



nyhart

Part of FuturePlan by Ascensus®

St. Clair County Employees' Retirement System

December 31, 2023

Actuarial Valuation Report

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At the request of the plan sponsor, this report summarizes the actuarial results of the St. Clair County Employees' Retirement System as of December 31, 2023. The purpose of this report is to communicate the following results of the valuation:

- Funded Status;
- and Determine Recommended Contribution;

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

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

The actuarial assumptions and methods were chosen by the employer. In our opinion, all actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- changes in plan provisions or applicable law.

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

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

Actuarial Certification

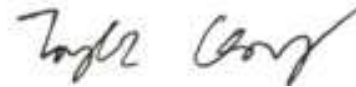
Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report. To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the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

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

Nyhart



Danielle Winegardner, FSA, EA, MAAA



Taylor Clary, ASA, EA

August 15, 2024
Date

Executive Summary

The actuarial report provides the plan sponsor with several ways to measure the funded status of the pension plan. The following detail is included in the report:

- Recommended Contribution
- Asset Performance
- Plan Demographics

This report is filled with actuarial terminology. However, the ultimate objective of the valuation is to provide a rational method of funding the plan. It is necessary to fund the benefit promised by the employer in a manner that is logical and employer friendly, yet safeguards the participants' interest. The actuarially derived contribution, however, is not the true cost of the pension plan. The true cost is illustrated by the following formula:

$$\text{Ultimate Pension Cost} = \text{Benefits Paid} - \text{Investment Income} + \text{Plan Expenses}$$

While the plan's liability and normal cost determine the current contribution recommendations, the true cost is controlled only by the "defined" benefit and investment income generated by the underlying assets. The actuarial process only controls the timing of costs.

We suggest that a plan sponsor treat the actuarial report as you would treat a scorecard. It is simply a measure of progress toward the ultimate goal of paying all pension benefits when participants retire.

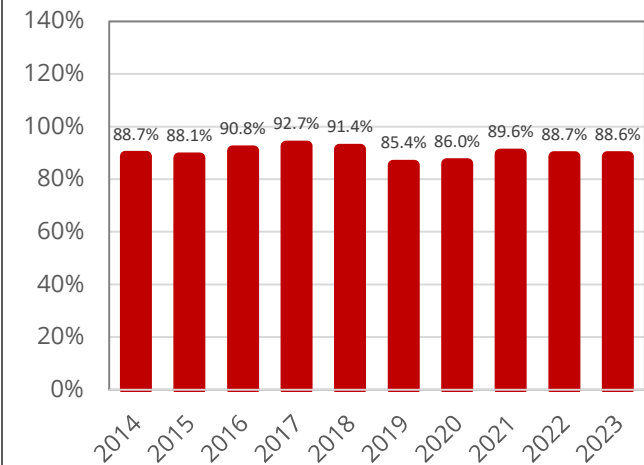
Executive Summary

Summary Results

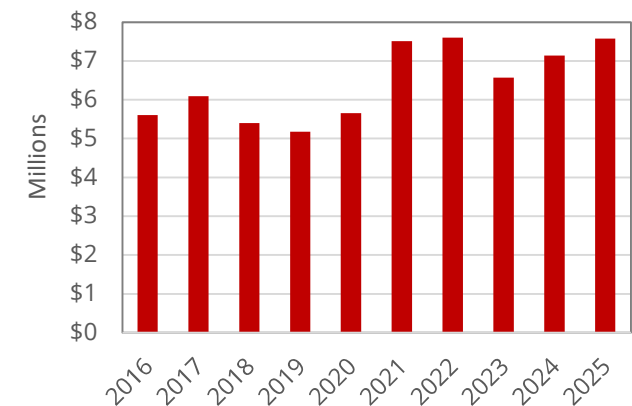
The actuarial valuation's primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level percentage of pay.

Valuation Date For Fiscal Year Beginning	December 31, 2022 January 1, 2024	December 31, 2023 January 1, 2025
Funded Status Measures		
Entry Age Accrued Liability	\$318,371,621	\$327,135,820
Actuarial Value of Assets (AVA)	282,264,993	289,985,399
Unfunded Actuarial Accrued Liability (UAAL)	\$36,106,628	\$37,150,421
Funded Percentage (AVA)	88.7%	88.6%
Funded Percentage (MVA)	77.8%	81.4%
Cost Measures		
Recommended Contribution	\$7,136,172	\$7,573,123
Recommended Contribution as a Percentage of Payroll	26.2%	28.1%
Asset Performance		
Market Value of Assets (MVA)	\$247,827,441	\$266,367,600
Actuarial Value of Assets (AVA)	\$282,264,993	\$289,985,399
Actuarial Value/Market Value	113.9%	108.9%
Market Value Rate of Return	(15.0)%	11.7%
Actuarial Value Rate of Return	3.6%	6.4%
Participant Information		
Active Participants	428	402
Terminated Vested Participants	138	132
Retirees, Beneficiaries, and Disabled Participants	841	867
Total	1,407	1,401
Expected Fiscal Year Payroll	\$27,250,143	\$26,984,351
Covered Payroll	\$28,778,107	\$28,844,769

History of Funded Ratio



History of Recommended Contribution



Executive Summary

Changes since Prior Valuation and Key Notes

There have been no changes in assumptions, methods, or plan provisions since the prior valuation.

