

CITY OF ORLANDO FIREFIGHTER PENSION FUND

October 1, 2023
Actuarial Valuation Report

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At the request of the plan sponsor, this report summarizes the Firefighter Pension Fund for the City of Orlando as of October 1, 2023. The purpose of this report is to communicate the following results of the valuation:

- · Determine Funded Status; and
- Determine Recommended Contribution for the fiscal year October 1, 2024 through September 30, 2025;

This report has been prepared in accordance with the applicable Federal and State laws. Consequently, it may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The results in this report were prepared using information provided to us by other parties. The census information has been provided to us by the employer. Asset information has been provided to us by the trustee. We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we have made assumptions we believe to be reasonable. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report. A summary of the data used in the valuation is included in this report.

The actuarial assumptions and methods were chosen by the Board. In our opinion, all actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan. 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;
- 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); and
- · changes in plan provisions or applicable law.

We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

This actuarial valuation and/or cost determination 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.



With respect to reporting standards for defined benefit retirement plans or systems contained in Section 112.664(1), Florida Statutes, the actuarial disclosures required under this section were 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, meet the requirements of Section 112.664(1), Florida Statutes, and Rule 60T-1.0035, Florida Administrative Code.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report. To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

In preparing the results, Nyhart used Proval valuation software developed by Winklevoss Technologies, LLC. This software is widely used for the purpose of performing pension valuations. We coded the plan provisions, assumptions, methods, and participant data summarized in this report, and reviewed the liability and cost outputs for reasonableness. We are not aware of any material weaknesses or limitations in the software, and have determined it is appropriate for performing this valuation.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States and are available for any questions.

Nyhart

Lawrence Watts, Jr., FSA, CFA, EA, MAAA

Enrolled Actuary No. 23-8496

Kerry Sipe, ASA, EA

Enrolled Actuary No. 23-8613

April 9, 2024

Date

Copies of this Report are to be furnished to the Division of Retirement within 60 days of receipt from the actuary at the following addresses:

Mr. Stephen Bardin

Benefits Administrator

Municipal Police Officers' &

Firefighters' Trust Funds

Division of Retirement

Post Office Box 3010

Tallahassee, FL 32315-3010

Mr. Keith Brinkman

Bureau Chief, Bureau of Local Retirement Systems

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Division of Retirement

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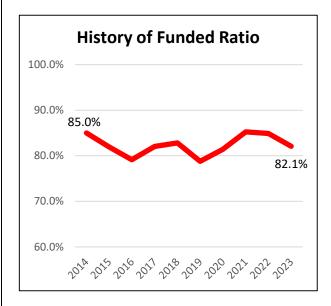
Tallahassee, FL 32315-9000



Summary Results

The actuarial valuation's primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level percentage of pay methodology.

	October 1, 2022	October 1, 2023
Funded Status Measures		
Accrued Liability	\$611,989,240	\$646,485,059
Actuarial Value of Assets	519,502,500	530,707,593
Unfunded Accrued Liability	\$92,486,740	\$115,777,466
Funded Percentage (AVA)	84.9%	82.1%
Funded percentage (MVA)	73.2%	74.1%
Cost Measures		
Recommended Contribution (City Contribution) Recommended Contribution (as a percentage of	\$22,834,091	\$26,514,921
expected payroll)	48.2%	52.9%
Asset Performance		
Market Value of Assets	\$448,157,347	\$479,145,072
Actuarial Value of Assets	519,502,500	530,707,593
Actuarial Value/Market Value	115.9%	110.8%
Member Information		
Active Members	508	502
Terminated Vested Members	2	2
Retirees, Beneficiaries, and Disabled Members	514	543
DROP Participants	17_	14
Total	1,041	1,061
Covered Payroll	\$45,528,166	\$48,183,788
Expected Payroll	\$47,349,293	\$50,111,140





Changes Since Prior Valuation

The assumption on future payroll growth for the amortization payments was decreased from 1.86% to 1.74% to stay at or below the 10 year average of historical pay growth. There have been no other changes to the assumptions or methods used since the last valuation.

There have been no known changes to the plan provisions since the last valuation.

Key Notes

This year, the census was reconciled exclusively using PensionGold data. As a result, there were several updates made to the retiree census data that are reflected in this year's valuation report.



Five Year Valuation Summary

	10/01/2019	10/01/2020	10/01/2021	10/01/2022	10/01/2023
Funding					
Accrued Liability	\$544,258,275	\$566,766,844	\$589,743,477	\$611,989,240	\$646,485,059
Actuarial Value of Assets	\$428,847,109	\$461,470,098	\$502,894,539	\$519,502,500	\$530,707,593
Unfunded Actuarial Accrued Liability	\$115,411,166	\$105,296,746	\$86,848,938	\$92,486,740	\$115,777,466
Funded Percentage	78.8%	81.4%	85.3%	84.9%	82.1%
Total Normal Cost (NC)	\$14,231,677	\$14,714,659	\$14,604,920	\$14,291,923	\$14,966,420
NC as a Percent of Covered Payroll	31.7%	32.1%	31.8%	31.4%	31.1%
Actual Employer Contribution	\$22,607,064	\$23,036,632	\$21,993,539	TBD	TBD
Recommended Contribution	\$22,607,064	\$23,036,632	\$21,993,539	\$22,834,091	\$26,514,921
Recommended Contribution (% of Pay)	50.4%	50.3%	47.9%	50.2%	55.0%
Interest Rate	7.25%	7.25%	7.25%	7.25%	7.25%
Expense Load Assumption	\$206,357	\$347,250	\$326,940	\$284,975	\$599,209
Rate of Return					
Actuarial Value of Assets	3.1%	7.3%	9.0%	4.2%	4.5%
Market Value of Assets	5.8%	7.6%	16.1%	-15.3%	10.1%
Demographic Information					
Active Participants	496	510	506	508	502
Terminated Vested Participants	5	5	5	2	2
Retired Participants	295	297	303	328	351
Beneficiaries	63	69	71	76	82
Disabled Participants	113	113	109	110	110
DROP Participants	21	21	22	17	14
Total Participants	993	1,015	1,016	1,041	1,061
Covered Payroll	\$44,839,453	\$45,795,877	\$45,892,488	\$45,528,166	\$48,183,788
Average Covered Pay	\$90,402	\$89,796	\$90,697	\$89,622	\$95,984



Identification of Risks

The results presented in this report are shown as single point values. However, these values are derived using assumptions about future markets and demographic behavior. If actual experience deviates from our assumptions, the actual results for the plan will consequently deviate from those presented in this report. Therefore, it is critical to understand the risks facing this pension plan. The following table shows the risks we believe are most relevant to the City of Orlando Firefighter Pension Fund. The risks are generally ordered with those we believe to have the most significance at the top. Also shown are possible methods by which a more detailed assessment of the risk can be performed.

Type of Risk	Additional Information
Investment Return	Portfolio risk and substantial equity position leave the plan open to adverse market results, which could increase costs in the
	future.
Participant Longevity	The plan has adopted FRS' most recent mortality tables for valuation purposes. These tables are modified from the standard tables, and, compared to the previous tables used by FRS, project a slightly shorter participant longevity overall. There is no guarantee FRS' anticipated mortality experience will mirror your plan's future experience. Deviation from expected mortality rates could impact long-term liabilities and plan cost.
Retirement	The plan has a relatively generous provisions regarding retirement eligibility; if more employees than expected retire or avail themselves of early retirement options, then this could impact estimated plan liabilities.
Salary Growth	The plan has experienced volatility in observed salary increases in the recent past; as benefits are based on final average salary, the salary growth assumption is key to accurately calculating liabilities and future costs.

Type of Risk	Method to Assess Risk
Investment Return	Scenario testing; asset/liability study
Participant Longevity	Benefit projections and contribution strategy
Retirement	Scenario testing; review population and retirement rates
Salary Growth	Review salary history and future budgets; scenario testing



Plan Maturity Measures - October 1, 2023

Each pension plan has a distinct life-cycle. New plans promise future benefits to active employees and then accumulate assets to pre-fund those benefits. As the plan matures, benefits are paid and the pre-funded assets begin to decumulate until ultimately, the plan pays out all benefits. A plan's maturity has a dramatic influence on how risks should be viewed. The following maturity measures illustrate where the City of Orlando Firefigher Pension Fund falls in its life-cycle.

