

NORTH BAY FIRE DISTRICT  
FIREFIGHTERS' PENSION TRUST FUND

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



**FOSTER & FOSTER**  
ACTUARIES AND CONSULTANTS

November 21, 2022

Board of Trustees  
North Bay Fire District  
Firefighters' Pension Board

Re: North Bay Fire District Firefighters' Pension Trust Fund

Dear Board:

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

The valuations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflect laws and regulations issued to date pursuant to the provisions of Chapters 112 and 175, Florida Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in the valuations, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience.

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

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.

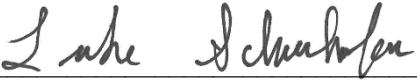
To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the North Bay Fire District, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Firefighters' Pension Trust Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

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

Respectfully submitted,

Foster & Foster, Inc.

By:   
\_\_\_\_\_  
Joseph L. Griffin, ASA, EA, MAAA  
Enrolled Actuary #20-6938

By:   
\_\_\_\_\_  
Luke M. Schoenhofen, ASA, EA, MAAA  
Enrolled Actuary #20-8968

JLG/lke

Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the North Bay Fire District Firefighters' Pension Trust Fund, performed as of October 1, 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>
Minimum Required Contribution	\$381,519	
% of Projected Annual Payroll		29.7%
Member Contributions (Est.)	66,588	
% of Projected Annual Payroll		5.0%
District And State Required Contribution	314,931	
% of Projected Annual Payroll		24.7%
State Contribution (Est.) <sup>1</sup>	123,429	123,429
% of Projected Annual Payroll		10.1%
District Required Contribution <sup>2</sup>	\$191,502	
% of Projected Annual Payroll		14.6%

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

<sup>2</sup> Please note that the District has access to a prepaid contribution of \$65,648.82 that is available to offset a portion of the above stated requirements for the fiscal year ending September 30, 2023.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. Sources of actuarial loss included an investment return of 5.52% (Actuarial Asset Basis) which fell short of the 7.25% assumption and less turnover than expected. These losses were offset in part by a gain associated with an average salary increase of 2.51% which fell short of the 6.16% assumption.

## CHANGES SINCE PRIOR VALUATION

### Plan Changes

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

### Actuarial Assumption/Method Changes

The funding method was changed from a percentage of payroll to a fixed dollar amount.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Method <u>10/1/2022</u>	Old Method <u>10/1/2022</u>	<u>10/1/2021</u>
<b>A. Participant Data</b>			
Actives	16	16	15
Service Retirees	2	2	2
Beneficiaries	1	1	1
Disability Retirees	3	3	3
Terminated Vested	7	7	7
<b>Total</b>	<b>29</b>	<b>29</b>	<b>28</b>
 Payroll Under Assumed Ret. Age	 1,220,835	 1,220,835	 1,149,295
 Annual Rate of Payments to:			
Service Retirees	91,282	91,282	91,282
Beneficiaries	57,356	57,356	57,356
Disability Retirees	38,524	38,524	38,524
Terminated Vested	65,201	65,201	65,201
 <b>B. Assets</b>			
Actuarial Value (AVA) <sup>1</sup>	7,068,920	7,068,920	6,553,060
Market Value (MVA) <sup>1</sup>	6,288,965	6,288,965	7,211,008
 <b>C. Liabilities</b>			
<b>Present Value of Benefits</b>			
<b>Actives</b>			
Retirement Benefits	6,748,544	6,748,544	6,176,283
Disability Benefits	89,336	89,336	84,144
Death Benefits	37,868	37,868	35,495
Vested Benefits	481,993	481,993	454,730
Refund of Contributions	27,222	27,222	25,737
Service Retirees	1,075,849	1,075,849	1,087,344
Beneficiaries	668,158	668,158	674,750
Disability Retirees	451,762	451,762	455,338
Terminated Vested	490,864	490,864	456,080
Share Plan Balances <sup>1</sup>	0	0	0
Excess State Monies Reserve	128,294	128,294	128,294
 <b>Total</b>	 <b>10,199,890</b>	 <b>10,199,890</b>	 <b>9,578,195</b>



C. Liabilities - (Continued)	New Method <u>10/1/2022</u>	Old Method <u>10/1/2022</u>	<u>10/1/2021</u>
Present Value of Future Salaries	11,740,106	11,740,106	11,436,347
Present Value of Future Member Contributions	587,005	587,005	571,817
Normal Cost (Retirement)	261,222	261,222	246,773
Normal Cost (Disability)	5,252	5,252	4,857
Normal Cost (Death)	1,954	1,954	1,813
Normal Cost (Vesting)	24,365	24,365	23,235
Normal Cost (Refunds)	<u>4,389</u>	<u>4,389</u>	<u>3,733</u>
Total Normal Cost	297,182	297,182	280,411
Present Value of Future Normal Costs	2,809,864	2,809,864	2,750,979
Accrued Liability (Retirement)	4,266,268	4,266,268	3,736,872
Accrued Liability (Disability)	40,914	40,914	37,047
Accrued Liability (Death)	20,681	20,681	18,608
Accrued Liability (Vesting)	240,395	240,395	226,273
Accrued Liability (Refunds)	6,841	6,841	6,610
Accrued Liability (Inactives)	2,686,633	2,686,633	2,673,512
Share Plan Balances <sup>1</sup>	0	0	0
Excess State Monies Reserve	<u>128,294</u>	<u>128,294</u>	<u>128,294</u>
Total Actuarial Accrued Liability (EAN AL)	7,390,026	7,390,026	6,827,216
Unfunded Actuarial Accrued Liability (UAAL)	321,106	321,106	274,156
Funded Ratio (AVA / EAN AL)	95.7%	95.7%	96.0%

D. Actuarial Present Value of Accrued Benefits	New Method <u>10/1/2022</u>	Old Method <u>10/1/2022</u>	<u>10/1/2021</u>
Vested Accrued Benefits			
Inactives + Share Plan Balances <sup>1</sup>	2,686,633	2,686,633	2,673,512
Actives	1,963,928	1,963,928	1,644,032
Member Contributions	<u>466,531</u>	<u>466,531</u>	<u>406,235</u>
Total	5,117,092	5,117,092	4,723,779
Non-vested Accrued Benefits	<u>436,648</u>	<u>436,648</u>	<u>302,705</u>
Total Present Value			
Accrued Benefits (PVAB)	5,553,740	5,553,740	5,026,484
Funded Ratio (MVA / PVAB)	113.2%	113.2%	143.5%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Method Changes	0	0	
Plan Experience	0	356,783	
Benefits Paid	0	(187,162)	
Interest	0	357,635	
Other	<u>0</u>	<u>0</u>	
Total	0	527,256	

	New Method	Old Method	
Valuation Date	10/1/2022	10/1/2022	10/1/2021
Applicable to Fiscal Year Ending	<u>9/30/2024</u>	<u>9/30/2024</u>	<u>9/30/2023</u>

E. Pension Cost

Normal Cost <sup>2</sup>	\$324,184		
% of Total Annual Payroll <sup>2</sup>		25.2	25.3
Administrative Expenses <sup>2</sup>	25,263		
% of Total Annual Payroll <sup>2</sup>		2.0	2.2
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 20 years (as of 10/1/2022) <sup>2</sup>	32,072		
% of Total Annual Payroll <sup>2</sup>		2.5	2.2
Minimum Required Contribution	381,519		
% of Total Annual Payroll <sup>2</sup>		29.7	29.7
Expected Member Contributions <sup>2</sup>	66,588		
% of Total Annual Payroll <sup>2</sup>		5.0	5.0
Expected District and State Contribution	314,931		
% of Total Annual Payroll <sup>2</sup>		24.7	24.7

F. Past Contributions

Plan Years Ending:	<u>9/30/2022</u>
District and State Requirement	299,072
Actual Contributions Made:	
District	175,643
State	<u>123,429</u>
Total	299,072

G. Net Actuarial (Gain)/Loss 68,218

<sup>1</sup> The asset values and liabilities include accumulated Share Plan Balances as of 9/30/2022 and 9/30/2021.