Executive Summary

Five Year Valuation Summary

Valuation Date For Fiscal Year Beginning	12/31/2019 1/1/2021	12/31/2020 1/1/2022	12/31/2021 1/1/2023	12/31/2022 1/1/2024	12/31/2023 1/1/2025
Funding					
Entry Age Accrued Liability	\$294,855,467	\$304,622,172	\$309,636,461	\$318,371,621	\$327,135,820
Actuarial Value of Assets (AVA)	251,879,408	\$262,058,236	\$277,396,611	\$282,264,993	289,985,399
Unfunded Actuarial Accrued Liability	\$42,976,059	\$42,563,936	\$32,239,850	\$36,106,628	\$37,150,421
Funded Percentage	85.4%	86.0%	89.6%	88.7%	88.6%
Normal Cost (NC)	\$3,702,345	\$3,582,182	\$3,349,813	\$3,117,168	\$3,144,851
NC as a Percent of Covered Payroll	10.9%	10.9%	10.9%	10.8%	10.9%
Actual Contributions	\$7,717,981	\$11,638,380	7,723,557	TBD	TBD
Recommended Contribution	\$7,508,530	\$7,601,585	\$6,567,873	\$7,136,172	\$7,573,123
Expected Fiscal Year Payroll	\$31,901,706	\$30,898,813	\$29,062,897	\$27,250,143	\$26,984,351
Recommended Contribution (% of Pay)	23.5%	24.6%	22.6%	26.2%	28.1%
Interest Rate	7.00%	7.00%	7.00%	7.00%	7.00%
Expense Load Assumption	\$210,000	\$150,000	\$160,000	\$160,000	\$170,000
Rate of Return					
Actuarial Value of Assets (AVA)	6.7%	7.6%	9.0%	3.6%	6.4%
Market Value of Assets (MVA)	18.0%	9.1%	13.9%	(15.0)%	11.7%
Demographic Information					
Active Participants	549	508	476	428	402
Terminated Vested Participants	142	149	149	138	132
Retired Participants	664	683	700	742	774
Beneficiaries	93	93	91	92	86
Disabled Participants	9	8	7	7	7
Total Participants	1,457	1,441	1,423	1,407	1,401
Covered Payroll	\$33,839,843	\$32,873,411	\$30,836,904	\$28,778,107	\$28,844,769
Average Compensation*	\$61,286	\$64,136	\$64,353	\$66,507	\$70,278

*Average Compensation shown is the average pay received by Active Participants during the year of the Valuation Date

Executive Summary

Identification of Risks

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

Type of Risk	Method to Assess Risk
Investment Return	Scenario Testing; Asset Liability Study
Contribution Risk	Scenario Testing; Stress Testing
Demographic Risk	Scenario Testing; Stress Testing; Experience Study
Participant Longevity	Stress Testing; Experience Study
Salary Growth	Scenario Testing; Experience Study
Interest Rates	Scenario Testing; Stochastic Modeling

Plan Maturity Measures - December 31, 2023

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

Duration of Liabilities: 10.4

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

Demographic Distribution - Ratio of Actively Accruing Participants to All Participants: 28.7%

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

Asset Leverage - Ratio of Payroll for Plan Participants to Market Value of Assets: 10.8%

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

Benefit Payment Percentage - Ratio of Annual Benefit Payments to Market Value of Assets: 7.2%

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

Assets and Liabilities

The basic building blocks of the actuarial report are contained in this section. These include:

- Actuarial Accrued Liabilities
- Asset Information
- Summary of Contributions

Assets and Liabilities

Present Value of Future Benefits

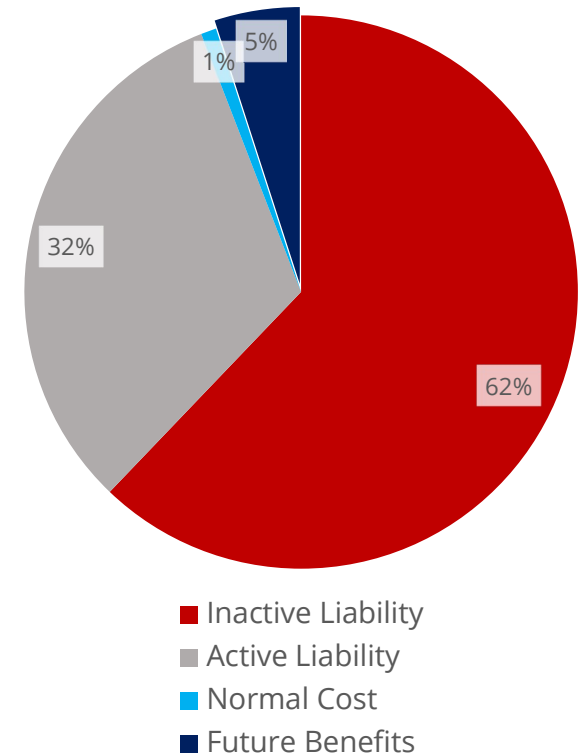
The Present Value of Future Benefits represents the future benefits payable to the existing participants.

December 31, 2023

Present Value of Future Benefits

Active Participants	
Retirement	\$109,693,335
Disability	6,388,581
Death	881,366
Termination	14,541,322
Total Active	\$131,504,604
Inactive Participants	
Retired Participants	\$190,526,635
Beneficiaries	13,399,188
Disabled Participants	749,732
Terminated Vested Participants	11,368,643
Total Inactive	\$216,044,198
Total	\$347,548,802
 Present Value of Future Payrolls	 \$184,652,819

Breakdown of Present Value of Future Benefits



Assets and Liabilities

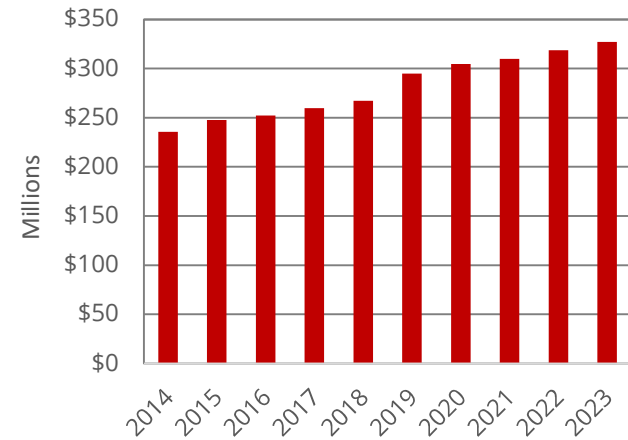
Entry Age Accrued Liability

The Entry Age Accrued Liability measures the present value of benefits earned as of the valuation date, using a specified set of actuarial assumptions.