Duration of Liabilities: 11.6

Duration is the most common measure of plan maturity. It is defined as the sensitivity of the liabilities to a change in the interest rate assumption. The metric also approximates the weighted average length of time, in years, until benefits are expected to be paid. A plan with high duration is, by definition, more sensitive to changes in interest rates. A plan with low duration is more susceptible to risk if asset performance deviates from expectations as there would be less time to make up for market losses in adverse market environments while more favorable environments could result in trapped surplus from gains. Conversely, high duration plans can often take on more risk when investing, and low duration plans are less sensitive to interest rate fluctuations.

Demographic Distribution - Ratio of Actively Accruing Participants to All Participants: 47.3%

A plan with a high ratio is more sensitive to fluctuations in salary (if a salary-based plan) and statutory changes. A plan with a low ratio is at higher risk from demographic experience. Such a plan should pay close attention to valuation assumptions as there will be less opportunity to realize future offsetting gains or losses when current experience deviates from assumptions. Plans with a low ratio also have limited opportunities to make alterations to plan design to affect future funded status.

Asset Leverage - Ratio of Payroll for Plan Participants to Market Value of Assets: 10.1%

Younger plans typically have a large payroll base from which to draw in order to fund the plan while mature plans often have a large pool of assets dedicated to providing benefits to a population primarily consisting of members no longer on payroll. Plans with low asset leverage will find it more difficult to address underfunding, as the contributions needed to make up the deficit will represent a higher percentage of payroll than for a plan with high asset leverage.

Benefit Payment Percentage - Ratio of Annual Benefit Payments to Market Value of Assets: 8.8%

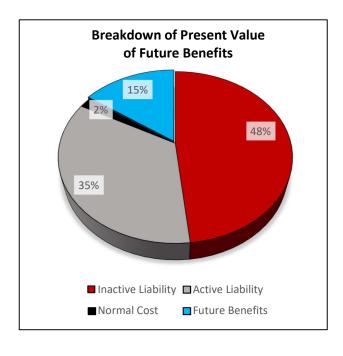
As a plan enters its decumulation phase, a larger percentage of the pre-funded assets are paid out each year to retirees. A high percentage is not cause for alarm as long as the plan is nearly fully funded. However, such a plan is more sensitive to negative asset performance, especially if cash contributions are not an option to make up for losses.



Present Value of Future Benefits

The Present Value of Future Benefits represents the discounted value of all future benefits expected to be payable to current members, considering future service and compensation not yet earned.

	October 1, 2023
Present Value of Future Benefits	
Active members	
Retirement	\$362,589,060
Disability	34,035,142
Death	4,116,442
Termination	2,020,975
Refund of contributions	442,294
Total active	\$403,203,913
Inactive members	
Retired members	\$286,914,157
DROP members	2,986,209
Beneficiaries	23,106,171
Disabled members	62,918,836
Terminated vested members	266,406
Total inactive	\$376,191,779
Total	\$779,395,692
Present value of future payrolls	\$413,055,748



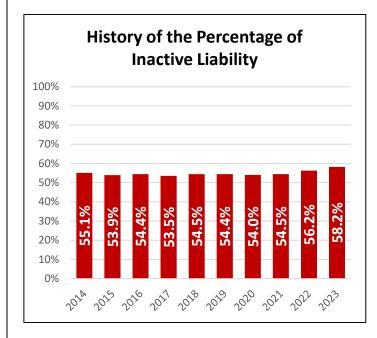


Accrued Liabilities

The Accrued Liability measures the present value of benefits earned as of the valuation date, using a specified set of actuarial assumptions. It is not a long-term snapshot of the liabilities.

Octo	ber 1	, 2023
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Accrued Liabilities	
Active members	
Retirement	\$257,230,878
Disability	10,350,139
Death	2,011,926
Termination	666,602
Refund of contributions	33,735
Total Active	\$270,293,280
nactive members	
Retired members	\$286,914,157
DROP members	2,986,209
Beneficiaries	23,106,171
Disabled members	62,918,836
Terminated vested members	266,406
Total Inactive	\$376,191,779
Total	\$646,485,059
Normal Cost	\$14,966,420

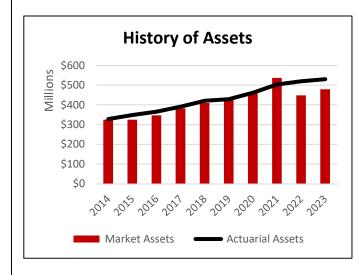




Asset Information

The amount of assets backing the pension promise is typically the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

Market Value Reconciliation	
Market value of assets, beginning of prior year	\$462,229,883
Contributions	
Employer	\$21,993,539
Employee	3,553,820
Non-Employer	4,015,121
Total	29,562,480
Investment income, net expenses	47,068,741
Benefit payments and refunds	(42,361,487)
Administrative expenses	(565,853)
Other expenses	(33,356)
Market value of assets, beginning of current year	\$495,900,408
Return on Market Value	10.14%
Share Plan Assets	\$16,755,336
Market value of assets available for pension benefits	\$479,145,072
Actuarial value of plan assets	
Value at beginning of current year	\$530,707,593





Asset Information (continued)

Plan Assets are used to develop funded percentages and contribution requirements.

	October 1, 2023
Expected actuarial value of assets	
(a) Actuarial value of assets, beginning of prior year	\$519,502,500
(b) Contributions	27,957,365
(c) Benefit payments	(39,322,948)
(d) Refund of contributions	(173,050)
(e) Expenses	(599,209)
(f) Expected return	37,957,367
(g) Expected actuarial value of assets, beginning of current year	\$545,322,025
2. Market value of assets, beginning of current year	\$479,145,072
3. Actual return on market value	\$43,125,567
4. Amount subject to phase in [3-1(f)]	\$5,168,200
5. Phase in of asset gain/(loss) *	
(a) Current year (20% x \$5,168,200)	\$1,033,640
(b) First prior year (20% x (\$120,258,434))	(\$24,051,687)
(c) Second prior year (20% x \$40,271,834)	\$8,054,367
(d) Third prior year (20% x \$1,746,238)	\$349,248
(e) Total phase-in	(\$14,614,432)
6. Preliminary actuarial value of assets, beginning of current year [1(g)+5(e)]	\$530,707,593
7. 80% market value of assets	\$383,316,058
8. 120% market value of assets	\$574,974,086
9. Final adjusted actuarial value of assets	\$530,707,593
10. Return on actuarial value of assets	4.46%

^{*} The asset valuation method was updated, starting with the October 1, 2019 valuation, to the 20% (5-year) phase-in-method with a 20% corridor.



October 1, 2023

Reconciliation of Gain/Loss

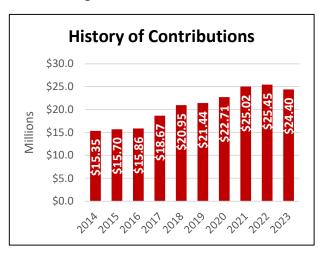
Liability (gain)/loss Actuarial liability, beginning of prior year \$611,989,240 Normal cost 14,291,923 Benefit payments (39,495,998) **Expected interest** 43,998,704 Assumption changes 0 1-year lag adjustment 462,521 Expected actuarial liability, beginning of current year \$631,246,390 Actual actuarial liability \$646,485,059 Liability (gain)/loss \$15,238,669 Asset (gain)/loss Actuarial value of assets, beginning of prior year \$519,502,500 Contributions 27,957,365 Benefit payments and expenses (40,095,207) Expected investment return 37,957,367 Expected actuarial value of assets, beginning of current year \$545,322,025 Actual actuarial value of assets, beginning of current year (before accumulated reserve adjustment) \$530,707,593 Asset (gain)/loss \$14,614,432 Total (gain)/loss \$29,853,101

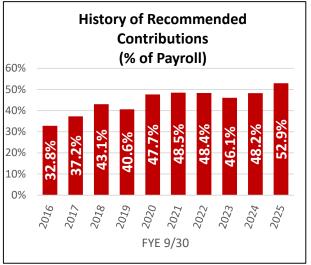


Development of Recommended Contribution

The minimum recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws. The recommended contribution is composed of the normal cost, administrative expenses, and an amortization charge.

