

# North Miami Police Pension Plan

Actuarial Valuation Report as of October 1, 2021

Annual Employer Contribution for the Fiscal Year  
Ending September 30, 2023







April 14, 2022

Board of Trustees  
North Miami Police Pension Plan  
North Miami, Florida

Dear Board Members:

The results of the October 1, 2021 Annual Actuarial Valuation of the North Miami Police Pension Plan are presented in this report.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure the System's funding progress, to determine the employer contribution rate for the fiscal year ending September 30, 2023, and to determine the actuarial information for GASB Statement No. 67 for the fiscal year ending September 30, 2021. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section B of this report. This report includes risk metrics in Section A but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data or other information through September 30, 2021. The valuation was based upon information furnished by the Plan Administrator concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator.

This report was prepared using certain assumptions approved by the Board as authorized under Florida Statutes and prescribed by the Florida Statutes as described in the section of this report entitled Actuarial Assumptions and Methods. The investment return assumption was prescribed by the Board and the assumed mortality rates detailed in the Actuarial Assumptions and Methods section were prescribed by Chapter 112.63, Florida Statutes. All actuarial assumptions used in this report are reasonable for purposes of this valuation.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Jeffrey Amrose and Trisha Amrose are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.


The signing actuaries are independent of the plan sponsor.


This actuarial valuation and/or cost determination was prepared and completed by us or under our direct supervision, and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate. In our opinion, the techniques and assumptions used are reasonable, meet the requirements and intent of Part VII, Chapter 112, Florida Statutes, and are based on generally accepted actuarial principles and practices. 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.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and Report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH AND COMPANY

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## **SECTION A**

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### **DISCUSSION OF VALUATION RESULTS**

## DISCUSSION OF VALUATION RESULTS

### Closed Plan

In reviewing this Report, it is important for the reader to keep in mind that this Plan was closed to new members after December 1, 2016. One consequence of this closure is that the required employer contribution will generally continue to increase as a percentage of covered payroll as such payroll decreases from year to year.

### Comparison of Required Employer Contributions

The following is a comparison of required contributions developed in this year's and last year's actuarial valuations.

	For FYE 9/30/2023 Based on 10/1/2021 Valuation	For FYE 9/30/2022 Based on 10/1/2020 Valuation	Increase (Decrease)
Required Employer/State Contribution As % of Covered Payroll	\$ 5,102,880 62.12 %	\$ 5,118,324 57.59 %	\$ (15,444) 4.53 %
Estimated Credit for State Contribution As % of Covered Payroll	\$ 82,682 1.00 %	\$ 82,682 0.93 %	\$ 0 0.07 %
Required Employer Contribution As % of Covered Payroll	\$ 5,020,198 61.12 %	\$ 5,035,642 * 56.66 %	\$ (15,444) 4.46 %
Date of Contribution	October 1, 2022	October 1, 2021	

**The most recent collective bargaining agreement between the Police Union and the City applied through September 30, 2021. That collective bargaining agreement stated that if no new agreement regarding Chapter 185 revenue or employee contributions was reached by September 30, 2021, the allocation of Chapter 185 revenue and the employee contribution rate would revert back to the arrangement that existed on September 30, 2018. This report was prepared assuming the agreement reverted back to that arrangement.**

The contribution has been calculated as though payments are made on the first day of the next fiscal year. Further, the required Employer contribution has been computed with the assumption that the State contribution credit in 2022 and 2023 will be at least \$82,682. If the actual State contribution credit falls below this amount, then the City must increase its contribution by the difference.

The actual Employer and State contributions for the year ending September 30, 2021 were \$4,545,250 and \$186,255, respectively, for a total of \$4,731,505. The required contribution was \$4,731,505 for that year.



## **Revisions in Benefits**

There were no revisions in benefits in the current valuation.

## **Revisions in Actuarial Assumptions and Methods**

The investment return assumption was changed from 7.10% to 7.00%, net of investment expenses. The net impact of the assumption change increased the required employer contribution by \$174,993 or 2.13% of covered payroll.

## **Actuarial Experience**

During the past year, there was a net actuarial gain of \$965,155 which means that actual experience was more favorable than expected. The net gain is primarily due to gains from the return on the actuarial value of assets above the assumed rate of 7.1%. The return on the actuarial value of assets was 9.7%, and the return on the market value of assets was 25.3%. This gain was partially offset by losses from higher than expected average salary increases and more members retiring than expected. Actual average salary increases were 6.5% versus 4.8% assumed. There were also 7 members retiring from active versus 4 expected. The gain decreased the required employer contribution by 0.96% of covered payroll.

## **Funded Ratio**

The funded ratio this year is 75.0% compared to 73.5% last year. The funded ratio was 75.9% before the assumption change detailed above. The funded ratio is equal to the actuarial value of assets divided by the actuarial accrued (past service) liability.

## **Analysis of Change in Required Employer Contribution**

The components of change in the required employer contribution are as follows:

Contribution Rate Last Year	56.66 %
Change Due to Experience Gain/Loss	(0.96)
Change in Administrative Expense	0.40
Change in Normal Cost Rate	(0.12)
Change in Amortization Payments on UAL	3.08
Change in Assumptions and Methods	2.13
Change in Benefit Provisions	0.00
Change in State Contribution	<u>(0.07)</u>
Contribution Rate This Year	61.12 %





### **Variability of Future Contribution Rates**

The Actuarial Cost Method used to determine the contribution rate is intended to produce contribution rates which are level. Even so, when experience differs from the assumptions, as it often does, the employer's contribution rate can vary significantly from year-to-year.

Over time, if the year-to-year gains and losses offset each other, the contribution rate would be expected to return to the current level, but this does not always happen.

The Market Value of Assets exceeds the Actuarial Value of Assets by \$9,344,802 as of the valuation date (see Section C). This difference will be gradually recognized in the absence of offsetting gains. In turn, the computed employer contribution rate will gradually decrease by approximately \$750,000, or 9.13% of covered payroll.

### **Relationship to Market Value**

If Market Value had been the basis for the valuation, the City contribution would have been about \$4.3 million, or 51.99% of covered payroll, and the funded ratio would have been 82.3%. In the absence of other gains and losses, the City contribution rate should increase to that level over the next several years, before reflecting further phase-in of the change in the investment return assumption.

### **Conclusion**

The remainder of this Report includes detailed actuarial valuation results, financial information, miscellaneous information and statistics, and a summary of plan provisions.

## **RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION**

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
3. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
4. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rate shown on page 1 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

## PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	<u>2021</u>	<u>2020</u>
Ratio of the market value of assets to payroll	12.79	9.48
Ratio of actuarial accrued liability to payroll	15.53	13.48
Ratio of actives to retirees and beneficiaries	1.2	1.5
Ratio of net cash flow to market value of assets	-1.04 %	0.16 %

### RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

### RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

### RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

### RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.



## **ADDITIONAL RISK ASSESSMENT**

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

**CHAPTER REVENUE**

<b>Actuarial Confirmation of the Use of State Chapter Money</b>			
	<b>748 Plan</b>	<b>691 Plan</b>	<b>Total</b>
1. Base Amount Previous Plan Year (Excluding Amount Allocated to Share Plan)	82,682	-	82,682
2. Amount Received for Previous Plan Year	378,068	4,201	382,269
3. Amount Allocated to Share Plan	145,964	1,622	147,586
4. Amount Received for Previous Plan Year After Share Plan Allocation (2) - (3)	232,104	2,579	234,683
5. Benefit Improvements Made in Prior Plan Year	-	-	-
6. Excess Funds for Previous Plan Year (4) - (5) - (1)	149,422	2,579	152,001
7. Accumulated Excess at Beginning of Previous Plan Year	-	40,393	40,393
8. Prior Excess Used in Previous Plan Year	-	-	-
9. Accumulated Excess as of Valuation Date (7) - (8) + (6)	149,422	* 42,972	192,394
10. Base Amount This Plan Year (Excluding Amount Allocated to the Share Plan) (1) + (5)	82,682	-	82,682

*\* The Accumulated Excess is not included in the Pension Fund.*

The Base Amount in line 10 is the amount the employer may take as a credit against its required contribution; however, in no event may the employer take credit for more than the actual amount of Chapter revenue received.

## **SECTION B**

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### **VALUATION RESULTS**

<b>PARTICIPANT DATA</b>		
	October 1, 2021	October 1, 2020
<b>ACTIVE MEMBERS</b>		
Number	79	89
Covered Annual Payroll	\$ 8,214,176	\$ 8,887,506
Average Annual Payroll	\$ 103,977	\$ 99,860
Average Age	42.4	42.1
Average Past Service	14.2	13.9
Average Age at Hire	28.2	28.2
<b>RETIRES &amp; BENEFICIARIES</b>		
Number	62	55
Annual Benefits	\$ 5,253,531	\$ 4,537,581
Average Annual Benefit	\$ 84,734	\$ 82,501
Average Age	58.8	58.7
<b>DISABILITY RETIREES</b>		
Number	5	4
Annual Benefits	\$ 244,788	\$ 150,404
Average Annual Benefit	\$ 48,958	\$ 37,601
Average Age	65.1	67.7
<b>TERMINATED VESTED MEMBERS</b>		
Number	1	2
Annual Benefits	\$ 24,420	\$ 103,743
Average Annual Benefit	\$ 24,420	\$ 51,872
Average Age	35.1	41.9

**ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION (ADEC)**

	October 1, 2021 <i>After Change</i>	October 1, 2021 <i>Before Change</i>	October 1, 2020
A. Valuation Date			
B. ADEC to Be Paid During Fiscal Year Ending	9/30/2023	9/30/2023	9/30/2022
C. Assumed Date of Employer Contrib.	10/1/2022	10/1/2022	10/1/2021
D. Annual Payment to Amortize Unfunded Actuarial Liability	\$ 2,967,034	\$ 2,857,689	\$ 2,903,908
E. Employer Normal Cost	2,135,846	2,070,198	2,214,416
F. ADEC as of the Valuation Date: D+E <i>Valuation Date</i>	5,102,880 10/1/2021	4,927,887 10/1/2021	5,118,324 10/1/2020
G. ADEC as % of Covered Payroll	62.12 %	59.99 %	57.59 %
H. Assumed Rate of Increase in Covered Payroll to Contribution Year	0.00 %	0.00 %	0.00 %
I. Covered Payroll for Contribution Year	8,214,176	8,214,176	8,887,506
J. ADEC if Paid on the First Day of the Next Fiscal Year (Before Credit for State Contribution): G x I <i>First Day of Next Fiscal Year</i>	5,102,880 10/1/2022	4,927,887 10/1/2022	5,118,324 10/1/2021
K. ADEC if Paid Quarterly throughout the Next Fiscal Year (Before Credit for State Contribution)	5,320,421	5,140,891	5,339,559
L. Credit for State Revenue in Contribution Year	82,682	82,682	82,682
M. Required Employer Contribution (REC) in Contribution Year: J - L *	5,020,198	4,845,205	5,035,642
N. REC as % of Covered Payroll in Contribution Year: M ÷ I *	61.12 %	58.99 %	56.66 %

\* Assuming the contribution is paid on the first day of the next fiscal year.



