City of Jacksonville Public Safety Defined Contribution Plan Disability and Survivorship Benefits

Actuarial Valuation and Review as of October 1, 2023

This report has been prepared at the request of the Defined Contribution Plan Advisory Committee and Defined Contribution Disability and Survivorship Panel to assist in administering the Plan. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Committee and Panel and may only be provided to other parties in its entirety, unless expressly authorized by Segal. The measurements shown in this actuarial valuation may not be applicable for other purposes.

Segal

Segal

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

July 31, 2024

Defined Contribution Plan Advisory Committee
Defined Contribution Disability and Survivorship Panel
City of Jacksonville Public Safety Defined Contribution Plan Disability and Survivorship Benefits
117 West Duval Street, Suite 330
Jacksonville, FL 32202

Dear Committee and Panel Members:

We are pleased to submit this Actuarial Valuation and Review as of October 1, 2023. It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for fiscal 2025.

Statement by Enrolled Actuary: This actuarial valuation and 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.

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
Vice President and Consulting Actuary
Enrolled Actuary No. 23-07009

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Section 1: Actuarial Valuation Summary

Purpose and basis

This report has been prepared by Segal to present a valuation of the City of Jacksonville Public Safety Defined Contribution Plan Disability and Survivorship Benefits as of October 1, 2023. 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 Committee and Panel;
- The characteristics of covered active participants and retired participants and beneficiaries as of September 30, 2023, provided by the Retirement Administrative Office;
- The assets of the Plan as of September 30, 2023, 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
- Subject to the requirements of Part VII, Chapter 112, Florida Statutes.

Valuation highlights

1. The City established Disability and Survivor Benefits under the City of Jacksonville Public Safety Employees Defined Contribution Plan effective October 1, 2017. It is our understanding that the inclusion of disability and survivor benefits subjects the Plan to the State of Florida's minimum funding requirements for retirement plans and that this Plan is a defined benefit plan subject to the applicable laws of the State of Florida. This October 1, 2023 valuation is the fourth actuarial valuation for the updated plan.
2. The actuarial determined contribution (ADC) calculated as of October 1, 2023 is adjusted for timing and projected to the next fiscal year; the ADC for the fiscal year beginning October 1, 2024 is $1,220,650, or 1.46% of projected payroll.
3. Actuarial assumptions used are those from the experience study for the period October 1, 2017 – September 30, 2022 for the City of Jacksonville Corrections Officers' Retirement Plan (CORP) and from the October 1, 2023 actuarial valuation of the City of Jacksonville Police and Fire Pension Fund.
4. The following actuarial assumptions were approved by the Board and changed with this valuation for the Corrections Officers:
   - Withdrawal rates were lowered for active participants with between six and ten years of service.
   - Active retirement rates were increased for participants with 20 years of service and decreased for participants with between 21 and 27 years of service
   - Salary scale rates were changed to reflect higher merit and promotional increases.
   - These changes increased the actuarial accrued liability by 6.66% and increased the total normal cost by 4.84%. The actuarial determined contribution increased by $83,264, or 0.10% of projected payroll, as a result of these changes.
5. The amortization period used for the amortization of unfunded actuarial accrued liability is 24 years; this is the period for new bases established in the CORP valuation as of October 1, 2023. Amortization was calculated on a level percent of pay basis assuming an average payroll growth of 1.25%, the same assumption as used for CORP.
6. 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.
7. It is important to note that this actuarial valuation is based on plan assets as of September 30, 2023. 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, 2023. Segal is available to prepare projections of potential outcomes of market conditions and other demographic experience upon request.