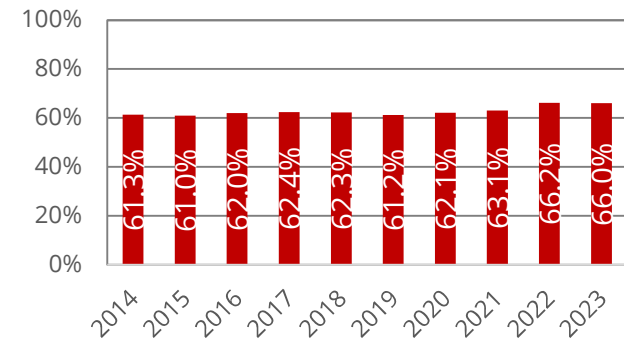
December 31, 2023

Active Participants	
Retirement	\$96,527,527
Disability	4,956,815
Death	732,681
Termination	8,874,599
Total Active	<u>\$111,091,622</u>
Inactive Participants	
Retired Participants	\$190,526,635
Beneficiaries	13,399,188
Disabled Participants	749,732
Terminated Vested Participants	11,368,643
Total Inactive	<u>\$216,044,198</u>
 Total Entry Age Accrued Liability	 \$327,135,820
 Normal Cost	 \$3,144,851
Interest Rate	7.00%

History of Liabilities



History of the Percentage of Inactive Liability



Assets and Liabilities

Reconciliation of Entry Age Accrued Liabilities

A plan's Entry Age Accrued Liability will change from one year to the next. It increases due to benefit accruals (Normal Cost) and interest, and it decreases as benefits are paid. Demographic experience, assumptions changes, and plan changes can cause increases or decreases.

	December 31, 2023
1. Entry Age Accrued Liability, Prior Year	\$318,371,621
2. Increases or Decreases due to:	
(a) Normal Cost	\$3,117,168
(b) Interest Adjustment	21,830,591
(c) Benefits Paid	(19,246,412)
(d) Demographic Experience	3,062,852
(e) Interest Rate Changes	0
(f) Mortality Changes	0
(g) Other Assumption Changes	0
(h) Plan Changes	0
(i) Other Changes	0
3. Entry Age Accrued Liability, Current Year	<u>\$327,135,820</u>

Assets and Liabilities

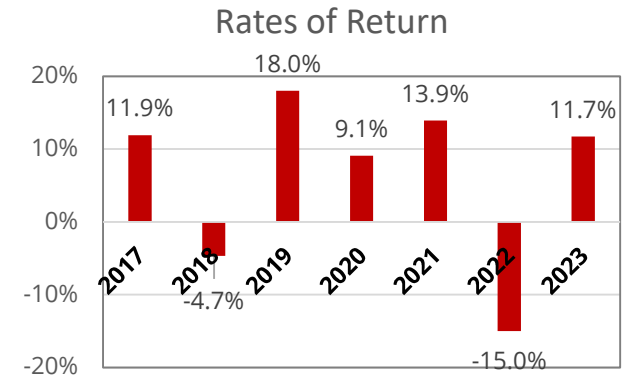
Asset Information

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

December 31, 2023

Market Value Reconciliation

Market Value of Assets, Prior Year	\$247,827,441
Contributions	
Employer Contributions	\$7,723,557
Employee Contributions	1,719,723
Total	\$9,443,280
Investment Income	\$28,508,591
Benefit Payments	(\$19,246,412)
Administrative Expenses	(\$165,300)
Market Value of Assets, Current Year (Before Receivable Contributions)	\$266,367,600
Discounted Receivable Contributions	\$0
Market Value of Assets, Current Year (After Receivable Contributions)	\$266,367,600
Historical Rates of Return	
Rate of Return for 2023	11.7%
Rate of Return for 2022	(15.0)%
Rate of Return for 2021	13.9%
Rate of Return for 2020	9.1%
Actuarial Value of Assets	
Value for Current Year	\$289,985,399



Monitoring the pension plan's investment performance is crucial to eliminating surprises.

Assets and Liabilities

Asset Information (continued) – 20% Phase in

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

December 31, 2023

Investment Gain or (Loss)

1. Prior Year's Actuarial Value of Assets	\$282,264,993
2. Employer Contributions for the Plan Year	7,723,557
3. Employee Contributions for the Plan Year	1,719,723
4. Benefit Payments During the Plan Year	(19,246,412)
5. Administrative Expenses During the Plan Year	(165,300)
6. Expected Earnings at 7.00% to the End of the Plan Year on:	
(a) Actuarial Value of Assets	\$19,758,549
(b) Contributions	330,515
(c) Benefit Payments	(673,624)
(d) Administrative Expenses	(5,786)
(e) Total Expected Earnings, (a) + (b) + (c) + (d)	\$19,409,654
7. Expected Actuarial Value of Assets, Current Year	\$291,706,215
8. Market Value of Assets, Current Year	\$266,367,600
9. Actual Return on Market Value	\$28,508,591
10. Investment Gain or (Loss), (9) – (6e)	\$9,098,937

Actuarial Value of Assets

11. Phase in of Asset Gains or (Losses)	
(a) Current Year (20% x \$9,098,937)	\$1,819,787
(b) First Prior Year (20% x (\$63,246,031))	(12,649,206)
(c) Second Prior Year (20% x \$18,727,998)	3,745,600
(d) Third Prior Year (20% x \$5,466,274)	1,093,255
(e) Fourth Prior Year (20% x \$21,348,742)	4,269,748
(f) Total Phase-In	(\$1,720,816)
12. Preliminary Actuarial Value of Assets, [(1) + (2) + (3) + (4) + (5) + (6e)] + (11f)	\$289,985,399
13. 80% of Market Value of Assets Corridor	\$213,094,080
14. 120% of Market Value of Assets Corridor	\$319,641,120
15. Final Actuarial Value of Assets	\$289,985,399
16. Return on Actuarial Value of Assets	6.4%

