City of Jacksonville Corrections Officers Retirement Plan

Actuarial Valuation and Review as of October 1, 2022

Segal

2727 Paces Ferry Road SE, Building One Suite 1400
Atlanta, GA 30339-4053
segalco.com
T 678.306.3100

February 17, 2023

Board of Trustees
City of Jacksonville Corrections Officers Retirement Plan
117 West Duval Street, Suite 330
Jacksonville, FL 32202

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of October 1, 2022. The census information on which our calculations were based was prepared by the Plan and the financial information was provided by the City's Finance Department. That assistance is gratefully acknowledged .

Statement by Enrolled Actuary: 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.

Segal does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. To the extent we can, however, Segal does review the data for reasonableness and consistency. Based on our review of the data, we have no reason to doubt the substantial accuracy of the information on which we have based this report and we have no reason to believe there are facts or circumstances that would affect the validity of these results.

The measurements shown in this actuarial valuation may not be applicable for other purposes. 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; changes in plan provisions or applicable law.

The actuarial calculations were directed under the supervision of Jeffrey S. Williams. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,
Segal

Jeffrey S. Williams, FCA, ASA, MAAA, EA
Vice President and Consulting Actuary
Enrolled Actuary No. 20-07009

Table of Contents

Table of Contents

Section 1: Actuarial Valuation Summary

Purpose and basis

This report has been prepared by Segal to present a valuation of the City of Jacksonville Corrections Officers Retirement Plan as of October 1, 2022. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to provide information for required disclosures under Governmental Accounting Standards Board (GASB) Statements No. 67 and 68.

The contribution requirements presented in this report are based on:

- The benefit provisions of the Plan, as administered by the Board;
- The characteristics of covered active participants, inactive vested participants, and retired participants and beneficiaries as of September 30, 2022, provided by the Retirement System Administrative Office;
- The assets of the Plan as of September 30, 2022, provided by the City's Finance Department;
- Economic assumptions regarding future salary increases and investment earnings;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc. and
- The funding policy adopted by the Board, subject to the requirements of Part VII, Chapter 112, Florida Statutes.

Valuation highlights

1. Segal strongly recommends an actuarial funding method that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the unfunded actuarial accrued liability and the principal balance.
2. The City's minimum required contribution calculated in the October 1, 2022 actuarial valuation is for the plan year beginning October 1, 2023.
3. The City's minimum required contribution for fiscal 2024 is $19,385,644, an increase of $2,199,671 from the City's minimum required contribution for fiscal 2023.
4. Actual contributions made during the fiscal year ending September 30, 2022 were $17,610,000, 100.10% of the City's minimum required contribution for fiscal 2022. In the prior fiscal year, actual contributions were $15,061,000, 100.11% of the prior year's minimum required contribution.
5. Actuarial Standard of Practice No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, states that an actuary preparing calculations of actuarially determined contributions should assess the material implications of the funding policy. This report includes two distinct contribution amounts, each with different implications.
    a. The **Florida Chapter 112 Determined Employer Contribution** is an amount consistent with a funding policy which seeks to stabilize the unfunded actuarial accrued liability (UAAL) as a percentage of total Corrections Officers Retirement Plan (CORP) payroll, including Defined Contribution participants, where UAAL is measured relative to assets currently available to make benefit payments. Under this policy, assuming that all assumptions are met in aggregate, the UAAL is expected to be reduced to zero over a period of 24 years after reflecting an amortization period reset as of October 1, 2016. Over the short term, this contribution policy would be expected to keep the UAAL roughly level over the next few years, primarily making payments on interest, and begin paying down the UAAL after that point.
    b. The **City's required minimum contribution**, which is the Chapter 112 contribution adjusted to comply with state law, reduced by amortization of discounted allocated surtax revenue, is an amount consistent with a funding policy which seeks to stabilize the contribution requirement as a percentage of total CORP payroll, including Corrections Officers Defined Contribution Plan participants, relative to an anticipated increase in contribution income set to begin January 1, 2031. Under this policy, assuming that all assumptions are met in aggregate, the UAAL is expected to be reduced to zero by December 31, 2060, after all of the surtax revenue allocated to the plan is collected and contributed. Over the short term, this contribution policy is expected to lead to an increase in the UAAL, prior to the revenue stream commencing and paying it down.

    Use of this contribution policy has been authorized by the Florida State Legislature and Jacksonville City Council.

Section 1: Actuarial Valuation Summary

6. The actuarial loss from investment and other experience is $13,767,514, or 2.59% of actuarial accrued liability.
   - The actuarial loss from investment experience was $4,197,301, or 0.79% of actuarial accrued liability.
   - The net experience loss from sources other than investment experience was $9,570,213, or 1.80% of the actuarial accrued liability. The primary cause of this loss was salary experience among the active population.
7. The rate of return on the market value of assets was -16.18% for the October 1, 2021 to September 30, 2022 plan year. The return on the actuarial value of assets was 4.97% for the same period due to the recognition of prior years' investment gains and losses. This resulted in an actuarial loss when measured against the assumed rate of return of 6.625%.
8. The actuarial value of assets is 112.2% of the market value of assets. The investment experience in the past years has only been partially recognized in the actuarial value of assets. As the deferred net loss is recognized in future years, the cost of the Plan is likely to increase unless the net loss is offset by future experience. The recognition of the market net losses of $28,778,309 will also have an impact on the future funded ratio. If the net deferred losses were recognized immediately in the actuarial value of assets, the City's minimum contribution would increase from 75.79% to about 83.9% of projected payroll.
9. There were no changes in plan provisions since the prior valuation.
10. The following change in actuarial assumptions is first reflected with this valuation:
    - The discount rate was lowered from 6.625% to 6.50%.

    As a result of this assumption change, the total normal cost increased by $248,392 (3.19%) and the actuarial accrued liability increased by $8,804,784 (1.66%). The present value of surtax revenue allocated to CORP increased by $3,393,985 as a result of the discount rate change. The net impact was an increase in the City's minimum required contribution of $502,274 (2.73% of pay).
11. The City changed the surtax allocation percentage from the prior valuation to the current valuation. In the 2021 valuation, CORP's allocation percentage was 6.20%; in the 2022 valuation, the allocation percentage has been decreased to 6.10%. This change was directed by the City based on its updated calculation of the Corrections Officers Retirement Plan's share of the City's unfunded liabilities. The change in the surtax allocation percentage caused the City's minimum required contribution to increase by $155,923.
12. Additionally, the method used to recognize surtax revenue for the purpose of calculating the surtax offset for the City's minimum contribution was changed from immediate recognition to recognizing the difference between actual and expected revenue growth over a period of five years. This methodology change caused the City's minimum required contribution to increase by $358,792.
13. The City is solely responsible for the assumption as to what percentage the surtax revenue will grow and Segal relies on the City for this assumption. This rate was set at 4.25% by the City for the projection period January 1, 2022 through December 31,

2060, and will be recalculated by the City every year and adopted by the City Council. Segal will ask the City each year to provide actual surtax revenue for the preceding fiscal year and an assumption as to future growth. The difference in actual and projected surtax revenue each year will be amortized over the period by which each year's gain or loss is being amortized. If surtax revenue grows more slowly or more quickly than expected, contribution requirements will increase or decrease accordingly.

14. The present value of the projected surtax revenue was determined and used in determination of the City's required contribution as follows:
    a. Smoothed 2022 surtax revenue was projected to increase by 4.25% each year thereafter through 2060.
    b. A share of 6.10% of the projected revenue for January 1, 2031 through December 31, 2060 was allocated to CORP.
    c. The revenue allocated to CORP was discounted at the valuation discount rate of 6.50% to October 1, 2022.
    d. The original allocated present value amount of $64,295,005 was amortized over a 30-year initial period (Section 3, Exhibit F), with subsequent charges amortized over new periods. The present value of projected surtax revenue as of October 1, 2022 allocated to CORP is $130,559,189.
    e. After the amortized value amount was adjusted for the timing of contributions and projected to October 1, 2023, this amount was used as an offset to the Florida Chapter 112 Determined Employer Contribution to determine the City's minimum required contribution for fiscal 2023.
15. The present value of projected surtax revenue does not decrease the UAAL. The amortized value of the projected surtax revenue is used as an offset to the Chapter 112 contribution.
16. This actuarial report as of October 1, 2022 is based on financial and demographic data as of that date. Changes subsequent to that date are not reflected and will affect future actuarial costs of the plan.
17. The financial information received states all results rounded to the nearest thousand. The results in this valuation are shown to the nearest dollar. Therefore, occasionally rounded numbers are combined with unrounded ones.

Changes from prior valuation

18. The funded ratio (the ratio of the actuarial value of assets to actuarial accrued liability) is 49.10%, compared to the prior year funded ratio of 50.73%. This ratio is one measure of funding status, and its history is a measure of funding progress. Using the market value of assets, the funded ratio is 43.78%, compared to 56.65% as of the prior valuation date. These measurements are not necessarily appropriate for assessing the sufficiency of the Plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for or the amount of future contributions.
19. The unfunded actuarial accrued liability (UAAL) is $274,933,496, which is an increase of $26,749,703 since the prior valuation.

Risk

20. It is important to note that this actuarial valuation is based on plan assets as of September 30, 2022. The Plan's funded status does not reflect short-term fluctuations of the market, but rather is based on the market values on the last day of the plan year. Moreover, this actuarial valuation does not include any possible short-term or long-term impacts on mortality of the covered population that may emerge after September 30, 2022 due to COVID-19. Segal is available to prepare projections of potential outcomes of market conditions and other demographic experience upon request.

21. Since the actuarial valuation results are dependent on a given set of assumptions, there is a risk that emerging results may differ significantly as actual experience proves to be different from the assumptions. We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the Plan's future financial condition, but have included a brief discussion of some risks that may affect the Plan in *Section 2*. A more detailed assessment would provide the Board with a better understanding of the inherent risks and could be important for the Plan because:

    - Relatively small changes in investment performance can produce large swings in the unfunded liabilities
    - retired participants account for most of the Plan's liabilities, leaving limited options for reducing costs in the event of adverse experience.
    - The Board has not had a detailed risk assessment in several years.

GASB

22. This report constitutes an actuarial valuation for the purpose of determining the actuarially determined contribution under the Plan's funding policy and measuring the progress of that funding policy. The Net Pension Liability (NPL) and Pension Expense under Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68, for inclusion in the Plan and employer's financial statements as of September 30, 2022, is included with this report.

23. The Net Pension Liability (NPL) is equal to the difference between the Total Pension Liability (TPL) and the Plan's fiduciary net position (equal to the market value of assets). The NPL as of September 30, 2022 is $303,711,805.

24. GASB accounting does not permit any recognition of the allocated surtax revenue in determining the Net Pension Liability or Pension Expense. It is Segal's understanding that the City has discussed this issue with their external auditors and does not include any recognition of allocated surtax revenue in its audited financial statements.

Summary of key valuation results

		2023	2022	2021
Contributions for fiscal year beginning October 1:	• Florida Chapter 112 determined employer contribution	$26,128,351	$23,748,105	$22,851,586
	• Less amortized value of discounted value of projected surtax revenue	-6,742,707	-6,562,132	-5,259,187
	• City's required minimum contribution*	$19,385,644	$17,185,973	$17,592,399
	• Actual employer contributions	- -	- -	17,610,000
Actuarial accrued liability for plan year beginning October 1:	• Retired participants and beneficiaries		$388,093,154	$357,574,892
	• Inactive vested participants		411,614	2,668,348
	• Active participants		151,674,037	143,499,095
	• Total actuarial accrued liability		540,178,805	503,742,335
	• Normal cost including administrative expenses		8,182,179	7,941,651
Assets for plan year beginning October 1:	• Market value of assets (MVA)		$236,467,000	$285,351,000
	• Actuarial value of assets (AVA)		265,245,309	255,558,542
	• Actuarial value of assets as a percentage of market value of assets		112.17%	89.56%
Funded status for plan year beginning October 1:	• Unfunded actuarial accrued liability on market value of assets		$303,711,805	$218,391,335
	• Funded percentage on MVA basis		43.78%	56.65%
	• Unfunded actuarial accrued liability on actuarial value of assets		$274,933,496	$248,183,793
	• Funded percentage on AVA basis		49.10%	50.73%
Key assumptions	• Net investment return		6.50%	6.625%
	• Inflation rate		2.50%	2.50%
	• Payroll growth for amortization purposes		1.25%	1.25%
Demographic data for plan year beginning October 1:	• Number of retired participants and beneficiaries		469	446
	• Number of inactive vested participants		3	6
	• Number of active participants		382	423
	• Covered payroll		$25,260,815	$25,903,031
	• Average payroll		66,128	61,236
	• Projected payroll for next fiscal year		$25,576,575	$26,226,819

*Pursuant to State Law Chapter 2016-146 and City of Jacksonville Ordinances 2017-257-E and 2017-258-E