Summary of key valuation results

		2024	2023	2022
Contributions for fiscal year beginning October 1:	• Actuarially determined contribution (ADC)	$1,220,650	$1,010,178	$695,686
	• ADC as a percent of payroll	1.46%	1.47%	1.26%
	• Actual employer contributions	- -	- -	1,761,000
Actuarial accrued liability for plan year beginning October 1:	• Retired participants and beneficiaries		$954,166	$452,062
	• Active participants		3,071,115	2,005,283
	• Total actuarial accrued liability		4,025,281	2,457,345
	• Normal cost, including administrative expenses		1,371,417	1,097,057
Assets for plan year beginning October 1:	• Market value of assets (MVA)		$3,429,000	$1,425,000
	• Actuarial value of assets (AVA)		3,429,000	1,425,000
	• Actuarial value of assets as a percentage of market value of assets		100.00%	100.00%
Funded status for plan year beginning October 1:	• Unfunded actuarial accrued liability on market value of assets		$596,281	$1,032,345
	• Funded percentage on AVA basis		85.19%	57.99%
	• Amortization period on an AVA basis		24	25
Key assumptions	• Net investment return		6.50%	6.50%
	• Payroll growth for amortization purposes		1.25%	1.25%
Demographic data for plan year beginning October 1:	• Number of retired participants and beneficiaries		3	3
	• Number of active participants		1,492	1,344
	• Covered payroll		$82,633,523	$67,861,643
	• Average payroll		55,384	50,492
	• Projected payroll for next fiscal year		83,666,442	68,709,914

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:

Input Item	Description
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 City. 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. 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. Plan sponsors often use 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 Committee and Panel. 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 Committee or Panel 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 Committee and Panel 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 Committee and Panel 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

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, 2023

	Assumption	Amount
1.	Net loss from investments	-$56,570
2.	Net gain from contributions	785,775
3.	Net loss from other experience	-50,173
4.	**Net experience gain: 1 + 2 + 3**	**$679,032**

Sources of experience variation

Experience variation is the difference 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
- The number of disability retirements (more or fewer than projected)
- Salary increases (greater or smaller than projected)

Unfunded actuarial accrued liability

Development of Unfunded Actuarial Accrued Liability for Year Ended September 30, 2023

	Unfunded Actuarial Accrued Liability	Change	Amount
1.	Unfunded actuarial accrued liability at beginning of year		$1,032,345
2.	Employer normal cost at beginning of year		893,472
3.	Actuarially determined contribution at beginning of year		-964,406
4.	Interest on 1, 2 & 3		62,492
5.	**Expected unfunded actuarial accrued liability**		**$1,023,903**
6.	Changes due to:		
	a. Net experience gain*	-$679,032	
	b. Assumptions	251,410	
	Total changes		**-$427,622**
7.	Unfunded actuarial accrued liability at end of year		$596,281

* Consisting of a $785,775 gain on contributions more than the actuarially determined contribution and a $106,743 loss on other experience.

Actuarially determined contribution

The actuarially determined contribution is equal to the employer normal cost payment and a payment on the unfunded actuarial accrued liability. As of October 1, 2023, the actuarially determined contribution payable for the fiscal year beginning October 1, 2024 is $1,220,650, or 1.46% of projected payroll.

The contribution requirement as of October 1, 2023 are based on the data described in Exhibit A, 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.

Actuarially Determined Contribution

	Contribution	2023 Amount	2023 Percent of Projected Payroll	2022 Amount	2022 Percent of Projected Payroll
1.	Total normal cost	$1,340,417	1.60%	$1,066,057	1.55%
2.	Administrative expenses	31,000	0.04%	31,000	0.05%
3.	Expected employee contributions	-247,901	-0.30%	-203,585	-0.30%
4.	**Employer normal cost: (1) + (2) + (3)**	**$1,123,516**	**1.34%**	**$893,472**	**1.30%**
5.	Actuarial accrued liability	$4,025,281		$2,457,345	
6.	Actuarial value of assets	3,429,000		1,425,000	
7.	**Unfunded actuarial accrued liability: (5) - (6)**	**$596,281**		**$1,032,345**	
8.	Payment on unfunded actuarial accrued liability	41,825	0.05%	70,934	0.10%
9.	Adjustment for timing*	55,309	0.07%	45,772	0.07%
10.	**Actuarially determined contribution: (4) + (8) + (9)**	**$1,220,650**	**1.46%**	**$1,010,178**	**1.47%**
11.	Projected payroll	$83,666,442		$68,709,914	

* Adjusted for timing and projected to next fiscal year; actuarially determined contributions are assumed to be paid at the end of every month.