**ACTUARIAL VALUE OF BENEFITS AND ASSETS**

A. Valuation Date	October 1, 2021 <i>After Change</i>	October 1, 2021 <i>Before Change</i>	October 1, 2020
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	\$ 66,041,095	\$ 64,738,353	\$ 69,916,935
b. Vesting Benefits	5,257,269	5,135,301	5,265,095
c. Disability Benefits	1,029,720	1,014,229	1,084,361
d. Preretirement Death Benefits	859,339	841,688	883,499
e. Return of Member Contributions	-	-	4,928
f. Total	<u>73,187,423</u>	<u>71,729,571</u>	<u>77,154,818</u>
2. Inactive Members			
a. Service Retirees & Beneficiaries	73,116,077	72,366,276	62,333,086
b. Disability Retirees	2,218,797	2,202,628	1,238,881
c. Terminated Vested Members	<u>151,191</u>	<u>147,091</u>	<u>1,301,877</u>
d. Total	75,486,065	74,715,995	64,873,844
3. Total for All Members	148,673,488	146,445,566	142,028,662
C. Actuarial Accrued (Past Service) Liability	127,595,580	126,010,641	119,771,241
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35	115,092,221	113,647,746	107,378,561
E. Plan Assets			
1. Market Value	105,037,573	105,037,573	84,248,013
2. Actuarial Value	95,692,771	95,692,771	87,972,095
F. Unfunded Actuarial Accrued Liability	31,902,809	30,317,870	31,799,146
G. Actuarial Present Value of Projected Covered Payroll	66,719,786	66,365,685	72,082,867
H. Actuarial Present Value of Projected Member Contributions	6,345,052	6,311,377	6,855,080
I. Accumulated Contributions of Active Members	7,494,957	7,494,957	7,988,397

**CALCULATION OF EMPLOYER NORMAL COST**

A. Valuation Date	October 1, 2021 <i>After Change</i>	October 1, 2021 <i>Before Change</i>	October 1, 2020
B. Normal Cost for			
1. Service Retirement Benefits	\$ 2,149,571	\$ 2,094,250	\$ 2,287,682
2. Vesting Benefits	335,113	326,670	342,676
3. Disability Benefits	66,515	65,580	71,253
4. Preretirement Death Benefits	58,430	57,278	60,968
5. Return of Member Contributions	<u>31,893</u>	<u>32,096</u>	<u>35,016</u>
6. Total for Future Benefits	2,641,522	2,575,874	2,797,595
7. Assumed Amount for Administrative Expenses	<u>275,492</u>	<u>275,492</u>	<u>262,023</u>
8. Total Normal Cost	2,917,014	2,851,366	3,059,618
9. Total as a % of Covered Payroll	35.51%	34.71%	34.43%
C. Expected Member Contribution	781,168	781,168	845,202
D. Employer Normal Cost: B8-C	2,135,846	2,070,198	2,214,416
E. Employer Normal Cost as a % of Covered Payroll	26.00%	25.20%	24.92%

## LIQUIDATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

### A. UAAL Amortization Period and Payments

Original UAAL				Current UAAL			
Date	Source *	Amortization Period (Years)	Amount	Years Remaining	Amount	Payment	
						After Change	Before Change
10/1/2005	Method Change	30	\$ 5,743,765	14	\$ 5,696,898	\$ 608,796	\$ 611,880
10/1/2005	Benefit Change	30	374,929	14	371,867	39,739	39,941
10/1/2006	(Gain)/Loss	30	1,855,675	15	1,861,996	191,063	192,092
10/1/2007	(Gain)/Loss	30	148,034	16	148,631	14,704	14,788
10/1/2008	Benefit Change	30	3,959,647	17	4,019,008	384,717	387,025
10/1/2008	(Gain)/Loss	30	1,253,299	17	1,272,086	121,770	122,500
10/1/2009	(Gain)/Loss	30	2,773,430	18	2,769,069	257,271	258,889
10/1/2010	(Gain)/Loss	30	(8,803)	19	(8,702)	(787)	(792)
10/1/2010	Assumption Change	30	1,001,365	19	989,588	89,482	90,070
10/1/2011	(Gain)/Loss	30	2,493,045	20	2,448,828	216,030	217,509
10/1/2012	(Gain)/Loss	30	(2,073,952)	21	(2,008,605)	(173,245)	(174,477)
10/1/2012	Assumption Change	30	805,050	21	779,684	67,249	67,727
10/1/2013	(Gain)/Loss	30	488,899	21	467,653	40,336	40,622
10/1/2013	Assumption Change	30	866,385	21	828,731	71,479	71,987
10/1/2014	(Gain)/Loss	30	(1,862,552)	21	(1,757,748)	(151,608)	(152,686)
10/1/2014	Assumption Change	30	915,047	21	863,559	74,483	75,013
10/1/2015	(Gain)/Loss	30	146,545	21	137,400	11,851	11,935
10/1/2015	Assumption Change	30	990,282	21	928,477	80,082	80,652
10/1/2016	(Gain)/Loss	30	18,964	21	18,071	1,559	1,570
10/1/2016	Assumption Change	30	3,303,161	21	3,147,678	271,492	273,422
10/1/2017	(Gain)/Loss	25	4,834,396	21	4,607,322	397,388	400,213
10/1/2017	Assumption Change	25	1,345,251	21	1,282,065	110,580	111,366
10/1/2018	(Gain)/Loss	25	(2,767,570)	22	(2,644,553)	(223,442)	(225,088)
10/1/2018	Assumption Change	25	1,395,709	22	1,333,670	112,684	113,514
10/1/2019	(Gain)/Loss	25	2,082,665	23	2,033,159	168,570	169,853
10/1/2019	Assumption Change	25	(2,307,009)	23	(2,252,171)	(186,728)	(188,149)
10/1/2020	(Gain)/Loss	25	2,476,014	24	2,460,602	200,502	202,077
10/1/2020	Assumption Change	25	1,498,087	24	1,488,762	121,312	122,264
10/1/2021	(Gain)/Loss	25	(965,155)	25	(965,155)	(77,402)	(78,028)
10/1/2021	Assumption Change	25	1,584,939	25	1,584,939	127,107	N/A
			32,663,533		31,902,809	2,967,034	2,857,689

\* Descriptions of the source of changes for bases other than (Gain)/Loss are described on the following pages.

10/1/2005 Method Changes:

1. The funding method was changed from Aggregate to Entry Age Normal with a 30-year amortization period.
2. The asset valuation method was changed.
3. The mortality table was changed from the 1983 Group Annuity Mortality Table to the RP 2000 Generational Mortality Table.
4. The investment earnings assumption was changed from 9% per year up to retirement and 7% thereafter to 8.5% per year.
5. The turnover rates were increased by 25%.
6. The salary increase assumption for service above 20 years was decreased from 4% to 3.5%.
7. It is assumed that members will choose the option (lump sum without COLA or annuity with COLA) with the greater actuarial value.

10/1/2005 Benefit Changes: Changed the definition of pensionable compensation to include future holiday pay, changed the period for determining the average final compensation from 60 months to 57 months, and changed the period for determining the average final compensation to 24 months and the early retirement reduction to 3% per year for employees who irrevocably waived their right to receive early retirement benefits upon the completion of 20 years of service.

10/1/2008 Benefit Change: The benefit multiplier was increased to 3.5% for service after January 1, 1998 and the member contribution rate was increased to 11.51% of pay.

10/1/2010 Assumption Change: The timing of expected pay increases was changed from end of year to mid-year timing. The short term payroll growth assumption was also reduced from 6% to 4%.

10/1/2012 Benefit Change: The Plan was amended by implementing a 3% Cost of Living Adjustment (COLA) for survivors in receipt of line of duty death benefits before the Plan's COLA was adopted on September 28, 2004. There is one survivor in receipt of line of duty death benefits who was affected by the Plan change, and the COLA start date for that survivor was retroactive to April 1, 2005.

10/1/2012 Assumption Change: Decreased the investment rate of return assumption to 8.4%.

10/1/2013 Benefit Change: The Plan was amended to allow members who previously waived eligibility for early retirement with 20 years of service regardless of age, who would have 20 years of service on or before January 1, 2013, to revoke their waivers. These members needed to agree to retire from City service on or before January 1, 2013. There was one member of the allowable ten members who elected to revoke their waiver and retired under the window.

10/1/2013 Assumption Change: Decreased the investment rate of return assumption to 8.3%.

10/1/2014 Assumption Change: Decreased the investment rate of return assumption to 8.2%.

10/1/2015 Assumption Change: Decreased the investment rate of return assumption to 8.1%.

10/1/2016 Assumption Changes: Decreased the investment rate of return assumption to 7.5%. Salary increase rates, retirement rates, withdrawal rates, and disability rates have all been revised based on the experience study as of 10/1/2015. The mortality assumption was changed to the same rates used by FRS for Special Risk members in their July 1, 2016 actuarial valuation, as mandated by the Florida Statutes.

10/1/2017 Assumption Change: Decreased the investment rate of return assumption to 7.4%.

10/1/2017 Method Change: The amortization period for the unfunded actuarial accrued liability has been lowered to 25 years for any new bases and for any existing bases that had over 25 years remaining as of October 1, 2017.

10/1/2018 Assumption Change: Decreased the investment rate of return assumption to 7.3%.



10/1/2019 Assumption Changes: Decreased the investment rate of return assumption to 7.2% and the mortality assumption was changed to reflect the mortality rates used by the Florida Retirement System (FRS) for Special Risk Class members in the July 1, 2019 FRS Actuarial Valuation.

10/1/2020 Assumption Change: Decreased the investment rate of return assumption to 7.1%.

