770		-
Contributions - Buy Back		1,154		-
Benefit Payments, including Refunds of Employee Contributions		(1,769,122)		(1,720,673)
Net Change in Total Pension Liability		1,937,837		2,369,313
Total Pension Liability - Beginning		31,344,814		28,975,501
Total Pension Liability - Ending (a)	\$	33,282,651	\$	31,344,814
Plan Fiduciary Net Position				
Contributions - Employer		987,082		1,012,918
Contributions - State		225,066		153,526
Contributions - Employee		175,619		173,578
Contributions - Buy Back		1,154		-
Net Investment Income		(5,886,173)		6,692,900
Benefit Payments, including Refunds of Employee Contributions		(1,769,122)		(1,720,673)
Administrative Expense		(49,271)		(43,605)
Net Change in Plan Fiduciary Net Position		(6,315,645)		6,268,644
Plan Fiduciary Net Position - Beginning		35,646,537		29,377,893
Plan Fiduciary Net Position - Ending (b)	\$	29,330,892	\$	35,646,537
Net Pension Liability - Ending (a) - (b)	\$	3,951,759	\$	(4,301,723)
Plan Fiduciary Net Position as a percentage of the Total Pension Liability		88.13%		113.72%
Covered Payroll	\$	3,512,371	\$	3,471,561
Net Pension Liability as a percentage of Covered Payroll	Ψ	112.51%	Ψ	-123.91%
		112.51/0		123.71/0

#### Notes to Schedule of Changes in Net Pension Liability and Related Ratios:

#### Changes of benefit terms:

For measurement date 09/30/2021, amounts reported as changes of benefit terms, resulted from Ordinance No. C-449. This ordinance was adopted on May 3, 2021 and provided the following benefit changes:

- 1.) Increase the benefit accrual rate from 3.00% to 3.25% of Average Final Compensation for each year of Credited Service. This improvement is for all years of service but only affects Members who terminate or enter DROP after May 3, 2021.
- 2.) Increase the maximum benefit from 75% to 81.25% of Average Final Compensation for those Members hired on or after October 1, 2008.
- 3.) Provide a 90-day window beginning May 3, 2021 for Police Officers who attain 20 years of Credited Service to allow them to retire immediately with no Early Retirement Reduction Factor. These Members will not be allowed to participate in the DROP and their first Cost of Living Adjustment will be when they would have reached their original Normal Retirement Date.
- 4.) Change the minimum age that distributions need to begin from age  $70 \frac{1}{2}$  to age 72.

#### Changes of assumptions:

For measurement date 09/30/2022, amounts reported as changed of assumptions resulted from an Experience Study dated May 31, 2022, the following changes were made:

- Investment Return Reduced from 7.50% to 7.25%, net of investment related expenses.
- Salary Increases Changed from an age-based table to a service-based table.
- Normal Retirement The assumption that Members eligible for Normal Retirement on the valuation date will work one year was eliminated. Additionally, the assumption that Members who are at least age 55 with between 10 and 25 years of service will retire with a 100% probability was changed to 50% at first eligibility, and then 100% one year later.
- Withdrawal Rates Increased by 25% for Members below age 30.

### SCHEDULE OF CONTRIBUTIONS

Last 2 Fiscal Years

		relation to the		Contributions	
	Actuarially	Actuarially		as a percentage	
	Determined	Determined	Deficiency	Covered	of Covered
Fiscal Year Ended	Contribution	Contributions	(Excess)	Payroll	Payroll
09/30/2022	\$ 835,944	\$ 1,212,148	\$ (376,204)	\$ 3,512,371	34.51%
09/30/2021	\$ 1,166,444	\$ 1,166,444	\$ -	\$ 3,471,561	33.60%

#### Notes to Schedule

Valuation Date: 10/01/2020 (AIS 03/16/2021)

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 can be found in the October 1, 2020 Actuarial Valuation for the Town of Medley Police Officers' Retirement System prepared by Foster & Foster Actuaries and Consultants.

## EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

	• • •	• 4 •	1 4 1 10 1 1	1 4 1 1 1 1 0	r informational purposes.
I ha tallawing	intarmatian	ic not roailiro	d to be disclosed	hilt is provided to	t informational niirnoege
THETOHOWINE	шилишаич	i is not i cuun c	u to be discipsed	Dut is biolitica for	. IIIIVI IIIAUVIIAI DUI DUSCS.
				<u>I</u>	1 1