Reconciliation of actuarially determined contribution

Reconciliation of Actuarially Determined Contribution
from October 1, 2023 to October 1, 2024

	Step	Amount
1.	Actuarially determined contribution as of October 1, 2023	$1,010,178
2.	Effect of expected change in amortization payment due to payroll growth	929
3.	Effect of change in other actuarial assumptions	83,265
4.	Effect of investment loss	4,156
5.	Effect of other gains and losses on accrued liability	3,686
6.	Net effect of other changes, including composition and number of participants	118,436
7.	**Total change**	**$210,472**
8.	**Actuarially determined contribution as of October 1, 2024**	**$1,220,650**

Low-Default-Risk Obligation Measure (LDROM)

In December 2021, the Actuarial Standards Board issued a revision of Actuarial Standard of Practice No. 4 (ASOP 4) *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. One of the revisions to ASOP 4 requires the disclosure of a Low-Default-Risk Obligation Measure (LDROM) when performing a funding valuation. The LDROM presented in this report is calculated using the same methodology and assumptions used to determine the Actuarial Accrued Liability (AAL) used for funding, except for the discount rate. The LDROM is required to be calculated using "a discount rate…derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future."

The LDROM is a calculation assuming a plan's assets are invested in an all-bond portfolio, generally lowering expected long-term investment returns. The discount rate selected and used for this purpose is the Bond Buyer General Obligation 20-year Municipal Bond Index Rate, published at the end of each week. The last published rate in September of the measurement period, by The Bond Buyer (www.bondbuyer.com), is 4.09% for use effective September 30, 2023. This is the rate used to determine the discount rate for valuing reported public pension plan liabilities in accordance with Governmental Accounting Standards when plan assets are projected to be insufficient to make projected benefit payments, and the 20-year period reasonably approximates the duration of plan liabilities. The LDROM is not used to determine a plan's funded status or Actuarially Determined Contribution (Florida Chapter 112 determined employer contribution). The plan's expected return on assets, currently 6.50%, is used for these calculations.

As of September 30, 2023, the LDROM for the system is $6,351,117. The difference between the plan's AAL of $4,025,281 and the LDROM can be thought of as the increase in the AAL if the entire portfolio were invested in low-default-risk securities. Alternatively, this difference could also be viewed as representing the expected savings from investing in the plan's diversified portfolio compared to investing only in low-default-risk securities.

ASOP 4 requires commentary to help the intended user understand the significance of the LDROM with respect to the funded status of the plan, plan contributions, and the security of participant benefits. In general, if plan assets were invested exclusively in low-default-risk securities, the funded status would be lower and the Actuarially Determined Contribution would be higher. While investing in a portfolio with low-default-risk securities may be more likely to reduce investment volatility and the volatility of employer contributions, it also may be more likely to result in higher employer contributions or lower benefits.

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. A more detailed assessment would provide the Trustees with a better understanding of the risks inherent in the 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 Plan's assets are comingled with the assets of the other three City of Jacksonville Retirement System plans and allocated among each plan.

- 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)

  Plan contributions are set by statute. The Plan's funding policy requires payment of 0.30% of payroll. As shown in this report, this is not enough to cover the City's contribution requirement. As such, we strongly urge the City to begin contributing the actuarial determined contribution.

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

  Examples of this risk include:
  - More or less active participant turnover than assumed.
  - More of less disabilities than assumed.
  - More or less deaths than assumed.

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

Type	2023	2022
Actuarial accrued liability (AAL)		
Retirees and beneficiaries	$954,166	$452,062
Active and inactive members (employer-financed)	3,071,115	2,005,283
Total	**$4,025,281**	**$2,457,345**
Actuarial value of assets	3,429,000	1,425,000
Cumulative portion of AAL covered		
Retirees and beneficiaries	100.00%	100.00%
Active and inactive members (employer-financed)	80.58%	48.52%