10/1/2021 Assumption Change: Decreased the investment rate of return assumption to 7.0%.

**B. Amortization Schedule**

The UAAL is being amortized as a level dollar amount over the number of years remaining in the amortization period. The expected amortization schedule is as follows:

Amortization Schedule	
Year	Expected UAAL
2021	\$ 31,902,809
2022	30,961,289
2023	29,953,853
2024	28,875,896
2025	27,722,483
2026	26,488,330
2031	18,894,230
2036	8,937,045
2041	1,920,810
2046	-

## ACTUARIAL GAINS AND LOSSES

The assumptions used to anticipate mortality, employment turnover, investment income, expenses, salary increases, and other factors have been based on long range trends and expectations. Actual experience can vary from these expectations. The variance is measured by the gain and loss for the period involved. If significant long-term experience reveals consistent deviation from what has been expected and that deviation is expected to continue, the assumptions should be modified. The net actuarial gain (loss) for the past year has been computed as follows:

<b>Derivation of the Current UAAL</b>	
1. Last Year's UAAL	\$ 31,799,146
2. Last Year's Employer Normal Cost	2,129,185
3. Last Year's Contributions	4,731,505
4. Interest at the Assumed Rate on:	
a. 1 and 2 for one year	2,408,912
b. 3 from dates paid	<u>322,713</u>
c. a - b	2,086,199
5. This Year's Expected UAAL (Before Change): 1 + 2 - 3 + 4c	31,283,025
6. Change in UAAL Due to Changes in Plan Provisions	0
7. Change in UAAL Due to Changes in Assumptions	1,584,939
8. This Year's Expected UAAL (After Changes)	32,867,964
9. This Year's Actual UAAL	31,902,809
10. Net Actuarial Gain/(Loss): 8 - 9	965,155
11. Gain/(Loss) Due to Investments	2,336,200
12. Gain/(Loss) Due to Other Sources	(1,371,045)

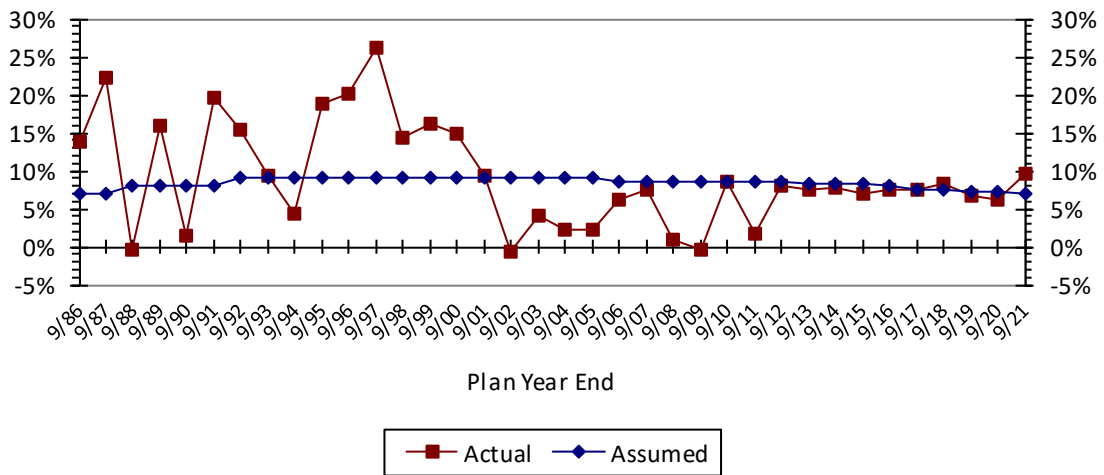
The fund earnings and salary increase assumptions have considerable impact on the cost of the Plan so it is important that they are in line with the actual experience. The following table shows the actual fund earnings and salary increase rates compared to the assumed rates for the last few years:

Year Ending	Investment Return		Salary Increases	
	Actual	Assumed	Actual	Assumed
9/30/1986	13.8 %	7.0 %	5.0 %	6.0 %
9/30/1987	22.3	7.0	6.8	6.0
9/30/1988	(0.5)	8.0	6.9	7.0
9/30/1989	15.8	8.0	7.9	7.0
9/30/1990	1.4	8.0	7.3	7.0
9/30/1991	19.5	8.0	2.4	7.0
9/30/1992	15.3	9.0	4.4	7.0
9/30/1993	9.3	9.0	6.5	7.0
9/30/1994	4.3	9.0	5.3	7.0
9/30/1995	18.8	9.0	9.1	7.0
9/30/1996	20.2	9.0	6.7	7.0
9/30/1997	26.3	9.0	2.6	7.0
9/30/1998	14.3	9.0	4.7	7.0
9/30/1999	16.3	9.0	9.7	7.0
9/30/2000	14.8	9.0	6.9	7.0
9/30/2001	9.4	9.0	1.4	7.0
9/30/2002	(0.6)	9.0	7.5	6.0
9/30/2003	4.2	9.0	7.0	5.8
9/30/2004	2.2	9.0	9.0	5.6
9/30/2005	2.3	9.0	5.7	5.7
9/30/2006	6.3	8.5	11.1	5.7
9/30/2007	7.5	8.5	6.6	6.7
9/30/2008	0.9	8.5	2.1	6.2
9/30/2009	(0.5)	8.5	5.8	6.4
9/30/2010	8.6	8.5	4.9	6.4
9/30/2011	1.8	8.5	4.6	6.9
9/30/2012	8.2	8.5	(0.2)	7.1
9/30/2013	7.4	8.4	3.8	6.9
9/30/2014	7.9	8.3	1.1	6.9
9/30/2015	6.9	8.2	6.7	6.6
9/30/2016	7.4	8.1	5.4	6.7
9/30/2017	7.6	7.5	17.6	5.1
9/30/2018	8.4	7.4	(0.6)	5.0
9/30/2019	6.7	7.3	7.1	5.0
9/30/2020	6.1	7.2	7.3	4.8
9/30/2021	9.7	7.1	6.5	4.8
Averages	9.0 %	---	5.8 %	---

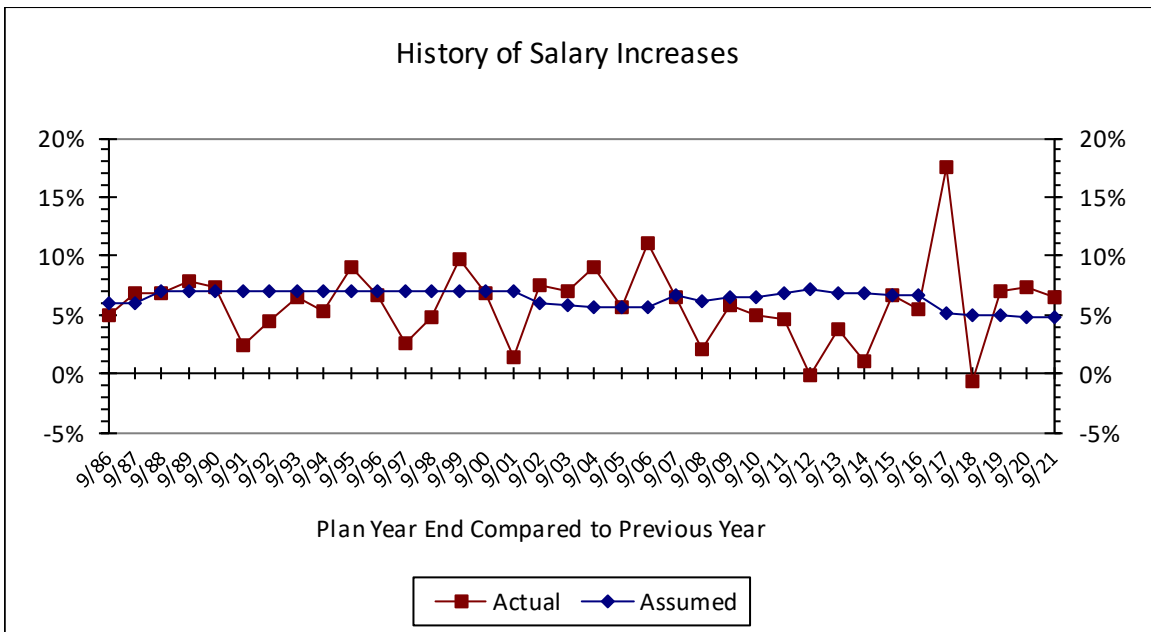
The actual investment return rates shown above are based on the actuarial value of assets. The actual salary increase rates shown above are the increases received by those active members who were included in the actuarial valuations both at the beginning and end of each year.



### History of Investment Return Based on Actuarial Value of Assets



### History of Salary Increases



**Actual (A) Compared to Expected (E) Decrements  
Among Active Employees**

Year Ended	Number Added During Year		Service Retirement		Disability Retirement		Death		Terminations				Active Members End of Year
	A	E	A	E	A	E	A	E	Vested	Other	Totals		
									A	A	A	E	
9/30/2002	10	7	2	1	1	0	0	0	2	2	4	3	107
9/30/2003	10	9	3	5	0	0	0	0	4	2	6	3	108
9/30/2004	13	4	2	3	0	0	0	0	0	2	2	3	117
9/30/2005	12	2	0	7	0	0	0	0	1	1	2	3	127
9/30/2006	1	6	1	0	0	1	0	0	0	5	5	5	122
9/30/2007	8	7	2	3	1	1	0	0	0	4	4	4	123
9/30/2008	6	7	1	6	0	1	1	0	3	2	5	4	122
9/30/2009	9	9	6	6	0	1	0	0	0	3	3	4	122
9/30/2010	6	9	7	9	0	1	0	0	0	2	2	4	119
9/30/2011	3	14	13	4	0	1	0	0	0	1	1	4	108
9/30/2012	8	8	5	3	0	1	0	0	2	1	3	4	108
9/30/2013	9	3	3	4	0	0	0	0	0	0	0	4	114
9/30/2014	6	8	2	2	0	0	0	0	3	3	6	4	112
9/30/2015	11	2	2	6	0	0	0	0	0	0	0	4	121
9/30/2016	4	10	3	3	0	1	0	0	2	5	7	4	115
9/30/2017	0	0	3	4	0	0	0	0	2	1	3	4	109
9/30/2018	4	0	2	5	0	0	1	0	1	1	2	3	108
9/30/2019	0	0	11	6	0	0	0	0	1	1	2	3	95
9/30/2020	0	0	5	4	0	0	0	0	1	0	1	2	89
9/30/2021	0	0	7	4	1	0	0	0	1	1	2	2	79
9/30/2022		0		3		0		0				1	
20 Yr Totals *	120	105	80	85	3	8	2	0	23	37	60	71	