	October 1, 2023
Funded Position	
Entry age accrued liability	\$646,485,059
2. Actuarial value of assets	530,707,593
3. Unfunded actuarial accrued liability (UAAL)	\$115,777,466
Employer Contributions	
1. Normal cost	
(a) Total normal cost	\$14,966,420
(b) Normal cost associated with participant contributions	(3,601,258)
(c) Net normal cost	\$11,365,162
2. Administrative expenses	599,209
3. Amortization of UAAL	15,005,258
4. Applicable interest	1,955,298
5. Total required contribution	\$28,924,927
6. Expected state contribution	(2,410,006)
7. Total recommended contribution ¹	\$26,514,921
As a percentage of covered payroll	55.03%
As a percentage of expected payroll	52.91%







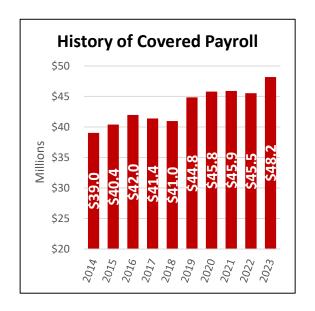
¹ Lump sum payment to be made October 1, 2024

Demographic Information

The foundation of a reliable actuarial report is the participant information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

October	1,	2023
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Participant Counts		
Active Participants	502	
Retired Participants	351	
Beneficiaries	82	
Disabled Participants	110	
Terminated Vested Participants	2	
DROP Participants	14	
Total Participants	1,061	
Active Participant Demographics		
Average Age	41.71	
Average Service	12.77	
Average Compensation	\$95,984	
Covered Payroll	\$48,183,788	





Demographic Information (continued)

	October 1, 2023
Retiree Statistics	
Average Age	66.09
Average Monthly Benefit	\$5,076
Beneficiary Statistics	
Average Age	70.07
Average Monthly Benefit	\$2,558
Disabled Participants Statistics	
Average Age	62.26
Average Monthly Benefit	\$4,196
Terminated Participants Statistics	
Average Age	41.46
Average Monthly Benefit	\$1,307
DROP Participants Statistics	
Average Age	51.16
Average Monthly Benefit	\$6,515



Participant Reconciliation

	Active	Terminated Vested	Disabled	Retired	Beneficiaries	Totals
Prior Year	508	2	110	345	76	1,041
Active						0
To Disabled	(2)		2			0
To Retired	(31)			31		0
To Terminated Vested						0
To Terminated Non-Vested	(5)					(5)
To Death						0
Terminated Vested						0
To Retired						0
Disabled						0
To Death			(2)			(2)
Retired						0
To Death				(11)		(11)
Survivor						0
To Death					(1)	(1)
Additions	32				8	40
Departures					(1)	(1)
Corrections						0
Current Year	502	2	110	365	82	1,061



Active Participant Schedule

Active participant information grouped based on age and service.

	Years of Service											
Age Group	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up	Total	Average Pay
Under 25	2	3									5	65,730
25 to 29	12	22	6								40	69,056
30 to 34	7	38	15	15							75	79,221
35 to 39	5	30	26	24	13						98	90,103
40 to 44	2	8	11	23	31	19					94	101,404
45 to 49		1	1	8	32	52	2				96	110,292
50 to 54	1		2	1	13	41	10				68	108,886
55 to 59					4	11	7				22	107,334
60 to 64					1	2	1				4	108,907
65 to 69												
70 & up												
Total	29	102	61	71	94	125	20				502	95,984



Plan Status

Special Acts beginning in 1945 and ordinances codified in Chapter 12, Articles II and III, Orlando City Code, and Fire Pension Ordinance.

Eligibility for Participation

All officers and firefighters regularly and continuously employed in the Fire Department, excluding secretaries, stenographers, and switchboard operators. Membership starts immediately upon hire.

Accrual of Benefits

A participant shall accumulate a benefit payable at normal retirement date based on credited service as of the date of determination and the accrual rate associated with their credited service. The total benefit shall not exceed 100% of Average Monthly Salary.

Credited Service	Accrual per Year of Credited Service
10-20	2%
20-42.5	3.4% (maximum 85%)
42.5+	3.4% (maximum 85%) + 2% for service over 42.5

Benefits

Normal Retirement

Eligibility Completion of 20 Years of Credited Service or attainment of age 47 and completion of 10 Years of Credited Service.

Benefit Unreduced Accrued Benefit payable immediately

Early Retirement

Eligibility Completion of 20 Years of Credited Service or attainment of age 47 and completion of 10 years of Credited Service.

Benefit Accrued retirement benefit

Late Retirement

Eligibility Participation continues after normal retirement date.

Benefit Accrued retirement benefit



Death before Retirement In Line of Duty

Eligibility Participant dies while performing duties.

Benefit Members with less than 10 years of service – Beneficiary receives 75% of 80% of the member's Average Monthly Salary until death.

Members with 10 years of service – Beneficiary receives 100% of accrued benefit for 10 years and 75% of member's 80% of the Average Monthly Salary. The 80% may be increased 3.4% for each year of service over 23.53 years (up to maximum of 85%) and

an additional 2% for each year of service over 42.5 years (up to maximum of 100%).

25% of the surviving spouses' pension is directed toward any surviving child under 18.

Death before Retirement Not In Line of Duty

Eligibility Participant dies while not in line of duty.

Benefit Members with less than 10 years of service – accumulated contributions without interest paid to Beneficiary.

Members with 10 years of service - Beneficiary receives 100% of Accrued Benefit for 10 years and 65% (75% if members reached

normal retirement) of the Accrued Benefit after 10 years until death.

Death during Qualified Military Service

Starting January 1, 2007, the beneficiary of a member who dies while performing qualified military service will be entitled to non-line of duty death benefits, subject to repayment of any withdrawn employee contributions.

Termination Benefit

Eligibility Fully vested after 10 years of Credited Service.

Benefit Less than 20 years of service – 2% of Average Monthly Salary per Years of Service

More than 20 years of service – service retirement benefit

Benefit payable at age 47. If the participant terminates prior to 10 years of service a refund of accumulated contributions without

interest will be issued

Disability Benefit In Line of Duty

Eligibility Immediately upon permanent disability

Benefit 80% of average monthly salary plus 2% for credited service between 40 and 50 years. Benefit terminates upon death or recovery.



Disability Benefit Not In Line of Duty

Eligibility Immediately upon permanent disability

Benefit Less than 10 years of service – 3% of Average Monthly Salary per year

10-20 years of service – 4% of Average Monthly Salary per year (maximum 60%)

More than 20 years of service - same as service retirement benefit

Compensation

Salary

All employees' base pay, EMT and paramedic pay, longevity pay, incentive pay, and fixed monthly remuneration, including pick-up contributions, but excluding overtime pay, education advancement pay, and any other form of compensation.

Average Monthly Salary

Average Monthly Salary during the last 3 years of Credited Service, or the 5 best years of last 10 years if greater.

Credited Service

For Vesting and Benefit Accrual

Continuous service credited under Pension Fund, from most recent date of employment. Upon reemployment a member may restore pre-breach service upon repayment of amount withdrawn plus interest. Periods of Disability in Line of Duty are credited upon returning to service.

After employment, active military service (maximum of 5 years) after March 12, 1999 is included in Credited Service.

Employee Contributions

1% (basic), .05% for "20 and out", 6.32% for COLA, totaling 7.37% of Compensation; .12% for DROP (not explicit in ordinance).

DROP

Eligibility Eligible for service retirement and completion of 20 years of service.

Benefit Forward Deferred Retirement Option Plan for up to 60 months or a retroactive Deferred Retirement Option Program for up to 60

months. Interest credited is 8.0%

Combined years of credited service and DROP participation may not exceed 360 months. Beneficiaries of DROP participants are

not entitled to preretirement death benefits and DROP participants are not eligible for disability benefits.



COLA

Eligibility Members who retire with 20 or more years of service, or beneficiaries of these members.

Benefit 5.0% triennial cost-of-living increase beginning 3 years after retirement or DROP exit. Additional cost of benefit is paid by

members. Members terminating and not for COLA are not entitled to a refund of contributions to fund the COLA.