Section 3: Supplemental Information

Exhibit A: Table of plan demographics

Category	Year Ended September 30, 2023	Year Ended September 30, 2022	Change From Prior Year
Active participants in valuation:			
• Number	1,492	1,344	11.0%
• Average age	30.6	30.2	0.4
• Average years of service	3.2	2.6	0.6
• Covered payroll	$82,633,523	$67,861,643	21.8%
• Average payroll	$55,384	$50,492	9.7%
Disabled participants:			
• Number in pay status	1	0	N/A
• Average age	26.0	N/A	N/A
• Average monthly benefit	$2,378	N/A	N/A
Beneficiaries:			
• Number in pay status	2	3	-33.3%
• Average age	46.0	45.0	1.0
• Average monthly benefit	$927	$688	34.7%

Exhibit B: Summary statement of income and expenses on a market value basis

Year Ended September 30, 2023 versus Year Ended September 30, 2022

Item	Income and Expenses	Assets as of YE 2023	Income and Expenses	Assets as of YE 2022
Net assets at market value at the beginning of the year		**$1,425,000**		**$1,026,000**
Contribution and other income:				
Employer contributions	$1,761,000		$216,000	
Employee contributions	259,000		214,000	
Total contribution income		$2,020,000		$430,000
Investment income:				
Investment income	$103,000		$1,000	
Less investment fees	-5,000		0	
Net investment income		$98,000		$1,000
Total income available for benefits		$2,118,000		$431,000
Less benefit payments and administrative expenses:				
Administrative expenses	$0		$0	
Benefit payments	-114,000		-32,000	
Net benefit payments and administrative expenses		-$114,000		-$32,000
Change in market value of assets		**$2,004,000**		**$399,000**
Net assets at market value at the end of the year		**$3,429,000**		**$1,425,000**

Exhibit C: Table of amortization bases

Type	Date Established	Initial Period	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
Initial liability	10/01/2020	27	$1,744,501	$118,103	24	$1,683,709
Change in assumptions	10/01/2021	26	-2,131,340	-147,325	24	-2,100,292
Experience loss	10/01/2021	26	880,441	60,859	24	867,616
Experience loss	10/01/2022	25	524,470	36,488	24	520,179
Change in assumptions	10/01/2022	25	53,124	3,696	24	52,690
Experience gain	10/01/2023	24	-679,032	-47,631	24	-47,631
Change in assumptions	10/01/2023	24	251,410	17,635	24	251,410
Total				**$41,825**		**$596,281**

* Level percentage of payroll

Exhibit D: 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
2020	$41,183,386	N/A	N/A	N/A
2021	54,740,577	32.92%	7.73%	10.76%
2022	67,861,643	23.97%	12.01%	8.67%
2023	82,633,523	21.77%	13.35%	10.72%

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

	Year Ended September 30, 2023		
	New Assumptions	Old Assumptions	Year Ended September 30, 2022
Participant data			
• Active members	1,492	1,492	1,344
• Total annual payroll	$82,633,523	$82,633,523	$67,861,643
• Retired members and beneficiaries	3	3	3
• Total annualized benefit	$50,769	$50,769	$24,780
Actuarial value of assets	$3,429,000	$3,429,000	$1,425,000
Present value of all future expected benefit payments:			
• Active members:			
◦ Disability benefits	$15,702,610	$13,586,257	$11,262,845
◦ Death benefits	7,315,089	6,603,954	5,501,005
◦ Total	$23,017,699	$20,190,211	$16,763,850
• Retired members and beneficiaries	954,165	954,165	452,062
Total	$23,971,864	$21,144,376	$17,215,912

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

	Year Ended September 30, 2023	Year Ended September 30, 2022
Unfunded actuarial accrued liability	$596,281	$1,032,345
Actuarial present value of accrued benefits		
Vested accrued benefits		
Active members	$1,209,965	$184,489
Retirees and beneficiaries	954,165	452,062
Nonvested active members	$10,673,664	$9,090,626
Total	$12,837,794	$9,727,177
Pension cost		
Normal cost, including administrative expenses	$1,371,417	$1,097,057
Expected employee contributions	-247,901	-203,585
Level % of payroll payment to amortize unfunded actuarial accrued liability	41,825	70,934
Total minimum annual cost payable monthly at valuation date	1,165,341	964,406
Total employer cost projected to budget year	1,220,650	1,010,178
Projected payroll	83,666,442	68,709,914
As % of projected payroll	1.46%	1.47%
Present value of active members' future salaries at attained age	$1,259,137,308	$972,540,484
Present value of active members' future contributions at attained age	3,777,412	2,917,621

Section 4: Actuarial Valuation Basis

Exhibit 1: Actuarial assumptions, methods and models

Rationale for assumptions

The information and analysis used in selecting each demographic assumption for Corrections participants that has a significant effect on this actuarial valuation is shown in the Corrections Officers' Retirement Plan Experience Study Report for the five-year period ended September 30, 2022.