RECENT HISTORY OF VALUATION RESULTS									
Valuation Date	Number of		Covered Annual Payroll	Actuarial Value of Assets	Actuarial Accrued Liability (AAL) - Entry Age Normal	Unfunded AAL (UAAL) - Entry Age Normal	Funded Ratio	Employer Normal Cost	
	Active Members	Inactive Members						Amount	% of Payroll
10/1/95	96	3	\$ 4,104,508	\$ 9,585,484	\$ 8,995,586	\$ (589,898)	106.6 %	\$ 1,109,104	9.76 %
10/1/97	98	4	4,497,429	14,614,214	11,248,464	(3,365,750)	129.9	400,493	6.83
10/1/99	107	4	5,312,541	19,157,751	13,566,544	(5,591,207)	141.2	307,353	3.68
10/1/01	104	5	5,469,735	24,124,424	20,374,068	(3,750,356)	118.4	195,360	5.57
10/1/02	107	6	5,917,542	23,484,787	22,884,351	(600,436)	102.6	304,626	14.66
10/1/03	108	6	6,190,865	22,764,119	23,529,578	765,459	96.7	1,165,034	18.82
10/1/04	117	6	7,031,747	23,064,904	25,958,509	2,893,605	88.9	1,584,162	22.53
10/1/05	127	5	7,787,903	27,393,083	33,511,777	6,118,694	81.7	1,340,779	17.22
10/1/06	122	6	8,325,901	31,020,690	39,111,752	8,091,062	79.3	1,551,241	18.63
10/1/07	123	7	8,814,200	34,269,292	42,712,978	8,443,686	80.2	1,773,937	20.13
10/1/08	122	7	8,687,911	35,762,075	49,498,712	13,736,637	72.2 *	1,360,165	15.66
10/1/09	122	11	8,931,391	36,595,232	53,587,800	16,992,568	68.3	1,426,946	15.98
10/1/10	119	17	9,004,946	40,159,836	58,568,153	18,408,317	68.6	1,638,670	18.20
10/1/11	108	29	8,469,168	42,456,776	63,662,556	21,205,780	66.7	1,449,922	17.12
10/1/12	108	32	8,174,358	44,577,607	65,146,979	20,569,372	68.4	1,642,964	20.10
10/1/13	114	35	8,641,896	49,223,508	71,473,243	22,249,735	68.9	1,768,511	20.46
10/1/14	112	37	8,303,772	53,428,211	74,883,541	21,455,330	71.3	1,751,194	21.09
10/1/15	121	39	9,185,954	58,298,763	80,847,820	22,549,057	72.1	1,821,704	19.83
10/1/16	115	42	9,058,510	64,820,231	89,987,665	25,167,434	72.0	1,717,092	18.96
10/1/17	109	45	9,962,588	70,395,918	101,480,968	31,085,050	69.4	2,147,804	21.56
10/1/18	108	47	9,667,188	76,560,966	106,163,493	29,602,527	72.1	2,232,167	23.09
10/1/19	95	56	8,936,209	82,645,862	111,236,653	28,590,791	74.3	2,129,185	23.83
10/1/20	89	61	8,887,506	87,972,095	119,771,241	31,799,146	73.5	2,214,416	24.92
10/1/21	79	68	8,214,176	95,692,771	127,595,580	31,902,809	75.0	2,135,846	26.00

\* The ratio was 78.5% before allowing the Plan amendment that is being funded with member contributions.

RECENT HISTORY OF REQUIRED AND ACTUAL CONTRIBUTIONS										
Valuation Date	End of Year To Which Valuation Applies	Required Contributions						Actual Contributions		
		Employer & State		Estimated State		Net Employer		Employer	State	Total
		Amount	% of Payroll	Amount	% of Payroll	Amount	% of Payroll			
10/1/85	9/30/87	\$ 668,968	9.95 %	\$ ---	--- %	\$ 668,968	9.95 %	\$ 668,968	\$ ---	\$ 668,968
10/1/87	9/30/88	665,073	8.35	---	---	665,073	8.35	665,073	---	665,073
10/1/87	9/30/89	742,366	---	---	---	742,366	---	771,335	---	771,335
10/1/89	9/30/90	778,557	8.19	---	---	778,557	8.19	776,878	---	776,878
10/1/89	9/30/91	846,580	---	---	---	846,580	---	855,377	---	855,377
10/1/91	9/30/92	1,057,492	9.32	---	---	1,057,492	9.32	1,057,400	---	1,057,400
10/1/91	9/30/93	1,356,744	12.4	---	---	1,356,744	12.4	1,356,744	---	1,356,744
10/1/91	9/30/94	1,401,934	12.36	---	---	1,401,934	12.36	1,398,812	---	1,398,812
10/1/93	9/30/95	592,021	19.43	---	---	592,021	19.43	592,021	---	592,021
10/1/93	9/30/96	725,024	19.9	---	---	725,024	19.9	725,024	---	725,024
10/1/95	9/30/97	558,938	13.62	---	---	558,938	13.62	558,938	---	558,938
10/1/95	9/30/98	424,916	9.58	---	---	424,916	9.58	424,916	---	424,916
10/1/97	9/30/99	353,245	7.85	---	---	353,245	7.85	353,245	---	353,245
10/1/97	9/30/00	344,764	7.85	---	---	344,764	7.85	344,764	---	344,764
10/1/99	9/30/01	224,529	4.23	---	---	224,529	4.23	224,528	---	224,528
10/1/99	9/30/02	237,449	4.23	---	---	237,449	4.23	237,449	---	237,449
10/1/01	9/30/03	332,042	6.07	---	---	332,042	6.07	332,042	---	332,042
10/1/02	9/30/04	945,433	15.98	---	---	945,433	15.98	945,433	---	945,433
10/1/03	9/30/05	1,269,887	20.51	66,130	1.07	1,203,757	19.44	1,203,757	66,130	1,269,887
10/1/04	9/30/06	1,679,308	22.53	66,130	0.89	1,613,178	21.64	1,651,623	66,130	1,717,753
10/1/05	9/30/07	1,795,501	21.75	82,682	1.00	1,712,819	20.75	1,712,819	82,682	1,795,501
10/1/06	9/30/08	2,145,468	24.31	82,682	0.94	2,062,786	23.37	2,062,786	82,682	2,145,468
10/1/07	9/30/09	2,412,376	25.82	82,682	0.88	2,329,694	24.94	2,329,694	82,682	2,412,376
10/1/08	9/30/10	2,307,822	25.06	82,682	0.90	2,225,140	24.16	2,225,141	82,682	2,307,823
10/1/09	9/30/11	2,594,980	27.41	82,682	0.87	2,512,298	26.54	2,512,298	82,682	2,594,980
10/1/10	9/30/12	2,874,163	30.69	82,682	0.88	2,791,481	29.81	2,791,481	82,682	2,874,163
10/1/11	9/30/13	2,871,387	32.60	82,682	0.94	2,788,705	31.66	2,788,705	82,682	2,871,387
10/1/12	9/30/14	3,175,248	37.35	82,682	0.97	3,092,566	36.38	3,194,000	82,682	3,276,682
10/1/13	9/30/15	3,441,341	38.29	82,682	0.92	3,358,659	37.37	3,358,659	82,682	3,441,341
10/1/14	9/30/16	3,640,905	42.16	82,682	0.96	3,558,223	41.20	3,558,223	576,823	4,135,046
10/1/15	9/30/17	3,827,089	40.06	82,682	0.87	3,744,407	39.19	3,744,407	82,682	3,827,089
10/1/16	9/30/18	3,967,627	43.80	82,682	0.91	3,884,945	42.89	3,884,945	82,682	3,967,627
10/1/17	9/30/19	4,908,116	49.27	184,085	1.85	4,724,031	47.42	4,724,031	184,085	4,908,116
10/1/18	9/30/20	4,879,993	50.48	197,038	2.04	4,682,955	48.44	4,682,955	197,038	4,879,993
10/1/19	9/30/21	4,731,505	52.95	186,254	2.09	4,545,251	50.86	4,545,250	186,255	4,731,505
10/1/20	9/30/22	5,118,324	57.59	82,682	0.93	5,035,642	56.66	---	---	---
10/1/21	9/30/23	5,102,880	62.12	82,682	1.00	5,020,198	61.12	---	---	---



## ACTUARIAL ASSUMPTIONS AND COST METHOD

### Valuation Methods

**Actuarial Cost Method** - Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

- (i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

**Financing of Unfunded Actuarial Accrued Liabilities** - Unfunded Actuarial Accrued Liabilities (full funding credit if assets exceed liabilities) were amortized by level (principal & interest combined) dollar contributions over a reasonable period of future years.

**Actuarial Value of Assets** - The Actuarial Value of Assets phase in the difference between the expected actuarial value and actual market value of assets at the rate of 20% per year. The Actuarial Value of Assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the Market Value of plan assets and whose upper limit is 120% of the Market Value of plan assets. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than assumed rate, Actuarial Value of Assets will tend to be greater than Market Value.

### Valuation Assumptions

**The actuarial assumptions used** in the valuation are shown in this Section. Both the economic and decrement assumptions were established following the Experience Study Report as of October 1, 2015. The covered group is too small to provide statistically significant experience on which to base the mortality assumption. Mortality is based on a commonly used mortality table and projection scale.

### Economic Assumptions

**The investment return rate** assumed in the current valuation is 7.0% per year, compounded annually (net after investment expenses).

**The Inflation Rate** assumed in this valuation is 2.5% per year. The Inflation Rate is defined to be the long term rate of annual increases in goods and services.

The assumed **real rate of return** over inflation is defined to be the portion of total investment return that is more than the assumed inflation rate. Considering other economic assumptions, the 7.0% investment return rate translates to an assumed real rate of return over wage inflation of 4.5%.

**Pay increase assumptions** for individual active members are shown below. Part of the assumption for each service year is for productivity, merit and/or seniority increases, and the other 2.5% recognizes inflation.

**The rates of salary increase** used for individual members are in accordance with the following table. This assumption is used to project a member’s current salary to the salaries upon which benefits will be based.