<sup>2</sup> Contributions developed as of 10/1/2022 displayed above have been adjusted to account for assumed salary increase and interest components.

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

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2022	321,106
2023	312,854
2024	304,004
2029	249,147
2033	189,204
2038	76,803
2042	0

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

	<u>Actual</u>	<u>Assumed</u>
Year Ended 9/30/2022	2.51%	6.16%
Year Ended 9/30/2021	13.22%	6.25%
Year Ended 9/30/2020	9.57%	6.60%
Year Ended 9/30/2019	7.77%	6.62%
Year Ended 9/30/2018	11.24%	6.48%

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

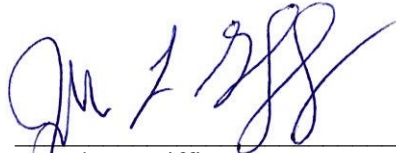
	<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended 9/30/2022	-14.88%	5.52%	7.25%
Year Ended 9/30/2021	21.45%	10.20%	7.50%
Year Ended 9/30/2020	9.82%	7.30%	7.50%
Year Ended 9/30/2019	5.15%	7.23%	7.75%
Year Ended 9/30/2018	7.97%	6.53%	7.75%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2022	\$1,220,835
	10/1/2012	846,355
(b) Total Increase		44.25%
(c) Number of Years		10.00
(d) Average Annual Rate		3.73%

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.



Joseph L. Griffin, ASA, EA, MAAA  
Enrolled Actuary #20-6938

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

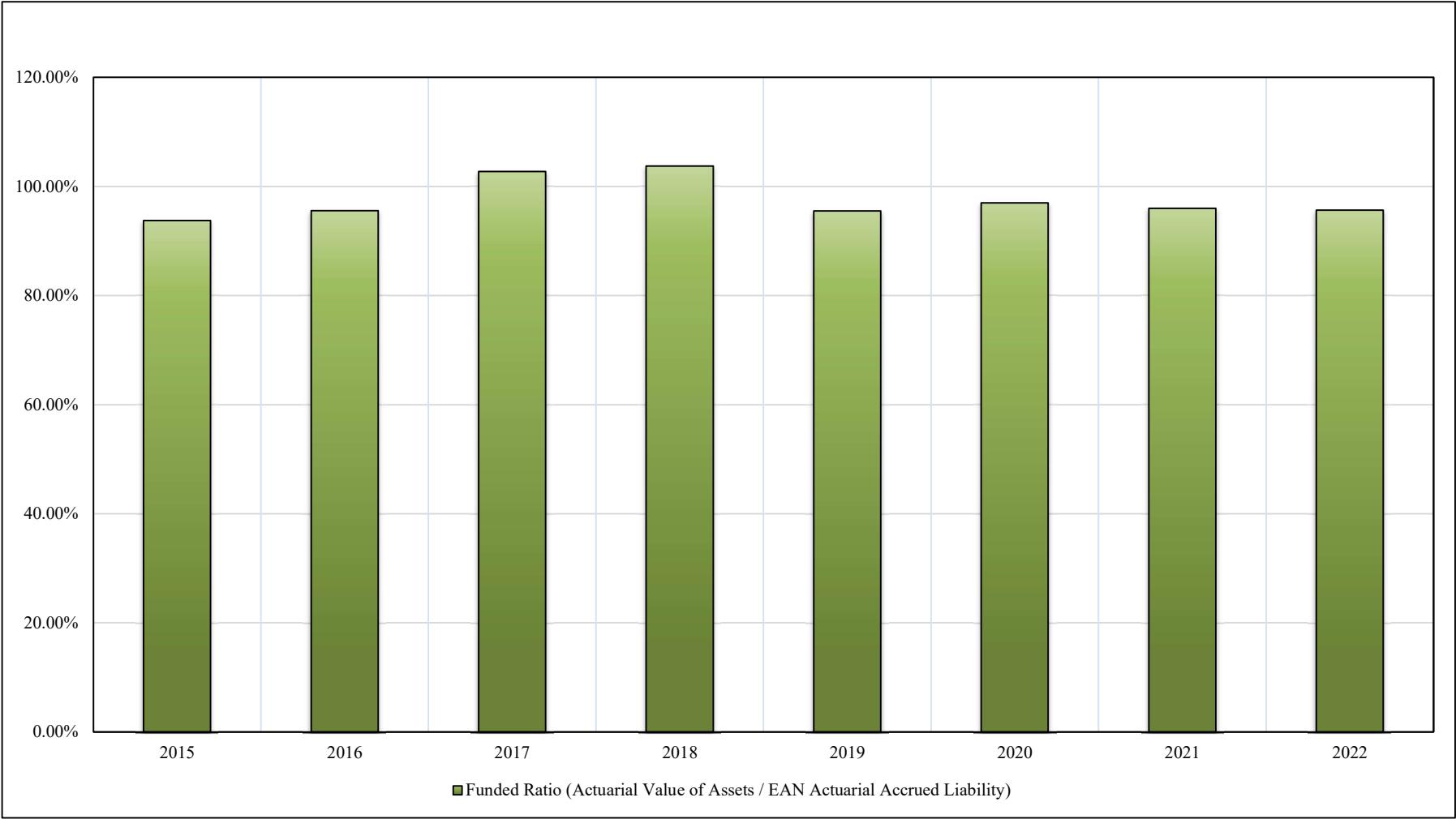
(1)	Unfunded Actuarial Accrued Liability as of October 1, 2021	\$274,156
(2)	Sponsor Normal Cost developed as of October 1, 2021	222,946
(3)	Expected administrative expenses for the year ended September 30, 2022	24,304
(4)	Expected interest on (1), (2) and (3)	36,921
(5)	Sponsor contributions to the System during the year ended September 30, 2022	299,072
(6)	Expected interest on (5)	6,367
(7)	Expected Unfunded Actuarial Accrued Liability as of September 30, 2022 (1)+(2)+(3)+(4)-(5)-(6)	252,888
(8)	Change to UAAL due to Method Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	68,218
(10)	Unfunded Actuarial Accrued Liability as of October 1, 2022	321,106

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2022 Amount</u>	<u>Amortization Amount</u>
Initial Base	10/1/2017	15	(83,563)	(8,690)
Actuarial Loss	10/1/2018	16	55,702	5,589
Method Change	10/1/2018	16	(90,688)	(9,100)
Benefits Change	10/1/2018	16	(180)	(18)
Actuarial Loss	10/1/2019	17	169,165	16,436
Assump Change	10/1/2019	17	115,125	11,186
Actuarial Gain	10/1/2020	18	(25,910)	(2,445)
Assump Change	10/1/2020	18	(34,832)	(3,287)
Actuarial Gain	10/1/2021	19	(53,222)	(4,892)
Assump Change	10/1/2021	19	201,291	18,501
Actuarial Loss	10/1/2022	20	68,218	6,121
			<u>321,106</u>	<u>29,401</u>

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2021	\$274,156
(2) Expected UAAL as of October 1, 2022	252,888
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	115,115
Salary Increases	(115,053)
Active Decrements	71,725
Inactive Mortality	14,074
Other	<u>(17,643)</u>
Increase in UAAL due to (Gain)/Loss	68,218
Method Changes	<u>0</u>
(4) Actual UAAL as of October 1, 2022	\$321,106

# 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 (Below Median) 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.