For Police and Fire participants, all demographic assumptions are the same as those used in the Police and Fire Pension Fund Actuarial Valuation as of October 1, 2022. These assumptions were developed by another actuary on behalf of the Board of the Police and Fire Pension Fund.

Net 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. asset allocation.

Salary Increases (including inflation) for Police and Fire

Service	Rate (%)
0-3	11.50
4	9.75
5	6.50
6-7	5.00
8 - 10	4.25
11 - 14	3.65
15 - 18	3.35
19+	2.75

Salary Increases (including inflation) for Corrections

Service	Rate (%)
0	10.00
1 – 2	8.00
3 – 10	7.00
11 - 15	6.00
16+	3.50

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%.

Mortality rates for Police and Fire

Healthy pre-retirement: FRS pre-retirement mortality tables for special risk personnel, with no set forward, projected generationally from 2010 with Scale MP2018

Healthy post-retirement: FRS healthy post-retirement mortality tables for special risk personnel, with no set forward, 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, reasonably reflect the healthy annuitant mortality experience of the Police and Fire Pension Fund 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. No significant experience exists for the Public Safety Defined Contribution Plan and the experience of the legacy plan has been used as a proxy.

Mortality rates for Corrections

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 Corrections Officers' 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. No significant experience exists for the Public Safety Defined Contribution Plan and the experience of the legacy plan has been used as a proxy.

Disability Rates for Police and Fire

Age	Rate (%)
20	0.03
25	0.03
30	0.03
35	0.03
40	0.04
45	0.08
50	0.19
55	0.38
60	0.76
65	0.00

100% of disabilities are assumed to be non-service incurred

Disability Rates for Corrections

Age	Rate (%)
20	0.03
25	0.04
30	0.05
35	0.08
40	0.12
45	0.18
50	0.30
55	0.47
60	0.75
65	0.00

100% of disabilities are assumed to be non-service incurred

Turnover Rates for Police and Fire

Age	Rate (%)
20	1.60
25	1.60
30	1.60
35	1.20
40	0.90
45	0.90
50	0.90
55	0.50
60	0.50
65	0.50

Turnover Rates for Corrections

Service	Rate (%)
0-4	12.00
4-6	7.00
6-8	5.00
8+	1.00

Retirement Rates for Police and Fire

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

Age	20	21	22-23	24-28	29	30+
Under 50	45%	25%	15%	25%	50%	100%
50 - 54	55%	30%	30%	25%	50%	100%
55 - 59	60%	30%	30%	25%	50%	100%
60 & Over	100%	50%	50%	50%	50%	100%

Note: For the purposes of applying retirement rates, participants are treated as being eligible for retirement based on the eligibility provisions from the Police and Fire Pension Fund and Correction Officers Retirement Plan. Rates first apply at 20 years of Credited Service

Retirement Rates for Corrections

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:

Age/Service	Retirement Probability (%)
Under 20	0
20	65
21	35
22	20
23 - 25	15
26 – 27	20
28+	100

Note: For the purposes of applying retirement rates, participants are treated as being eligible for retirement based on the eligibility provisions from the Police and Fire Pension Fund and Correction Officers Retirement Plan. Rates first apply at the earliest of age 65 with five years of Credited Service or any age with 20 years of Credited Service

Unknown Data for Participants

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

Administrative Expenses

$31,000 for plan year beginning October 1, 2023

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

Actual Value of Assets

Market value of assets

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.