Years of Service	Salary Increase Rates		
	Assumed General Inflation	Promotion, Productivity & Seniority	Total Rates
0	2.5%	6.5%	9.0%
1	2.5%	6.5%	9.0%
2	2.5%	6.5%	9.0%
3	2.5%	5.0%	7.5%
4	2.5%	5.0%	7.5%
5	2.5%	5.0%	7.5%
6	2.5%	3.8%	6.3%
7	2.5%	3.8%	6.3%
8	2.5%	3.8%	6.3%
9	2.5%	3.8%	6.3%
10 - 14	2.5%	2.0%	4.5%
15 - 19	2.5%	1.5%	4.0%
Over 20	2.5%	1.0%	3.5%

### Demographic Assumptions

The **mortality tables** are the PUB-2010 Headcount Weighted Safety Below Median Employee Male Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Employee Female Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Below Median Healthy Retiree Male Table (post-retirement) and the PUB-2010 Safety Healthy Retiree Female Table (post-retirement). These tables use ages set forward one year and mortality improvements to all future years after 2010 using scale MP-2018. These are the same rates used for Special Risk Class members in the July 1, 2020 Actuarial Valuation of the Florida Retirement System (FRS).

Sample Attained Ages (in 2021)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	0.42 %	0.20 %	32.50	36.33
55	0.56	0.36	27.73	31.30
60	0.92	0.61	23.14	26.51
65	1.32	0.92	18.87	22.00
70	2.08	1.45	14.86	17.74
75	3.54	2.42	11.27	13.82
80	6.30	4.16	8.19	10.35

This assumption is used to measure the probabilities of each benefit payment being made after retirement.

For disabled retirees, the mortality tables used were 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Male Table and 20% of the Headcount Weighted Safety Disabled Retiree Male Table, and 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Female Table and 20% Headcount Weighted Safety Disabled Retiree Female Table, both with no provision being made for future mortality improvements. These are the same rates used for Special Risk Class members in the July 1, 2020 Actuarial Valuation of the Florida Retirement System (FRS).

Sample Attained Ages (in 2021)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	1.45 %	1.25 %	24.04	26.84
55	1.91	1.50	20.88	23.54
60	2.37	1.81	17.92	20.32
65	3.00	2.22	15.07	17.17
70	3.91	2.90	12.39	14.10
75	5.30	4.13	9.87	11.22
80	7.66	6.21	7.60	8.67

**The rates of retirement** are used to measure the probability of eligible members retiring during the next year.

NORMAL RETIREMENT RATES	
Years After 1st Normal Ret.	Retirement Rates
0	25.0%
1	25.0%
2	25.0%
3	25.0%
4	35.0%
5	35.0%
6	35.0%
7	35.0%
8	35.0%
9	35.0%
10+	100.0%

<b>EARLY RETIREMENT RATES</b>	
<b>Members Eligible for Early Retirement at 20 Years of Service</b>	
<b>Service</b>	<b>Retirement Rates</b>
20	30.0%
21	30.0%
22	30.0%
23	30.0%
24	30.0%
25	30.0%
26	30.0%
27	30.0%
28	30.0%
29+	100.0%

<b>EARLY RETIREMENT RATES</b>	
<b>Members NOT Eligible for Early Retirement at 20 Years of Service</b>	
<b>Age</b>	<b>Retirement Rates</b>
50	10.0%
51	10.0%
52	10.0%
53	10.0%
54	10.0%



**Rates of separation from active membership** were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

WITHDRAWAL RATES		
Age	Years of Service	Assumption
ALL	Under 1	11.0%
	1	10.0%
	2	9.0%
	3	8.0%
	4	7.0%
25 - 29	5 & Over	3.0%
30 - 34		2.0%
35 - 39		2.0%
40 - 44		2.0%
45 - 49		2.0%
50 - 54		2.0%
55 - 59		2.0%

**Rates of disability** among active members. (75% of future disability retirements are assumed to be service-connected.)

DISABILITY RATES	
Ages	Assumption
20	0.04%
25	0.04%
30	0.05%
35	0.06%
40	0.08%
45	0.13%
50	0.25%
55	0.39%

***Changes Since Previous Valuation***

The investment return assumption was lowered from 7.1% to 7.0%.

## Miscellaneous and Technical Assumptions

<b><i>Administrative &amp; Investment Expenses</i></b>	The investment return assumption is intended to be the return net of investment expenses. Annual administrative expenses are assumed to be equal to the average of the expenses over the previous two years. Assumed administrative expenses are added to the Normal Cost.
<b><i>Benefit Service</i></b>	Exact fractional service is used to determine the amount of benefit payable.
<b><i>COLA</i></b>	For future cost-of-living adjustments, benefits are assumed to increase 3% per year starting five years after retirement.
<b><i>Decrement Operation</i></b>	Disability and mortality decrements operate during retirement eligibility.
<b><i>Decrement Timing</i></b>	Decrements of all types are assumed to occur at the beginning of the year.
<b><i>Eligibility Testing</i></b>	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
<b><i>Forfeitures</i></b>	For vested separations from service, it is assumed that 0% of members separating will withdraw their contributions and forfeit an employer financed benefit. It was further assumed that the liability at termination is the greater of the vested deferred benefit (if any) or the member's accumulated contributions.
<b><i>Incidence of Contributions</i></b>	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. Contribution balances are rolled forward with an assumed annual interest rate of 5.0%.
<b><i>Marriage Assumption</i></b>	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
<b><i>Normal Form of Benefit</i></b>	A ten-year certain and life benefit is the normal form of benefit.
<b><i>Pay Increase Timing</i></b>	Middle of fiscal year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
<b><i>Service Credit Accruals</i></b>	It is assumed that members accrue one year of service credit per year.

## GLOSSARY

<b><i>Actuarial Accrued Liability (AAL)</i></b>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<b><i>Actuarial Assumptions</i></b>	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.
<b><i>Actuarial Cost Method</i></b>	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.
<b><i>Actuarial Equivalent</i></b>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<b><i>Actuarial Present Value (APV)</i></b>	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
<b><i>Actuarial Present Value of Future Benefits (APVFB)</i></b>	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
<b><i>Actuarial Valuation</i></b>	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67, such as the Funded Ratio and the Actuarially Determined Employer Contribution (ADEC).
<b><i>Actuarial Value of Assets</i></b>	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Employer Contribution (ADEC).

<b><i>Amortization Method</i></b>	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.
<b><i>Amortization Payment</i></b>	That portion of the plan contribution or ADEC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
<b><i>Amortization Period</i></b>	The period used in calculating the Amortization Payment.
<b><i>Actuarially Determined Employer Contribution (ADEC)</i></b>	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The ADEC consists of the Employer Normal Cost and Amortization Payment.
<b><i>Closed Amortization Period</i></b>	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.
<b><i>Employer Normal Cost</i></b>	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
<b><i>Equivalent Single Amortization Period</i></b>	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
<b><i>Experience Gain/Loss</i></b>	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.

<b><i>Funded Ratio</i></b>	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.
<b><i>GASB</i></b>	Governmental Accounting Standards Board.
<b><i>GASB No. 67 and GASB No. 68</i></b>	These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.
<b><i>Normal Cost</i></b>	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
<b><i>Open Amortization Period</i></b>	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
<b><i>Unfunded Actuarial Accrued Liability</i></b>	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
<b><i>Valuation Date</i></b>	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.

## SECTION C

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### PENSION FUND INFORMATION

## Statement of Plan Assets at Market Value

Item	September 30	
	2021	2020
A. Cash and Cash Equivalents (Operating Cash)	\$ -	\$ -
B. Receivables		
1. Member Contributions	\$ 14,480	\$ 11,765
2. Employer Contributions	-	-
3. State Contributions (from Share Plan)	-	-
4. Investment Income and Other Receivables	63,902	219,755
5. Total Receivables	<u>\$ 78,382</u>	<u>\$ 231,520</u>
C. Investments		
1. Short Term Investments	\$ 4,041,847	\$ 3,375,146
2. Domestic Equities	39,549,059	31,308,472
3. Index Fund-Bonds	29,626,291	23,052,019
4. Domestic Fixed Income	14,444,058	11,779,294
5. International Fixed Income	-	-
6. Real Estate	17,912,556	15,876,443
7. Private Equity	-	-
8. Total Investments	<u>\$ 105,573,811</u>	<u>\$ 85,391,374</u>
D. Liabilities		
1. Benefits Payable	\$ -	\$ (896,289)
2. Accrued Expenses and Other Payables	(614,620)	(478,592)
3. Total Liabilities	<u>\$ (614,620)</u>	<u>\$ (1,374,881)</u>
E. Total Market Value of Assets Available for Benefits	\$ 105,037,573	\$ 84,248,013
F. Allocation of Investments		
1. Short Term Investments	3.8%	4.0%
2. Domestic Equities	37.4%	36.6%
3. Index Fund-Bonds	28.1%	27.0%
4. Domestic Fixed Income	13.7%	13.8%
5. International Fixed Income	0.0%	0.0%
6. Real Estate	17.0%	18.6%
7. Private Equity	0.0%	0.0%
8. Total Investments	<u>100.0%</u>	<u>100.0%</u>



## Reconciliation of Plan Assets

Item	September 30	
	2021	2020
A. Market Value of Assets at Beginning of Year	\$ 84,248,013	\$ 80,605,147
B. Adjustment to Match Financial Statements	\$ -	\$ -
C. Revenues and Expenditures		
1. Contributions		
a. Employee Contributions*	\$ 845,591	\$ 875,237
b. Employer Contributions	4,545,250	4,682,955
c. State Contributions (from Share Plan)	186,255	197,038
d. Total	<u>\$ 5,577,096</u>	<u>\$ 5,755,230</u>
2. Investment Income		
a. Interest, Dividends, and Other Income	\$ 2,938,985	\$ 1,136,525
b. Net Realized/Unrealized Gains/(Losses)	19,179,703	2,669,245
c. Investment Expenses	(341,297)	(296,268)
d. Net Investment Income	<u>\$ 21,777,391</u>	<u>\$ 3,509,502</u>
3. Benefits and Refunds		
a. Regular Monthly Benefits	\$ (5,132,743)	\$ (4,454,822)
b. Refunds	(58,715)	-
c. Lump Sum Benefits	(1,093,240)	(896,289)
d. Total	<u>\$ (6,284,698)</u>	<u>\$ (5,351,111)</u>
4. Administrative and Miscellaneous Expenses	\$ (280,229)	\$ (270,755)
5. Transfers	\$ -	\$ -
D. Market Value of Assets at End of Year	\$ 105,037,573	\$ 84,248,013

\* Includes purchased service credit contributions.