### Interest Rate

7.25% per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.

### Salary Increases

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

Payroll Growth

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

Administrative Expenses

\$23,159 annually, based on the average of actual expenses incurred in the prior two fiscal years.

Amortization Method

New UAAL amortization bases are amortized over 20 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.

Retirement Age

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

Early Retirement

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

Disability Rate

See table later in this section. It is assumed that 90% of disablements and active Member deaths are service related. This assumption was developed from those used by other plans containing Florida municipal Firefighters.

Termination Rate

See table later in this section. This assumption was developed from those used by other plans containing Florida municipal Firefighters.

Funding Method

Entry Age Normal Actuarial Cost Method. The following loads are applied for determining the minimum required contribution:

Interest - A half year, based on current 7.25% assumption.

Salary - A full year, based on current 5.27% assumption.

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.

% Terminating During the Year		% Becoming Disabled During the Year	
Age	Rate	Age	Rate
20	6.0%	20	0.03%
25	5.7%	25	0.03%
30	5.0%	30	0.04%
35	3.8%	35	0.05%
40	2.6%	40	0.07%
45	1.6%	45	0.10%
50	0.8%	50	0.18%
55	0.3%	55	0.36%
60	0.2%	60	0.90%
65	0.2%	65+	2.22%
70	0.2%		

## 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.

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.

Market Value of Assets 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.

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

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

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

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

## 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 500.0% on October 1, 2015 to 177.8% 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 36.4%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors may result in lower volatility in contribution requirements when compared to a more 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 93.8% on October 1, 2015 to 95.7% 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 5.0% on October 1, 2015 to 2.4% on October 1, 2022. The current Net Cash Flow Ratio of 2.4% indicates that contributions are generally in excess of 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>10/1/2022</u>	<u>10/1/2021</u>	<u>10/1/2017</u>	<u>10/1/2015</u>
<u>Support Ratio</u>				
Total Actives	16	15	17	15
Total Inactives <sup>1</sup>	9	9	7	3
Actives / Inactives <sup>1</sup>	177.8%	166.7%	242.9%	500.0%

Asset Volatility Ratio

Market Value of Assets (MVA)	6,288,965	7,211,008	4,399,004	3,389,301
Total Annual Payroll	1,220,835	1,149,295	910,803	874,609
MVA / Total Annual Payroll	515.1%	627.4%	483.0%	387.5%

Accrued Liability (AL) Ratio

Inactive Accrued Liability	2,686,633	2,673,512	1,807,409	733,616
Total Accrued Liability (EAN)	7,390,026	6,827,216	4,215,322	3,771,686
Inactive AL / Total AL	36.4%	39.2%	42.9%	19.5%

Funded Ratio

Actuarial Value of Assets (AVA)	7,068,920	6,553,060	4,332,200	3,536,301
Total Accrued Liability (EAN)	7,390,026	6,827,216	4,215,322	3,771,686
AVA / Total Accrued Liability (EAN)	95.7%	96.0%	102.8%	93.8%

Net Cash Flow Ratio

Net Cash Flow <sup>2</sup>	148,129	168,978	109,031	169,592
Market Value of Assets (MVA)	6,288,965	7,211,008	4,399,004	3,389,301
Ratio	2.4%	2.3%	2.5%	5.0%

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

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



PARTIAL HISTORY OF PREMIUM TAX REFUNDS

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from Previous Year</u>
1998	12,899.20	_____ %
1999	16,762.16	29.9%
2000	19,060.35	13.7%
2001	22,546.42	18.3%
2002	24,345.00	8.0%
2003	30,197.67	24.0%
2004	32,799.43	8.6%
2005	38,385.97	17.0%
2006	44,709.46	16.5%
2007	65,574.57	46.7%
2008	104,942.35	60.0%
2009	107,950.54	2.9%
2010	91,832.55	-14.9%
2011	117,749.32	28.2%
2012	96,458.03	-18.1%
2013	108,137.86	12.1%
2014	122,408.31	13.2%
2015	103,271.36	-15.6%
2016	92,377.22	-10.5%
2017	70,246.48	-24.0%
2018	69,082.65	-1.7%
2019	67,868.16	-1.8%
2020	74,986.86	10.5%
2021	76,434.90	1.9%
2022	123,429.35	61.5%

EXCESS STATE MONIES RESERVE

	Regular Distribution			Special Distribution		
	<u>Actual State Contribution</u>	<u>Applicable "Frozen" Amount</u>	<u>Excess State Monies Reserve</u>	<u>Actual State Contribution</u>	<u>Applicable "Frozen" Amount</u>	<u>Excess State Monies Reserve</u>
1999	\$16,762.16	\$12,899.20	\$3,862.96	\$0.00	\$0.00	\$0.00
2000	19,060.35	12,899.20	6,161.15	0.00	0.00	0.00
2001	22,546.42	12,899.20	9,647.22	0.00	0.00	0.00
2002	24,345.00	12,899.20	11,445.80	0.00	0.00	0.00
2003	27,289.56	12,899.20	14,390.36	2,908.11	0.00	2,908.11
2004	27,556.80	12,899.20	14,657.60	5,242.63	0.00	5,242.63
2005	33,356.11	12,899.20	20,456.91	5,029.86	0.00	5,029.86
2006	36,014.94	12,899.20	23,115.74	8,694.52	0.00	8,694.52
2007	48,324.73	46,582.20	1,742.53	17,249.84	0.00	17,249.84
2008	63,785.35	46,582.20	17,203.15	41,157.00	0.00	41,157.00
2009	57,884.45	46,582.20	11,302.25	50,066.09	0.00	50,066.09
2010	61,001.04	61,001.04	0.00	30,831.51	25,276.16	5,555.35
2011	61,546.42	61,546.42	0.00	56,202.90	24,730.78	31,472.12
2012	62,513.71	62,513.71	0.00	33,944.32	23,763.49	10,180.83
2013	70,175.15	70,175.15	0.00	37,962.71	16,102.05	21,860.66
2014	78,818.70	78,818.70	0.00	43,589.61	7,458.50	36,131.11
2015	71,929.79	71,929.79	0.00	31,341.57	14,347.41	16,994.16
2016	73,789.47	71,929.79	1,859.68	18,587.75	14,347.41	4,240.34
2017	66,621.75	71,929.79	0.00	3,624.73	14,347.41	0.00
2018	66,343.88	66,343.88	0.00	2,738.77	2,738.77	0.00
2019	67,868.16	67,868.16	0.00	0.00	0.00	0.00
2020	73,934.58	73,934.58	0.00	1,052.28	1,052.28	0.00
2021	76,434.90	76,434.90	0.00	0.00	0.00	0.00
2022	122,770.03	122,770.03	0.00	659.32	659.32	0.00
			<u>135,845.35</u>			<u>256,782.62</u>
Accumulated Regular Excess			135,845.35			
Accumulated Special Excess			<u>256,782.62</u>			
Total Excess State Monies			392,627.97			
Less Excess Used in Funding Res. No. 07-01 (3.0% BR)			(93,822.60)			
Less Excess Used in Funding Res. No. 10-01 (3.5% MR, 3 Yr AFC)			<u>(170,511.12)</u>			
Equals Current State Monies Reserve			\$128,294.25			