Payment Forms

Normal Form 10 year Certain and Life

Optional Forms

50%, 66 2/3%, 75%, and 100% Joint and Survivor Annuity (reduction on first death); Single Life Annuity

For married participants who elect the 10 year Certain and Life,

- If death of the participant occurs during the 10 year certain period, the spouse will continue to receive 100% of the normal form benefit through the remainder of the ten years. After the ten year period, the spouse will receive 75% of the normal form benefit for the remainder of his or her lifetime.
- If death of the participant occurs after the 10 year certain period, the spouse will continue to receive 75% of the normal form benefit for the remainder of his or her lifetime.
- If the spouse dies before the participant, there is no reduction to the benefit.

Plan Provisions Not Included

We are not aware of any plan provisions not included in the valuation.

Adjustment Made for Subsequent Events

We are not aware of any event following the measurement date and prior to the date of this report that would materially impact results.

Changes Since Prior Report

None.



Cost Method

Entry Age Method

Amortization Method

Fresh Start of UAAL amortization over 20 years as of 9/30/2005. All new bases are to be amortized over a 20-year closed period with a 4.0% payroll growth assumption. This assumption was adjusted to 1.74% for 2023 to remain in compliance with the Florida 10-year average requirement.

Asset Valuation Method

20% (5-year) Phase-in method with a 20% asset corridor.

Interest Rates

7.25% net of investment expenses

The assumed interest rates are based on a study of actuarial experience for the plan during 2014-2018. See the experience study report dated November 21, 2019 as prepared by Nyhart.

Annual Pay Increases

2.50% inflation plus merit increases (sample below).

<u>Age</u>	<u>Rates</u>
20	2.5%
30	2.5%
40	2.0%
50	1.0%
60	0.0%

The assumed annual pay increases and inflation rate are based on a study of actuarial experience for the plan during 2014-2018. See the experience study report dated November 21, 2019 as prepared by Nyhart.

Expense and/or Contingency Loading

One-year term cost method, based on expenses for the previous year.

Mortality Rates

Pre-Retirement:

Pub-2010 Generational using scale MP-2018, Females, Headcount Weighted Safety Employee Female Table, set forward 1 year; Males, Headcount Weighted Safety Below Median Employee Male Table, set forward 1 year

Post-Retirement:

Pub-2010 Generational using scale MP-2018, Females, Headcount Weighted Safety Healthy Retiree Female Table, set forward 1 year; Males, Headcount Weighted Safety Below Median Healthy Retiree Male Table, set forward 1 year



Disabled:

Florida Retirement System special risk disabled mortality

75% of assumed deaths are expected to be in Line of Duty.

Pub-2010, Females, 80% Headcount Weighted General Disabled Retiree Female Table / 20% Headcount Weighted Safety Disabled Retiree Female Table; Males, 80% Headcount Weighted General Disabled Retiree Male Table / 20% Headcount Weighted Safety Disabled Retiree Male Table.

These are the same mortality rates used by the Florida Retirement System in its July 1, 2023 Actuarial Valuation Report.

After completion of 20 years of credited service with the following rates:

Service at	
<u>Retirement</u>	<u>Rates</u>
20-23	10%
24	20%
25	40%
26-28	30%
29	70%
30+	100%

The assumed retirement rates are based on a study of actuarial experience for the plan during 2009-2014. See the experience study report dated November 19, 2015 as prepared by Nyhart. No changes were recommended based on the experience study for the plan during 2014-2018. See the experience study report dated November 21, 2019 as prepared by Nyhart.

<u>Age</u>	Rates
20	2.36%
30	0.35%
40	0.83%
50	1.42%

Disability rates cease upon attainment of 23 years of service.

75% of disabilities are assumed to be In Line of Duty and no offsets are included in any disability benefits. No probabilities of recovery are used.

Retirement Rates

Disability Rates



The assumed disability rates are based on a study of actuarial experience for the plan during 2014-2018. See the experience study report dated November 21, 2019 as prepared by Nyhart.

Withdrawal Rates	<u>Age</u>	<u>Rates</u>
	20	1.50%
	30	1.00%

40

50 60

balances.

0.50%

0.25%

If not vested upon termination, it is assumed that members withdraw their contribution

The assumed withdrawal rates are based on a study of actuarial experience for the plan during 2014-2018. See the experience study report dated November 21, 2019 as prepared by Nyhart.

80% of active Members are assumed to be married with female spouses assumed to be 3 years younger than male spouses.

All members retiring with 20 or more years of service are assumed to receive a 5% cost-of-living increase every 3 years.

Premium tax revenues under Chapter 175 are assumed to be \$2,410,006.

Most recent reported salary for all actives being valued, projected forward one year based on Annual Pay Increase assumptions above.

Covered Payroll increased by a 4.0% payroll growth assumption to account for the lagged contribution.

Marital Status and Ages

Cost-of-Living

State Contributions

Covered Payroll

Expected Payroll



DROP

Retroactive Deferred Retirement Option Program: It is assumed that 100% of those who have 27 or more years of service will participate in

the retroactive DROP.

Forward Deferred Retirement Option Program: The valuation does not explicitly assume future participation in the Forward DROP.

Instead, a load is added to the liability equal to the actual Forward DROP account

balances as of the valuation date.

Changes Since Prior ReportThe assumption of future payroll growth for amortization purposes was decreased to

1.74% to stay at or below the 10 year average of historical pay growth, per state law.



The actuarial report also shows the necessary items required for plan reporting and the any state requirements.

- ✓ Reconciliation of unfunded actuarial liability
- ✓ Statement of changes in plan net assets
- ✓ Distribution of assets
- ✓ Schedule of amortizations
- ✓ Florida State requirements
 - Comparative summary of principal valuation results
 - Comparison of Payroll Growth, salary increases, and investment results
 - Requirements under Florida Statute 112.664 and F.A.C. 60T 1.0035
 - Reserve account for benefit improvements under F.L. 99-1 and SB 172
- ✓ Supplemental CAFR information
- ✓ Low-Default-Risk Obligation Measure (LDROM)



Reconciliation of Unfunded Actuarial Liability

	October 1, 2023
1. Unfunded Actuarial Accrued Liability beginning of prior year	\$92,486,740
2. Normal Cost	14,291,923
3. Expenses	599,209
4. Employer Contributions	(21,993,539)
5. Non-Employer Contributions	(5,963,826)
6. Interest	6,041,337
7. 1-year lag adjustment	462,521
8. Expected Unfunded Actuarial Accrued Liability, beginning of current year	\$85,924,365
9. Changes due to:	
(a) Amendments	\$0
(b) Assumptions	0
(c) Funding Methods	0
(d) Asset Valuation Methods	0
(e) Total	\$0
10. (Gain)/Loss due to:	
(a) Assets	\$14,614,432
(b) Liabilities	\$15,238,669
(c) Total	\$29,853,101
11. Unfunded Actuarial Liability beginning of current year [8 + 9(e) + 10(c)]	\$115,777,466



Statement of Changes in Plan Net Assets

		September 30, 2022	September 30, 2023
1.	Additions		
	(a) Contributions:		
	(i) Employer	\$23,036,632	\$21,993,539
	(ii) Member	3,360,639	3,553,820
	(iii) Nonemployer contributing entity	3,104,991	4,015,121
	(iv) Excess premium tax	0	0
	(v) Total	\$29,502,262	\$29,562,480
	(b) Investment income		
	(i) Net increase in fair value of investments	(\$88,737,686)	\$40,203,840
	(ii) Interest and dividends	5,515,524	8,625,267
	(iii) Investment expense, other than from securities lending	(2,318,291)	(1,760,830)
	(iv) Securities lending income	32,348	464
	(v) Securities lending expense	(7,253)	0
	(vi) Total	(\$85,515,358)	\$47,068,741
	(c) Other	0	0
	(d) Total additions [(a)+(b)+(c)]	(\$56,013,096)	\$76,631,221
2.	Deductions		
	(a) Benefit payments, including refunds of member contributions	\$34,400,221	\$42,361,487
	(b) Administrative expense	242,268	565,853
	(c) Other	42,707	33,356
	(d) Total deductions	\$34,685,196	\$42,960,696
3.	Net increase [(1d)-(2d)]	(\$90,698,292)	\$33,670,525
4.	Net assets held in trust for pension benefits, beginning of year	552,928,175	462,229,883
5.	Net assets held in trust for pension benefits, end of year [(3)+(4)]	\$462,229,883	\$495,900,408