### Actuarial Value of Assets

Items	Year Ending September 30	
	2021	2020
A. Beginning of Year Assets		
1. Market Value	\$ 84,248,013	\$ 80,605,147
2. Actuarial Value	87,972,095	82,645,862
B. End of Year Market Value of Assets	105,037,573	84,248,013
C. Net of Contributions Less Disbursements	(987,831)	133,364
D. Actual Net Investment Earnings	21,777,391	3,509,502
E. Expected Investment Earnings	6,372,307	6,123,890
F. Expected Actuarial Value End of Year	93,356,571	88,903,116
G. Market Value End of Year less Expected Actuarial Value: B - F	11,681,002	(4,655,103)
H. 20% of Difference	2,336,200	(931,021)
I. End of Year Assets		
1. Actuarial Value: F + H	95,692,771	87,972,095
2. Final Actuarial Value Within 80% to 120% of Market Value	95,692,771	87,972,095
J. Recognized Investment Earnings	8,708,507	5,192,869
K. Recognized Rate of Return	9.7%	6.1%

Year Ended	Investment Rate of Return*	
	Market Value	Actuarial Value
	Basis**	Basis
9/30/86	19.1 %	13.8 %
9/30/87	15.0	22.3
9/30/88	1.6	(0.5)
9/30/89	16.2	15.8
9/30/90	(0.4)	1.4
9/30/91	23.0	19.5
9/30/92	16.1	15.3
9/30/93	9.4	9.3
9/30/94	0.8	4.3
9/30/95	23.4	18.8
9/30/96	22.7	20.2
9/30/97	30.1	26.3
9/30/98	6.0	14.3
9/30/99	20.5	16.3
9/30/00	6.5	14.8
9/30/01	(7.1)	9.4
9/30/02	(6.9)	(0.6)
9/30/03	13.1	4.2
9/30/04	10.5	2.2
9/30/05	6.9	2.3
9/30/06	6.0	6.3
9/30/07	12.8	7.5
9/30/08	(13.2)	0.9
9/30/09	(1.1)	(0.5)
9/30/10	11.6	8.6
9/30/11	(1.4)	1.8
9/30/12	18.8	8.2
9/30/13	13.4	7.4
9/30/14	10.1	7.9
9/30/15	3.1	6.9
9/30/16	9.9	7.4
9/30/17	10.6	7.6
9/30/18	12.0	8.4
9/30/19	0.5	6.7
9/30/20	4.2	6.1
9/30/21	25.3	9.7
<b>Average Returns:</b>		
Last 5 Years	10.2 %	7.7 %
Last 10 Years	10.6 %	7.6 %
All Years	9.3 %	9.0 %

\* Net of investment expenses after 2005.

\*\* Calculated returns may differ from returns calculated by the investment consultant.



## **SECTION D**

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### **FINANCIAL ACCOUNTING INFORMATION**

**FASB NO. 35 INFORMATION**

A. Valuation Date	October 1, 2021	October 1, 2020
<b>B. Actuarial Present Value of Accumulated Plan Benefits</b>		
1. Vested Benefits		
a. Members Currently Receiving Payments	\$ 75,334,874	\$ 63,571,967
b. Terminated Vested Members	151,191	1,301,877
c. Other Members	<u>38,191,576</u>	<u>40,904,441</u>
d. Total	113,677,641	105,778,285
2. Non-Vested Benefits	1,414,580	1,600,276
3. Total Actuarial Present Value of Accumulated Plan Benefits: 1d + 2	115,092,221	107,378,561
4. Accumulated Contributions of Active Members	7,494,957	7,988,397
<b>C. Changes in the Actuarial Present Value of Accumulated Plan Benefits</b>		
1. Total Value at Beginning of Year	107,378,561	100,007,261
2. Increase (Decrease) During the Period Attributable to:		
a. Plan Amendment	0	0
b. Change in Actuarial Assumptions	1,444,476	1,354,859
c. Latest Member Data, Benefits Accumulated and Decrease in the Discount Period	12,553,882	11,367,552
d. Benefits Paid	<u>(6,284,698)</u>	<u>(5,351,111)</u>
e. Net Increase	7,713,660	7,371,300
3. Total Value at End of Period	115,092,221	107,378,561
<b>D. Market Value of Assets</b>	105,037,573	84,248,013
<b>E. Actuarial Assumptions - See page entitled Actuarial Assumptions and Methods</b>		

**SCHEDULE OF CHANGES IN THE EMPLOYER'S  
NET PENSION LIABILITY AND RELATED RATIOS  
GASB Statement No. 67**

Fiscal year ending September 30,	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
<b>Total Pension Liability</b>								
Service Cost	\$ 2,728,817	\$ 2,745,074	\$ 2,884,226	\$ 2,874,281	\$ 2,736,585	\$ 2,688,621	\$ 2,364,576	\$ 2,474,226
Interest	8,368,131	8,192,391	7,986,311	7,175,820	7,112,421	6,699,774	6,407,038	5,987,806
Benefit Changes	-	-	-	-	-	-	-	-
Difference between actual & expected experience	1,753,351	1,490,024	(2,846,387)	5,426,628	(586,971)	(722,729)	(2,551,912)	-
Assumption Changes	1,560,253	(2,593,823)	1,471,145	1,422,393	2,910,987	1,055,450	973,319	-
Benefit Payments	(6,225,983)	(5,351,111)	(4,686,763)	(4,550,105)	(4,280,161)	(2,859,026)	(2,992,356)	(3,537,499)
Refunds	(58,715)	-	(71,573)	(18,657)	(32,663)	(160,092)	-	(72,946)
Other	-	-	-	-	-	-	-	-
<b>Net Change in Total Pension Liability</b>	<u>8,125,854</u>	<u>4,482,555</u>	<u>4,736,959</u>	<u>12,330,360</u>	<u>7,860,198</u>	<u>6,701,998</u>	<u>4,200,665</u>	<u>4,851,587</u>
<b>Total Pension Liability - Beginning</b>	<u>116,637,565</u>	<u>112,155,010</u>	<u>107,418,051</u>	<u>95,087,691</u>	<u>87,227,493</u>	<u>80,525,495</u>	<u>76,324,830</u>	<u>71,473,243</u>
<b>Total Pension Liability - Ending (a)</b>	<u>\$ 124,763,419</u>	<u>\$ 116,637,565</u>	<u>\$ 112,155,010</u>	<u>\$ 107,418,051</u>	<u>\$ 95,087,691</u>	<u>\$ 87,227,493</u>	<u>\$ 80,525,495</u>	<u>\$ 76,324,830</u>
<b>Plan Fiduciary Net Position</b>								
Contributions - Employer	\$ 4,545,250	\$ 4,682,955	\$ 4,724,031	\$ 3,884,945	\$ 3,744,407	\$ 3,558,223	\$ 3,358,659	\$ 3,194,000
Contributions - Employer (from State/Share Plan)	186,255	197,038	184,085	82,682	82,682	576,823	82,682	82,682
Contributions - Non-Employer Contributing Entity	-	-	-	-	-	-	-	-
Contributions - Member	845,591	875,237	907,850	932,232	1,153,440	1,014,411	846,576	791,906
Net Investment Income	21,777,391	3,509,502	420,126	8,694,199	6,933,826	5,759,158	1,672,653	4,798,319
Benefit Payments	(6,225,983)	(5,351,111)	(4,686,763)	(4,550,105)	(4,280,161)	(2,859,026)	(2,992,356)	(3,537,499)
Refunds	(58,715)	-	(71,573)	(18,657)	(32,663)	(160,092)	-	(72,946)
Administrative Expense	(280,229)	(270,755)	(253,291)	(227,839)	(159,823)	(136,260)	(126,435)	(132,094)
Other	-	-	-	-	-	-	-	-
<b>Net Change in Plan Fiduciary Net Position</b>	<u>20,789,560</u>	<u>3,642,866</u>	<u>1,224,465</u>	<u>8,797,457</u>	<u>7,441,708</u>	<u>7,753,237</u>	<u>2,841,779</u>	<u>5,124,368</u>
<b>Plan Fiduciary Net Position - Beginning</b>	<u>84,248,013</u>	<u>80,605,147</u>	<u>79,380,682</u>	<u>70,583,225</u>	<u>63,141,517</u>	<u>55,388,280</u>	<u>52,546,501</u>	<u>47,422,133</u>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<u>\$ 105,037,573</u>	<u>\$ 84,248,013</u>	<u>\$ 80,605,147</u>	<u>\$ 79,380,682</u>	<u>\$ 70,583,225</u>	<u>\$ 63,141,517</u>	<u>\$ 55,388,280</u>	<u>\$ 52,546,501</u>
<b>Net Pension Liability - Ending (a) - (b)</b>	<u>19,725,846</u>	<u>32,389,552</u>	<u>31,549,863</u>	<u>28,037,369</u>	<u>24,504,466</u>	<u>24,085,976</u>	<u>25,137,215</u>	<u>23,778,329</u>
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>	84.19 %	72.23 %	71.87 %	73.90 %	74.23 %	72.39 %	68.78 %	68.85 %
<b>Covered Payroll*</b>	\$ 8,887,506	\$ 8,936,209	\$ 9,667,188	\$ 9,962,588	\$ 9,058,510	\$ 9,185,954	\$ 8,901,956	\$ 8,327,087
<b>Net Pension Liability as a Percentage of Covered Payroll</b>	221.95 %	362.45 %	326.36 %	281.43 %	270.51 %	262.20 %	282.38 %	285.55 %

\* Estimated covered payroll



**SCHEDULE OF THE EMPLOYER'S NET PENSION LIABILITY**  
**GASB Statement No. 67**

FY Ending September 30,	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability	Plan Fiduciary Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2014	\$ 76,324,830	\$ 52,546,501	\$ 23,778,329	68.85%	\$ 8,327,087	285.55%
2015	80,525,495	55,388,280	25,137,215	68.78%	8,901,956	282.38%
2016	87,227,493	63,141,517	24,085,976	72.39%	9,185,954	262.20%
2017	95,087,691	70,583,225	24,504,466	74.23%	9,058,510	270.51%
2018	107,418,051	79,380,682	28,037,369	73.90%	9,962,588	281.43%
2019	112,155,010	80,605,147	31,549,863	71.87%	9,667,188	326.36%
2020	116,637,565	84,248,013	32,389,552	72.23%	8,936,209	362.45%
2021	124,763,419	105,037,573	19,725,846	84.19%	8,887,506	221.95%

**NOTES TO SCHEDULE OF THE EMPLOYER'S NET PENSION LIABILITY**  
**GASB Statement No. 67**

**Valuation Date:** October 1, 2020  
**Measurement Date:** September 30, 2021

**Methods and Assumptions Used to Determine Net Pension Liability:**

Actuarial Cost Method	Entry Age Normal
Roll Forward Procedures	The Total Pension Liability was developed by using standard actuarial techniques to roll forward amounts from the October 1, 2020 actuarial valuation one year to the measurement date.
Inflation	2.50%
Salary Increases	3.50% to 9.00% depending on service
Investment Rate of Return	7.10%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition
Mortality	The mortality tables are the PUB-2010 Headcount Weighted Safety Below Median Employee Male Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Employee Female Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Below Median Healthy Retiree Male Table (post-retirement) and the PUB-2010 Safety Healthy Retiree Female Table (post-retirement). These tables use ages set forward one year and mortality improvements to all future years after 2010 using scale MP-2018. These are the same rates used for Special Risk Class members in the July 1, 2019 Actuarial Valuation of the Florida Retirement System (FRS).