Funding Results

The basic building blocks of the actuarial report are contained in this section. These include:

- Reconciliation of Gain/Loss
- Recommended Contribution

Funding Results

Reconciliation of Gain or (Loss)

December 31, 2023

Liability Gain or (Loss)

1. Entry Age Accrued Liability, Prior Year	\$318,371,621
2. Normal Cost for Prior Year	3,117,168
3. Benefit Payments	(19,246,412)
4. Expected Interest	21,830,591
5. Change in Assumptions	0
6. Change in Plan Provisions	0
7. Expected Entry Age Accrued Liability, Current Year	\$324,072,968
8. Actual Entry Age Accrued Liability, Current Year	\$327,135,820
9. Liability Gain or (Loss), (7) – (8)	(\$3,062,852)

Asset Gain or (Loss)

10. Actuarial Value of Assets, Prior Year	\$282,264,993
11. Total Contributions	9,443,280
12. Benefit Payments	(19,246,412)
13. Administrative Expenses	(165,300)
14. Expected Investment Return	19,409,654
15. Expected Actuarial Value of Assets, Current Year	\$291,706,215
16. Actual Actuarial Value of Assets, Current Year	\$289,985,399
17. Asset Gain or (Loss), (16) – (15)	(\$1,720,816)

Total Gain or (Loss), (9) + (17)

(\$4,783,668)

Funding Results

Development of Recommended Contribution

The recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

Valuation Date For Fiscal Year Beginning

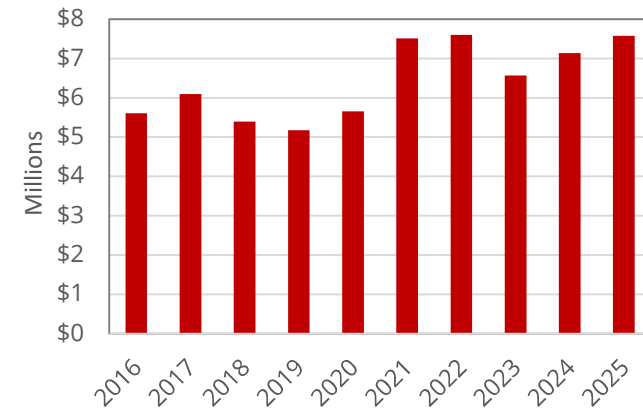
December 31, 2023
January 1, 2025

Recommended Contribution

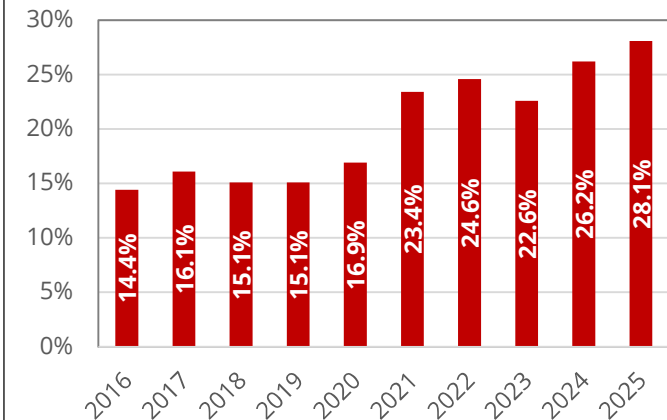
1. Entry Age Accrued Liability	
(a) Active Participants	\$111,091,622
(b) Terminated Vested Participants	11,368,643
(c) Retirees, Beneficiaries, and Disabled Participants	204,675,555
(d) Total, (a) + (b) + (c)	\$327,135,820
2. Actuarial Value of Assets	\$289,985,399
3. Unfunded Actuarial Accrued Liability (UAAL), (1d) - (2)	\$37,150,421
4. Amortization of UAAL*	\$5,171,971
5. Normal Cost	
(a) Total Normal Cost	\$3,144,851
(b) Expected Participant Contributions	1,627,932
(c) Net Normal Cost, (a) - (b)	\$1,516,919
6. Administrative Expenses	\$170,000
7. Applicable Interest	\$714,233
8. Total Recommended Contribution, (4) + (5c) + (6) + (7)	\$7,573,123
9. Estimated Fiscal Year Payroll	\$26,984,351
10. Recommended Contribution as a Percent of Payroll, (8) / (9)	28.1%

*More details are provided in the back of the report.

History of Recommended Contribution



History of Recommended Contribution (% of Payroll)



Data, Assumptions, and Plan Provisions

- Demographic Information
- Plan Provisions
- Assumptions and Methods

Data, Assumptions, and Plan Provisions

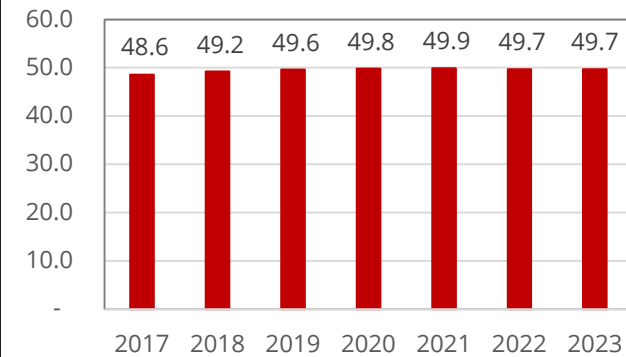
Demographic Information

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

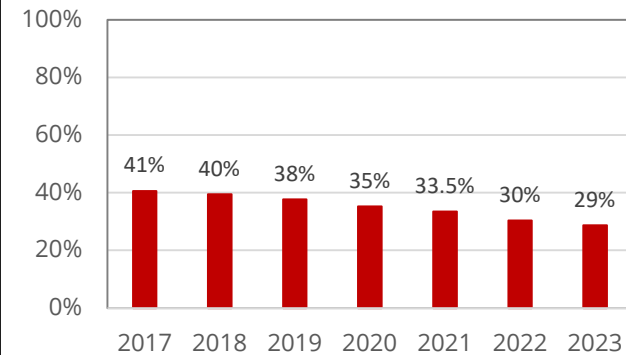
Valuation Date For Fiscal Year Beginning	December 31, 2022 January 1, 2024	December 31, 2023 January 1, 2025
Participant Counts		
Active Participants	428	402
Retired Participants	742	774
Beneficiaries	92	86
Disabled Participants	7	7
Terminated Vested Participants	138	132
Total Participants	1,407	1,401
Active Participant Demographics (Ongoing)		
Average Age	49.7	49.7
Average Service	17.3	17.7
Average Compensation*	\$66,507	\$70,278
Estimated Fiscal Year Payroll	\$27,250,143	\$26,984,351
Total Covered Payroll	\$28,778,107	\$28,844,769