Important information about actuarial valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal relies on a number of input items. These include:

Plan provisions	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Participant information	An actuarial valuation for a plan is based on data provided to the actuary by the Retirement Administrative Office. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Financial information	Part of the cost of a plan will be paid from existing assets — the balance will need to come from future contributions and investment income. The valuation is based on the asset values as of the valuation date, typically reported by the City's Finance Department. A snapshot as of a single date may not be an appropriate value for determining a single year's contribution requirement, especially in volatile markets. The Jacksonville Retirement System uses an "actuarial value of assets" that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
Actuarial assumptions	In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of participants in each year, as well as forecasts of the plan's benefits for each of those events. In addition, the benefits forecasted for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets. All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions are selected within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model may use approximations and estimates that will have an immaterial impact on our results. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

Section 1: Actuarial Valuation Summary

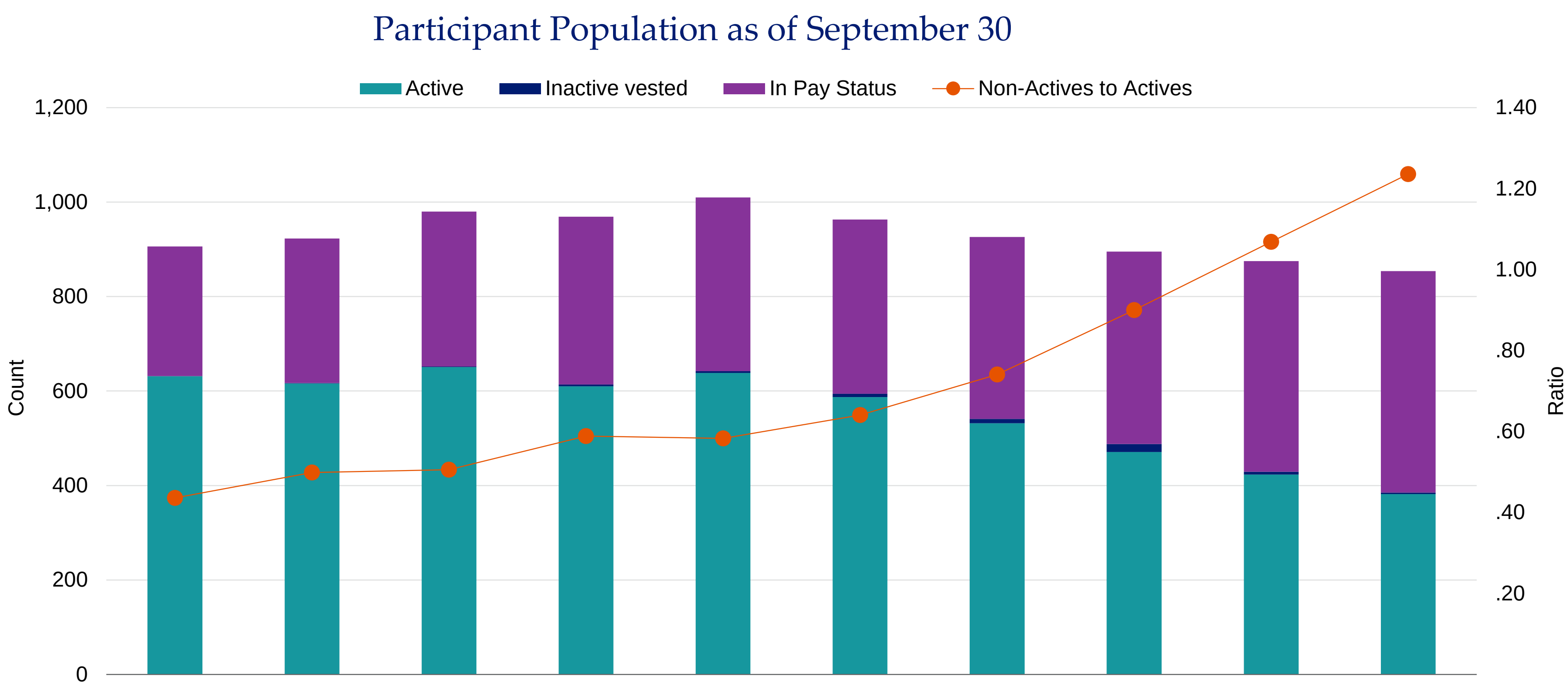
The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

The actuarial valuation is prepared at the request of the Board of Trustees. Segal is not responsible for the use or misuse of its report, particularly by any other party.
An actuarial valuation is a measurement at a specific date — it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted.
If the Board is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.
While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.
Segal's report shall be deemed to be final and accepted by the Board upon delivery and review. Trustees should notify Segal immediately of any questions or concerns about the final content.

As Segal has no discretionary authority with respect to the management or assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Plan.

Section 2: Actuarial Valuation Results

Participant information



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
In Pay Status[1]	274	306	328	355	368	369	385	407	446	469
Inactive Vested[2]	1	1	1	4	4	7	9	17	6	3
Active	631	616	651	610	638	587	532	471	423	382
Ratio	0.44	0.50	0.51	0.59	0.58	0.64	0.74	0.90	1.07	1.24

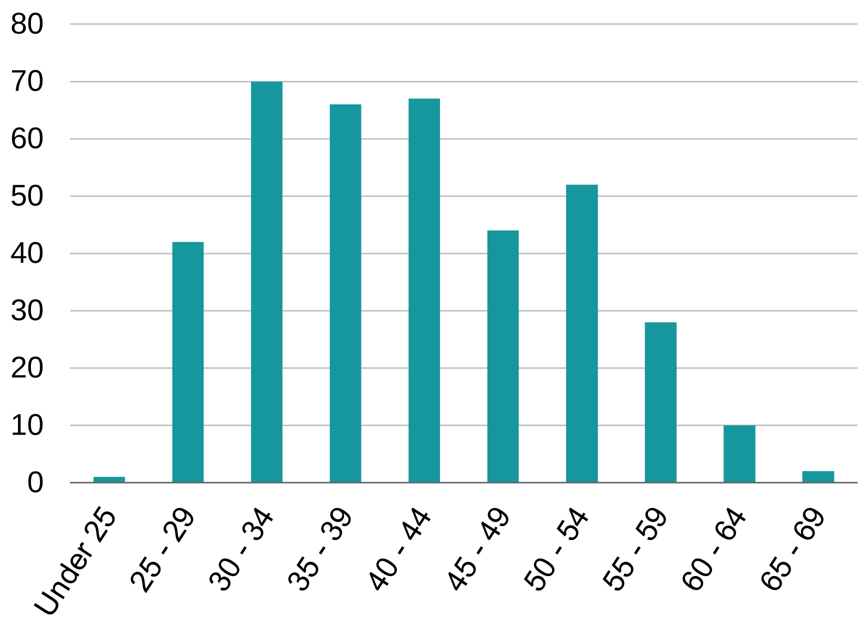
[1] Includes DROP participants
[2] Excludes Inactive participants due a refund of contributions Active participants

Active participants

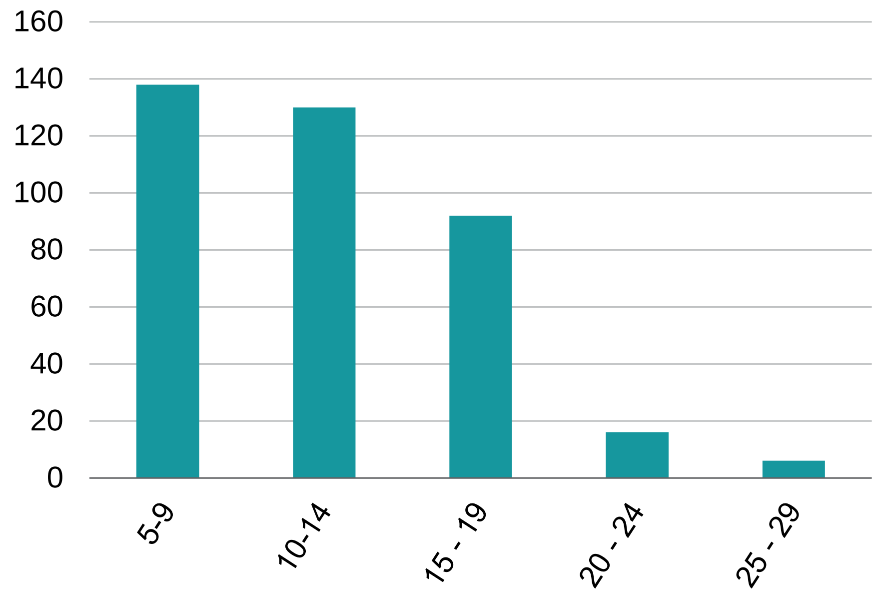
As of September 30,	2022	2021	Change
Active participants	382	423	-9.7%
Average age	41.8	40.8	1.0
Average years of service	12.5	11.6	0.9
Average compensation	$66,128	$61,236	8.0%

Distribution of Active Participants as of September 30, 2022

Actives by Age



Actives by Years of Service

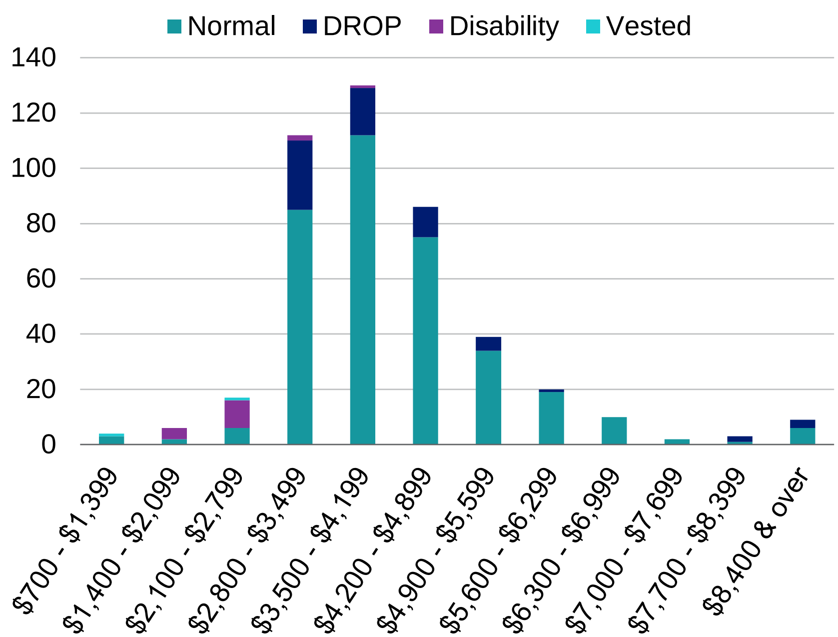


Retired participants and beneficiaries

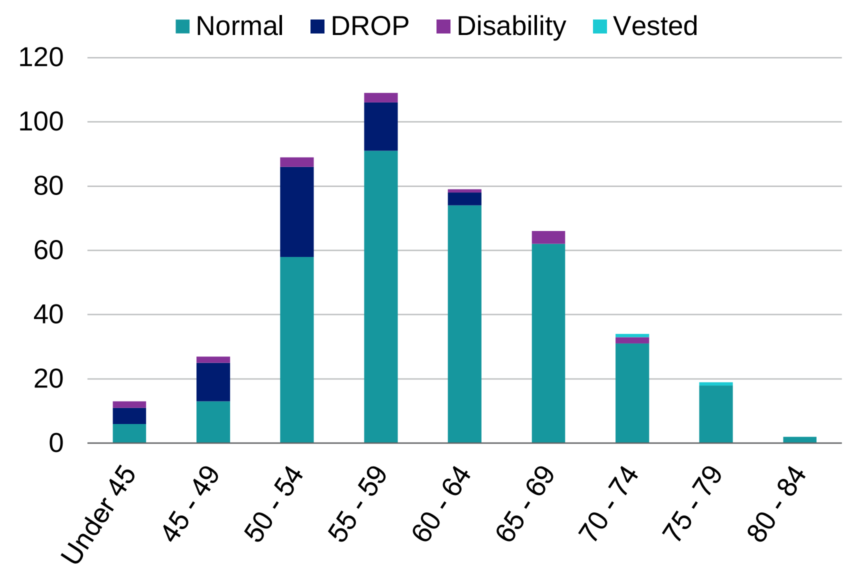
As of September 30,	2022	2021	Change
Retired participants	438	417	5.0%
Beneficiaries	31	29	6.9%
Average age	59.8	59.4	0.4
Average regular benefit amount	$4,069	$3,970	2.5%
Average supplement amount	117	117	0.0%
Total monthly amount	1,963,323	1,822,877	7.7%