**Other Information:**

Notes See Discussion of Valuation Results in the October 1, 2020 Actuarial Valuation Report.



**SCHEDULE OF CONTRIBUTIONS**  
**GASB Statement No. 67**

FY Ending September 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2014	\$ 3,239,178	\$ 3,276,682	\$ (37,504)	\$ 8,327,087	39.35%
2015	3,441,341	3,441,341	0	8,901,956	38.66%
2016	3,640,905	4,135,046	(494,141)	9,185,954	45.01%
2017	3,827,089	3,827,089	0	9,058,510	42.25%
2018	3,967,627	3,967,627	0	9,962,588	39.83%
2019	4,908,116	4,908,116	0	9,667,188	50.77%
2020	4,879,993	4,879,993	0	8,936,209	54.61%
2021	4,731,505	4,731,505	0	8,887,506	53.24%

**NOTES TO SCHEDULE OF CONTRIBUTIONS**  
**GASB Statement No. 67**

**Valuation Date:** October 1, 2019  
**Notes** Actuarially determined contributions are calculated as of October 1, which is two years prior to the end of the fiscal year in which contributions are reported.

**Methods and Assumptions Used to Determine Contribution Rates:**

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Dollar, Closed
Remaining Amortization Period	25 years
Asset Valuation Method	Recognition of 20% of difference between market value of assets and expected actuarial value of assets
Inflation	2.50%
Salary Increases	3.50% to 9.00% depending on service
Investment Rate of Return	7.20%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition
Mortality	The mortality tables are the PUB-2010 Headcount Weighted Safety Below Median Employee Male Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Employee Female Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Below Median Healthy Retiree Male Table (post-retirement) and the PUB-2010 Safety Healthy Retiree Female Table (post-retirement). These tables use ages set forward one year and mortality improvements to all future years after 2010 using scale MP-2018. These are the same rates used for Special Risk Class members in the July 1, 2019 Actuarial Valuation of the Florida Retirement System (FRS).

**Other Information:**

**Notes** See Discussion of Valuation Results in the October 1, 2019 Actuarial Valuation Report.

**SINGLE DISCOUNT RATE**  
**GASB Statement No. 67**

A single discount rate of 7.10% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.10%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between the total actuarially determined contribution rates and the member rate. Based on these 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 (7.10%) was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan’s net pension liability, calculated using a single discount rate of 7.10%, as well as what the plan’s net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher:

**Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption**

1% Decrease 6.10%	Current Single Discount Rate Assumption 7.10%	1% Increase 8.10%
\$37,177,514	\$19,725,846	\$5,403,572

## SECTION E

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### MISCELLANEOUS INFORMATION

<b>RECONCILIATION OF MEMBERSHIP DATA</b>		
	<b>From 10/1/20 To 10/1/21</b>	<b>From 10/1/19 To 10/1/20</b>
<b>A. Active Members</b>		
1. Number Included in Last Valuation	89	95
2. New Members Included in Current Valuation	0	0
3. Non-Vested Employment Terminations	(1)	0
4. Vested Employment Terminations	(1)	(1)
5. Service Retirements	(7)	(5)
6. Disability Retirements	(1)	0
7. Deaths	0	0
8. Transfer from General Employees Plan	0	0
9. Transfer to General Employees Plan	0	0
10. Other	<u>0</u>	<u>0</u>
11. Number Included in This Valuation	79	89
<b>B. Terminated Vested Members</b>		
1. Number Included in Last Valuation	2	1
2. Additions from Active Members	1	1
3. Lump Sum Payments/Refund of Contributions	(1)	0
4. Payments Commenced	(1)	0
5. Deaths	0	0
6. Other--Return to Actives	<u>0</u>	<u>0</u>
7. Number Included in This Valuation	1	2
<b>C. Service Retirees, Disability Retirees and Beneficiaries</b>		
1. Number Included in Last Valuation	59	55
2. Additions from Active Members	8	5
3. Additions from Terminated Vested Members	1	0
4. Deaths Resulting in No Further Payments	(1)	0
5. Deaths Resulting in New Survivor Benefits	0	0
6. End of Certain Period - No Further Payments	0	0
7. Other -- Lump Sum Distributions	<u>0</u>	<u>(1)</u>
8. Number Included in This Valuation	67	59

### ACTIVE PARTICIPANT SCATTER

Age Group	Years of Service to Valuation Date											Totals
	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30 & Up	
20-24 NO.	-	-	-	-	-	-	-	-	-	-	-	0
TOT PAY	-	-	-	-	-	-	-	-	-	-	-	0
AVG PAY	-	-	-	-	-	-	-	-	-	-	-	0
25-29 NO.	-	-	-	-	-	1	-	-	-	-	-	1
TOT PAY	-	-	-	-	-	74,209	-	-	-	-	-	74,209
AVG PAY	-	-	-	-	-	74,209	-	-	-	-	-	74,209
30-34 NO.	-	-	-	-	1	14	1	-	-	-	-	16
TOT PAY	-	-	-	-	73,471	1,172,676	97,548	-	-	-	-	1,343,695
AVG PAY	-	-	-	-	73,471	83,763	97,548	-	-	-	-	83,981
35-39 NO.	-	-	-	-	2	5	7	-	-	-	-	14
TOT PAY	-	-	-	-	146,012	424,932	757,298	-	-	-	-	1,328,242
AVG PAY	-	-	-	-	73,006	84,986	108,185	-	-	-	-	94,874
40-44 NO.	-	-	-	-	-	2	1	11	1	-	-	15
TOT PAY	-	-	-	-	-	191,403	97,131	1,208,203	102,859	-	-	1,599,596
AVG PAY	-	-	-	-	-	95,702	97,131	109,837	102,859	-	-	106,640
45-49 NO.	-	-	-	-	-	1	4	7	6	-	-	18
TOT PAY	-	-	-	-	-	75,022	400,477	795,545	739,849	-	-	2,010,893
AVG PAY	-	-	-	-	-	75,022	100,119	113,649	123,308	-	-	111,716
50-54 NO.	-	-	-	-	-	1	1	4	4	2	-	12
TOT PAY	-	-	-	-	-	97,510	99,169	462,340	485,585	241,514	-	1,386,118
AVG PAY	-	-	-	-	-	97,510	99,169	115,585	121,396	120,757	-	115,510
55-59 NO.	-	-	-	-	-	1	1	-	1	-	-	3
TOT PAY	-	-	-	-	-	81,451	95,685	-	110,163	-	-	287,299
AVG PAY	-	-	-	-	-	81,451	95,685	-	110,163	-	-	95,766
60 & Up NO.	-	-	-	-	-	-	-	-	-	-	-	-
TOT PAY	-	-	-	-	-	-	-	-	-	-	-	-
AVG PAY	-	-	-	-	-	-	-	-	-	-	-	-
TOT NO.	0	0	0	0	3	25	15	22	12	2	0	79
TOT AMT	0	0	0	0	219,483	2,117,203	1,547,308	2,466,088	1,438,456	241,514	0	8,030,052
AVG AMT	0	0	0	0	73,161	84,688	103,154	112,095	119,871	120,757	0	101,646



### INACTIVE PARTICIPANT DISTRIBUTION

Age Group	Terminated Vested		Disabled		Retired		Deceased with Beneficiary	
	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits
Under 20	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-
35-39	1	24,420	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-
45-49	-	-	-	-	4	239,884	-	-
50-54	-	-	1	94,384	15	1,296,860	-	-
55-59	-	-	-	-	18	1,529,162	-	-
60-64	-	-	2	92,763	12	1,101,282	1	32,179
65-69	-	-	1	35,184	7	679,874	-	-
70-74	-	-	-	-	4	328,318	-	-
75-79	-	-	1	22,457	1	45,972	-	-
80-84	-	-	-	-	-	-	-	-
85-89	-	-	-	-	-	-	-	-
90-94	-	-	-	-	-	-	-	-
95-99	-	-	-	-	-	-	-	-
100 & Over	-	-	-	-	-	-	-	-
<b>Total</b>	<b>1</b>	<b>24,420</b>	<b>5</b>	<b>244,788</b>	<b>61</b>	<b>5,221,352</b>	<b>1</b>	<b>32,179</b>
<b>Average Age</b>		<b>35</b>		<b>65</b>		<b>59</b>		<b>65</b>

## **SECTION F**

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### **SUMMARY OF PLAN PROVISIONS**



## SUMMARY OF PLAN PROVISIONS

### A. Ordinances

The Plan was established under the Code of Ordinances for the City of North Miami, Florida, Chapter 15, Article IV, and was most recently amended under Ordinance No. 1407 passed and adopted on its second reading on December 13, 2016. The Plan is also governed by certain provisions of Chapter 185, Florida Statutes, Part VII, Chapter 112, Florida Statutes (F.S.) and the Internal Revenue Code.

### B. Effective Date

January 1, 1977

### C. Plan Year

October 1 through September 30

### D. Type of Plan

Qualified, governmental defined benefit retirement plan; for GASB purposes it is a single employer plan.