STATEMENT OF FIDUCIARY NET POSITION  
SEPTEMBER 30, 2022

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Short Term Investments	36,000.70	36,000.70
Total Cash and Equivalents	36,000.70	36,000.70
Receivables:		
Member Contributions in Transit	4,647.04	4,647.04
District Contributions in Transit	60,736.53	60,736.53
State Contributions	123,429.35	123,429.35
Total Receivable	188,812.92	188,812.92
Investments:		
Mutual Funds:		
Fixed Income	1,833,995.80	1,539,034.95
Equity	4,071,158.49	3,711,685.30
Pooled/Common/Commingled Funds:		
Real Estate	678,357.96	883,972.12
Total Investments	6,583,512.25	6,134,692.37
Total Assets	6,808,325.87	6,359,505.99
<u>LIABILITIES</u>		
Payables:		
Investment Expenses	4,446.68	4,446.68
Administrative Expenses	445.85	445.85
Prepaid District Contribution	65,648.82	65,648.82
Total Liabilities	70,541.35	70,541.35
NET POSITION RESTRICTED FOR PENSIONS	6,737,784.52	6,288,964.64

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

ADDITIONS

Contributions:

Member	60,296.78
District	175,642.68
State	123,429.35

Total Contributions 359,368.81

Investment Income:

Net Realized Gain (Loss)	35,814.56
Unrealized Gain (Loss)	(1,353,651.47)
Net Increase in Fair Value of Investments	(1,317,836.91)
Interest & Dividends	275,021.75
Less Investment Expense <sup>1</sup>	(27,356.20)

Net Investment Income (1,070,171.36)

Total Additions (710,802.55)

DEDUCTIONS

Distributions to Members:

Benefit Payments	187,162.44
Refunds of Member Contributions	0.00

Total Distributions 187,162.44

Administrative Expense 24,078.07

Total Deductions 211,240.51

Net Increase in Net Position (922,043.06)

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 7,211,007.70

End of the Year 6,288,964.64

<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 Ending	Gain/(Loss)	<u>Gains/Losses Not Yet Recognized</u>				2026
		Amounts Not Yet Recognized by Valuation Year				
		2022	2023	2024	2025	
09/30/2019	(129,695)	(25,939)	0	0	0	0
09/30/2020	116,223	46,488	23,243	0	0	0
09/30/2021	800,116	480,070	320,047	160,024	0	0
09/30/2022	(1,600,718)	(1,280,574)	(960,430)	(640,286)	(320,142)	0
<b>Total</b>		<b>(779,955)</b>	<b>(617,140)</b>	<b>(480,262)</b>	<b>(320,142)</b>	<b>0</b>

Development of Investment Gain/Loss

Market Value of Assets, 09/30/2021	7,211,008
Contributions Less Benefit Payments & Admin Expenses	213,777
Expected Investment Earnings*	530,547
Actual Net Investment Earnings	<u>(1,070,171)</u>
2022 Actuarial Investment Gain/(Loss)	(1,600,718)

\*Expected Investment Earnings =  $0.0725 * (7,211,008 + 0.5 * 213,777)$

Development of Actuarial Value of Assets

(1) Market Value of Assets, 09/30/2022	6,288,965
(2) Gains/(Losses) Not Yet Recognized	<u>(779,955)</u>
(3) Actuarial Value of Assets, 09/30/2022, (1) - (2)	7,068,920

(A) 09/30/2021 Actuarial Assets: 6,553,060

(I) Net Investment Income:	
1. Interest and Dividends	275,022
2. Realized Gain (Loss)	35,815
3. Unrealized Gain (Loss)	(1,353,651)
4. Change in Actuarial Value	1,437,903
5. Investment Expenses	<u>(27,356)</u>
<b>Total</b>	<b>367,732</b>

(B) 09/30/2022 Actuarial Assets, including Prepaid Contributions: 7,134,568

Actuarial Assets Rate of Return =  $2I/(A+B-I)$ : 5.52%  
 Market Value of Assets Rate of Return: -14.88%

10/01/2022 Limited Actuarial Assets (not including Prepaid): 7,068,920

Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis) (115,115)

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

REVENUES

Contributions:		
Member	60,296.78	
District	175,642.68	
State	123,429.35	
 Total Contributions		 359,368.81
Earnings from Investments:		
Interest & Dividends	275,021.75	
Net Realized Gain (Loss)	35,814.56	
Unrealized Gain (Loss)	(1,353,651.47)	
Change in Actuarial Value	1,437,903.00	
 Total Earnings and Investment Gains		 395,087.84
 EXPENDITURES		
Distributions to Members:		
Benefit Payments	187,162.44	
Refunds of Member Contributions	0.00	
 Total Distributions		 187,162.44
Expenses:		
Investment related <sup>1</sup>	27,356.20	
Administrative	24,078.07	
 Total Expenses		 51,434.27
 Change in Net Assets for the Year		 515,859.94
 Net Assets Beginning of the Year		 6,553,059.70
 Net Assets End of the Year <sup>2</sup>		 7,068,919.64