Distribution of Retired Participants and Beneficiaries as of September 30, 2022

By Type and Monthly Amount



By Type and Age



Section 2: Actuarial Valuation Results

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

Determination of Actuarial Value of Assets for Year Ended September 30, 2022

			Original Amount[1]	Percent Deferred[2]	Unrecognized Amount[3]	
1	Market value of assets, September 30, 2022					$236,467,000
2	Calculation of unrecognized return					
	(a)	Year ended September 30, 2022	-$64,741,818	80%	-$51,793,454	
	(b)	Year ended September 30, 2021	45,760,012	60%	27,456,006	
	(c)	Year ended September 30, 2020	-5,273,967	40%	-2,109,586	
	(d)	Year ended September 30, 2019	-11,656,375	20%	-2,331,275	
	(e)	Year ended September 30, 2018	5,056,884	0%	0	
	(f)	Total unrecognized return				-$28,778,309
3	Preliminary actuarial value: (1) - (2f)					265,245,309
4	Adjustment to be within 20% corridor					0
5	Final actuarial value of assets as of September 30, 2022: (3) + (4)					$265,245,309
6	Actuarial value as a percentage of market value: (5) ÷ (1)					112.2%
7	Amount deferred for future recognition: (1) - (5)					-$28,778,309

[1] Total return minus expected return on a market value basis

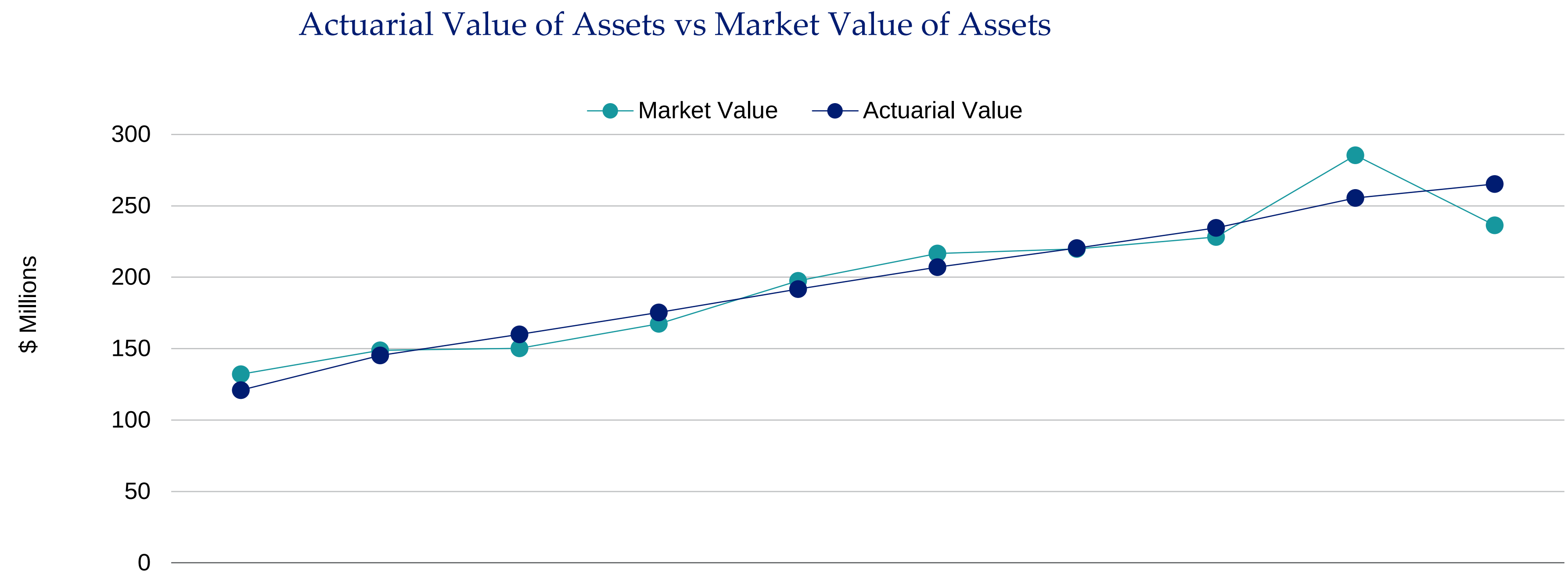
[2] Percent deferred applies to the current valuation year

[3] Recognition at 20% per year over five years

Deferred return as of September 30, 2022 recognized in each of the next four years:

(a) Amount recognized on September 30, 2023	-$7,182,430
(b) Amount recognized on September 30, 2024	-4,851,155
(c) Amount recognized on September 30, 2025	-3,796,362
(d) Amount recognized on September 30, 2026	-12,948,364

Asset history for years ended September 30

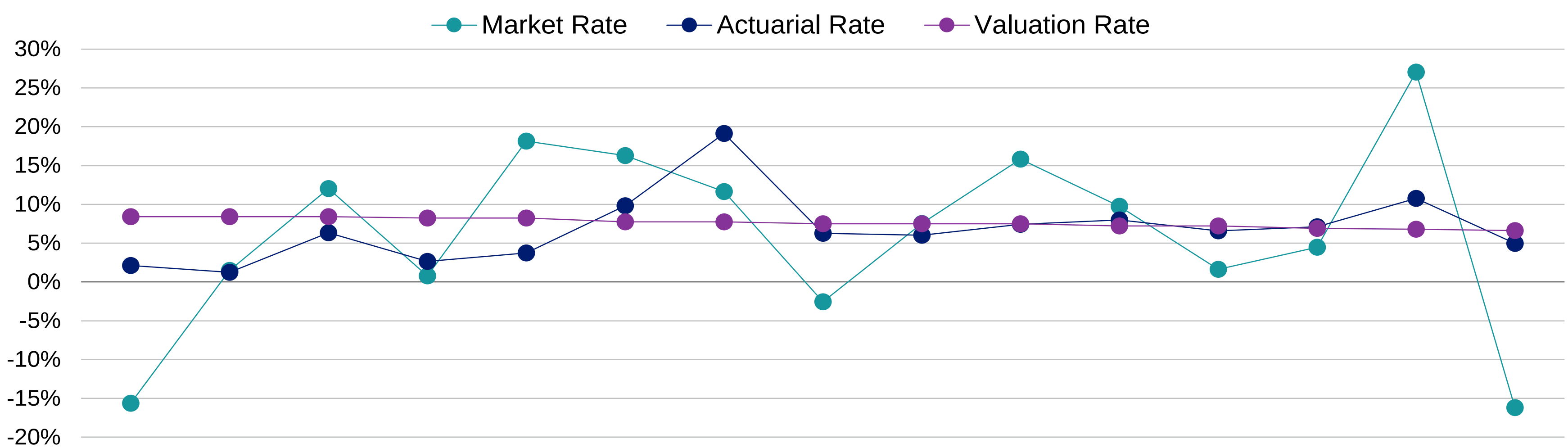


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Actuarial Value[1]	$120.95	$145.28	$159.91	$175.33	$191.74	$207.09	$220.33	$234.51	$255.56	$265.25
Market Value[1]	132.15	148.72	150.22	167.39	197.38	216.67	219.75	228.17	285.35	236.47
Ratio	0.92	0.98	1.06	1.05	0.97	0.96	1.00	1.03	0.90	1.12

[1]In $ millions

Historical investment returns

Market and Actuarial Rates of Return for Years Ended September 30



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Market rate	-15.61%	1.49%	12.03%	0.79%	18.14%	16.29%	11.66%	-2.54%	7.55%	15.83%	9.76%	1.62%	4.49%	27.03%	-16.18%
Actuarial rate	2.14%	1.23%	6.33%	2.65%	3.73%	9.82%	19.12%	6.28%	6.02%	7.44%	8.00%	6.60%	7.10%	10.75%	4.97%
Assumed rate	8.40%	8.40%	8.40%	8.25%	8.25%	7.75%	7.75%	7.50%	7.50%	7.50%	7.20%	7.20%	6.90%	6.80%	6.63%

Average Rates of Return	Actuarial Value	Market Value
Most recent five-year average return:	7.44%	4.18%
Most recent ten-year average return:	8.14%	6.24%

Actuarial experience

Assumptions should consider experience and should be based on reasonable expectations for the future.

Each year actual experience is compared to that projected by the assumptions. Differences are reflected in the actuarial valuation.

Assumptions are not changed if experience is believed to be a short-term development that will not continue over the long term. On the other hand, if experience is expected to continue, assumptions are changed.

Actuarial Experience for Year Ended September 30, 2022

1	Loss from investments[1]	-$4,197,301
2	Gain from administrative expenses	6,828
3	Net loss from other experience	-9,577,041
4	Net experience loss: **1 + 2 + 3**	-$13,767,514

[1] Details on next page

Investment experience

Actuarial planning is long term. The obligations of a pension plan are expected to continue for the lifetime of all its participants.

The assumed long-term rate of return of 6.50% considers past experience, the asset allocation policy of the Board and future expectations.

Investment Experience

		Year Ended September 30, 2022 Market Value	Year Ended September 30, 2022 Actuarial Value
1	Net investment income	-$45,935,000	$12,635,767
2	Average value of assets	283,876,500	254,084,042
3	Rate of return: **1 ÷ 2**	-16.18%	4.97%
4	Assumed rate of return	6.625%	6.625%
5	Expected investment income: **2 x 4**	18,806,818	16,833,068
6	Investment gain/(loss): **1 - 5**	-$64,741,818	-$4,197,301

Non-investment experience

Administrative expenses

Administrative expenses for the year ended September 30, 2022 totaled $159,000, as compared to the assumption of $160,000. This resulted in an experience gain of $6,828 for the year, after accounting for timing

Other experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- Mortality experience (more or fewer than expected deaths)
- The extent of turnover among participants
- Retirement experience (earlier or later than projected)
- The number of disability retirements (more or fewer than projected)
- Salary increases (greater or smaller than projected)

The net loss from this other experience for the year ended September 30, 2022 amounted to $9,577,041, which is 1.8% of the actuarial accrued liability.

Actuarial assumptions

- The assumption change reflected in this report is:
  - The discount rate was lowered from 6.625% to 6.50%.
  - This change increased the total normal cost by $248,392 (3.19%) and the actuarial accrued liability by $8,804,784 (1.66%).

Plan provisions

- There were no changes in plan provisions since the prior valuation.

Unfunded Actuarial Accrued Liability

Development of Unfunded Actuarial Accrued Liability for Year Ended September 30, 2022

1	Unfunded actuarial accrued liability at beginning of year		$248,183,793
2	Employer normal cost at beginning of year		5,508,798
3	Employer contributions		-17,610,000
4	Interest on 1, 2 & 3		16,278,607
5	Expected unfunded actuarial accrued liability		$252,361,198
6	Changes due to:		
	(a) Net experience (gain)/loss	$13,767,514	
	(b) Assumptions	8,804,784	
	Total changes		$22,572,298
7	Unfunded actuarial accrued liability at end of year		$274,933,496

Florida Chapter 112 Determined Employer Contribution and City's Minimum Required Contribution

The chart below shows the calculations of the Florida Chapter 112 determined employer contribution and the City's minimum required contribution pursuant to State Law Chapter 2016-146 and City of Jacksonville Ordinances 2017-257-E and 2017-258-E.

The contribution requirements as of October 1, 2022 are based on the data previously described, the actuarial assumptions and Plan provisions described in *Section 4*, including all changes affecting future costs adopted at the time of the actuarial valuation, actuarial gains and losses, and changes in the actuarial assumptions.

Florida Chapter 112 Determined Contribution and City's Minimum Required Contribution for Year Beginning October 1

		2023		2022	
		Amount	**% of Projected Payroll**	**Amount**	**% of Projected Payroll**
1.	Total normal cost	$8,023,179	31.37%	$7,781,651	29.67%
2.	Administrative expenses	159,000	0.62%	160,000	0.61%
3.	Expected employee contributions	-2,379,470	-9.30%	-2,432,853	-9.28%
4.	Employer normal cost: (1) + (2) + (3)	$5,802,709	22.69%	$5,508,798	21.00%
5.	Actuarial accrued liability	$540,178,805		$503,742,335	
6.	Actuarial value of assets	265,245,309		255,558,542	
7.	Unfunded actuarial accrued liability: (5) - (6)	$274,933,496		$248,183,793	
8.	Payment on unfunded actuarial accrued liability	$19,141,737	74.84%	$17,148,992	65.39%
9.	Florida Chapter 112 determined employer contribution: (4) + (8)[1]	26,128,351	102.16%	23,748,105	90.55%
10.	Amortized value of discounted value of projected surtax revenue[1, 2]	6,742,707	26.36%	6,562,132	25.02%
11.	City's minimum required contribution: (9) - (10)[2]	$19,385,644	75.79%	$17,185,973	65.53%
12.	Projected payroll	$25,576,575		$26,226,819	

[1]Adjusted for timing and projected to next fiscal year; contributions are assumed to be paid at the end of every month.