### E. Eligibility Requirements

All police bargaining unit members and general employees initially employed as a police officer trainee before December 1, 2016, the date the City joins the Florida Retirement System (FRS), shall be eligible for membership and shall become members of this system immediately upon being employed on a full-time permanent basis pursuant to the city's administrative rules and procedures. Effective December 1, 2016, all sworn police personnel including police administrators, who are members of this system may remain members of this system or instead may elect to join the FRS as applicable.

### F. Credited Service

Service is measured as the total number of calendar years, or portions thereof, during which the member has served as an employee of the City and has made the required contributions to the Plan. No service is credited for any periods of employment for which the member received a refund of employee contributions.

### G. Compensation

Total compensation including member contributions which are "picked up" by the City.



## H. Average Final Compensation (AFC)

For members who did not waive the 20 and out early retirement provision, AFC is the average of Compensation over the highest 57 months out of the last 120 months of Credited Service prior to termination or retirement. For all other members, AFC is the average of Compensation over the highest 24 months out of the last 120 months of Credited Service prior to termination or retirement. AFC excludes lump sum payment of unused leave.

## I. Normal Retirement

**Eligibility:** A member may retire on the first day of the month coincident with or next following the earlier of:

- (1) age 55 and 10 years of Credited Service, or
- (2) age 50 and 20 years of Credited Service.

**Benefit:** 1.0% of AFC multiplied by years of Credited Service prior to July 1, 1979, plus 3.0% of AFC multiplied by years of Credited Service from July 1, 1979 through December 31, 1997, plus 3.5% of AFC multiplied by years of Credited Service earned on or after January 1, 1998.

**Normal Form of Benefit:** 10 Years Certain and Life thereafter; other options are also available.

**Supplemental Benefit:** Lump sum of member contributions made through September 30, 1982, if applicable.

**COLA:** Members who retire after October 1, 2004 (not due to disability) and elect an annuity form of payment receive an annual cost of living adjustment each April 1st. These retirees may choose a 1.92% COLA with a one-year delay, a 2.50% COLA with a three-year delay, or a 3.00% COLA with a five-year delay.

## J. Early Retirement

**Eligibility:** Members may elect to retire earlier than the Normal Retirement Eligibility upon attainment of age 50 with 10 years of Credited Service. Members who did not waive the 20 and out early retirement provision may elect to retire upon the attainment of 20 years of Credited Service regardless of age.

**Benefit:** For members who did not waive the 20 and out early retirement provision, the Normal Retirement Benefit is reduced by 1.0% for each year that the Early Retirement date precedes the Normal Retirement date. For all other members, the Normal Retirement Benefit is reduced by 3.0% for each year that the Early Retirement date precedes the Normal Retirement date.

**Normal Form of Benefit:** 10 Years Certain and Life thereafter; other options are also available.



Supplemental

Benefit: Lump sum of member contributions made through September 30, 1982, if applicable.

COLA: Members who retire after October 1, 2004 (not due to disability) and elect an annuity form of payment receive an annual cost of living adjustment each April 1st. These retirees may choose a 1.92% COLA with a one-year delay, a 2.50% COLA with a three-year delay, or a 3.00% COLA with a five-year delay.

**K. Delayed Retirement**

Same as Normal Retirement taking into account compensation earned and service credited until the date of actual retirement.

**L. Service Connected Disability**

Eligibility: Any member who incurs a mental or physical condition resulting from injury, disease, or mental disorder, which renders the member incapable of performing satisfactory work for the City is immediately eligible for a disability benefit.

Benefit: 75% of member's Compensation on the date of disability. The benefit will be reduced by amounts paid from other sources to the extent that, when combined with this benefit, they exceed 100% of the rate of pay in effect at the time of the disability. The benefit shall not be less than the accrued pension, or 42% of AFC, whichever is greater.

If a member receives a Service Connected Disability and work is available in a lower medical classification which the member is capable of performing, the member is entitled to a salary of at least 90% of the rate of pay he was receiving prior to becoming disabled. Such salary shall be paid first by the 75% disability benefit.

Normal Form of Benefit: Payable for life, or until recovery from disability. Other options are also available.

COLA: None

**M. Non-Service Connected Disability**

Eligibility: Any member who incurs a mental or physical condition resulting from injury, disease, or mental disorder, which renders the member incapable of performing satisfactory work for the City is immediately eligible for a disability benefit.

Benefit: The member's vested accrued benefit payable at the Normal Retirement date taking into account compensation earned and service credited on the date of disability. For members with at least ten years of credited service, the benefit shall not be less than the accrued pension, or 25% of AFC, whichever is greater.

Normal Form  
of Benefit: 10 Years Certain and Life thereafter payable at the Normal Retirement date, or an actuarially equivalent lump sum payable immediately. Other options are also available.

COLA: None

#### **N. Death in the Line of Duty**

Eligibility: Any member who dies while performing, directly or indirectly, services for the City is eligible for survivor benefits regardless of Credited Service.

Benefit: 50% of the average wages paid to the member during the last 12 months of employment shall be paid to the member's spouse. In addition, 10% of the member's final compensation shall be paid for each child under age 18. In no event shall the total benefit exceed 100% of the member's final compensation. If the member was eligible for normal retirement, the benefit shall not be less than the accrued pension.

Normal Form  
of Benefit: Benefits payable for the life of the spouse. Children's benefits are payable until age 18. If the member was eligible for normal retirement, the benefit shall not be payable for less than 10 years.

COLA: After October 1, 2004, beneficiaries may choose a 1.92% COLA with a one-year delay, a 2.50% COLA with a three-year delay, or a 3.00% COLA with a five-year delay. The COLA is 3.00% per year for survivors in receipt of benefits before the Plan's COLA was adopted on September 28, 2004.

#### **O. Other Pre-Retirement Death**

Eligibility: Any vested member who dies while employed by the City is eligible for survivor benefits.

Benefit: The actuarial equivalent of the vested accrued benefit plus the Member's pre-October 1, 1982 contributions shall be paid to the beneficiaries.

Normal Form  
of Benefit: Lump sum

COLA: After October 1, 2004, beneficiaries may choose a 1.92% COLA with a one-year delay, a 2.50% COLA with a three-year delay, or a 3.00% COLA with a five-year delay.

The designated beneficiary of a plan member with less than 5 years of Credited Service will receive a refund of the member's accumulated contributions with interest.

**P. Post Retirement Death**

Benefit determined by the form of benefit elected upon retirement.

**Q. Optional Forms**

In lieu of electing the Normal Form of benefit, the optional forms of benefits available to all retirees are the Straight Life Annuity option, the 50%, 67%, 75%, and 100% Joint and Survivor options, or the 5 and 10 Years Certain and Life options. A Social Security option is also available for members retiring prior to the time they are eligible for Social Security retirement benefits if they are not retiring under Disability Retirement.

Alternatively, members can elect a partial lump sum with the remaining value of the benefit paid as a monthly annuity. A total lump sum distribution is also available for those who became members of the Plan prior to October 1, 2004.

**R. Vested Termination**

Eligibility: A member has earned a non-forfeitable right to Plan benefits after the completion of 5 years of Credited Service (see vesting table below).

Credited Service	Vested Percent
Less than 5	0%
5	25
6	40
7	55
8	70
9	85
10 or more	100

Benefit: The benefit is the member’s vested accrued Normal Retirement Benefit as of the date of termination. Benefit begins at the member’s Early or Normal Retirement date and will be reduced for Early Retirement if applicable.

Normal Form of Benefit: 10 Years Certain and Life thereafter; other options are also available. In lieu thereof, the Board may elect to make an immediate lump sum payment of the actuarially equivalent benefit.

COLA: Members who retire after October 1, 2004 (not due to disability) and elect an annuity form of payment receive an annual cost of living adjustment each April 1st. These retirees may choose a 1.92% COLA with a one-year delay, a 2.50% COLA with a three-year delay, or a 3.00% COLA with a five-year delay.

Members terminating employment with less than 5 years of Credited Service will receive a refund of their own accumulated contributions with interest.



## **S. Refunds**

**Eligibility:** All members terminating employment with less than 5 years of Credited Service are eligible. Optionally, vested members (those with 5 or more years of Credited Service) may elect a refund in lieu of the vested benefits otherwise due.

**Benefit:** A refund of the member's contributions with interest.

## **T. Member Contributions**

11.51% of Compensation; and if the market value return for the fiscal year is more than 30% greater than the investment return assumption, the member contribution rate for the following year is reduced to 9.51% of Compensation.

For the period October 1, 2018 through September 30, 2021, the employee contribution rate remained at 9.51% of pay regardless of the investment performance of the Plan. Since no new agreement regarding employee contributions was reached by September 30, 2021, the employee contribution rate reverts back to the arrangements that existed on September 30, 2018.

## **U. State Contribution**

Chapter 185 Premium Tax refunds. The City and Police Benevolent Association have mutually agreed that the first \$82,682 of Chapter 185 revenue will be used to offset the City's required contribution, the next \$147,586 of Chapter 185 will be allocated to the Share Plan, and any excess Chapter 185 revenue above \$230,268 will be designated as unallocated and held in reserve as an accumulated excess.

Under the collective bargaining agreement covering the period October 1, 2018 through September 30, 2021, the City may apply 50% of the annual Chapter 185 revenue as an offset to the required contribution. The remaining 50% of the annual Chapter 185 revenue is allocated to the Share Plan. The City was also provided with the full balance of unallocated excess Chapter 185 revenue of \$627,494 to use as an offset to the required contribution. Since no new agreement regarding Chapter 185 revenue was reached by September 30, 2021, the allocation of Chapter 185 revenue reverts back to the arrangements that existed on September 30, 2018.

## **V. Employer Contribution**

Any additional amount determined by the actuary needed to fund the plan properly according to State laws.

## **W. Cost of Living Increases**

Members who retire after October 1, 2004 (not due to disability) and elect an annuity form of payment receive an annual cost of living adjustment each April 1st. These retirees may choose a 1.92% COLA with a one-year delay, a 2.50% COLA with a three-year delay, or a 3.00% COLA with a five-year delay.

**X. 13<sup>th</sup> Check**

Not Applicable

**Y. Deferred Retirement Option Plan (DROP)**

Not Applicable

**Z. Other Ancillary Benefits**

There are no ancillary retirement type benefits not required by statutes but which might be deemed a North Miami Police Pension Plan liability if continued beyond the availability of funding by the current funding source.

**AA. Changes from Previous Valuation**

None