*Average Compensation is the average pay received during the year of the Valuation Date.

History of Average Active Participant Age



History of Active Participant Ratio



Demographic Information (continued)

	December 31, 2022	December 31, 2023
Retiree Statistics		
Average Age	71.2	71.3
Average Monthly Benefit	\$1,895	\$1,897
Beneficiary Statistics		
Average Age	75.4	77.0
Average Monthly Benefit	\$1,472	\$1,529
Disabled Participant Statistics		
Average Age	62.3	63.3
Average Monthly Benefit	\$829	\$829
Terminated Vested Participant Statistics		
Average Age	51.5	50.5
Number with Monthly Benefits	120	112
Average Monthly Benefit	\$1,127	\$1,155
Number due Employee Contribution Refund	18	20
Total Employee Contribution Dollars	\$107,722	\$110,376

Monitoring the average age of the population is important due to the relationship of actuarial cost to age. Generally speaking, an older population generates a higher actuarial cost.

Changes in the ratio of active to retired participants can be a significant driver of costs in a volatile asset market.

Data, Assumptions, and Plan Provisions

Participant Reconciliation

	Active	Terminated Vested	Disabled	Retired	Beneficiary	Totals
Prior Year	428	138	7	742	92	1,407
Active						
To Lump Sum Cash-Out						0
To Terminated Vested	(8)	8				0
To Retired	(25)			25		0
Terminated Vested						
To Active						0
To Lump Sum Cash-Out		(3)				(3)
To Disabled						0
To Retired		(15)		15		0
Retired						
To Death				(21)		(21)
Beneficiary						
To Death					(1)	(1)
To Retired (Status Correction)				12	(12)	0
Disabled						
To Death						0
Additions	7	4		1	7	19
Departures						0
Current Year	402	132	7	774	86	1,401

Data, Assumptions, and Plan Provisions

Active Participant Schedule

Active participant information grouped based on age and service.

Age Group	Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up	
Under 25	4	3									7
25 to 29	1	9	3								13
30 to 34	1	1	6								8
35 to 39	1	2	9	12	12	1					37
40 to 44		3	2	8	28	4					45
45 to 49			9	15	20	36	4	1			85
50 to 54			2	7	35	33	12	3			92
55 to 59				7	25	23	7	5	1		68
60 to 64			4	1	13	10		3	1		32
65 to 69			2	2	2	1	3				10
70 & up			1		1		1	2			5
Total	7	18	38	52	136	108	27	14	2	0	402

Data, Assumptions, and Plan Provisions

Plan Provisions

Name of plan

St. Clair County Employees' Retirement System

Effective date

The plan was originally effective as of January 1, 1964.

Participation

A county policeman, sheriff, or deputy sheriff who agrees to make required participant contributions shall become a participant on his/her date of hire.

The Plan is closed to new hires for most of General County employees, Road Commission, and Mental Health.

Benefits

Normal Retirement

Eligibility

Sheriffs	25 years of service regardless of age
Others	Age 55 with 25 years of service
All	Age 60 with 8 years of service; when age plus service equals 80 and service is at least 25 years

Benefit

The pension payable for modified plan members is determined as the Final Average Compensation (FAC) multiplied by:

<u>Years of Service</u>	<u>Annual Multiplier</u>	<u>Annual Application</u>
1-10	1.75%	Accumulative
11-19	2.00%	Accumulative
20-24	2.00%	Retroactive to 1st Year
25-29	2.40%	Retroactive to 1st Year
	(2.50% for Sheriff Department Supervisors)	

The pension payable for original plan members is determined as the FAC multiplied by total service and 2.00%.

Data, Assumptions, and Plan Provisions

Final Average Compensation (FAC)

Highest 3 years out of last 10 (highest 5 years out of last 10 for Mental Health; Friend of the Court and Road Commission are the highest 3 years out of last 5)

Base pay only for certain General County and Sheriff's Department members

Please see the appendix for applicable provisions by group

Non-Duty Disability Retirement

Eligibility	10 or more years of service
Benefit	Computed as a regular retirement, offsets apply

Duty Disability Retirement

Eligibility	
Sheriffs	10 years of service
Others	No age or service requirements; must be in receipt of Worker's Compensation payments
Benefit	
Sheriffs	50% of compensation at the time of disability and offsets apply.
Others	Computed as a regular retirement; upon termination of Worker's Compensation payments, additional service credit is granted and the benefit is recomputed; offsets apply

Termination Benefit

Participants become vested in their accrued benefit after 8 years of service.

Supplemental Payments to Retirees Age 65 and Older

If a retiree had less than 20 years of service at retirement, an annual payment of \$14.00 per month will be made for the life of the retiree. For members with 20 or more years of service at retirement, an annual payment of \$16.00 per month will be made for the life of the retiree.

Post-Retirement Life Insurance

The Retirement System provides \$3,500 of life insurance to retirees.

Credited Service

Service is credited for employees working more than 1,000 hours (nearest 1/12th). A full year of service is granted for more than 1,950 hours and partial credit is provided for hours worked between 1,000 and 1,950.