[2]Pursuant to State Law Chapter 2016-146 and City of Jacksonville Ordinances 2017-257-E and 2017-258-E

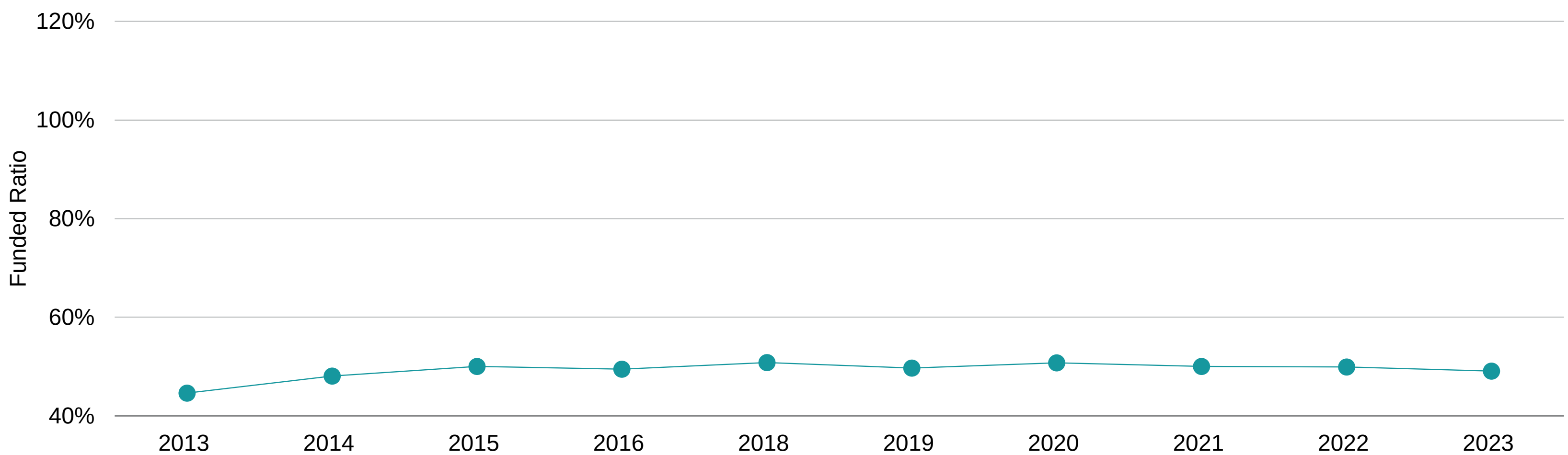
Reconciliation of actuarially determined contribution

Reconciliation of Actuarially Determined Contribution from October 1, 2022 to October 1, 2023

		Amount
1	Actuarially determined contribution as of October 1, 2022	$23,748,105
2	Effect of expected change in amortization payment due to payroll growth	142,651
3	Effect of change in administrative expense assumption	-1,048
4	Effect of change in other actuarial assumptions	1,018,037
5	Effect of investment (gain)/loss	305,640
6	Effect of other gains and losses on accrued liability	685,630
7	Net effect of other changes, including composition and number of participants	48,761
8	Total change	$2,199,671
9	Actuarially determined contribution as of October 1, 2023	$19,385,644

Schedule of funding progress through September 30, 2022

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Compensation (c)	UAAL as a Percentage of Covered Compensation [(b) - (a)] / (c)
10/01/2013	$120,947,042	$271,073,724	$150,126,682	44.62%	$27,871,010	538.65%
10/01/2014	145,276,644	302,122,370	156,845,726	48.09%	27,373,702	572.98%
10/01/2015	159,914,247	319,655,728	159,741,481	50.03%	28,091,083	568.66%
10/01/2016	175,333,405	354,234,673	178,901,268	49.50%	26,585,054	672.94%
10/01/2017	191,740,583	377,380,082	185,639,499	50.81%	27,548,015	673.88%
10/01/2018	207,089,881	416,673,228	209,583,347	49.70%	28,164,021	744.15%
10/01/2019	220,334,774	434,176,844	213,842,070	50.75%	28,726,006	744.42%
10/01/2020	234,514,215	468,831,017	234,316,802	50.02%	28,268,208	828.91%
10/01/2021	255,558,542	503,742,335	248,183,793	50.73%	25,903,031	958.13%
10/01/2022	265,245,309	540,178,805	274,933,496	49.10%	25,260,815	1,088.38%



History of employer contributions

History of Employer Contributions: 2015 – 2024

Fiscal Year Ended September 30	City's Minimum Required	Actual Employer Contribution	Percent Contributed
2015	$17,618,896	$17,832,000	101.21%
2016	18,863,935	18,864,000	100.00%
2017	19,155,820	19,162,000	100.03%
2018	13,973,105	13,973,000	100.00%
2019	14,497,788	14,498,000	100.00%
2020	15,042,623	15,058,000	100.10%
2021	15,044,530	15,061,000	100.11%
2022	17,592,399	17,610,000	100.10%
2023	17,185,973	- -	- -
2024	19,385,644	- -	- -

Risk

Since the actuarial valuation results are dependent on a given set of assumptions and data as of a specific date, there is a risk that emerging results may differ significantly as actual experience differs from the assumptions.

This report does not contain a detailed analysis of the potential range of future measurements but does include a brief discussion of some risks that may affect the Plan. Upon request, a more detailed assessment of the risks can be provided to enable a better understanding of the risks specific to your Plan. This assessment may include scenario testing, sensitivity testing, stress testing and stochastic modeling.

- **Investment Risk** (the risk that returns will be different than expected)

  The market value rate of return over the last ten years has ranged from a low of -16.18% to a high of 27.03%. These two large movements have occurred over the past two years.

- **Longevity Risk** (the risk that mortality experience will be different than expected)

  The actuarial valuation includes an expectation of future improvement in life expectancy. Emerging plan experience that does not match these expectations will result in either an increase or decrease in the actuarially determined contribution. It is not yet known what long-term impact the COVID-19 pandemic may have on the Plan's mortality experience.

- **Contribution Risk** (the risk that actual contributions will be different from actuarially determined contribution)

  The Plan's funding policy requires payment of the City's minimum required contribution, which is the Florida Chapter 112 determined contribution reduced for anticipated funding from allocated surtax income. This policy produces a risk that this reduction in immediate funding might be either too large of too small, depending on whether the surtax income gross as quickly as expected.

  If the City paid the Florida Chapter 112 determined contribution, the effective amortization period would be 24 years, meaning that the current contribution level, with amortization payments growing 1.25%, would be adequate to be expected to reduce the unfunded liability to zero over 24 years. Under the City's current policy of paying the City's required contribution, over the immediate term, the unfunded liability has an expected growth rate of 1.6% and increases at this level can be expected to continue until the surtax income becomes payable to the Plan's trust. If plan experience is less favorable than anticipated, the unfunded liability will grow faster than 1.6% per year. By comparison, the surtax revenue is assumed to grow 4.25% per year.

  If the surtax revenue for fiscal 2022 had been 1% lower, the City's required contribution would increase by $18,794 or 0.07% of projected payroll after accounting for smoothing. For comparison purposes, the allocated surtax revenue is 55.2% of the market value of assets and 24.2% of the actuarial accrued liability.

Section 2: Actuarial Valuation Results

- **Demographic Risk** (the risk that participant experience will be different than assumed)

  Examples of this risk include:

  - Actual retirements occurring earlier or later than assumed. The value of retirement plan benefits is sensitive to the rate of benefit accruals and any early retirement subsidies that apply.
  - More or less active participant turnover than assumed.

- **Actual Experience** Over the Last Ten years and Implications for the Future
  - Past experience can help demonstrate the sensitivity of key results to the Plan's actual experience. Over the past ten years: The non-investment gain/loss for a year has ranged from a loss of $10,056,085 to a gain of $1,978,720. Over the past ten years, the Plan's market value performance has, on average, fallen short of the expected annual return.
  - The funded percentage on the actuarial value of assets has ranged from a low of 44.6% to a high of 50.8% since 2009.

- **Maturity Measures**

  As pension plans mature, the cash needed to fulfill benefit obligations will increase over time. Therefore, cash flow projections and analysis should be performed to assure that the Plan's asset allocation is aligned to meet emerging pension liabilities.

  Currently the Plan has a pay status to active participant ratio of 1.24. For the prior year benefits and expenses paid were $2,949,000 more than contributions received. As the Plan matures, more cash will be needed from the investment portfolio to meet benefit payments. Since the Plan is closed to new entrants, the amount of employee contributions is expected to continue to decline each year as the number of active participants decrease.

GFOA funded liability by type

The Actuarial Accrued Liability represents the present value of benefits earned, calculated using the Plan's actuarial cost method. The Actuarial Value of Assets reflects the financial resources available to liquidate the liability. The portion of the liability covered by assets reflects the extent to which accumulated plan assets are sufficient to pay future benefits, and is shown for liabilities associated with employee contributions, pensioner liabilities, and other liabilities. The Government Finance Officers Association (GFOA) recommends that the funding policy aim to achieve a funded ratio of 100 percent.

GFOA Funded Liability by Type as of September 30

	2022	2021
Actuarial accrued liability (AAL)		
Active member contributions	$19,822,533	$19,147,162
Retirees and beneficiaries	388,093,154	357,574,892
Active and inactive members (employer-financed)	132,263,118	127,020,281
Total	$540,178,805	$503,742,335
Actuarial value of assets	265,245,309	255,558,542
Cumulative portion of AAL covered		
Active member contributions	100.00%	100.00%
Retirees and beneficiaries	63.24%	66.12%
Active and inactive members (employer-financed)	0.00%	0.00%

Actuarial balance sheet

An overview of the Plan's funding is given by an Actuarial Balance Sheet. In this approach, first the amount and timing of all future payments that will be made by the Plan for current participants is determined. Then these payments are discounted at the valuation interest rate to the date of the valuation, thereby determining the present value, referred to as the "liability" of the Plan.

Second, this liability is compared to the assets. The "assets" for this purpose include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments for the unfunded actuarial accrued liability.

Actuarial Balance Sheet

	Year Ended	
	September 30, 2022	**September 30, 2021**
Liabilities		
Present value of benefits for retired participants and beneficiaries	$388,093,154	$357,574,892
Present value of benefits for inactive vested participants	411,614	2,668,348
Present value of benefits for active participants	208,055,874	200,954,564
Total liabilities	$596,560,642	$561,197,804
Assets		
Total valuation value of assets	$265,245,309	$255,558,542
Present value of future contributions by members	16,695,020	17,987,210
Present value of future employer contributions for:		
Entry age cost	39,686,817	39,468,259
Unfunded actuarial accrued liability	274,933,496	248,183,793
Total of current and future assets	$596,560,642	$561,197,804

Section 3: Supplemental Information

Exhibit A: Table of Plan Demographics

Category	Year Ended September 30 2022	2021	Change From Prior Year
Active participants in valuation:			
• Number	382	423	-9.7%
• Average age	41.8	40.8	1.0
• Average years of service	12.5	11.6	0.9
• Covered payroll	$25,260,815	$25,903,031	-2.5%
• Average payroll	66,128	61,236	8.0%
• Employee contribution balances	19,822,533	19,147,162	3.5%
• Total active vested participants	382	366	4.4%
Inactive vested participants	3	6	-50.0%
Retired participants:			
• Number in pay status	357	336	6.5%
• Average age	60.9	60.7	0.2
• Average monthly benefit[1]	$4,217	$4,152	1.6%
Disabled participants:			
• Number in pay status	17	16	6.3%
• Average age	57.5	56.3	1.2
• Average monthly benefit[1]	$2,424	$2,343	3.5%
Beneficiaries:			
• Number in pay status	31	29	6.9%
• Average age	64.0	64.0	0.0
• Average monthly benefit[1]	$3,010	$2,940	2.4%
DROP participants not yet in pay status:			
• Number	64	65	-1.5%
• Average age	52.3	51.9	0.4
• Average monthly benefit[1]	$4,197	$3,891	7.9%

[1]Does not include supplemental benefit amounts

Exhibit B: Participants in Active Service as of September 30, 2022 by Age, Years of Service, and Average Compensation

		Years of Service				
Age	**Total**	**5-9**	**10-14**	**15 - 19**	**20 - 24**	**25 - 29**
Under 25	1	1	- -	- -	- -	- -
	$51,468	$51,468	$0	$0	$0	$0
25 - 29	42	42	- -	- -	- -	- -
	53,882	53,882	- -	- -	- -	- -
30 - 34	70	49	21	- -	- -	- -
	59,878	55,948	69,046	- -	- -	- -
35 - 39	66	20	29	17	- -	- -
	67,029	56,618	69,263	75,466	- -	- -
40 - 44	67	10	24	27	6	- -
	70,414	60,365	65,959	72,561	95,321	- -
45 - 49	44	3	19	14	7	1
	73,086	53,244	68,315	73,749	93,814	68,892
50 - 54	52	9	24	13	2	4
	70,392	55,001	68,494	74,485	72,552	102,022
55 - 59	28	3	8	15	1	1
	68,502	54,104	69,368	69,990	82,068	68,892
60 - 64	10	1	4	5	- -	- -
	69,006	54,048	64,404	75,679	- -	- -
65 - 69	2	- -	1	1	- -	- -
	64,476	- -	60,660	68,292	- -	- -
70 & over	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -
Unknown	- -	- -	- -	- -	- -	- -
	- -	- -	- -	- -	- -	- -
Total	382	138	130	92	16	6
	$66,128	$55,530	$68,128	$73,254	$90,987	$90,979