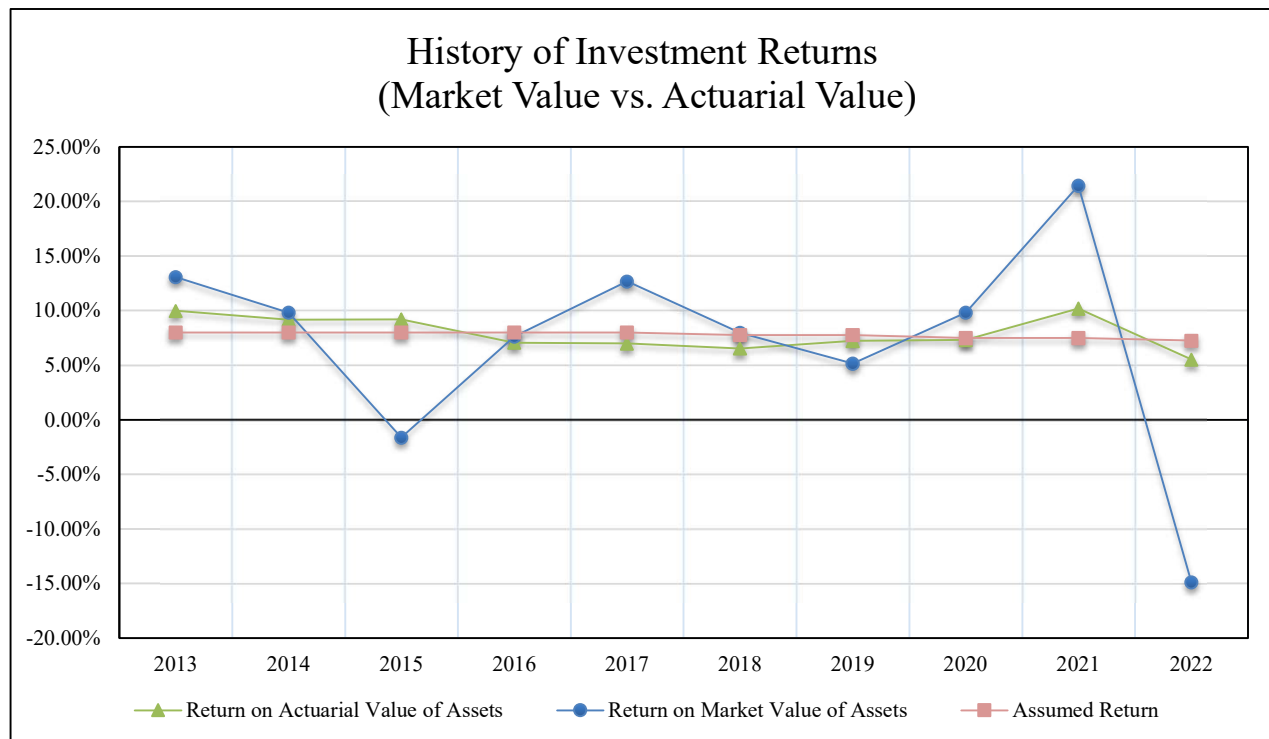
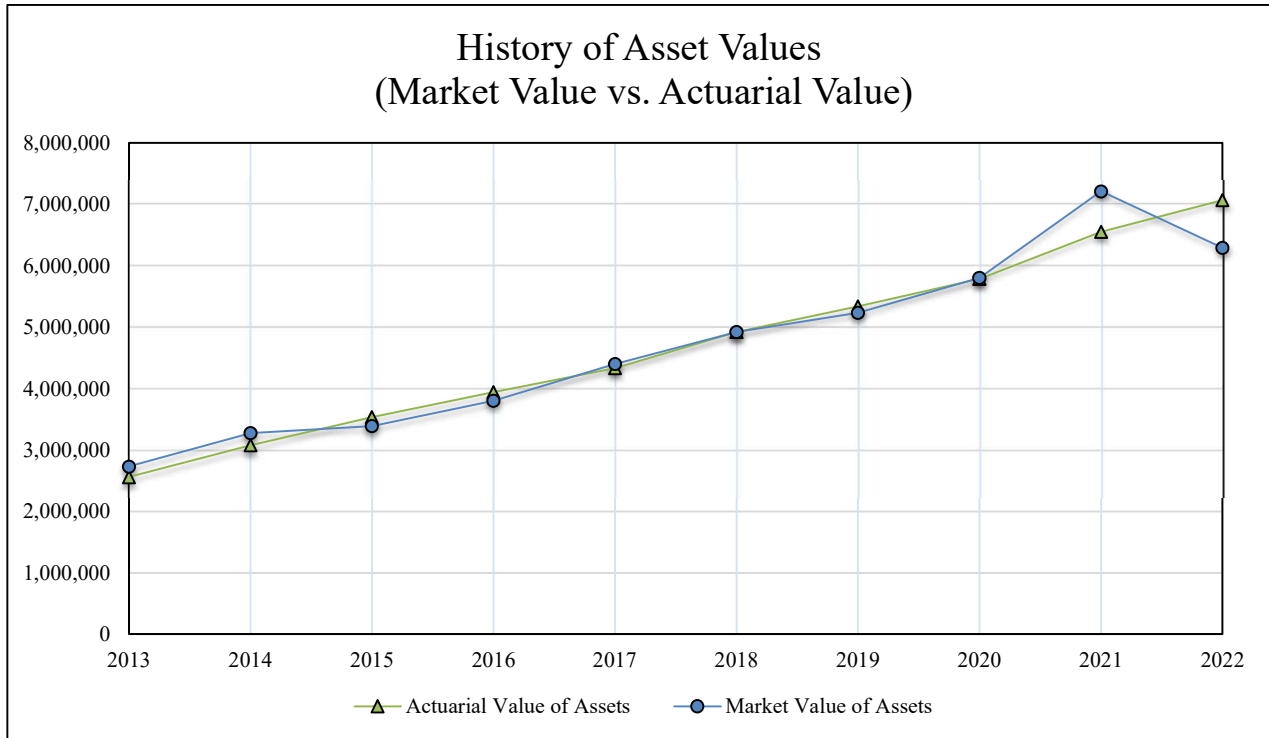
<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

<sup>2</sup>Net Assets may be limited for actuarial consideration.

RECONCILIATION OF DISTRICT SHORTFALL/(PREPAID) CONTRIBUTION  
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2022

(1) Required District and State Contributions	\$299,072.03
(2) Less Allowable State Contribution	<u>(123,429.35)</u>
(3) Required District Contribution for Fiscal 2022	175,642.68
(4) Plus 2021 Shortfall Contribution	14,592.02
(5) Less Actual District Contributions	<u>(255,883.52)</u>
(6) Equals District's Shortfall/(Prepaid) Contribution as of September 30, 2022	(\$65,648.82)

# HISTORY OF ASSET VALUES AND INVESTMENT RETURNS





STATISTICAL DATA

	<u>10/1/2022</u>	<u>10/1/2021</u>	<u>10/1/2020</u>	<u>10/1/2019</u>
<u>Actives</u>				
Number	16	15	16	16
Average Current Age	38.2	38.2	36.9	36.2
Average Age at Employment	27.5	27.8	28.0	27.7
Average Past Service	10.7	10.4	8.9	8.5
Average Annual Salary	\$76,302	\$76,620	\$66,148	\$60,824
<u>Service Retirees</u>				
Number	2	2	3	3
Average Current Age	64.0	63.0	61.3	60.3
Average Annual Benefit	\$45,641	\$45,641	\$49,546	\$49,546
<u>Beneficiaries</u>				
Number	1	1	0	0
Average Current Age	59.8	58.8	N/A	N/A
Average Annual Benefit	\$57,356	\$57,356	N/A	N/A
<u>Disability Retirees</u>				
Number	3	3	3	3
Average Current Age	55.5	54.5	53.5	52.5
Average Annual Benefit	\$12,841	\$12,841	\$12,841	\$12,841
<u>Terminated Vested</u>				
Number	7	7	6	6
Average Current Age <sup>1</sup>	45.3	44.3	43.3	45.7
Average Annual Benefit <sup>1</sup>	\$21,734	\$21,734	\$21,734	\$22,372