# COMPONENTS OF PENSION EXPENSE FISCAL YEAR SEPTEMBER 30, 2022

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ (4,301,723)	\$ 4,154,246	\$ 1,094,754	\$ -
Total Pension Liability Factors:				
Service Cost	799,802	-	-	799,802
Interest	2,344,504	-	-	2,344,504
Changes in benefit terms	-	-	-	-
Contributions - Buy Back	1,154	-	-	1,154
Differences between Expected and Actual Experience				
with regard to economic or demographic assumptions	(141,271)	141,271	-	-
Current year amortization of experience difference	-	(112,997)	(90,696)	(22,301)
Change in assumptions about future economic or				
demographic factors or other inputs	702,770	-	702,770	-
Current year amortization of change in assumptions	-	(95,761)	(216,842)	121,081
Benefit Payments, including Refunds of Employee				
Contributions	(1,769,122)			
Net change	1,937,837	(67,487)	395,232	3,244,240
Plan Fiduciary Net Position:				
Contributions - Employer	987,082	-	-	-
Contributions - State	225,066	-	-	-
Contributions - Employee	175,619	-	-	(175,619)
Contributions - Buy Back	1,154	-	-	(1,154)
Projected Net Investment Income	2,657,385	-	-	(2,657,385)
Difference between projected and actual earnings on				
Pension Plan investments	(8,543,558)	-	8,543,558	-
Current year amortization	-	(940,799)	(2,031,485)	1,090,686
Benefit Payments, including Refunds of Employee				
Contributions	(1,769,122)	-	-	-
Administrative Expenses	(49,271)			49,271
Net change	(6,315,645)	(940,799)	6,512,073	(1,694,201)
Ending Balance	\$ 3,951,759	\$ 3,145,960	\$ 8,002,059	\$ 1,550,039
Ending Darance	Ψ 3,331,133	Ψ 3,143,300	Ψ 0,002,039	Ψ 1,550,057

## 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	Differences Between Projected and Actual	Recognition										
Ending	Earnings	Period (Years)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2022	\$ 8,543,558	5	\$ 1,708,710	\$ 1,708,712	\$ 1,708,712	\$ 1,708,712	\$ 1,708,712	\$ -	\$ -	\$ -	\$ -	- \$
2021	\$ (4,505,468)	5	\$ (901,094)	\$ (901,094)	\$ (901,094)	\$ (901,094)	\$ -	\$ -	\$ -	\$ -	\$ -	- \$
2020	\$ 320,153	5	\$ 64,031	\$ 64,031	\$ 64,031	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$
2019	\$ 1,293,722	5	\$ 258,744	\$ 258,744	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$
2018	\$ (198,523)	5	\$ (39,705)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$
Net Increase	e (Decrease) in Pension	Expense	\$ 1,090,686	\$ 1,130,393	\$ 871,649	\$ 807,618	\$ 1,708,712	\$ -	\$ -	\$ -	\$ -	- \$

## 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)		2022		2023		2024	2025		2026		2027		2028		2029		2030			2031	
2022	\$	702,770	6	\$	117,130	\$	117,128	\$	117,128 \$	117,128	\$	117,128	\$	117,128	\$	_	\$		- \$		_	\$		_
2020	\$	(574,563)	6	\$	(95,761)	\$	(95,761)	\$	(95,761) \$			•	\$	-	\$	-	\$		- \$		_	\$		-
2016	\$	697,984	7	\$	99,712	\$	-	\$	- \$	-	\$	-	\$	-	\$	-	\$		- \$		-	\$		-
Not In one oo	. (D	- ana asa) in Danaian	Emana	Φ.	121 001	¢	21.267	¢	21.267 \$	21 267	¢	117 129	Φ	117 120	¢.		Φ.		Ф.			Φ.		
Net Increas	e (D	ecrease) in Pension	Expense	\$	121,081	\$	21,367	\$	21,367 \$	21,367	\$	117,128	\$	117,128	\$	-	\$		- \$		-	<b>&gt;</b>		-

## AMORTIZATION SCHEDULE - EXPERIENCE

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

Plan Year		ferences Between pected and Actual	Recognition																				
Ending	Experience		Period (Years)	2022		2023		2024		2025		2026		2027		2028		2029		2030		 2031	
2022	\$	(141,271)	6	\$	(23,546)	\$ (23,545)	\$	(23,545)	\$	(23,545)	\$	(23,545)	\$	(23,545)	\$	_	\$	_	-	\$	_	\$	_
2021	\$	65,287	6	\$	10,881	\$ 10,881	\$		\$	, , ,	\$		\$	- 9	\$	-	\$	_		\$	-	\$	_
2020	\$	56,651	6	\$	9,442	\$ 9,442	\$	9,442	\$	9,442	\$	_	\$	- 5	\$	-	\$	-	-	\$	-	\$	-
2019	\$	315,249	6	\$	52,542	\$ 52,542	\$	52,542	\$	-	\$	-	\$	- 5	\$	-	\$	_		\$	-	\$	-
2018	\$	(226,019)	6	\$	(37,670)	\$ (37,670)	\$	-	\$	-	\$	-	\$	- 5	\$	-	\$	-	-	\$	-	\$	-
2017	\$	124,820	7	\$	17,831	\$ 17,831	\$	-	\$	-	\$	-	\$	- 5	\$	-	\$	-	-	\$	-	\$	-
2016	\$	(362,464)	7	\$	(51,781)	\$ -	\$	-	\$	-	\$	-	\$	- 5	\$	-	\$	-	•	\$	-	\$	-
Net Increase (Decrease) in Pension Expense					(22,301)	\$ 29,481	\$	49,320	\$	(3,222)	\$	(12,664)	\$	(23,545)	\$		\$		<del>_</del>	\$	_	\$ 	<del>-</del>