Exhibit C: Reconciliation of Participant Data

	Active Participants	Inactive Vested Participants	DROP Participants	Disableds	Retired Participants	Beneficiaries	Total
Number as of October 1, 2021	**423**	**6**	**65**	**16**	**336**	**29**	**875**
New participants	0	N/A	0	N/A	N/A	N/A	0
Terminations – with vested rights	-4	0	0	0	0	0	-4
Terminations – without vested rights	0	N/A	0	N/A	N/A	N/A	0
Retirements	-9	-3	-12	N/A	24	N/A	0
New DROP participants	-11	0	11	0	0	0	0
New disabilities	-1	0	0	1	N/A	N/A	0
Return to work	0	0	0	0	0	N/A	0
Deceased	0	0	0	0	-4	0	-4
New beneficiaries	0	0	0	0	0	2	2
Lump sum cash-outs	-16	0	0	0	0	0	-16
Rehire	0	0	0	N/A	0	N/A	0
Certain period expired	N/A	N/A	0	0	0	0	0
Data adjustments	0	0	0	0	1	0	1
Active participants no longer accruing benefits	0	0	0	N/A	N/A	N/A	0
Net transfers (to)/from General	0	0	0	0	0	0	0
Number as of October 1, 2022	**382**	**3**	**64**	**17**	**357**	**31**	**854**

Exhibit D: Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended September 30, 2022		Year Ended September 30, 2021	
Net assets at market value at the beginning of the year		$285,351,000		$228,172,000
Contribution and other income:				
• Employer contributions	$17,610,000		$15,061,000	
• Employee contributions	3,153,000		3,341,000	
• Less administrative expenses	159,000		160,000	
Net contribution income		*$20,604,000*		*$18,242,000*
Investment income:				
• Interest, dividends, and other income	$4,578,000		$3,833,000	
• Realized appreciation	11,564,000		69,000	
• Unrealized appreciation	-60,131,000		6,487,000	
• Less investment fees	-1,946,000		-1,617,000	
Net investment income		*-$45,935,000*		*$61,141,000*
Total income available for benefits		**-$25,172,000**		**$79,543,000**
Less benefit payments and administrative expenses:				
• Benefit payments	-19,727,000		-18,166,000	
• DROP credits	-2,866,000		-2,630,000	
• Refunds	-2,542,000		-3,787,000	
• DROP withdrawals	1,961,000		3,756,000	
• DROP interest/adjustment	-379,000		-1,377,000	
Net benefit payments		*-$23,553,000*		*-$22,204,000*
Change in reserve for future benefits		**-$48,884,000**		**$57,179,000**
Net assets at market value at the end of the year		**$236,467,000**		**$285,351,000**

Exhibit E: Summary Statement of Plan Assets

	September 30, 2022		September 30, 2021	
Cash equivalents		$2,152,000		$2,859,000
Total accounts receivable		0		165,000
Investments:				
Equities	$132,667,000		$189,479,000	
Fixed Income	47,799,000		50,888,000	
Real Estate	57,146,000		47,669,000	
Other Assets	9,865,000		6,887,000	
Total investments at market value		247,477,000		294,923,000
Total assets		249,629,000		297,947,000
Total accounts payable		-13,162,000		-12,596,000
Net assets at market value		**$236,467,000**		**$285,351,000**
Net assets at actuarial value		**$265,245,309**		**$255,558,542**

Exhibit F: Development of the Fund through September 30, 2022

Year Ended September 30	Employer Contributions	Employee Contributions	Other Contributions	Net Investment Return[1]	Admin. Expenses	Benefit Payments	Market Value of Assets at Year-End	Actuarial Value of Assets at Year-End	Actuarial Value as a Percent of Market Value
2013	$10,742,000	$2,525,000	$392,000	$18,466,000	$50,000	$12,925,000	$132,154,000	$120,947,042	91.5%
2014	13,522,000	2,253,000	0	15,468,000	65,000	14,611,000	148,721,000	145,276,644	97.7%
2015	17,832,000	2,466,000	0	-3,849,000	73,000	14,874,000	150,223,000	159,914,247	106.5%
2016	18,864,000	2,410,000	0	11,548,000	75,000	15,583,000	167,387,000	175,333,405	104.7%
2017	19,162,000	2,500,000	0	26,747,000	75,000	18,338,000	197,383,000	191,740,583	97.1%
2018	13,973,000	3,151,000	0	19,269,000	128,000	16,981,000	216,667,000	207,089,881	95.6%
2019	14,498,000	3,225,000	0	3,496,000	158,000	17,974,000	219,754,000	220,334,774	100.3%
2020	15,058,000	3,401,000	0	9,840,000	153,000	19,728,000	228,172,000	234,514,215	102.8%
2021	15,061,000	3,341,000	0	61,141,000	160,000	22,204,000	285,351,000	255,558,542	89.6%
2022	17,610,000	3,153,000	0	-45,935,000	159,000	23,553,000	236,467,000	265,245,309	112.2%

[1] On a market basis, net of investment fees and administrative expenses

Exhibit G: Table of Amortization Bases

Florida Chapter 112 Recommended Contribution Amortization Bases

Type	Date Established	Initial Period	Initial Amount	Annual Payment[1]	Years Remaining	Outstanding Balance
Fresh start	10/01/2016	30	$178,901,268	$12,262,973	24	$174,823,712
Experience loss	10/01/2017	30	-2,816,018	-190,214	25	-2,768,269
Change in assumptions	10/01/2017	30	-283,924	-19,178	25	-279,109
Plan Amendment	10/01/2017	30	9,863,395	666,243	25	9,696,144
Experience loss	10/01/2018	29	5,111,441	345,466	25	5,027,725
Change in assumptions	10/01/2018	29	19,111,594	1,291,692	25	18,798,574
Experience loss	10/01/2019	28	12,171,775	824,310	25	11,996,560
Change in assumptions	10/01/2019	28	-7,304,312	-494,670	25	-7,199,164
Experience loss	10/01/2020	27	15,277,628	1,038,082	25	15,107,676
Change in assumptions	10/01/2020	27	6,108,635	415,068	25	6,040,679
Experience loss	10/01/2021	26	3,753,461	256,247	25	3,729,282
Change in assumptions	10/01/2021	26	11,440,746	781,055	25	11,367,047
Experience loss	10/01/2022	25	19,787,855	1,359,667	25	19,787,855
Change in assumptions	10/01/2022	25	8,804,784	604,996	25	8,804,784
Total				**$19,141,737**		**$274,933,496**

[1] Level percentage of payroll

City's Minimum Recommended Contribution Surtax Amortization Bases

Type	Date Established	Initial Period	Initial Amount	Annual Payment[1]	Years Remaining	Outstanding Balance
Discounted surtax revenue applied	10/01/2016	30	-$64,295,005	-4,407,168	24	-62,829,579
Surtax offset gain	10/01/2017	30	-1,534,336	-103,640	25	-1,508,317
Allocation change	10/01/2017	30	4,705,811	317,864	25	4,626,016
Discount rate change	10/01/2017	30	-3,286,369	-221,985	25	-3,230,642
Surtax offset gain	10/01/2018	29	-1,420,046	-95,976	25	-1,396,788
Allocation change	10/01/2018	29	-1,349,426	-91,204	25	-1,327,326
Discount rate change	10/01/2018	29	-3,713,867	-251,008	25	-3,653,040
Surtax offset gain	10/01/2019	28	-348,544	-23,604	25	-343,527
Allocation change	10/01/2019	28	-7,142,670	-483,724	25	-7,039,850
Discount rate change	10/01/2019	28	-2,159,598	-146,255	25	-2,128,511
Surtax offset loss	10/01/2020	27	6,298,215	427,950	25	6,228,152
Allocation change	10/01/2020	27	3,119,832	211,986	25	3,085,126
Discount rate change	10/01/2020	27	-2,063,845	-140,234	25	-2,040,886
Surtax offset gain	10/01/2021	26	-9,862,882	-673,335	25	-9,799,347
Allocation change	10/01/2021	26	-4,296,673	-293,332	25	-4,268,995
Discount rate change	10/01/2021	26	-4,356,487	-297,416	25	-4,328,423
Surtax offset gain	10/01/2022	25	-6,174,896	-424,291	25	-6,174,896
Allocation change	10/01/2022	25	2,166,398	148,858	25	2,166,398
Discount rate change	10/01/2022	25	-3,393,985	-233,208	25	-3,393,985
Surtax smoothing	10/01/2022	25	4,985,065	342,535	25	4,985,065
Total				**-$6,437,187**		**-$92,373,355**

[1] Level percentage of payroll; per Part VII, Chapter 112.64(5)(b) of Florida Statutes, outstanding balances were amortized using a 1.25% payroll growth rate for October 1, 2021 valuation.

Exhibit H: Section 415

Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for non-compliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of $160,000 indexed for inflation. That limit is $245,000 for 2022. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as form of benefits chosen and after-tax contributions.

Benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.

Exhibit I: Supplementary State of Florida Information
Summary of Salary Changes

Year Ended September 30	Total Salary	Percent Change in Total Salary	Percent Change in Salary of Employees Remaining Active	Expected Percent Change in Salary of Employees Remaining Active
2010*	$27,869,052	0.75%	N/A	N/A
2010	32,329,400	16.88%	2.45%	5.28%
2011	31,832,037	-1.54%	3.09%	5.80%
2012	28,944,158	-9.07%	0.78%	6.15%
2013	27,871,010	-3.71%	3.03%	1.72%
2014	27,373,702	-1.78%	3.89%	1.70%
2015	28,091,083	2.62%	3.08%	1.66%
2016	26,585,054	-5.36%	2.63%	4.26%
2017	27,548,015	3.62%	4.03%	8.21%
2018	28,164,021	2.24%	10.21%	8.31%
2019	28,726,006	2.00%	12.46%	8.34%
2020	28,268,208	-1.59%	12.06%	3.98%
2021	25,903,031	-8.37%	3.06%	3.84%
2022	25,260,815	-2.48%	8.64%	3.69%

Note: The Plan was closed to new entrants as of October 1, 2017.

The average total payroll growth for the most recent ten years was -2.44% per year. Additional analysis of bargained pay increases applicable for the next year and pay of DC plan participants was used to support a payroll increase assumption of 1.25%.

*Prior to the inclusion of new participants with greater than one year of employment.

Exhibit J: Supplementary State of Florida Information
Recent History of Recommended and Actual Contributions

Fiscal Year Ended September 30	Valuation Date October 1	Contribution Rate as Percent of Valuation Payroll	Valuation Payroll	Florida Chapter 112 Recommended Contribution	City's Minimum Required Contribution	Actual Contribution
2013	2011	39.11%	$32,946,158	$12,884,770	- -	$10,742,000
2014	2012	49.93%	29,812,483	14,884,963	- -	13,522,000
2015	2013	62.81%	28,049,384	17,618,896	- -	17,832,000
2016	2014	68.64%	27,480,459	18,863,935	- -	18,864,000
2017	2015	67.73%	28,282,102	19,155,820	- -	19,162,000
2018	2016	69.26%	26,917,306	18,643,233	$13,973,105	13,973,000
2019	2017	68.63%	27,892,365	19,141,501	14,497,788	14,498,000
2020	2018	70.53%	28,516,071	20,111,161	15,042,623	15,058,000
2021	2019	71.56%	29,085,081	20,812,130	15,044,530	15,061,000
2022	2020	79.84%	28,621,561	22,851,586	17,592,399	17,610,000
2023	2021	90.55%	26,226,819	23,748,105	17,185,973	- -
2024	2022	102.16%	25,576,575	26,128,351	19,385,644	- -

The Plan was closed to new entrants as of October 1, 2017; as a result, valuation payroll is expected to continue declining.