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

## AGE AND SERVICE DISTRIBUTION

### PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24	1											1
25 - 29												0
30 - 34					1	5						6
35 - 39						1		2				3
40 - 44						1		1				2
45 - 49						1				1		2
50 - 54								1				1
55 - 59										1		1
60 - 64												0
65+												0
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>8</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>16</b>

## VALUATION PARTICIPANT RECONCILIATION

### 1. Active lives

a. Number in prior valuation 10/1/2021	15
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 distributio	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. Continuing participants	15
g. New entrants / Rehires	1
h. Total active life participants in valuation	16

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

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested (Deferred Annuity)	Vested (Due Refund)	<u>Total</u>
a. Number prior valuation	2	1	3	3	4	13
Retired						
Vested (Deferred Annuity)						
Vested (Due Refund)						
Hired/Terminated in Same Year						
Death, With Survivor						
Death, No Survivor						
Disabled						
Refund of Contributions						
Rehires						
Expired Annuities						
Data Corrections						
b. Number current valuation	2	1	3	3	4	13

SUMMARY OF CURRENT PLAN  
(Through Resolution No. 13-03)

<u>Eligibility</u>	Full-time employees who are classified as full-time Firefighters 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 District after June 1, 1997, as a Firefighter. Members may purchase service prior to June 1, 1997, by depositing amounts actuarially determined to fully fund the credits.
<u>Salary</u>	Fixed compensation, including tax-deferred and tax-exempt items of income.
<u>Average Final Compensation</u>	Average Salary for the highest 3 years during the 5 years immediately preceding retirement or termination.
<u>Member Contributions</u>	5.0% of Salary.
<u>District / State Contributions</u>	Remaining amounts required in order to pay current costs and amortize unfunded past service cost, if any, as provided in Part VII of Chapter 112, Florida Statutes.
<u>Normal Retirement</u>	
Date	Earlier of: 1) age 55 and 10 years of Credited Service, or 2) age 52 and 25 years of Credited Service.
Benefit	3.5% of Average Final Compensation <u>times</u> Credited Service
Form of Benefit	Ten Year Certain and Life Annuity (options available).
<u>Early Retirement</u>	
Eligibility	Age 50 and 10 Years of Credited Service.
Benefit	Accrued benefit, reduced 3% per year prior to Normal Retirement Date.

Vesting

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

Disability

Eligibility	
Service Incurred	Covered from Date of Employment.
Non-Service Incurred	10 years of Credited Service.
Benefit	Benefit accrued to date of disability but not less than 42% of Average Final Compensation (Service Incurred), or 25% of Average Final Compensation (Non-Service Incurred).
Duration	Payable for life with 10 year guarantee 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.
Non-Vested	Refund of accumulated contributions without interest.
Post-Retirement	Benefits payable to beneficiary in accordance with option selected at retirement.

Board of Trustees

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

Share Plan

A Share Plan exists, but is not currently funded.

STATEMENT OF FIDUCIARY NET POSITION  
SEPTEMBER 30, 2022

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Short Term Investments	36,001
Total Cash and Equivalents	36,001
Receivables:	
Member Contributions in Transit	4,647
District Contributions in Transit	60,737
State Contributions	123,429
Total Receivable	188,813
Investments:	
Mutual Funds:	
Fixed Income	1,539,035
Equity	3,711,685
Real Estate	883,972
Total Investments	6,134,692
Total Assets	6,359,506
<u>LIABILITIES</u>	
Payables:	
Investment Expenses	4,447
Administrative Expenses	446
Total Liabilities	4,893
NET POSITION RESTRICTED FOR PENSIONS	6,354,613

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

ADDITIONS

## Contributions:

Member	60,297
District	241,292
State	123,429

Total Contributions	425,018
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## Investment Income:

Net Increase in Fair Value of Investments	(1,317,838)
Interest & Dividends	275,022
Less Investment Expense <sup>1</sup>	(27,356)

Net Investment Income	(1,070,172)
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Total Additions	(645,154)
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DEDUCTIONS

## Distributions to Members:

Benefit Payments	187,163
Refunds of Member Contributions	0

Total Distributions	187,163
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Administrative Expense	24,078
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Total Deductions	211,241
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Net Increase in Net Position	(856,395)
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## NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	7,211,008
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End of the Year	6,354,613
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<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 Plan's Board of Trustees comprised of:

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

*Plan Membership as of October 1, 2021:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	6
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	7
Active Plan Members	15
	28
	28

*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 North Bay Fire District Firefighters' Pension Trust Fund prepared by Foster & Foster Actuaries and Consultants.

*Contributions*

Member Contributions: 5.0% of Salary.

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

*Investment Policy:*

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

Asset Class	Target Allocation
Domestic Equity	55.00%
International Equity	10.00%
Broad Market Fixed Income	20.00%
Fixed Income (Non-Core)	2.50%
Global Fixed Income	2.50%
Real Estate	10.00%
Total	100.00%

*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 -14.88 percent.

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



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	\$ 7,378,251
Plan Fiduciary Net Position	<u>\$ (6,354,613)</u>
Sponsor's Net Pension Liability	<u>\$ 1,023,638</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	86.13%

*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:

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 (Below Median) 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. 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.

The most recent actuarial experience study used to review the other significant assumptions was dated June 6, 2017.

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

For 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.

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Best estimates of arithmetic 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:

<u>Asset Class</u>	<u>Long Term Expected Real Rate of Return<sup>1</sup></u>
Domestic Equity	7.50%
International Equity	8.50%
Broad Market Fixed Income	2.50%
Fixed Income (Non-Core)	2.50%
Global Fixed Income	3.50%
Real Estate	4.50%

<sup>1</sup> Source: AndCo Consulting

### *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.

	1% Decrease	Current Discount Rate	1% Increase
	<u>6.25%</u>	<u>7.25%</u>	<u>8.25%</u>
Sponsor's Net Pension Liability	\$ 2,076,573	\$ 1,023,638	\$ 155,554

**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	281,269	247,065
Interest	484,851	448,027
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	171,094	(19,719)
Changes of assumptions	-	193,006
Benefit Payments, including Refunds of Employee Contributions	(187,163)	(190,196)
Net Change in Total Pension Liability	750,051	678,183
Total Pension Liability - Beginning	6,628,200	5,950,017
Total Pension Liability - Ending (a)	<u>\$ 7,378,251</u>	<u>\$ 6,628,200</u>
Plan Fiduciary Net Position		
Contributions - Employer	241,292	245,196
Contributions - State	123,429	76,435
Contributions - Employee	60,297	59,783
Net Investment Income	(1,070,172)	1,241,494
Benefit Payments, including Refunds of Employee Contributions	(187,163)	(190,196)
Administrative Expense	(24,078)	(22,240)
Net Change in Plan Fiduciary Net Position	(856,395)	1,410,472
Plan Fiduciary Net Position - Beginning	7,211,008	5,800,536
Plan Fiduciary Net Position - Ending (b)	<u>\$ 6,354,613</u>	<u>\$ 7,211,008</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 1,023,638</u>	<u>\$ (582,808)</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	86.13%	108.79%
Covered Payroll	\$ 1,205,936	\$ 1,195,656
Net Pension Liability as a percentage of Covered Payroll	84.88%	-48.74%

**Notes to Schedule:***Changes of assumptions:*

For measurement date 09/30/2021, amounts reported as changes of assumptions resulted from lowering the investment rate of return from 7.50% to 7.25% per year compounded annually, net of investment related expenses.