Distribution of Assets

	September 30, 2022	September 30, 2023
Cash and deposits	\$10,506,645	\$8,387,526
Securities lending cash collateral	355,586	339,203
Total cash	\$10,862,231	\$8,726,729
Receivables		
Contributions	\$0	\$0
Other	0	0
Total receivables	\$0	\$0
Investments		
Domestic Equities	\$151,443,365	\$156,592,585
Fixed Income	112,014,952	122,264,370
International Equities	67,364,820	77,027,836
Global Asset Allocation	0	0
Share Plan Mutual Fund	13,292,166	15,054,227
Real Estate	39,397,959	35,251,980
Hedge Funds	10,752,494	286,360
Short-term Investments/Asset Bonded Securities	671,937	435,686
Private Debt	32,633,202	45,422,725
Private Equity	24,092,646	34,912,945
Total investments	451,663,541	487,248,714
Payables		
Investment management fees	\$0	\$0
Due to broker for investments purchased	0	0
Collateral payable for securities lending	0	0
Other	295,889	75,035
Total liabilities	\$295,889	\$75,035
Reserved Assets		
Balance in share fund	(\$14,072,536)	(\$16,755,336)
Assets available for benefits	\$448,157,347	\$479,145,072



Schedule of Amortizations

					October 1, 2023
	<u>Original</u>	<u>Original</u>	Remaining Period	<u>Remaining</u>	<u>Annual</u>
<u>Description</u>	<u>Amounts</u>	<u>Period</u>	<u>Years</u>	<u>Balance</u>	<u>Payment</u>
Fresh Start	18,321,886	20	2	4,910,078	2,519,766
Actuarial (Gain)/Loss	(4,506,959)	20	3	(1,716,412)	(602,564)
Actuarial (Gain)/Loss	(4,698,623)	20	4	(2,286,940)	(617,730)
Plan Amendment	809,250	20	4	385,351	104,088
Actuarial (Gain)/Loss	10,730,175	20	5	6,002,081	1,330,257
Plan Amendment	8,133,032	20	6	5,123,267	970,285
Actuarial (Gain)/Loss	14,877,715	20	6	10,304,507	1,951,550
Actuarial (Gain)/Loss	7,047,273	20	7	5,313,227	884,227
Assumption Change	4,950,244	20	7	3,732,192	621,111
Actuarial (Gain)/Loss	6,486,893	20	8	5,219,773	779,049
Actuarial (Gain)/Loss	(3,644,397)	20	9	(3,083,159)	(419,137)
Actuarial (Gain)/Loss	(1,136,396)	20	10	(998,907)	(125,207)
Actuarial (Gain)/Loss	(1,834,540)	20	11	(1,663,431)	(194,141)
Actuarial (Gain)/Loss	6,029,015	20	12	5,208,487	570,607
Assumption Change	13,660,962	20	12	11,801,750	1,292,920
Actuarial (Gain)/Loss	11,623,470	20	13	10,283,010	1,064,601
Assumption Change	9,364,914	20	13	8,284,916	857,738
Actuarial (Gain)/Loss	(12,194,307)	20	14	(10,983,230)	(1,080,729)
Assumption Change	2,759,850	20	14	2,485,756	244,594
Actuarial (Gain)/Loss	(1,680,465)	20	15	(1,544,014)	(145,105)
Assumption Change	6,142,390	20	15	5,643,632	530,383
	Fresh Start Actuarial (Gain)/Loss Actuarial (Gain)/Loss Plan Amendment Actuarial (Gain)/Loss Plan Amendment Actuarial (Gain)/Loss Actuarial (Gain)/Loss Assumption Change Actuarial (Gain)/Loss Assumption Change Actuarial (Gain)/Loss Assumption Change Actuarial (Gain)/Loss Assumption Change Actuarial (Gain)/Loss Assumption Change Actuarial (Gain)/Loss	DescriptionAmountsFresh Start18,321,886Actuarial (Gain)/Loss(4,506,959)Actuarial (Gain)/Loss(4,698,623)Plan Amendment809,250Actuarial (Gain)/Loss10,730,175Plan Amendment8,133,032Actuarial (Gain)/Loss14,877,715Actuarial (Gain)/Loss7,047,273Assumption Change4,950,244Actuarial (Gain)/Loss6,486,893Actuarial (Gain)/Loss(1,136,396)Actuarial (Gain)/Loss(1,136,396)Actuarial (Gain)/Loss(1,834,540)Actuarial (Gain)/Loss6,029,015Assumption Change13,660,962Actuarial (Gain)/Loss11,623,470Assumption Change9,364,914Actuarial (Gain)/Loss(12,194,307)Assumption Change2,759,850Actuarial (Gain)/Loss(1,680,465)	Description Amounts Period Fresh Start 18,321,886 20 Actuarial (Gain)/Loss (4,506,959) 20 Actuarial (Gain)/Loss (4,698,623) 20 Plan Amendment 809,250 20 Actuarial (Gain)/Loss 10,730,175 20 Plan Amendment 8,133,032 20 Actuarial (Gain)/Loss 14,877,715 20 Actuarial (Gain)/Loss 7,047,273 20 Assumption Change 4,950,244 20 Actuarial (Gain)/Loss (3,644,397) 20 Actuarial (Gain)/Loss (1,136,396) 20 Actuarial (Gain)/Loss (1,834,540) 20 Actuarial (Gain)/Loss 6,029,015 20 Actuarial (Gain)/Loss 11,623,470 20 Assumption Change 9,364,914 20 Actuarial (Gain)/Loss (12,194,307) 20 Assumption Change 2,759,850 20 Actuarial (Gain)/Loss (1,680,465) 20	Description Amounts Period Years Fresh Start 18,321,886 20 2 Actuarial (Gain)/Loss (4,506,959) 20 3 Actuarial (Gain)/Loss (4,698,623) 20 4 Plan Amendment 809,250 20 4 Actuarial (Gain)/Loss 10,730,175 20 5 Plan Amendment 8,133,032 20 6 Actuarial (Gain)/Loss 14,877,715 20 6 Actuarial (Gain)/Loss 7,047,273 20 7 Assumption Change 4,950,244 20 7 Actuarial (Gain)/Loss 6,486,893 20 8 Actuarial (Gain)/Loss (1,136,396) 20 10 Actuarial (Gain)/Loss (1,834,540) 20 11 Actuarial (Gain)/Loss 6,029,015 20 12 Assumption Change 13,660,962 20 12 Actuarial (Gain)/Loss 11,623,470 20 13 Assumption Change 9,364,914 <	Description Amounts Period Years Balance Fresh Start 18,321,886 20 2 4,910,078 Actuarial (Gain)/Loss (4,506,959) 20 3 (1,716,412) Actuarial (Gain)/Loss (4,698,623) 20 4 (2,286,940) Plan Amendment 809,250 20 4 385,351 Actuarial (Gain)/Loss 10,730,175 20 5 6,002,081 Plan Amendment 8,133,032 20 6 5,123,267 Actuarial (Gain)/Loss 14,877,715 20 6 10,304,507 Actuarial (Gain)/Loss 7,047,273 20 7 5,313,227 Assumption Change 4,950,244 20 7 3,732,192 Actuarial (Gain)/Loss 6,486,893 20 8 5,219,773 Actuarial (Gain)/Loss (1,136,396) 20 10 (998,907) Actuarial (Gain)/Loss (1,834,540) 20 11 (1,663,431) Actuarial (Gain)/Loss 6,029,015 20



Schedule of Amortizations (Cont.)