Exhibit K: Supplementary State of Florida Information
Comparative Summary of Principal Valuation Results

	Year Ended September 30, 2021		Year Ended September 30, 2020
	New Assumptions	Old Assumptions	
Participant data			
• Active members	382	382	423
• Total annual payroll	$25,260,815	$25,260,815	$25,903,031
• Retired members and beneficiaries	406	406	381
• Total annualized benefit	$19,679,844	$19,679,844	$18,749,038
• Terminated vested members	3	3	6
• Total annualized benefit	$44,568	$44,568	$164,544
• DROP participants	64	64	65
• Total annualized benefit	$3,223,296	$3,223,296	$3,125,488
Actuarial value of assets	$265,245,309	$265,245,309	$255,558,542
Present value of all future expected benefit payments:			
• Active members:			
• Retirement benefits	$181,225,097	$176,032,670	$174,421,536
• Vesting benefits	1,970,681	1,957,602	2,252,665
• Disability benefits	3,822,317	3,735,101	3,885,015
• Death benefits	1,215,246	1,186,349	1,248,186
• Return of contributions	19,822,533	19,822,533	19,147,162
• Total	$208,055,874	$202,734,255	$200,954,564
• Terminated vested members	411,614	403,774	2,668,348
• Retired members and beneficiaries	322,272,363	317,866,008	296,489,108
• DROP participants	65,820,790	64,710,908	61,085,784
Total	$596,560,640	$585,714,945	$561,197,804

Exhibit K: Supplementary State of Florida Information
Comparative Summary of Principal Valuation Results (Cont'd)

	Year Ended September 30, 2021		
	New Assumptions	**Old Assumptions**	**Year Ended September 30, 2020**
Unfunded actuarial accrued liability	$274,933,496	$266,128,712	$248,183,793
Actuarial present value of accrued benefits			
Vested accrued benefits			
Active members	$116,112,778	$113,399,994	$106,946,992
Inactive members	411,614	403,774	2,668,348
Retirees and beneficiaries	322,272,363	317,866,008	296,489,108
DROP participants	65,820,790	64,710,908	61,085,784
Nonvested active members	- -	- -	845,691
Total	$504,617,545	$496,380,684	$468,035,923
Pension cost			
Normal cost, including administrative expenses	$8,182,179	$7,934,787	$7,941,651
Expected employee contributions	-2,379,470	-2,379,470	-2,432,853
Level % of payroll payment to amortize unfunded actuarial accrued liability	19,141,737	18,738,118	17,148,992
Discounted and amortized value of allocated surtax revenue	-6,437,187	-6,768,115	-6,260,853
Total minimum annual cost payable monthly at valuation date	$19,146,315	18,141,882	$16,973,801
Total employer cost projected to budget year	**19,385,644**	**18,368,655**	**17,185,973**
Projected payroll	25,576,575	25,576,575	26,226,819
As % of projected payroll	75.79%	71.82%	65.53%
Present value of active members' future salaries at attained age	$166,950,196	$166,080,894	$179,872,098
Present value of expected future employee contributions	16,695,020	16,608,089	17,987,210

Exhibit L: Supplementary State of Florida Information
Actuarial Present Value of Accumulated Plan Benefits

Factors	Change in Actuarial Present Value of Accumulated Plan Benefits	
Actuarial present value of accumulated benefits as of October 1, 2021		$468,035,923
Benefits accumulated, net experience gain or loss, changes in data	$21,670,574	
Benefits paid	-23,553,000	
Interest	30,227,187	
Changes in assumptions	8,236,861	
Plan changes	0	
Net increase	$36,581,622	
As % of payroll	144.82%	
Actuarial present value of accumulated benefits as of October 1, 2022		$504,617,545

Exhibit M: Supplementary State of Florida Information
Reconciliation of DROP Accounts

Nearest Age	Total Actives*	Eligible for Normal**	Number Retiring	Number Entering DROP
Under 40	204	0	0	0
40	13	0	1	1
41	20	2	1	0
42	14	1	0	1
43	11	0	0	0
44	10	2	0	0
45	11	1	1	0
46	9	2	1	1
47	9	2	0	0
48	14	5	0	4
49	11	3	1	1
50	14	2	1	0
51	15	0	0	1
52	12	2	0	0
53	6	0	0	1
54	6	0	0	0
55	7	2	0	1
56	9	0	0	0
57	5	0	0	0
58	3	1	0	0
59	5	1	1	0
60	5	0	0	0
61	2	0	0	0
62	2	0	0	0
63	2	0	0	0
64	0	0	0	0
65 & over	4	0	2	0
Total	423	26	9	11

*Number of active participants from prior valuation
**Number of active participants either eligible to retire as of October 1, 2021 or who became eligible during the plan year ended September 30, 2022

Exhibit N: Actuarial Projections through Fiscal 2062

City of Jacksonville General Employees Retirement Plan
Actuarial Projections through Fiscal Year Ending September 30, 2062

Plan Year Beginning	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Actuarial Accrued Liability	Funded Ratio	Fiscal Year Ending	Surtax Contribution	% of Total Contribution	Required City Contribution	% of Total Contribution	Total Contribution
					2023	$0	0.0%	$17,185,973	100.0%	$17,185,973
2022	$540,178,805	$265,245,309	$274,933,496	49.10%	2024	0	0.0%	19,385,644	100.0%	19,385,644
2023	557,773,802	267,660,634	290,113,168	47.99%	2025	0	0.0%	19,861,744	100.0%	19,861,744
2024	574,732,868	273,616,113	301,116,755	47.61%	2026	0	0.0%	20,300,160	100.0%	20,300,160
2025	591,254,670	280,486,244	310,768,426	47.44%	2027	0	0.0%	20,704,409	100.0%	20,704,409
2026	607,437,255	278,092,819	329,344,436	45.78%	2028	0	0.0%	21,675,907	100.0%	21,675,907
2027	622,729,529	288,108,229	334,621,300	46.27%	2029	0	0.0%	21,593,028	100.0%	21,593,028
2028	637,016,416	298,083,822	338,932,594	46.79%	2030	0	0.0%	21,581,259	100.0%	21,581,259
2029	650,474,383	307,099,807	343,374,576	47.21%	2031	7,508,283	25.9%	21,501,274	74.1%	29,009,557
2030	662,779,982	322,723,105	340,056,877	48.69%	2032	10,436,513	33.2%	20,980,921	66.8%	31,417,434
2031	672,190,238	339,372,214	332,818,024	50.49%	2033	10,880,065	34.4%	20,730,728	65.6%	31,610,793
2032	679,498,225	354,799,718	324,698,507	52.21%	2034	11,342,468	35.5%	20,622,013	64.5%	31,964,481
2033	685,152,998	369,667,626	315,485,372	53.95%	2035	11,824,523	36.6%	20,516,171	63.4%	32,340,694
2034	689,080,118	384,139,033	304,941,085	55.75%	2036	12,327,065	37.6%	20,422,299	62.4%	32,749,364
2035	691,248,523	398,284,285	292,964,238	57.62%	2037	12,850,965	38.8%	20,262,653	61.2%	33,113,618
2036	691,331,074	411,974,624	279,356,450	59.59%	2038	13,397,131	39.9%	20,159,525	60.1%	33,556,656
2037	689,434,190	425,322,517	264,111,673	61.69%	2039	13,966,509	41.2%	19,938,711	58.8%	33,905,220
2038	685,036,004	438,119,229	246,916,775	63.96%	2040	14,560,086	42.2%	19,947,311	57.8%	34,507,397
2039	678,871,436	450,896,900	227,974,536	66.42%	2041	15,178,890	43.1%	20,051,986	56.9%	35,230,876
2040	671,260,101	464,255,986	207,004,115	69.16%	2042	15,823,993	43.9%	20,218,167	56.1%	36,042,160
2041	662,418,816	478,611,483	183,807,333	72.25%	2043	16,496,512	44.7%	20,422,495	55.3%	36,919,007
2042	652,489,529	494,305,954	158,183,575	75.76%	2044	17,197,614	45.4%	20,653,972	54.6%	37,851,586
2043	641,585,179	511,654,451	129,930,728	79.75%	2045	17,928,513	46.2%	20,906,658	53.8%	38,835,171
2044	629,797,865	530,960,383	98,837,482	84.31%	2046	18,690,474	46.9%	21,171,015	53.1%	39,861,489
2045	617,206,168	552,532,418	64,673,750	89.52%	2047	19,484,820	47.6%	21,444,288	52.4%	40,929,108
2046	603,875,878	576,675,787	27,200,091	95.50%	2048	20,312,924	65.6%	10,637,733	34.4%	30,950,657
2047	589,872,423	603,711,461	(13,839,038)	102.35%	2049	0	0.0%	308,769	100.0%	308,769
2048	575,249,854	600,657,021	(25,407,167)	104.42%	2050	0	0.0%	316,487	100.0%	316,487
2049	560,067,111	587,121,809	(27,054,698)	104.83%	2051	0	0.0%	324,400	100.0%	324,400
2050	544,386,496	573,195,714	(28,809,218)	105.29%	2052	0	0.0%	332,510	100.0%	332,510
2051	528,274,625	558,952,308	(30,677,683)	105.81%	2053	0	0.0%	340,823	100.0%	340,823
2052	511,799,909	544,467,404	(32,667,495)	106.38%	2054	0	0.0%	349,344	100.0%	349,344
2053	495,031,792	529,818,329	(34,786,537)	107.03%	2055	0	0.0%	358,078	100.0%	358,078
2054	478,039,178	515,082,386	(37,043,208)	107.75%	2056	0	0.0%	367,030	100.0%	367,030
2055	460,893,455	500,339,908	(39,446,453)	108.56%	2057	0	0.0%	376,205	100.0%	376,205
2056	443,663,626	485,669,419	(42,005,793)	109.47%	2058	0	0.0%	385,610	100.0%	385,610
2057	426,416,765	471,148,140	(44,731,375)	110.49%	2059	0	0.0%	395,250	100.0%	395,250
2058	409,219,701	456,853,700	(47,633,999)	111.64%	2060	0	0.0%	405,132	100.0%	405,132
2059	392,136,040	442,861,210	(50,725,170)	112.94%	2061	0	0.0%	415,260	100.0%	415,260
2060	375,225,663	429,242,805	(54,017,142)	114.40%	2062	0	0.0%	425,641	100.0%	425,641
2061	358,543,510	416,066,474	(57,522,964)	116.04%	2063	0	0.0%	436,282	100.0%	436,282
Total:						$260,207,348	33.0%	$528,412,865	67.0%	$788,620,213
Total Present Value at 6.625%:						$81,755,867	25.2%	$243,163,453	74.8%	$324,919,320

Assumptions

Investment Return Assumption	6.625% per year
Actuarial Value of Assets	5-year smoothed market value
Payroll Growth Assumption	1.50% per year
Pension Liability Surtax Proceeds	35.50%, projected to increase 4.25% annually
Administrative Expenses	Projected to increase 2.5% annually

Projections are not a guarantee of future results. They are intended to serve as estimates of future financial outcomes that are based on assumptions about future experience and the information available at the time the modeling is undertaken and completed. Projected results will change if demographic or economic assumptions, or plan provisions, change in the future, or if the contributing employers make contributions other than expected.

Section 4: Actuarial Valuation Basis

Exhibit I: Actuarial Assumptions, Methods and Models

Rationale for Assumptions	The information and analysis used in selecting each demographic assumption that has a significant effect on this actuarial valuation is shown in the Experience Study Report for the five-year period ended September 30, 2017.
Investment Return:	6.50%. The net investment return assumption was chosen by the Retirement System's Board of Trustees with input from the actuary. The assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes as provided by Segal Marco Advisors, as well as the Plan's target asset allocation.
Salary Increases (including inflation):	See table below
Inflation Rate:	2.50%
Payroll Growth:	1.25% used for amortization of unfunded liability amounts, based on the requirement in the Florida Statutes that the assumption for this purpose may not exceed the average annual growth for the preceding ten years. Negotiated pay level increases and pay of DC Plan participants were taken into consideration in setting a payroll growth that is expected to be achieved and maintained on a ten-year average basis. The Fund's long-term payroll growth assumption is equal to the inflation assumption of 2.50%.

Salary Increases (including inflation):

Service	Rate (%)
0	7.50
1	6.50
2	6.00
3	5.50
4	5.25
5	5.00
6	4.50
7 - 10	4.00
11 - 14	3.75
15+	2.80

Section 4: Actuarial Valuation Basis

Mortality Rates:

Healthy pre-retirement: FRS pre-retirement mortality tables for special risk personnel, set forward 2 years, projected generationally from 2010 with Scale MP2018

Healthy post-retirement: FRS healthy post-retirement mortality tables for special risk personnel, set forward 2 years, projected generationally from 2010 with Scale MP2018

Disabled: FRS disabled mortality tables for personnel other than special risk, with no set forward, projected generationally from 2010 with Scale MP2018

The FRS tables for special risk personnel, set forward 2 years, reasonably reflect the healthy annuitant mortality experience of the General Employees Retirement Plan as of the measurement date. The FRS disabled mortality tables for special risk personnel reasonably reflect the disabled annuitant mortality experience as of the measurement date.

Annuitant Mortality Rates:

	Rate (%)[1]			
	Healthy		Disabled	
Age	Male	Female	Male	Female
55	1.04	0.55	2.53	1.91
60	1.16	0.61	3.08	2.27
65	1.45	0.88	3.93	2.83
70	2.34	1.51	5.08	3.79
75	3.90	2.62	6.98	5.46
80	6.63	4.65	10.12	8.31
85	11.21	8.64	14.68	12.60
90	18.13	15.47	21.29	17.72

[1] Mortality rates shown for base table.