Change in Actuarial Assumptions

The following changes in actuarial assumptions occurred with this valuation for Corrections Officers:

- Withdrawal rates were lowered for active participants with between six and ten years of service.
- Active retirement rates were increased for participants with 20 years of service and decreased for participants with between 21 and 27 years of service
- Salary scale rates were changed to reflect higher merit and promotional increases.

Exhibit 2: 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

Disability

- Age Requirement None
- Service Requirement None
- Amount 60% of final compensation

Spouse's Pre-Retirement Death Benefit

- Age Requirement None
- Service Requirement Two years of Credited Service
- Amount 45% of final compensation plus 1.5% per year of service in excess of 20

Cost of Living Adjustment

On the January 1st following the initial benefit commencement date, and on each January 1st thereafter, the regular benefit is increased by 3%.

Member Contributions

0.3% of Earnable Compensation

Section 5: GASB Information

General information about the pension plan

Plan description

Plan membership. At October 1, 2023, pension plan membership consisted of the following:

Membership	Amount
Retired participants or beneficiaries currently receiving benefits	3
Inactive participants with a vested right to a deferred or immediate benefit	0
Active members	1,492
Total	**1,495**

Exhibit 1: Net Pension Liability

Components of the Net Pension Liability	Current	Prior
Reporting date for employer under GASB 68	September 30, 2024	September 30, 2023
Measurement date and reporting date for the Plan under GASB 67	September 30, 2023	September 30, 2022
Total Pension Liability	$4,025,281	$2,457,345
Plan Fiduciary Net Position	3,429,000	1,425,000
Net Pension Liability	596,281	1,032,345
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	85.19%	57.99%

Actuarial assumptions. The Total Pension Liability (TPL) as of September 30, 2023, which was determined based on the results of an actuarial valuation as of October 1, 2023, used the following actuarial assumptions, applied to all periods included in the measurement:

Section 5: GASB Information

Assumption Type	Assumption
Salary increases	3.50% - 10.00%, of which 2.50% is the Plan's long-term payroll inflation
Net investment rate of return	6.50%
Other assumptions	See Section 4 of this report for a complete description of all actuarial assumptions. These assumptions were developed in the analysis of actuarial experience study for the Corrections Officers' Retirement Plan for the period October 1, 2017 through September 30, 2022 for Corrections Officers and by the assumptions in use by the Police and Fire Retirement Plan.

Detailed information regarding all actuarial assumptions can be found in Section 4, Exhibit I.

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	30.00%	6.60%
International equity	20.00%	6.70%
Fixed income	20.00%	1.80%
Real estate	15.00%	3.40%
Private equity	7.50%	9.90%
Alternatives	7.50%	3.00%
Total	**100.00%**	**5.16%**

Discount rate. The discount rate used to measure the Total Pension Liability (TPL) was 6.50% as of September 30, 2023 and September 30, 2022. 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, 2023 and September 30, 2022.

* Based on capital market assumptions provided by Segal Marco Advisors

Discount rate sensitivity

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the Net Pension Liability (NPL) of the Plan as of September 30, 2023, which is allocated to all employers, calculated using the discount rate of 6.50%, as well as what the Plan'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.

Item	1% Decrease (5.50%)	Current Discount Rate (6.50%)	1% Increase (7.50%)
Net Pension Liability	$1,384,659	$596,281	-$17,635

Exhibit 2: Schedule of changes in Net Pension Liability

Components of the Net Pension Liability	Current	Prior
Reporting and Measurement Dates		
Reporting date for employer under GASB 68	September 30, 2024	September 30, 2023
Measurement date and reporting date for the Plan under GASB 67	September 30, 2023	September 30, 2022
Total Pension Liability		
Service cost	$1,066,057	$765,764
Interest	225,316	147,967
Change of benefit terms	0	0
Differences between expected and actual experience	139,153	38,791
Changes of assumptions	251,410	53,124
Benefit payments, including refunds of member contributions	-114,000	-32,000
Net change in Total Pension Liability	$1,567,936	$973,646
Total Pension Liability — beginning	2,457,345	1,483,699
Total Pension Liability — ending	$4,025,281	$2,457,345
Plan Fiduciary Net Position		
Contributions — employer	$1,761,000	$216,000
Contributions — employee	259,000	214,000
Net investment income	98,000	1,000
Benefit payments, including refunds of member contributions	-114,000	-32,000
Administrative expense	0	0
Other	0	0
Net change in Plan Fiduciary Net Position	$2,004,000	$399,000
Plan Fiduciary Net Position — beginning	1,425,000	1,026,000
Plan Fiduciary Net Position — ending	$3,429,000	$1,425,000