						October 1, 2023
		<u>Original</u>	<u>Original</u>	Remaining Period	Remaining	<u>Annual</u>
Date Established	<u>Description</u>	<u>Amounts</u>	<u>Period</u>	<u>Years</u>	<u>Balance</u>	<u>Payment</u>
9/30/2019	Actuarial (Gain)/Loss	961,497	20	16	903,654	81,454
9/30/2019	Assumption Change	15,776,137	20	16	14,827,044	1,336,491
9/30/2019	Asset Method Change	15,317,044	20	16	14,395,572	1,297,599
9/30/2020	Actuarial (Gain)/Loss	(5,347,487)	20	17	(5,126,769)	(444,876)
9/30/2021	Actuarial (Gain)/Loss	(13,110,288)	20	18	(12,785,360)	(1,071,519)
9/30/2022	Actuarial (Gain)/Loss	11,416,935	20	19	11,288,290	916,332
9/30/2023	Actuarial (Gain)/Loss	29,853,101	20	20	29,853,101	2,353,214
				Total:	115,777,466	15,005,258



Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results			
	10/1/2023	10/1/2023	10/1/2022
	7.25%	7.25%	7.25%
	(current methods	(prior methods	
	& assumptions)	& assumptions)	
Participant Data			
Active members	502	502	508
Total annual payroll	\$48,183,788	\$48,183,788	\$45,528,166
Members in DROP	14	14	17
Total annualized benefit	\$1,094,533	\$1,094,533	\$1,314,511
Retired members and beneficiaries	433	433	404
Total annualized benefit	\$23,895,592	\$23,895,592	\$21,434,839
Disabled members receiving benefits	110	110	110
Total annualized benefit	\$5,539,288	\$5,539,288	\$5,504,211
Terminated vested members	2	2	2
Total annualized benefit	\$31,359	\$31,359	\$31,359
Assets			
Actuarial value of assets	\$530,707,593	\$530,707,593	\$519,502,500
Market value of assets	\$479,145,072	\$479,145,072	\$448,157,347



Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results (continued)			
	10/1/2023	10/1/2023	10/1/2022
	7.25%	7.25%	7.25%
	(current methods	(prior methods	
	& assumptions)	& assumptions)	
Liabilities, present value of all future expected benefit payments			
Active members			
Retirement benefits	\$362,589,060	\$362,589,060	\$351,848,241
Vesting benefits	\$2,020,975	\$2,020,975	1,840,751
Disability benefits	\$34,035,142	\$34,035,142	31,247,041
Death benefits	\$4,116,442	\$4,116,442	4,027,458
Return of contribution	442,294	442,294	365,111
Total	\$403,203,913	\$403,203,913	\$389,328,602
Terminated vested members	\$266,406	\$266,406	\$248,131
Retired members and beneficiaries	\$313,006,537	\$313,006,537	\$281,367,571
Disabled members	\$62,918,836	\$62,918,836	\$62,494,020
Total	\$779,395,692	\$779,395,692	\$733,438,324
Liabilities due and unpaid	\$0	\$0	\$0
Actuarial accrued liability	\$646,485,059	\$646,485,059	\$611,989,240
Unfunded actuarial accrued liability	\$115,777,466	\$115,777,466	\$92,486,740



Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results (continued)			
	10/1/2023	10/1/2023	10/1/2022
	7.25%	7.25%	7.25%
	(current methods	(prior methods	
	& assumptions)	& assumptions)	
Actuarial present value of accrued benefits			
Statement of actuarial present value of all accrued			
benefits			
Vested accrued benefits			
Inactive members and beneficiaries	\$376,191,779	\$376,191,779	\$344,109,722
Active members	178,808,000	178,808,000	179,408,840
Total value of all vested accrued benefits	\$554,999,779	\$554,999,779	\$523,518,562
Non-vested accrued benefits	4,435,007	4,435,007	4,899,986
Total actuarial present value of all accrued benefits	\$559,434,786	\$559,434,786	\$528,418,548
Actuarial present value of accrued benefits, beginning of year	\$528,418,548	\$528,418,548	\$506,412,687
Increase (decrease) during year			
Benefits accumulated	\$33,608,571	\$33,608,571	\$19,797,096
Plan amendment	0	0	0
Changes in actuarial assumptions	0	0	0
Interest	36,903,665	36,903,665	35,528,222
Benefits paid	(39,495,998)	(39,495,998)	(33,319,457)
Other changes	0	0	0
Net increase (decrease)	\$31,016,238	\$31,016,238	\$22,005,861
Actuarial present value of accrued benefits, end of year	\$559,434,786	\$559,434,786	\$528,418,548



Information to Comply with Florida 60T-1.003(4)(i)

Comparative Summary Of Principal Valuation Results (continued)			
	10/1/2023	10/1/2023	10/1/2022
	7.25%	7.25%	7.25%
	(current methods	(prior methods	
	& assumptions)	& assumptions)	
Pension cost			
Normal Cost	\$14,966,420	\$14,966,420	\$14,291,923
Member contributions	\$3,601,258	\$3,601,258	\$3,410,060
Expected plan sponsor contribution	\$26,514,921	\$26,514,921	\$22,834,091
As % of expected payroll	52.91%	52.91%	48.22%
Member Contributions as % of payroll	7.49%	7.49%	7.49%
Past contributions	9/30/2023	9/30/2023	9/30/2022
Required plan sponsor contribution	\$24,403,545	\$24,403,545	\$25,446,638
Required member contribution	\$3,553,820	\$3,553,820	\$3,360,639
Actual contributions made by:			
Plan's sponsor	\$21,993,539	\$21,993,539	\$23,036,632
Members	\$3,553,820	\$3,553,820	\$3,360,639
Other	\$2,410,006	\$2,410,006	\$2,410,006
Net actuarial (gain)/loss (if applicable)	\$29,853,101	\$29,853,101	\$11,416,935
Other disclosures (where applicable)			
Present value of active member			
Future salaries at attained age	\$413,055,748	\$413,055,748	\$376,676,023
Future contributions at attained age	\$28,284,956	\$28,284,956	\$25,677,990
Accumulated Member Contributions	\$35,879,962	\$35,879,962	\$36,829,847



Information to Comply with Florida 60T-1.003(3)(f)

September 30, 2023

Historical Salary Increases and Asset Performance

			Expected Salary	Asset Return	Asset Return	Asset Return
Year Ending	Payroll Growth	Salary Growth	<u>Growth</u>	(Market)	(Actuarial)	(Expected)
9/30/2023	5.61%	12.60%	4.24%	10.14%	4.46%	7.25%
9/30/2022	-0.79%	3.76%	4.23%	-15.27%	4.19%	7.25%
9/30/2021	0.21%	5.53%	5.50%	16.10%	9.04%	7.25%
9/30/2020	2.13%	2.22%	5.51%	7.64%	7.34%	7.25%
9/30/2019	4.57%	6.26%	5.55%	5.84%	3.12%	7.60%
9/30/2018	-1.07%	3.75%	5.57%	6.63%	6.77%	7.70%
9/30/2017	-1.37%	-1.84%	5.60%	10.45%	7.29%	7.75%
9/30/2016	3.94%	8.17%	6.14%	8.21%	6.55%	7.75%
9/30/2015	3.46%	6.50%	5.00%	0.10%	6.27%	8.00%
9/30/2014	0.70%	2.70%	5.00%	9.00%	7.80%	8.00%
<u>Averages</u>						
3-year				2.71%	5.87%	
5-year				4.30%	5.61%	
10-year	1.74%			5.55%	6.27%	
25-year				6.03%	6.77%	

Amortization of Unfunded Actuarial Accrued Liability

	<u>UAAL</u>	<u>Amortization</u>
10/1/2023	\$115,777,466	\$15,005,258
10/1/2024	\$108,078,193	\$15,266,350
10/1/2025	\$99,540,702	\$12,923,768
10/1/2026	\$92,896,661	\$13,783,207
10/1/2042	\$3,265,911	\$3,265,911