Section 4: Actuarial Valuation Basis

Termination Rates before Retirement:

	Rate (%)			
	Mortality[1]		Disability[2]	
Age	Male	Female	Male	Female
20	0.05	0.04	0.03	0.03
25	0.06	0.05	0.04	0.04
30	0.07	0.05	0.05	0.05
35	0.08	0.06	0.08	0.08
40	0.10	0.08	0.12	0.12
45	0.14	0.11	0.18	0.18
50	0.21	0.17	0.30	0.30
55	0.32	0.25	0.47	0.47
60	0.50	0.40	0.75	0.75
65	0.87	0.69	0.00	0.00

[1]Mortality rates shown for base table

[2]100% of disabilities are assumed to be non-service incurred.

Retirement Rates: 100% retirement assumed at age 65 with 5 years of service; for ages less than 65, retirement rate assumptions are based on service as follows:

Service	Rate (%)
Under 20	0%
20	50
21 – 24	40
25 – 27	50
28 & Over	100

Refund of Contributions: 95% of participants that are vested and terminate are assumed to take a refund of their employee contributions in lieu of their accrued benefit deferred to age 65.

Retirement Rates for Inactive Vested Participants: 65

Unknown Data for Participants: Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.

Section 4: Actuarial Valuation Basis

Value of Applicable Tax Revenue:	Smoothed revenue of $112,840,490 for fiscal 2022 is used as the basis of the City's revenue projection. This amount is prior to the application of the allocation percentage. Smoothed revenue is calculated as actual revenue less unrecognized revenue growth. Unrecognized revenue growth is equal to the difference between actual and expected revenue growth, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value. This method is applied prospectively to revenue growth occurring during fiscal 2022 and later. Actual revenue for fiscal 2022 was $117,149,012.
Tax Revenue Growth Rate:	4.25%. This assumption is determined by the City. Segal has not reviewed the information used to set this assumption, but Segal previously reviewed the sensitivity of this assumption when it was initially set.
Projected Tax Revenue Allocation:	6.10%. This percentage is determined by the City; last year's percentage was 6.20%.
Administrative Expenses:	Previous year's actual expenses; $159,000 for October 1, 2022.
Family Composition:	60% of participants are assumed to be married. None are assumed to have dependent children. Females are assumed to be three years younger than their spouses.
Actuarial Value of Assets:	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual and the expected market return, and is recognized over a five - year period, further adjusted, if necessary, to be within 20% of the market value.
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method. Entry Age is the age at the time the participant commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis based on each member's benefit accrual rate and are allocated by compensation. Normal Cost is not included for participants who are assumed to retire with 100% certainty in the upcoming plan year based on the retirement assumptions.
Justification for Change in Actuarial Assumptions and Methods:	Following ongoing board review of discount rate options: ➢ The discount rate was lowered from 6.625% to 6.50%.

Exhibit II: Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year:	October 1 through September 30	
Plan Status:	Closed to new entrants	
Normal Retirement:	*Age Requirement*	Age 65 with five years of Credited Service or any age with 20 years of Credited Service.
	Regular Benefit Amount	3.0% of Final Monthly Compensation times years of Credited Service for the first 20 years plus 2.0% of Final Monthly Compensation times years of Credited Service for years in excess of 20. However, the benefit may not exceed 80% of Final Monthly Compensation.
	Supplemental Benefit Amount	Monthly benefit of $5 times years of Credited Service, not less than $25 per month or more than $150 per month.
	Minimum Benefit Amount	$72.08 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.
Early Retirement:	None	
Service-Incurred Disability:	*Age Requirement*	None
	Service Requirement	None
	Regular Benefit Amount	50% of the average salary earned in the last three years immediately preceding disability retirement.
	Supplemental Benefit Amount	Monthly benefit of $5 times years of Credited Service, not less than $25 per month or more than $150 per month.
	Minimum Benefit Amount	$72.08 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.

Non-service Incurred Disability:	*Age Requirement*	None
	Service Requirement	5 years of Credited Service
	Regular Benefit Amount	25% percent of the average salary earned in the last three years immediately preceding disability retirement. For each year of service in excess of 5 years, the benefit shall be increased 2.5%, to a maximum of 50%.
	Supplemental Benefit Amount	Monthly benefit of $5 times years of Credited Service, not less than $25 per month or more than $150 per month.
	Minimum Benefit Amount	$72.08 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.
Vesting:	*Age Requirement*	None
	Service Requirement	5 years of Credited Service
	Regular Benefit Amount	Accrued Normal Retirement Benefit payable at age 65.
	Supplemental Benefit Amount	Monthly benefit of $5 times years of Credited Service, not less than $25 per month or more than $150 per month. Payable at Age 65.
	Minimum Benefit Amount	$72.08 per whole year of Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.
Spouse's Pre-Retirement Death Benefit:	*Age Requirement*	None
	Service Requirement	None
	Regular Benefit Amount	If the Member is eligible for retirement, the surviving spouse is entitled to 75% of the member's accrued retirement benefit. If the Member is not eligible for retirement, the surviving spouse is entitled to 75% of the pension the Member would have received if the Member had worked to eligibility for Normal Retirement at current salary, using a 2% annual accrual rate.
	Supplemental Benefit Amount	Monthly benefit of $5 times years of Member's Credited Service, not less than $25 per month or more than $150 per month.
	Minimum Benefit Amount	75% of $72.08 per whole year of Member's Credited Service, not to exceed 30. Minimum accrual rate increases 4% each October 1st.
Spouse's Post-Retirement Death Benefit:	*Regular Benefit Amount*	Surviving spouse is entitled to 75% of the Member's regular benefit.
	Supplemental Benefit Amount	Surviving spouse is entitled to 100% of the Member's supplemental benefit.
	Minimum Benefit Amount	75% of the Member's Minimum Benefit Amount at retirement.

Section 4: Actuarial Valuation Basis

Member:	All City Corrections Officers hired prior to October 1, 2017.
Member Contributions:	10% of Earnable Compensation, additional 2% of Earnable Compensation during DROP participation.
Credited Service:	The number of full years and months worked from date of participation to date of termination or retirement, plus any prior service purchased.
Final Monthly Compensation:	Average monthly rate of Earnable Compensation during the highest 36 consecutive months (78 pay periods) out of the last ten years of employment.
Earnable Compensation:	Base pay for regular hours worked as an employee, plus service raises and excluding bonuses, adjusted compensation, overtime or any extra compensation over and above regularly budgeted salaries.
Cost of Living Adjustment:	On the December 1st after the initial benefit commencement date, and on each December 1st thereafter, the regular benefit is increased by 3%.
DROP:	Members with 20 or more years of service may elect to defer receipt of their retirement benefits while continuing employment with the City for up to 5 years. Upon the effective date of participating in the DROP, a member's years of service and Final Monthly Compensation become frozen for purposes of determining pension benefits. Additional service beyond the date of DROP participation no longer accrues any additional benefits under the Retirement System. Benefits that would have been payable are accumulated at interest to date of termination and paid or rolled over in a single sum, and payments are made directly to the Member thereafter based on the accrued retirement benefit at the DROP start date. COLA increases start at termination of employment rather than at the start of the DROP.
Changes in Plan Provisions:	There have been no changes in plan provisions since the last valuation.

Section 5: GASB Information

General information about the pension plan

Plan Description

Plan membership. At September 30, 2022, pension plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	469
Vested terminated members entitled to but not yet receiving benefits	3
Active members	382
Total	854

Net Pension Liability

Reporting Date for Employer under GASB 68	September 30, 2023	September 30, 2022
Measurement Date	**September 30, 2022**	**September 30, 2021**
Components of the Net Pension Liability		
Total Pension Liability	$553,371,805	$515,650,335
Plan Fiduciary Net Position	249,660,000	297,259,000
Net Pension Liability	303,711,805	218,391,335
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	45.12%	57.65%

The Net Pension Liability (NPL) for the plan was measured as of September 30, 2022 and 2021. Plan Fiduciary Net Position (plan assets) was valued as of the measurement dates and the Total Pension Liability (TPL) was determined from actuarial valuations as of September 30, 2022 and 2021, respectively.

Actuarial assumptions. The TPL as of September 30, 2022 and 2021, that were measured by actuarial valuations as of September 30, 2022 and 2021, respectively, used the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.50%
Salary increases	2.80% - 7.50%, of which 2.50% is the Plan's long-term payroll inflation assumption.
Investment rate of return	6.50%, net of pension plan investment expense, including inflation (previously 6.625%)
Other assumptions	See the October 1, 2022 actuarial valuation for a complete description of all actuarial assumptions. These assumptions were developed in the analysis of actuarial experience study for the period October 1, 2012 through September 30, 2017.

Determination of discount rate and investment rates of return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation. The target allocation (approved by the Board) and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	30.0%	6.91%
International equity	20.0%	7.21%
Fixed income	20.0%	1.61%
Real estate	15.0%	3.61%
Private equity	7.5%	9.96%
Alternatives	7.5%	3.21%
Total	100.0%	

Discount rate. The discount rates used to measure the Total Pension Liability (TPL) were 6.50% and 6.625% as of September 30, 2022 and September 30, 2021, respectively. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan Fiduciary Net Position (FNP) was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of both September 30, 2022 and September 30, 2021.

Discount rate sensitivity

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the Net Pension Liability of the CORP as of September 30, 2022, calculated using the discount rate of 6.50%, as well as what the CORP's NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (5.50%) or 1-percentage-point higher (7.50%) than the current rate.

	1% Decrease (5.50%)	**Current Discount Rate (6.50%)**	**1% Increase (7.50%)**
Net Pension Liability	$383,592,132	$303,711,805	$239,370,159

Exhibit 2: Schedule of Changes in Net Pension Liability – Last two fiscal years

Reporting Date for Employer under GASB 68	**September 30, 2023**	**September 30, 2022**
Measurement Date	**September 30, 2022**	**September 30, 2021**
Total Pension Liability		
Service cost	$7,781,651	$8,106,028
Interest	33,939,708	32,479,217
Change of benefit terms	0	0
Differences between expected and actual experience	9,464,327	5,071,327
Changes of assumptions	8,804,784	11,440,746
Benefit payments, including refunds of member contributions	-22,269,000	-21,953,000
Net change in Total Pension Liability	$37,721,470	$35,144,318
Total Pension Liability – beginning	515,650,335	480,506,017
Total Pension Liability – ending	$553,371,805	$515,650,335
Plan Fiduciary Net Position		
Contributions – employer	$17,610,000	$15,061,000
Contributions – employee	3,153,000	3,341,000
Net investment income	-45,934,000	61,123,000
Benefit payments, including refunds of member contributions	-22,269,000	-21,953,000
Administrative expense	-159,000	-160,000
Other	0	0
Net change in Plan Fiduciary Net Position	-$47,599,000	$57,412,000
Plan Fiduciary Net Position – beginning	297,259,000	239,847,000
Plan Fiduciary Net Position – ending	$249,660,000	$297,259,000
Net Pension Liability – ending	$303,711,805	$218,391,335
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	45.12%	57.65%
Covered payroll[1]	$25,260,815	$25,903,031
Plan Net Pension Liability as percentage of covered payroll	1,202.30%	843.11%

[1] Pensionable payroll as of the measurement date

Section 5: GASB Information

Notes to Schedule:

Benefit changes:	*No benefit changes have been reflected in the past two fiscal years.*
Assumption changes:	*As of September 30, 2021 the assumed investment return was lowered from 6.80% to 6.625%.*
	As of September 30, 2022 the assumed investment return was lowered from 6.625% to 6.50%.