Optional forms of payment

A participant may choose to receive distributable benefits in an actuarially equivalent alternative form of benefit as follows.

- a monthly benefit payable for the participant's lifetime; or
- a monthly benefit payable for the participant's lifetime with a guarantee that the remainder, if any, of 120 monthly payments will be made to the participant's beneficiary following his death; or
- a monthly benefit payable for the participant's lifetime with 50% or 100% of such benefit continued to a surviving contingent annuitant following his death; or
- a monthly benefit payable for the participant's lifetime with a pop-up option with 50% or 100% of such benefit continued to a surviving contingent annuitant following his death

Actuarial Equivalence

Interest Rate: 7.0%

Mortality: Pub-2010 General mortality table, blended 50% female and 50% male, projected to the valuation date for the year using the SOA MP improvement scale in effect for the previous valuation year

Data, Assumptions, and Plan Provisions

Employee Contributions

As a condition for participation, employees must agree to contribute 6% of their compensation to the plan (8% for Road Commission employees, 5% for Mental Health employees).

Plan Provisions Not Included

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

Adjustments Made for Subsequent Events

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

Data, Assumptions, and Plan Provisions

Actuarial Assumptions and Methods

Except where otherwise indicated, the following assumptions were selected by the plan sponsor with the concurrence of the actuary. Prescribed assumptions are based on the requirements of the relevant law, the Internal Revenue Code, and applicable regulation. The actuary was not able to evaluate the prescribed assumptions for reasonableness for the purpose of the measurement.

Valuation Date December 31, 2023

Participant and Asset Information Collected as of December 31, 2023

Cost Method (CO) Individual Entry Age Level Percent of Pay Cost Method

Amortization Method (CO)

Mental Health 15 year level dollar closed amortization of Unfunded Actuarial Accrued Liability

General County 15 year level dollar closed amortization of Unfunded Actuarial Accrued Liability

Road Commission 15 year level dollar closed amortization of Unfunded Actuarial Accrued Liability

Each subsequent year after an employer who has closed participation reaches a 15 year amortization period of their unfunded accrued liability, a new amortization base for any assumption changes, plan changes, or actuarial gain/(loss) will be set up which will be fully amortized in 15 years.

Asset Valuation Method

20% Phase-In Method: Expected actuarial value of assets, adjusted by 20% of the asset gain/(loss) from the previous five years. The asset gain/(loss) for a particular year is defined as the difference between the actual market value return and the expected actuarial value return. This method was first used for the December 31, 2005 valuation.

Interest Rates (CO) 7.00%

The interest rate is the expected long-term rate of return on assets. This assumption is supported by the investment mix of the plan assets as of 12/31/2023.

Data, Assumptions, and Plan Provisions

Retirement Rates (FE)

Age	General*	Road Commission	Sheriff**	Service	Sheriff**
50	20.0%	25.0%		25	50.0%
51	20.0%	25.0%		26	15.0%
52	20.0%	25.0%		27	15.0%
53	20.0%	25.0%		28	25.0%
54	20.0%	25.0%		29	25.0%
55	40.0%	25.0%		30+	100.0%
56	40.0%	25.0%			
57	40.0%	25.0%			
58	40.0%	25.0%			
59	40.0%	25.0%			
60	20.0%	15.0%	15.0%		
61	20.0%	15.0%	15.0%		
62	20.0%	40.0%	40.0%		
63	30.0%	20.0%	20.0%		
64	35.0%	20.0%	20.0%		
65	35.0%	100.0%	100.0%		
66	25.0%	100.0%	100.0%		
67	25.0%	100.0%	100.0%		
68	25.0%	100.0%	100.0%		
69	25.0%	100.0%	100.0%		
70+	100.0%	100.0%	100.0%		

*Includes Mental Health Authority

**Sheriff Retirement Rates are only based on age when the participant has less than 25 years of service.

The assumed retirement rates are based on a study of actual experience for the plan during 2013-2018. See the experience study report date December 13, 2019.

Disability Rates (FE)

Ages	Percent Becoming Disabled within Next Year
20	0.08%
25	0.08%
30	0.08%
35	0.08%
40	0.20%
45	0.26%
50	0.49%
55	0.89%
60	1.41%

Disability rates are determined based on the results of broad population studies.
50% of Disabilities are assumed to be duty related.
50% of Disabilities are assumed to be non-duty related.

Withdrawal Rates (FE)

Age	Years of Service	Percent of Active Members Separating within Next Year		
		General*	Road Commission	Sheriff
ALL	0	15.0%	2.0%	5.0%
	1	9.0%	2.0%	5.0%
	2	9.0%	2.0%	5.0%
	3	9.0%	2.0%	5.0%
	4	9.0%	2.0%	5.0%
	5	9.0%	2.0%	5.0%
	6+	9.0%	2.0%	2.0%
20		6.0%		
25		6.0%		
30		6.0%		
35		6.0%		
40		6.0%		
45		4.0%		
50		4.0%		
55		4.0%		
60		4.0%		
65		4.0%		

*Includes Mental Health Authority

The assumed withdrawal rates are based on a study of actual experience for the plan during 2013-2018. See the experience study report date December 13, 2019.

Data, Assumptions, and Plan Provisions

Annual Pay Increases (FE)

Pay increase assumption applies to all groups and includes 2.25% inflation. Pay increases compounded with inflation are based on service as follows:

<u>Service</u>	<u>Increase</u>
1	7.00%
2	6.00%
3	5.00%
4	4.00%
5	3.00%
6-19	2.25%
20+	2.25%

The assumed annual pay increases are based on a study of actual experience for the plan during 2013-2018 as well as the employer's average target increase for a career employee. See the experience study report date December 13, 2019.