October 1, 2023

GASB 67/68			
Valuation_	200 bp ²	Funding Rate ²	+200 bp ²
7.25%	5.25%	7.25%	9.25%
			\$14,291,923
44,093,071	43,998,704	43,998,704	43,998,704
0	0	0	0
(1,766,545)		15,701,190	15,701,190
0	183,414,459	0	(123,738,283)
(39,322,948)	(39,322,948)	(39,322,948)	(39,322,948)
(173,050)_		(173,050)	(173,050)
\$17,122,451	\$217,910,278	\$34,495,819	(\$89,242,464)
\$613,636,368	\$611,989,240	\$611,989,240	\$611,989,240
\$630,758,819	\$829,899,518	\$646,485,059	\$522,746,776
\$21,993,539	\$21,993,539	\$21,993,539	\$21,993,539
3,553,820	3,553,820	3,553,820	3,553,820
2,410,006	2,410,006	2,410,006	2,410,006
43,125,567	43,125,567	43,125,567	43,125,567
(39,322,948)	(39,322,948)	(39,322,948)	(39,322,948)
(173,050)	(173,050)	(173,050)	(173,050)
(565,853)	(565,853)	(565,853)	(565,853)
		(33,356)	(33,356)
		\$30,987,725	\$30,987,725
			\$448,157,347
\$479,145,072	\$479,145,072	\$479,145,072	\$479,145,072
\$151.613.747	\$350.754.446	\$167.339.987	\$43,601,704
			91.66%
	14		21
. •		. •	
\$25,791,523	\$47,377,373	\$26,514,921	\$10,314,187
51.47%	94.54%	52.91%	20.58%
	7.25% \$14,291,923 44,093,071 0 (1,766,545) 0 (39,322,948) (173,050) \$17,122,451 \$613,636,368 \$630,758,819 \$21,993,539 3,553,820 2,410,006 43,125,567 (39,322,948) (173,050) (565,853) (33,356) \$30,987,725 \$448,157,347	7.25% 5.25% \$14,291,923 \$14,291,923 44,093,071 43,998,704 0 0 (1,766,545) 15,701,190 0 183,414,459 (39,322,948) (39,322,948) (173,050) (173,050) \$17,122,451 \$217,910,278 \$613,636,368 \$611,989,240 \$630,758,819 \$21,993,539 3,553,820 3,553,820 2,410,006 2,410,006 43,125,567 (39,322,948) (173,050) (173,050) (565,853) (39,322,948) (173,050) (565,853) (33,356) \$30,987,725 \$448,157,347 \$448,157,347 \$479,145,072 \$479,145,072 \$151,613,747 \$350,754,446 75.96% 57.74% 16 14	7.25% 5.25% 7.25% \$14,291,923 \$14,291,923 \$14,291,923 44,093,071 43,998,704 43,998,704 0 0 0 (1,766,545) 15,701,190 15,701,190 0 183,414,459 0 (39,322,948) (39,322,948) (39,322,948) (173,050) (173,050) (173,050) \$17,122,451 \$217,910,278 \$34,495,819 \$613,636,368 \$611,989,240 \$611,989,240 \$630,758,819 \$829,899,518 \$646,485,059 \$21,993,539 \$21,993,539 \$21,993,539 3,553,820 3,553,820 3,553,820 2,410,006 2,410,006 2,410,006 43,125,567 43,125,567 43,125,567 (39,322,948) (39,322,948) (39,322,948) (173,050) (173,050) (173,050) (565,853) (565,853) (565,853) (33,356) (33,356) (33,356) \$30,987,725 \$30,987,725 \$30,987,725 \$448,

¹Includes DROP assets and liabilities



²Based on valuation assumption with interest rate changes as noted ³Figures may not add due to rounding

October 1, 2023

Sustainment of Expected Benefit Payments

Mortality GASB 67/68 Valuation

Interest 7.25%

<u>Year</u>	Market Value of Assets	<u>Investment Return</u>	Benefit Payments
1	\$479,145,072	\$33,389,251	\$37,869,935 ¹
2	474,664,388	33,109,988	36,589,988
3	471,184,388	32,784,743	38,638,093
4	465,331,038	32,294,094	40,499,107
5	457,126,025	31,611,000	42,976,396
6	445,760,629	30,684,433	45,856,460
7	430,588,602	29,497,406	48,300,730
8	411,785,278	28,040,018	50,944,145
9	388,881,151	26,291,987	53,400,424
10	361,772,714	24,260,074	55,269,009
11	330,763,779	21,980,065	56,163,605
12	296,580,239	19,425,583	58,302,413
13	257,703,409	16,542,509	60,113,504
14	214,132,414	13,302,018	62,404,448
15	165,029,984	9,676,869	64,235,758
16	110,471,095	5,699,516	64,848,769
17	51,321,842		67,016,195



¹Benefit payments include the DROP balance at 9/30/2023

October 1, 2023

Sustainment of Expected Benefit Payments

Mortality Pub-2010 Generational using Scale MP-2018 (FRS Mortality)

Interest 7.25%

<u>Year</u>	Market Value of Assets	<u>Investment Return</u>	Benefit Payments
1	\$479,145,072	\$33,389,251	\$37,869,935 ¹
2	474,664,388	33,109,988	36,589,988
3	471,184,388	32,784,743	38,638,093
4	465,331,038	32,294,094	40,499,107
5	457,126,025	31,611,000	42,976,396
6	445,760,629	30,684,433	45,856,460
7	430,588,602	29,497,406	48,300,730
8	411,785,278	28,040,018	50,944,145
9	388,881,151	26,291,987	53,400,424
10	361,772,714	24,260,074	55,269,009
11	330,763,779	21,980,065	56,163,605
12	296,580,239	19,425,583	58,302,413
13	257,703,409	16,542,509	60,113,504
14	214,132,414	13,302,018	62,404,448
15	165,029,984	9,676,869	64,235,758
16	110,471,095	5,699,516	64,848,769
17	51,321,842		67,016,195



¹Benefit payments include the DROP balance at 9/30/2023

October 1, 2023

Sustainment of Expected Benefit Payments

Mortality Pub-2010 Generational using Scale MP-2018 (FRS Mortality)

Interest 5.25%

<u>Year</u>	Market Value of Assets	<u>Investment Return</u>	Benefit Payments
1	\$479,145,072	\$24,173,746	\$37,869,935 ¹
2	465,448,883	23,487,865	36,589,988
3	452,346,760	22,746,929	38,638,093
4	436,455,596	21,864,416	40,499,107
5	417,820,905	20,821,897	42,976,396
6	395,666,406	19,584,152	45,856,460
7	369,394,098	18,141,514	48,300,730
8	339,234,882	16,489,653	50,944,145
9	304,780,390	14,617,140	53,400,424
10	265,997,106	12,532,594	55,269,009
11	223,260,691	10,265,750	56,163,605
12	177,362,836	7,800,687	58,302,413
13	126,861,110	5,102,413	60,113,504
14	71,850,019	2,154,963	62,404,448
15	11,600,534		64,235,758



¹Benefit payments include the DROP balance at 9/30/2023

October 1, 2023

Sustainment of Expected Benefit Payments

Mortality Pub-2010 Generational using Scale MP-2018 (FRS Mortality)

Interest 9.25%

<u>Year</u>	Market Value of Assets	<u>Investment Return</u>	<u>Benefit Payments</u>
1	\$479,145,072	\$42,608,166	\$37,869,935 ¹
2	483,883,303	43,104,341	36,589,988
3	490,397,656	43,614,289	38,638,093
4	495,373,852	43,990,418	40,499,107
5	498,865,163	44,201,323	42,976,396
6	500,090,090	44,184,372	45,856,460
7	498,418,002	43,919,156	48,300,730
8	494,036,428	43,394,306	50,944,145
9	486,486,589	42,584,855	53,400,424
10	475,671,020	41,499,904	55,269,009
11	461,901,915	40,185,802	56,163,605
12	445,924,112	38,611,123	58,302,413
13	426,232,822	36,707,768	60,113,504
14	402,827,086	34,439,124	62,404,448
15	374,861,762	31,769,506	64,235,758
16	342,395,510	28,738,653	64,848,769
17	306,285,394	25,300,441	67,016,195
18	264,569,640	21,369,771	68,607,326
19	217,332,085	16,912,013	70,559,347
20	163,684,751	11,904,427	71,558,915
21	104,030,263	6,317,384	73,084,595
22	37,263,052		74,190,705



¹Benefit payments include the DROP balance at 9/30/2023

Reserve Account For Future Benefit Improvements Under F.L. 99-1

Adjusted Base Amount at 10/1/2023

Year Established	<u>Description</u>	Ch. 175 Fire	Suppl. Fire
1998	Base Year Premium Tax Distribution	\$1,065,707	\$72,788
2007	All 99-1 Benefits	221,025	0
2009	Multiplier Increase	1,123,274	0
	Adjusted Base Amount	\$2,410,006	\$72,788
Reserve Account fo	or 2022/2023		
		Ch. 175 Fire	Suppl. Fire
1. Reserve Account			
	ount at September 30, 2022	\$0	\$0
(b) Interest on (a	a) for full year	0	0
(c) Distribution (to Fire Share Plan	0	0
(d) Reserve Acco	ount at September 30, 2023 before 2022 Distribution	\$0	\$0
2. Increase in Reser	ve Account		
(a) Premium Ta	ax Distribution for 2022	\$4,015,121	\$0
(b) Amount Av	ailable	2,410,006	72,788
(c) Excess Used	d to Cover Employee State Shortfall	0	0
	Allocation Available	\$1,605,115	\$0
(e) Amount Allo	ocated to Share Plan	(1,605,115)	0
(f) Increase in I	Reserve	\$0	\$0
3. Reserve Account	at September 30, 2023 [(1d) + (2f)]	\$0	\$0