Deferred outflows of resources and deferred inflows of resources

Reporting Date for Employer under GASB 68	September 30, 2023	September 30, 2022
Measurement Date	**September 30, 2022**	**September 30, 2021**
Deferred Outflows of Resources		
Changes of assumptions or other inputs	17,452,796	18,231,880
Net difference between projected and actual earnings on pension plan investments	30,440,863	0
Difference between expected and actual experience in the Total Pension Liability	18,066,256	17,914,443
Total Deferred Outflows of Resources	$65,959,915	$36,146,323
Deferred Inflows of Resources		
Changes of assumptions or other inputs	1,460,862	2,921,724
Net difference between projected and actual earnings on pension plan investments	0	28,084,658
Difference between expected and actual experience in the Total Pension Liability	293,499	789,582
Total Deferred Inflows of Resources	$1,754,361	$31,795,964
Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:		
Reporting Date for Employer under GASB 68 Year Ended September 30:		
2023	N/A	$6,304,443
2024	$22,663,861	4,982,132
2025	16,431,015	-1,250,714
2026	11,996,227	-5,685,502
2027	13,114,451	0
2028	0	0
Thereafter	0	0

Schedule of recognition of change in total Net Pension Liability

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

Reporting Date for Employer under GASB 68 Year Ended September 30	Differences between Expected and Actual Experience	Recognition Period (Years)	2022	2023	2024	2025	2026	2027	2028	Thereafter
2016	$1,699,155	7.00	$242,736	$0	$0	$0	$0	$0	$0	$0
2017	-1,418,089	7.00	-202,584	-202,584	0	0	0	0	0	0
2018	-2,054,491	7.00	-293,499	-293,499	-293,499	0	0	0	0	0
2019	17,044,608	6.00	2,840,768	2,840,768	2,840,768	0	0	0	0	0
2020	5,491,767	5.00	1,098,353	1,098,353	1,098,353	0	0	0	0	0
2021	9,965,234	5.00	1,993,047	1,993,047	1,993,047	1,993,047	0	0	0	0
2022	5,071,327	5.00	1,014,267	1,014,265	1,014,265	1,014,265	1,014,265	0	0	0
2023	9,464,327	4.00	N/A	2,366,081	2,366,082	2,366,082	2,366,082	0	0	0
Net increase (decrease) in pension expense			N/A	$8,816,431	$9,019,016	$5,373,394	$3,380,347	$0	$0	$0

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

Reporting Date for Employer under GASB 68 Year Ended September 30	Assumption Changes	Recognition Period (Years)	2022	2023	2024	2025	2026	2027	2028	Thereafter
2016	-$1,243,005	7.00	-$177,572	$0	$0	$0	$0	$0	$0	$0
2017	16,320,426	7.00	2,331,489	2,331,489	0	0	0	0	0	0
2018	9,950,689	7.00	1,421,527	1,421,527	1,421,527	0	0	0	0	0
2019	718,682	6.00	119,780	119,780	119,780	0	0	0	0	0
2020	-7,304,312	5.00	-1,460,862	-1,460,862	-1,460,862	0	0	0	0	0
2021	6,108,635	5.00	1,221,727	1,221,727	1,221,727	1,221,727	0	0	0	0
2022	11,440,746	5.00	2,288,150	2,288,149	2,288,149	2,288,149	2,288,149	0	0	0
2023	8,804,784	4.00	N/A	2,201,196	2,201,196	2,201,196	2,201,196	0	0	0
Net increase (decrease) in pension expense			N/A	$8,123,006	$5,791,517	$5,711,072	$4,489,345	$0	$0	$0

The average of the expected remaining service lives of all employees that are provided with pensions through the Plan's (active and inactive employees) determined as of September 30, 2022 is four years.

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

Reporting Date for Employer under GASB 68 Year Ended September 30	Differences between Projected and Actual Earnings	Recognition Period (Years)	2022	2023	2024	2025	2026	2027	2028	Thereafter
2018	-$13,116,089	5.00	-$2,623,218	$0	$0	$0	$0	$0	$0	$0
2019	-4,032,972	5.00	-806,594	-806,594	0	0	0	0	0	0
2020	12,533,895	5.00	2,506,779	2,506,779	2,506,779	0	0	0	0	0
2021	6,100,070	5.00	1,220,014	1,220,014	1,220,014	1,220,014	0	0	0	0
2022	-44,939,578	5.00	-8,987,914	-8,987,916	-8,987,916	-8,987,916	-8,987,916	0	0	0
2023	65,572,256	5.00	N/A	13,114,452	13,114,451	13,114,451	13,114,451	13,114,451	0	0
Net increase (decrease) in pension expense			N/A	$7,046,735	$7,853,328	$5,346,549	$4,126,535	$13,114,451	$0	$0

Total Increase (Decrease) in Pension Expense

Reporting Date for Employer under GASB 68 Year Ended September 30	Total Increase (Decrease) in Pension Expense	Recognition Period (Years)	2022	2023	2024	2025	2026	2027	2028	Thereafter
2016	$16,840,875		$65,164	$0	$0	$0	$0	$0	$0	$0
2017	16,008,525		2,128,905	2,128,905	0	0	0	0	0	0
2018	-5,219,891		-1,495,190	1,128,028	1,128,028	0	0	0	0	0
2019	13,730,318		2,153,954	2,153,954	2,960,548	0	0	0	0	0
2020	10,721,350		2,144,270	2,144,270	2,144,270	0	0	0	0	0
2021	22,173,939		4,434,788	4,434,788	4,434,788	4,434,788	0	0	0	0
2022	-28,427,505		-5,685,497	-5,685,502	-5,685,502	-5,685,502	-5,685,502	0	0	0
2023	83,841,367		N/A	17,681,729	17,681,729	17,681,729	17,681,729	13,114,451	0	0
Net increase (decrease) in pension expense			N/A	$23,986,172	$22,663,861	$16,431,015	$11,996,227	$13,114,451	$0	$0

Pension expense

Reporting Date for Employer under GASB 68	September 30, 2023	September 30, 2022
Measurement Date	**September 30, 2022**	**September 30, 2021**
Components of Pension Expense		
Service cost	$7,781,651	$8,106,028
Interest on the Total Pension Liability	33,939,708	32,479,217
Current-period benefit changes	0	0
Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	2,366,081	1,014,267
Expensed portion of current-period changes of assumptions or other inputs	2,201,196	2,288,150
Member contributions	-3,153,000	-3,341,000
Projected earnings on plan investments	-19,638,256	-16,183,422
Expensed portion of current-period differences between actual and projected earnings on plan investments	13,114,452	-8,987,914
Administrative expense	159,000	160,000
Other	0	0
0Recognition of beginning of year deferred outflows of resources as pension expense	18,055,898	14,996,220
Recognition of beginning of year deferred inflows of resources as pension expense	-11,751,455	-5,564,329
Pension Expense	**$43,075,275**	**$24,967,217**

Schedule of reconciliation of Net Pension Liability

Reporting Date for Employer under GASB 68	September 30, 2023	September 30, 2022
Measurement Date	**September 30, 2022**	**September 30, 2021**
Beginning Net Pension Liability	$218,391,335	$240,659,017
Pension expense	43,075,275	24,967,217
Employer contributions	-17,610,000	-15,061,000
New net deferred inflows/outflows	66,159,638	-22,742,008
Recognition of prior deferred inflows/outflows	-6,304,443	-9,431,891
Ending Net Pension Liability	$303,711,805	$218,391,335

Schedule of contributions – Last ten fiscal years

Year Ended September 30	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency / (Excess)	Covered Payroll[1]	Contributions as a Percentage of Covered Payroll[2]
2013	$12,884,770	$10,742,000	$2,142,770	$27,871,010	38.54%
2014	14,884,963	13,522,000	1,362,963	27,373,702	49.40%
2015	17,618,896	17,832,000	-213,104	28,091,083	63.48%
2016	18,863,935	18,864,000	-65	26,585,054	70.96%
2017	19,155,820	19,162,000	-6,180	27,548,015	69.56%
2018	18,643,233	13,973,000	4,670,233	28,164,021	49.61%
2019	19,141,501	14,498,000	4,643,501	28,726,006	50.47%
2020	20,111,161	15,058,000	5,053,161	28,268,208	53.27%
2021	20,812,130	15,061,000	5,751,130	25,903,031	58.14%
2022	22,851,586	17,610,000	5,241,586	25,260,815	69.71%

See accompanying notes to this schedule on next page.

[1] Pensionable payroll as of the measurement date.

[2] The City contributed the percentage of payroll represented by the actuarially determined contribution in the corresponding actuarial valuation for years ending on or before September 30, 2016. Actual dollar contributions may be more or less than the actuarially determined contributions due to actual payroll being different from projected payroll. Effective with the September 30, 2017 fiscal year, the City implemented a policy to ensure that the calculated dollar amount of the actuarially determined contribution was met.

Effective with the September 30, 2018 fiscal year, the City began contributing based on an adjusted state minimum required contribution that reflects an adjustment for an offset for amortization of the discounted value of projected surtax revenue allocated to the plan beginning in 2030.

Section 5: GASB Information

Notes to Schedule:

Methods and assumptions used to establish "actuarially determined contribution" rates:

Valuation date	Actuarially determined contribution rates are calculated as of October 1, two years prior to the end of the fiscal year in which contributions are reported
Actuarial cost method	Entry Age Actuarial Cost Method
Amortization method	Level percent of payroll, using 1.25% annual increases[1]
Remaining amortization period	As of October 1, 2020 the effective amortization period is 26 years.
Asset valuation method	The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between actual and expected returns on a market value basis and is recognized over a five-year period. The deferred return is further adjusted, if necessary, so that the actuarial value of assets will stay within 20% of the market value of assets.
Actuarial assumptions:	
Investment rate of return	6.80%, net of pension plan investment expense, including inflation.
Inflation rate	2.50%
Projected salary increases	2.80% - 7.50%, of which 2.50% is the Plan's long-term payroll inflation assumption.
Cost of living adjustments	Plan provisions contain a 3.00% COLA
Other assumptions	Same as those used in the October 1, 2020 funding actuarial valuation.

[1] The Fund's payroll inflation assumption was 2.50% as of October 1, 2020. Per Part VII, Chapter 112.64(5)(a) of Florida Statutes, the payroll growth assumption used for amortization of the unfunded liability is not allowed to exceed the average annual payroll growth for the proceeding ten years. However, pursuant to Chapter 112.64(5)(b), and after adjusting this analysis to account for bargained pay level increases and inclusion of DC plan participants in the total payroll, the assumption was set at 1.25%

Appendix A: Definition of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Actuarial Accrued Liability for Actives:	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial Accrued Liability for Retirees and Beneficiaries:	Actuarial Present Value of lifetime benefits to existing retirees and beneficiaries. This sum takes account of life expectancies appropriate to the ages of the annuitants and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial Cost Method:	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the actuarially determined contribution.
Actuarial Gain or Loss:	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., assets earn more than projected, salary increases are less than 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, actuarial losses are the result of unfavorable experience, i.e., actual results yield actuarial liabilities that are larger than projected.
Actuarially Equivalent:	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV):	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is: Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.) Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and Discounted according to an assumed rate (or rates) of return to reflect the time value of money.
Actuarial Present Value of Future Benefits:	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund of

	member contributions 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.
Actuarial Valuation:	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, as well as Actuarially Determined Contributions.
Actuarial Value of Assets (AVA):	The value of the Plan's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Contribution.
Actuarially Determined:	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the Plan.
Actuarially Determined Contribution (ADC):	The employer's contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Plan's funding policy. The ADC consists of the Employer Normal Cost and the Amortization Payment.
Amortization Method:	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 Unfunded Actuarial Accrued Liability. 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 Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization Payment:	The portion of the pension plan contribution, or ADC, that is intended to pay off the Unfunded Actuarial Accrued Liability.
Assumptions or Actuarial Assumptions:	The estimates upon which the cost of the Plan is calculated, including: <u>Investment return</u> - the rate of investment yield that the Plan will earn over the long-term future; <u>Mortality rates</u> - the rate or probability of death at a given age for employees and retirees; <u>Retirement rates</u> - the rate or probability of retirement at a given age or service; <u>Disability rates</u> - the rate or probability of disability retirement at a given age; <u>Withdrawal rates</u> - the rate or probability at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement; <u>Salary increase rates</u> - the rates of salary increase due to inflation, real wage growth and merit and promotion increases.

Appendix A: Definition of Pension Terms

Closed Amortization Period:	A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 20 years, it is 19 years at the end of one year, 18 years at the end of two years, etc. See Open Amortization Period.
Decrements:	Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal.
Defined Benefit Plan:	A retirement plan in which benefits are defined by a formula based on the member's compensation, age and/or years of service.
Defined Contribution Plan:	A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
Employer Normal Cost:	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Experience Study:	A periodic review and analysis of the actual experience of the Plan that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified based on recommendations from the Actuary.
Funded Ratio:	The ratio of the Actuarial Value of Assets (AVA) to the Actuarial Accrued Liability (AAL). Plans sometimes also calculate a market funded ratio, using the Market Value of Assets (MVA), rather than the AVA.
GASB 67 and GASB 68:	Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68. 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.
Investment Return:	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.
Net Pension Liability (NPL):	The Net Pension Liability is equal to the Total Pension Liability minus the Plan Fiduciary Net Position.
Normal Cost:	The portion of the Actuarial Present Value of Future Benefits and expenses, if applicable, allocated to a valuation year by the Actuarial Cost Method. Any payment with respect to an Unfunded Actuarial Accrued Liability is not part of the Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of member contributions and employer Normal Cost unless otherwise specifically stated.

Appendix A: Definition of Pension Terms

Open Amortization Period:	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in each future year in determining the Amortization Period.
Plan Fiduciary Net Position:	Market value of assets.
Service Costs:	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.
Total Pension Liability (TPL):	The actuarial accrued liability under the entry age normal cost method and based on the blended discount rate as described in GASB 67 and 68.
Unfunded Actuarial Accrued Liability:	The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative, in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus or an Overfunded Actuarial Accrued Liability.
Valuation Date or Actuarial Valuation Date:	The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Benefits is determined. The expected benefits to be paid in the future are discounted to this date.