Section 5: GASB Information

Components of the Net Pension Liability	Current	Prior
Net Pension Liability		
Net Pension Liability – ending	$596,281	$1,032,345
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	85.19%	57.99%
Covered payroll*	$68,709,914	$55,424,834
Plan Net Pension Liability as percentage of covered payroll	0.87%	1.86%

Notes to Schedule:

- **Benefit changes:** None
- **Change of Assumptions:** The discount rate was lowered from 6.625% to 6.50% based on a September 30, 2022 measurement.

  The following changes in assumptions for Corrections Officers were made based on a September 30, 2023 measurement:
  - Withdrawal rates were lowered for active participants with between six and ten years of service.
  - Active retirement rates were increased for participants with 20 years of service and decreased for participants with between 21 and 27 years of service
  - Salary scale rates were changed to reflect higher merit and promotional increases.

* Pensionable payroll as of the measurement date

Exhibit 3: Schedule of employer contributions

Year Ended September 30	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2020	N/A	$109,237	N/A	$41,183,386	0.27%
2021	N/A	160,000	N/A	54,740,577	0.29%
2022	$1,614,696	216,000	$1,398,696	67,861,643	0.32%
2023	695,686	1,761,000	(1,065,314)	82,633,523	2.13%

Exhibit 4: Pension expense

Components of pension expense	Current	Prior
Reporting date for employer under GASB 68	September 30, 2024	September 30, 2023
Measurement date	September 30, 2023	September 30, 2022
Service cost	$1,066,057	$765,764
Interest	225,316	147,967
Current-period benefit changes	—	—
Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	8,698	2,279
Expensed portion of current-period changes of assumptions	15,715	3,124
Member contributions	-259,000	-214,000
Projected earnings on pension plan investments	-154,570	-81,156
Expensed portion of current-period differences between actual and projected earnings on pension plan investments	11,314	16,032
Administrative expense	—	—
Other	—	—
Recognition of beginning of year deferred outflows of resources as pension expense	25,539	4,101
Recognition of beginning of year deferred inflows of resources as pension expense	-157,644	-157,644
Pension expense	**$781,425**	**$486,467**

Deferred outflows of resources and deferred inflows of resources

Deferred Outflows and Inflows	Current	Prior
Reporting and measurement dates		
Reporting date for employer under GASB 68	September 30, 2024	September 30, 2023
Measurement date	September 30, 2023	September 30, 2022
Deferred outflows of resources		
Changes in proportion and differences between employer's contributions and proportionate share of contributions*	$0	$0
Changes of assumptions	282,570	50,000
Net difference between projected and actual earnings on pension plan investments	101,551	76,427
Difference between expected and actual experience in the Total Pension Liability	164,685	36,512
Total deferred outflows of resources	**$548,806**	**$162,939**
Deferred inflows of resources		
Changes in proportion and differences between employer's contributions and proportionate share of contributions‡	$0	$0
Changes of assumptions	1,755,222	1,880,595
Net difference between projected and actual earnings on pension plan investments	0	0
Difference between expected and actual experience in the Total Pension Liability	451,794	484,065
Total deferred inflows of resources	**$2,207,016**	**$2,364,660**
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:		
2024	N/A	-$132,105
2025	-$96,381	-132,105
2026	-96,381	-132,105
2027	-100,482	-136,206
2028	-116,513	-152,237
2029	-127,827	-152,237
Thereafter	-1,120,626	-1,364,726

Note: Average expected remaining service is 16.00 years as of September 30, 2023 and 17.00 years as of September 30, 2022