Mortality Rates (FE)

Healthy:

General and Mental Health: Pub-2010 General mortality table with generational improvements from 2010 based on the SOA Scale MP-2021

Sheriff: Pub-2010 Public Safety mortality table with generational improvements from 2010 based on the SOA Scale MP-2021

Road Commission: RP-2014 Blue Collar mortality table with generational improvements from 2006 based on the SOA Scale MP-2021

Disabled:

General and Mental Health: Pub-2010 Non-Public Safety Disabled Retiree mortality table with generational improvements from 2010 based on the SOA Scale MP-2021

Sheriff: Pub-2010 Public Safety Disabled Retiree mortality table with generational improvements from 2010 based on the SOA Scale MP-2021

Road Commission: RP-2014 Disabled mortality table with generational improvements from 2006 based on the SOA Scale MP-2021

Beneficiaries:

Pub-2010 General mortality table with generational improvements from 2010 based on the SOA Scale MP-2021

Mortality assumptions are set to reflect general population trends.

Data, Assumptions, and Plan Provisions

Marital Status and Ages (FE)	100% of Participants assumed to be married with female spouses assumed to be 3 years younger
Payment Form Election (FE)	Single Life Annuity: 40% 50% Joint Life Annuity: 20% 100% Joint Life Annuity: 40%
Expense and/or Contingency Loading (FE)	Preceding year's administrative expenses, rounded up to the nearest \$10,000. Expenses are assumed to be paid mid-year. Administrative expenses are allocated to each employer based on each employer's proportional share of the total actuarial value of assets.
Cost of Living Increases (FE)	None

FE indicates an assumption representing an estimate of future experience

MD indicates an assumption representing observations of estimates inherent in market data

CO indicates an assumption representing a combination of an estimate of future experience and observations of market data

Other Measurements

- Asset Allocation by Group
- Development of Recommended Contribution by Group
- Amortization Bases
- Demographic Information by Group
- Plan Provisions by Group
- Low-Default-Risk Obligation Measure

Other Measurements

Asset Allocation by Group

The assets were originally allocated by group for the December 31, 2005 valuation. This asset allocation by group has been maintained for each valuation thereafter taking into account contributions and benefit payments by group. The table below shows how the assets changed by group since the last valuation.

	General	Mental Health	Road Commission	Total
Actuarial Value of Assets, 12/31/2022	\$ 182,827,628	\$ 57,934,255	\$ 41,503,110	\$ 282,264,993
Employer Contributions	5,749,763	1,370,807	602,987	7,723,557
Employee Contributions	1,124,957	440,451	154,315	1,719,723
Benefit Payments	(12,533,751)	(3,215,849)	(3,496,812)	(19,246,412)
Expenses	(107,068)	(33,927)	(24,305)	(165,300)
Investment Income	<u>11,479,377</u>	<u>3,649,971</u>	<u>2,559,490</u>	<u>17,688,838</u>
Actuarial Value of Assets, 12/31/2023	\$ 188,540,906	\$ 60,145,708	\$ 41,298,785	\$ 289,985,399

Other Measurements

Development of Recommended Contribution by Group – General County (Including Sheriff Division)

The recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

Valuation Date **December 31, 2023**
For Fiscal Year Beginning **January 1, 2025**

Funded Position

1. Entry Age Accrued Liability	\$213,872,541
2. Actuarial Value of Assets	<u>188,540,906</u>
3. Unfunded Actuarial Accrued Liability (UAAL), (1) - (2)	\$25,331,635
4. Funded Ratio, (2) / (1)	88.2%

Employer Contributions

5. Normal Cost	
(a) Total Normal Cost	\$2,082,449
(b) Expected Participant Contributions	<u>1,071,200</u>
(c) Net Normal Cost, (a) - (b)	\$1,011,249
6. Administrative Expenses	110,529
7. Amortization of UAAL	3,699,078
8. Applicable Interest	<u>502,321</u>
9. Total Recommended Contribution, (5c) + (6) + (7) + (8)	\$5,323,177
10. Estimated Fiscal Year Payroll	\$17,607,680
11. Recommended Contribution as a Percent of Payroll, (9) / (10)	30.2%

Other Measurements

Development of Recommended Contribution by Group – Mental Health

The recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

Valuation Date For Fiscal Year Beginning	December 31, 2023 January 1, 2025
Funded Position	
1. Entry Age Accrued Liability	\$66,682,297
2. Actuarial Value of Assets	<u>60,145,708</u>
3. Unfunded Actuarial Accrued Liability (UAAL), (1) - (2)	\$6,536,589
4. Funded Ratio, (2) / (1)	90.2%
Employer Contributions	
5. Normal Cost	
(a) Total Normal Cost	\$835,450
(b) Expected Participant Contributions	<u>407,582</u>
(c) Net Normal Cost, (a) - (b)	\$427,868
6. Administrative Expenses	35,260
7. Amortization of UAAL	770,270
8. Applicable Interest	<u>128,273</u>
9. Total Recommended Contribution, (5c) + (6) + (7) + (8)	\$1,361,671
10. Estimated Fiscal Year Payroll	\$7,775,736
11. Recommended Contribution as a Percent of Payroll, (9) / (10)	17.5%

Other Measurements

Development of Recommended Contribution by Group – Road Commission

The recommended contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

Valuation Date

December 31, 2023

For Fiscal Year Beginning

January 1, 2025

Funded Position

1. Entry Age Accrued Liability	\$46,580,982
2. Actuarial Value of Assets	<u>41,298,785</u>
3. Unfunded Actuarial Accrued Liability (UAAL), (1) - (2)	\$5,282,197
4. Funded Ratio, (2) / (1)	88.7%

Employer Contributions

5. Normal Cost	
(a) Total Normal Cost	\$226,952
(b) Expected Participant Contributions	<u>149,150</u>
(c) Net Normal Cost, (a) - (b)	\$77,802
6. Administrative Expenses	24,211
7. Amortization of UAAL	702,623
8. Applicable Interest	<u>83,639</u>
9. Total Recommended Contribution, (5c) + (6) + (7) + (8)	\$888,275
10. Estimated Fiscal Year Payroll	\$1,600,935
11. Recommended Contribution as a Percent of Payroll, (9) / (10)	55.5%