## SCHEDULE OF CONTRIBUTIONS

Last 2 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a percentage of Covered Payroll
09/30/2022	\$ 299,072	\$ 364,721	\$ (65,649)	\$ 1,205,936	30.24%
09/30/2021	\$ 321,631	\$ 321,631	\$ -	\$ 1,195,656	26.90%

Notes to Schedule

Valuation Date: 10/01/2020

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 of the North Bay Fire District Firefighters' Pension Trust Fund prepared by Foster & Foster Actuaries and Consultants.

SCHEDULE OF INVESTMENT RETURNS  
Last 2 Fiscal Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
09/30/2022	-14.88%
09/30/2021	21.45%

**NOTES TO THE FINANCIAL STATEMENTS**  
(For the Year Ended September 30, 2023)

*Plan Description*

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

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

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

*Plan Membership as of October 1, 2021:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	6
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	7
Active Plan Members	15
	28
	28

*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 North Bay Fire District Firefighters' Pension Trust Fund prepared by Foster & Foster Actuaries and Consultants.

*Contributions*

Member Contributions: 5.0% of Salary.

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

**Net Pension Liability**

The measurement date is September 30, 2022.

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

The reporting period is October 1, 2022 through September 30, 2023.

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 (Below Median) 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. 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.

The most recent actuarial experience study used to review the other significant assumptions was dated June 6, 2017.

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

For 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 arithmetic 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:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return <sup>1</sup>
Domestic Equity	55.0%	7.50%
International Equity	10.0%	8.50%
Broad Market Fixed Income	20.0%	2.50%
Fixed Income (Non-Core)	2.5%	2.50%
Global Fixed Income	2.5%	3.50%
Real Estate	10.0%	4.50%
Total	100%	

<sup>1</sup> Source: AndCo Consulting

*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)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Reporting Period Ending September 30, 2022	\$ 6,628,200	\$ 7,211,008	\$ (582,808)
Changes for a Year:			
Service Cost	281,269	-	281,269
Interest	484,851	-	484,851
Differences between Expected and Actual Experience	171,094	-	171,094
Changes of assumptions	-	-	-
Changes of benefit terms	-	-	-
Contributions - Employer	-	241,292	(241,292)
Contributions - State	-	123,429	(123,429)
Contributions - Employee	-	60,297	(60,297)
Net Investment Income	-	(1,070,172)	1,070,172
Benefit Payments, including Refunds of Employee Contributions	(187,163)	(187,163)	-
Administrative Expense	-	(24,078)	24,078
Net Changes	750,051	(856,395)	1,606,446
Reporting Period Ending September 30, 2023	\$ 7,378,251	\$ 6,354,613	\$ 1,023,638

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

	Current		
	1% Decrease	Discount Rate	1% Increase
	6.25%	7.25%	8.25%
Sponsor's Net Pension Liability	\$ 2,076,573	\$ 1,023,638	\$ 155,554

*Pension Plan Fiduciary Net Position.*

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



**FINAL PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND  
DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS  
FISCAL YEAR SEPTEMBER 30, 2022**

For the year ended September 30, 2022, the Sponsor has recognized a Pension Expense of \$18,432.

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 Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	228,040	284,359
Changes of assumptions	299,183	44,352
Net difference between Projected and Actual Earnings on Pension Plan investments	-	659,596
Employer and State contributions subsequent to the measurement date	364,721	-
<b>Total</b>	<b>\$ 891,944</b>	<b>\$ 988,307</b>

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State contributions subsequent to the measurement date has been recognized as a reduction of the Net Pension Liability in the year ended September 30, 2022.

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

Year ended September 30:	
2023	\$ (162,435)
2024	\$ (145,138)
2025	\$ (151,359)
2026	\$ (128,115)
2027	\$ 77,350
Thereafter	\$ 48,613

**Payable to the Pension Plan**

On September 30, 2021, the Sponsor reported a payable of \$14,592 for the outstanding amount of contributions of the Pension Plan required for the year ended September 30, 2021.

**PRELIMINARY PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND  
DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS  
FISCAL YEAR SEPTEMBER 30, 2023**

For the year ended September 30, 2023, the Sponsor will recognize a Pension Expense of \$381,504.

On September 30, 2023, 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	335,334	185,432
Changes of assumptions	235,679	36,960
Net difference between Projected and Actual Earnings on Pension Plan investments	779,958	-
Employer and State contributions subsequent to the measurement date	TBD	-
<b>Total</b>	<b>TBD</b>	<b>\$ 222,392</b>

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer and State contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the year ended September 30, 2023.

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

Year ended September 30:		
2024	\$	199,448
2025	\$	193,227
2026	\$	216,471
2027	\$	421,936
2028	\$	73,055
Thereafter	\$	24,442

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

Reporting Period Ending Measurement Date	09/30/2023 09/30/2022	09/30/2022 09/30/2021
Total Pension Liability		
Service Cost	281,269	247,065
Interest	484,851	448,027
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	171,094	(19,719)
Changes of assumptions	-	193,006
Benefit Payments, including Refunds of Employee Contributions	(187,163)	(190,196)
Net Change in Total Pension Liability	750,051	678,183
Total Pension Liability - Beginning	6,628,200	5,950,017
Total Pension Liability - Ending (a)	<u>\$ 7,378,251</u>	<u>\$ 6,628,200</u>
Plan Fiduciary Net Position		
Contributions - Employer	241,292	245,196
Contributions - State	123,429	76,435
Contributions - Employee	60,297	59,783
Net Investment Income	(1,070,172)	1,241,494
Benefit Payments, including Refunds of Employee Contributions	(187,163)	(190,196)
Administrative Expense	(24,078)	(22,240)
Net Change in Plan Fiduciary Net Position	(856,395)	1,410,472
Plan Fiduciary Net Position - Beginning	7,211,008	5,800,536
Plan Fiduciary Net Position - Ending (b)	<u>\$ 6,354,613</u>	<u>\$ 7,211,008</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 1,023,638</u>	<u>\$ (582,808)</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	86.13%	108.79%
Covered Payroll	\$ 1,205,936	\$ 1,195,656
Net Pension Liability as a percentage of Covered Payroll	84.88%	-48.74%

**Notes to Schedule:***Changes of assumptions:*

For measurement date 09/30/2021, amounts reported as changes of assumptions resulted from lowering the investment rate of return from 7.50% to 7.25% per year compounded annually, net of investment related expenses.

**SCHEDULE OF CONTRIBUTIONS**  
Last 2 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a percentage of Covered Payroll
09/30/2022	\$ 299,072	\$ 364,721	\$ (65,649)	\$ 1,205,936	30.24%
09/30/2021	\$ 321,631	\$ 321,631	\$ -	\$ 1,195,656	26.90%

Notes to Schedule

Valuation Date: 10/01/2020

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 of the North Bay Fire District Firefighters' Pension Trust Fund prepared by Foster & Foster Actuaries and Consultants.

EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

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

**FINAL COMPONENTS OF PENSION EXPENSE**  
**FISCAL YEAR SEPTEMBER 30, 2022**

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 149,481	\$ 546,892	\$ 836,529	\$ -
Employer and State Contributions made after 09/30/2021	-	-	364,721	-
Total Pension Liability Factors:				
Service Cost	247,065	-	-	247,065
Interest	448,027	-	-	448,027
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	(19,719)	19,719	-	-
Current year amortization of experience difference	-	(98,927)	(39,358)	(59,569)
Change in assumptions about future economic or demographic factors or other inputs	193,006	-	193,006	-
Current year amortization of change in assumptions	-	(7,392)	(63,506)	56,114
Benefit Payments, including Refunds of Employee Contributions	(190,196)	-	-	-
Net change	<u>678,183</u>	<u>(86,600)</u>	<u>454,863</u>	<u>691,637</u>
Plan Fiduciary Net Position:				
Contributions - Employer	245,196	-	(245,196)	-
Contributions - State	76,435	-	(76,435)	-
Contributions - Employee	59,783	-	-	(59,783)
Projected Net Investment Income	441,377	-	-	(441,377)
Difference between projected and actual earnings on Pension Plan investments	800,117	800,117	-	-
Current year amortization	-	(220,224)	(25,939)	(194,285)
Benefit Payments, including Refunds of Employee Contributions	(190,196)	-	-	-
Administrative Expenses	(22,240)	-	-	22,240
Net change	<u>1,410,472</u>	<u>579,893</u>	<u>(347,570)</u>	<u>(673,205)</u>
Ending Balance	<u>\$ (582,808)</u>	<u>\$ 1,040,185</u>	<u>\$ 943,822</u>	<u>\$ 18,432</u>

**PRELIMINARY COMPONENTS OF PENSION EXPENSE**  
**FISCAL YEAR SEPTEMBER 30, 2023**

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ (582,808)	\$ 1,040,185	\$ 943,822	\$ -
Employer and State Contributions made after 09/30/2022	-	-	TBD*	-
Total Pension Liability Factors:				
Service Cost	281,269	-	-	281,269
Interest	484,851	-	-	484,851
Changes in benefit terms	-	-	-	-
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	171,094	-	171,094	-
Current year amortization of experience difference	-	(98,927)	(63,800)	(35,127)
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	(7,392)	(63,504)	56,112
Benefit Payments, including Refunds of Employee Contributions	(187,163)	-	-	-
Net change	<u>750,051</u>	<u>(106,319)</u>	<u>43,790</u>	<u>787,105</u>
Plan Fiduciary Net Position:				
Contributions - Employer	241,292	-	(241,292)	-
Contributions - State	123,429	-	(123,429)	-
Contributions - Employee	60,297	-	-	(60,297)
Projected Net Investment Income	530,547	-	-	(530,547)
Difference between projected and actual earnings on Pension Plan investments	(1,600,719)	-	1,600,719	-
Current year amortization	-	(184,917)	(346,082)	161,165
Benefit Payments, including Refunds of Employee Contributions	(187,163)	-	-	-
Administrative Expenses	(24,078)	-	-	24,078
Net change	<u>(856,395)</u>	<u>(184,917)</u>	<u>889,916</u>	<u>(405,601)</u>
Ending Balance	<u>\$ 1,023,638</u>	<u>\$ 748,949</u>	<u>TBD</u>	<u>\$ 381,504</u>

\* Employer and State Contributions subsequent to the measurement date made after September 30, 2022 but made on or before September 30, 2023 need to be added.

AMORTIZATION SCHEDULE - INVESTMENTS

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

Plan Year Ending	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
2022	\$ 1,600,719	5	\$ -	\$ 320,143	\$ 320,144	\$ 320,144	\$ 320,144	\$ 320,144	\$ -	\$ -	\$ -	\$ -
2021	\$ (800,117)	5	\$ (160,025)	\$ (160,023)	\$ (160,023)	\$ (160,023)	\$ (160,023)	\$ -	\$ -	\$ -	\$ -	\$ -
2020	\$ (116,222)	5	\$ (23,244)	\$ (23,244)	\$ (23,244)	\$ (23,244)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2019	\$ 129,695	5	\$ 25,939	\$ 25,939	\$ 25,939	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (8,249)	5	\$ (1,650)	\$ (1,650)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (176,524)	5	\$ (35,305)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (194,285)	\$ 161,165	\$ 162,816	\$ 136,877	\$ 160,121	\$ 320,144	\$ -	\$ -	\$ -	\$ -



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
2021	\$ 193,006	7	\$ 27,574	\$ 27,572	\$ 27,572	\$ 27,572	\$ 27,572	\$ 27,572	\$ 27,572	\$ -	\$ -	\$ -
2020	\$ (59,136)	8	\$ (7,392)	\$ (7,392)	\$ (7,392)	\$ (7,392)	\$ (7,392)	\$ (7,392)	\$ (7,392)	\$ -	\$ -	\$ -
2019	\$ 165,030	8	\$ 20,629	\$ 20,629	\$ 20,629	\$ 20,629	\$ 20,629	\$ 20,629	\$ -	\$ -	\$ -	\$ -
2017	\$ 29,167	7	\$ 4,167	\$ 4,167	\$ 4,167	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 89,089	8	\$ 11,136	\$ 11,136	\$ 11,136	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 56,114	\$ 56,112	\$ 56,112	\$ 40,809	\$ 40,809	\$ 40,809	\$ 20,180	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - EXPERIENCE

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

Plan Year Ending	Differences Between Expected and Actual Experience	Recognition Period (Years)	Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience											
			2022	2023	2024	2025	2026	2027	2028	2029	2030	2031		
2022	\$ 171,094	7	\$ -	\$ 24,442	\$ 24,442	\$ 24,442	\$ 24,442	\$ 24,442	\$ 24,442	\$ 24,442	\$ 24,442	\$ 24,442	\$ -	\$ -
2021	\$ (19,719)	7	\$ (2,817)	\$ (2,817)	\$ (2,817)	\$ (2,817)	\$ (2,817)	\$ (2,817)	\$ (2,817)	\$ (2,817)	\$ (2,817)	\$ -	\$ -	\$ -
2020	\$ 250,003	8	\$ 31,250	\$ 31,250	\$ 31,250	\$ 31,250	\$ 31,250	\$ 31,250	\$ 31,250	\$ 31,250	\$ 31,250	\$ -	\$ -	\$ -
2019	\$ 64,861	8	\$ 8,108	\$ 8,108	\$ 8,108	\$ 8,108	\$ 8,108	\$ 8,108	\$ 8,108	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ (363,536)	8	\$ (45,442)	\$ (45,442)	\$ (45,442)	\$ (45,442)	\$ (45,442)	\$ (45,442)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (168,931)	7	\$ (24,133)	\$ (24,133)	\$ (24,133)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ (87,107)	8	\$ (10,888)	\$ (10,888)	\$ (10,888)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ (125,177)	8	\$ (15,647)	\$ (15,647)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ (59,569)	\$ (35,127)	\$ (19,480)	\$ 15,541	\$ 15,541	\$ 60,983	\$ 52,875	\$ 24,442	\$ -	\$ -	\$ -	\$ -