* Calculated in accordance with Paragraphs 54 and 55 of GASB 68

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)	2023	2024	2025	2026	2027	2028	2029	Thereafter
2022	-$548,606	17.00	-$32,271	-$32,271	-$32,271	-$32,271	-$32,271	-$32,271	-$32,271	-$290,439
2023	38,791	17.00	2,279	2,282	2,282	2,282	2,282	2,282	2,282	22,820
2024	139,153	16.00	N/A	8,698	8,697	8,697	8,697	8,697	8,697	86,970
Total*			**N/A**	**-$21,291**	**-$21,292**	**-$21,292**	**-$21,292**	**-$21,292**	**-$21,292**	**-$180,649**

* Net increase (decrease) in pension expense

Section 5: GASB Information

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)	2023	2024	2025	2026	2027	2028	2029	Thereafter
2022	-$2,131,340	17.00	-$125,373	-$125,373	-$125,373	-$125,373	-$125,373	-$125,373	-$125,373	-$1,128,357
2023	53,124	17.00	3,124	3,125	3,125	3,125	3,125	3,125	3,125	31,250
2024	251,410	16.00	N/A	15,715	15,713	15,713	15,713	15,713	15,713	157,130
Total*			**N/A**	**-$106,533**	**-$106,535**	**-$106,535**	**-$106,535**	**-$106,535**	**-$106,535**	**-$939,977**

* Net increase (decrease) in pension expense

Section 5: GASB Information

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)	2023	2024	2025	2026	2027	2028	2029	Thereafter
2022	$20,507	5.00	$4,101	$4,101	$4,101	$4,101	$0	$0	$0	$0
2023	80,156	5.00	16,032	16,031	16,031	16,031	16,031	0	0	0
2024	56,570	5.00	N/A	11,314	11,314	11,314	11,314	11,314	0	0
Total*			**N/A**	**$31,446**	**$31,446**	**$31,446**	**$27,345**	**$11,314**	**$0**	**$0**

* Net increase (decrease) in pension expense

Section 5: GASB Information

Total Increase (Decrease) in Pension Expense

Reporting Date for Employer under GASB 68 Year Ended September 30	Total Increase (Decrease) in Pension Expense	2023	2024	2025	2026	2027	2028	2029	Thereafter
2022	-$2,659,439	-$153,543	-$153,543	-$153,543	-$153,543	-$157,644	-$157,644	-$157,644	-$1,418,796
2023	172,071	21,435	21,438	21,438	21,438	21,438	5,407	5,407	54,070
2024	447,133	N/A	35,727	35,724	35,724	35,724	35,724	24,410	244,100
Total*		**N/A**	**-$96,378**	**-$96,381**	**-$96,381**	**-$100,482**	**-$116,513**	**-$127,827**	**-$1,120,626**

* Net increase (decrease) in pension expense

Schedule of reconciliation of Net Pension Liability

Item	Current	Prior
Reporting and measurement dates		
Reporting date for employer under GASB 68	September 30, 2024	September 30, 2023
Measurement date and reporting date for plan under GASB 67	September 30, 2023	September 30, 2022
Net Pension Liability		
Beginning Net Pension Liability	$1,032,345	$457,699
• Pension expense	781,425	486,467
• Employer contributions	-1,761,000	-216,000
• New net deferred inflows/outflows	411,406	150,636
• Change in allocation of prior deferred inflows/outflows	0	0
• Recognition of prior deferred inflows/outflows	132,105	153,543
Ending Net Pension Liability	**$596,281**	**$1,032,345**

Appendix A: Definition of Pension Terms

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

Term	Definition
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	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.

Appendix A: Definition of Pension Terms

Term	Definition
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	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	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: **Investment return** — the rate of investment yield that the Plan will earn over the long-term future; **Mortality rates** — the rate or probability of death at a given age for employees and retirees; **Retirement rates** — the rate or probability of retirement at a given age or service; **Disability rates** — the rate or probability of disability retirement at a given age; **Withdrawal rates** — the rate or probability at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement; **Salary increase rates** — the rates of salary increase due to inflation, real wage growth and merit and promotion increases.

Appendix A: Definition of Pension Terms

Term	Definition
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.
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.

Appendix A: Definition of Pension Terms

Term	Definition
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.