Withdrawal From Active Employment Before Age and Service Retirement Eligibility and Pay Increase Assumptions

Percen	t of Active Members Separating	Pay Increase Assumption			
			Annual Pay Percent		
Sample Ages	Expected Separations Within Next Year	Sample Ages	Increase		
25	1.25%	25	5.00%		
30	1.00%	30	5.00%		
35	0.75%	35	4.75%		
40	0.50%	40	4.50%		
45	0.25%	45	4.00%		
50	0.25%	50	3.50%		
55	0.25%	55	3.00%		
60	0.25%	60	2.50%		



Schedule of Active Members' Valuation Data

			Annual	% Increase
Valuation		Annual	Average	In Average
Date	Number	Payroll	Payroll	Pay
9/30/2014	500	39,030,560	78,061	0.53%
9/30/2015	494	40,382,106	81,745	4.72%
9/30/2016	481	41,973,977	87,264	6.75%
9/30/2017	498	41,399,503	83,132	-4.74%
9/30/2018	486	40,957,849	84,275	1.37%
9/30/2019	496	44,839,453	90,402	7.27%
9/30/2020	510	45,795,877	89,796	-0.67%
9/30/2021	506	45,892,488	90,697	1.00%
9/30/2022	508	45,528,166	89,622	-1.19%
9/30/2023	502	48,183,788	95,984	7.10%

Schedule of Retirees and Beneficiaries Valuation Data

	Adde	Added to Rolls		Removed From Rolls		Rolls End of Year		
Valuation Date	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances	% Increase in Annual Allowances	Average Annual Allowances
9/30/2014	14	675,073	/	114,603	445	18,475,445	3.13%	41,518
9/30/2015	19	1,239,892	9	257,454	455	19,457,883	5.32%	42,765
9/30/2016	19	1,816,871	8	440,298	469	20,834,456	7.07%	44,423
9/30/2017	7	625,676	11	205,234	466	21,254,898	2.02%	45,611
9/30/2018	20	1,571,035	8	313,876	478	22,512,057	5.91%	47,096
9/30/2019	26	1,845,850	12	315,934	492	24,041,973	6.80%	48,866
9/30/2020	24	1,525,852	16	407,377	500	25,160,449	4.65%	50,321
9/30/2021	23	1,614,043	16	546,504	505	26,227,988	4.24%	51,937
9/30/2022	33	2,306,705	7	285,252	531	28,249,441	7.71%	53,200
9/30/2023	41	2,647,113	15	527,055	557	30,369,498	7.50%	54,523



Solvency Test

Portion of Accrued Liabilities Covered by Reported

	Aggregate Accrued Liabilities				Assets		
			Active and Inactive Members	Actuarial	Active		
Valuation	Active Member	Retirees and	(Employer Financed	Value of	Member	Retirees and	Employer Financed
Date	Contributions	Beneficiaries	Portion)	Assets	Contributions	Beneficiaries	Portion
9/30/2014	27,702,743	212,744,463	145,867,313	328,357,893	100.00%	100.00%	60.27%
9/30/2015	30,749,776	229,243,370	165,014,678	348,252,298	100.00%	100.00%	53.49%
9/30/2016	30,272,316	251,608,286	180,389,466	365,768,349	100.00%	100.00%	46.50%
9/30/2017	36,942,812	254,703,358	184,196,552	390,325,521	100.00%	100.00%	53.57%
9/30/2018	36,599,666	276,436,708	194,593,040	420,441,619	100.00%	100.00%	55.19%
9/30/2019	40,936,359	296,069,706	207,252,210	428,847,109	100.00%	100.00%	44.31%
9/30/2020	38,385,313	306,239,278	222,142,253	461,470,098	100.00%	100.00%	52.60%
9/30/2021	39,079,227	321,113,876	229,550,374	502,894,539	100.00%	100.00%	62.17%
9/30/2022	36,829,847	344,109,722	231,049,671	519,502,500	100.00%	100.00%	59.97%
9/30/2023	35,879,962	376,191,779	234,413,318	530,707,593	100.00%	100.00%	50.61%

Equivalent Single Period Remaining

Investment Return Assumption	7.25%
Payroll Growth Assumption	1.74%
Equivalent Level Dollar Discount Rate	5.42%
Unfunded Actuarial Accrued Liability	\$115,777,466
Amortization Payment (BOY)	\$15,005,258
Weighted Amortization Factor	7.71579
Equivalent Single Amortization Period (yrs.)	10



Schedule of Funding Progress

						Unfunded AAL as a
		Actuarial			Active	Percentage of
	Actuarial	Accrued			Member	Active Member
Valuation	Value of	Liability (AAL)	Unfunded	Funded	Covered	Covered
Date	Assets	Entry Age	AAL	Ratio	Payroll	Payroll
9/30/2014	328.36	386.31	57.95	85.0%	39.03	148.5%
9/30/2015	348.25	425.01	76.76	81.9%	40.38	190.1%
9/30/2016	365.77	462.27	96.50	79.1%	41.97	229.9%
9/30/2017	390.32	475.84	85.52	82.0%	41.40	206.6%
9/30/2018	420.43	507.63	87.20	82.8%	40.96	212.9%
9/30/2019	428.85	544.26	115.41	78.8%	44.84	257.4%
9/30/2020	461.47	566.77	105.30	81.4%	45.80	229.9%
9/30/2021	502.89	589.74	86.85	85.3%	45.89	189.2%
9/30/2022	519.50	611.99	92.49	84.9%	45.53	203.1%
9/30/2023	530.71	646.49	115.78	82.1%	48.18	240.3%

Schedule of Employer Contributions

		Annual		
Valuation	Fiscal Year	Required	Percentage	
Date	Ending	Contribution	Contributed	Payment Information
9/30/2012	9/30/2014	15,349,478	100%	Lump Sum on October 1, 2013
9/30/2013	9/30/2015	15,695,905	100%	Lump Sum on October 1, 2014
9/30/2014	9/30/2016	15,860,906	100%	Lump Sum on October 1, 2015
9/30/2015	9/30/2017	18,666,749	100%	Lump Sum on October 1, 2016
9/30/2016	9/30/2018	20,951,655	100%	Lump Sum on October 1, 2017
9/30/2017	9/30/2019	21,438,116	100%	Lump Sum on October 1, 2018
9/30/2018	9/30/2020	22,711,364	100%	Lump Sum on October 1, 2019
9/30/2019	9/30/2021	25,017,070	100%	Lump Sum on October 1, 2020
9/30/2020	9/30/2022	25,446,638	100%	Lump Sum on October 1, 2021
9/30/2021	9/30/2023	24,403,545	100%	Lump Sum on October 1, 2022



Low-Default-Risk Obligation Measure (LDROM)

The LDROM liability represents the estimated asset value as of the measurement date the Plan would need in order to purchase a low-default-risk fixed income securities portfolio with durations that are reasonably consistent with the timing of benefits expected to be paid from the plan.

	October 1, 2023
LDROM liability	\$ (763,571,759)
Market value of assets	<u>\$ 479,145,072</u>
LDROM funded status	\$ (284,426,687)

The LDROM liability measure is for informational purposes only. The plan sponsor has no requirements to contribute to the Plan to meet this threshold, and the funded status on this basis is not used for any restrictions.

The LDROM funding target could reasonably be viewed as the assets needed to immunize the Plan against investment risk. If Plan assets are not funded to this level, it does not necessarily mean the security of participant benefits is at risk. If Plan assets are invested to earn in excess of a fixed income portfolio, future investment returns could make up the underfunding. If the plan is fully funded, or nearly fully funded, on the LDROM measure, the plan sponsor may want to consider reducing investment risk in order to offer greater benefit security and lower contribution volatility.

The above LDROM liability measure applies a single effective discount rate, 5.85%, which would produce approximately the same discounted plan cashflows as the FTSE Above Median Double-A Pension Discount Curve as of September 30, 2023. All other data, assumptions, methods and provisions are the same as those detailed in this report. We did not perform an analysis of assumption or provision changes resulting from a potential shift in investment policy due to the limited scope of our engagement.