Other Measurements

Amortization Bases

General County (Including Sheriff Division)

<u>Date Established</u>	<u>Years Remaining</u>	<u>Remaining Balance</u>	<u>Annual Payment</u>
12/31/2014	6	\$7,840,519	\$1,537,297
12/31/2015	7	1,644,788	285,230
12/31/2016	8	(1,349,964)	(211,286)
12/31/2017	9	(1,028,897)	(147,591)
12/31/2018	10	3,081,918	410,090
12/31/2019	11	12,769,352	1,591,478
12/31/2020	12	937,819	110,349
12/31/2021	13	(4,603,104)	(514,734)
12/31/2022	14	4,362,395	466,185
12/31/2023	15	1,676,809	172,060
Total		\$25,331,635	\$3,699,078

Mental Health

<u>Date Established</u>	<u>Years Remaining</u>	<u>Remaining Balance</u>	<u>Annual Payment</u>
12/31/2020	12	\$7,734,468	\$910,079
12/31/2021	13	(1,438,114)	(160,814)
12/31/2022	14	(857,549)	(91,641)
12/31/2023	15	1,097,784	112,646
Total		\$6,536,589	\$770,270

Other Measurements

Amortization Bases (continued)

Road Commission

<u>Date Established</u>	<u>Years Remaining</u>	<u>Remaining Balance</u>	<u>Annual Payment</u>
12/31/2016	8	\$3,040,939	\$475,944
12/31/2017	9	(636,237)	(91,265)
12/31/2018	10	347,611	46,254
12/31/2019	11	710,614	88,565
12/31/2020	12	(119,365)	(14,047)
12/31/2021	13	(1,265,913)	(141,559)
12/31/2022	14	2,329,513	248,942
12/31/2023	15	875,035	89,789
Total		\$5,282,197	\$702,623
Total		\$37,150,421	\$5,171,971

Other Measurements

Demographic Information by Group

	General County	Mental Health	Road Commission	Plan Total
Active Participants				
Count	262	114	26	402
Average Age	48.5	51.4	53.8	49.7
Average Service	18.1	15.6	23.2	17.7
Average Compensation*	\$68,859	\$72,909	\$73,039	\$70,278
Terminated Vested				
Average Age	50.3	50.1	53.9	50.5
Number with Monthly Benefits	66	37	9	112
Total Deferred Monthly Benefits	\$78,658	\$40,462	\$10,260	\$129,380
Average Deferred Monthly Benefit	\$1,192	\$1,094	\$1,140	\$1,155
Number due Employee Contribution Refund	12	8	0	20
Total Employee Contribution Dollars	\$47,715	\$62,661	\$0	\$110,376
Participants Receiving Benefits				
Count	566	155	146	867
Average Age	71.8	70.2	73.2	71.8
Total Monthly Benefits	\$1,039,360	\$276,723	\$289,769	\$1,605,852
Average Monthly Benefit	\$1,836	\$1,785	\$1,985	\$1,852

*Average Compensation is the average pay received during the year of the Valuation Date.

Other Measurements

Demographic Information by Group – Total Actives at 12/31/2023

Attained Age as of 12/31/2023	Credited Service							Total	Average Compensation*
	< 5	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +		
Under 25	7							7	\$38,245
25 - 29	10	3						13	\$62,720
30 - 34	2	6						8	\$72,386
35 - 39	3	9	12	12	1			37	\$70,146
40 - 44	3	2	8	28	4			45	\$67,614
45 - 49		9	15	20	36	4	1	85	\$75,952
50 - 54		2	7	35	33	12	3	92	\$75,077
55 - 59			7	25	23	7	6	68	\$70,541
60		2		3	2			7	\$58,901
61				1	3		2	6	\$51,840
62		1		2	1			4	\$68,683
63			1	5	1		2	9	\$68,523
64		1		2	3			6	\$50,222
65 +		3	2	3	1	4	2	15	\$58,370
Total	25	38	52	136	108	27	16	402	\$70,278

*Average Compensation is the average pay received during the year of the Valuation Date.

Other Measurements

Demographic Information by Group – General County Actives at 12/31/2023

Attained Age as of 12/31/2023	Credited Service							Total	Average Compensation*
	< 5	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +		
Under 25	7							7	\$38,245
25 - 29	10	3						13	\$62,720
30 - 34	2	3						5	\$69,066
35 - 39	3	4	8	8	1			24	\$71,559
40 - 44	3		6	24	4			37	\$66,968
45 - 49		3	4	15	26	2		50	\$78,572
50 - 54			4	20	22	9	2	57	\$72,645
55 - 59				18	15	4	5	42	\$66,652
60				2	2			4	\$58,931
61				1	2		2	5	\$50,442
62				2				2	\$72,459
63			1	3	1			5	\$54,443
64					2			2	\$48,768
65 +			1	2	1	3	2	9	\$60,672
Total	25	13	24	95	76	18	11	262	\$68,859

*Average Compensation is the average pay received during the year of the Valuation Date.

Other Measurements

Demographic Information by Group – Mental Health Actives at 12/31/2023

Attained Age as of 12/31/2023	Credited Service							Total	Average Compensation*
	< 5	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +		
Under 25								0	N/A
25 - 29								0	N/A
30 - 34		3						3	\$77,919
35 - 39		5	4	3				12	\$65,934
40 - 44		2	2	2				6	\$70,986
45 - 49		6	11	4	8	1		30	\$70,620
50 - 54		2	3	13	8	1	1	28	\$80,991
55 - 59			7	7	3	2	1	20	\$79,366
60		2		1				3	\$58,861
61								0	N/A
62		1						1	\$61,221
63				2				2	\$63,922
64		1		2	1			4	\$50,949
65 +		3	1	1				5	\$63,529
Total	0	25	28	35	20	4	2	114	\$72,909

*Average Compensation is the average pay received during the year of the Valuation Date.

Other Measurements

Demographic Information by Group – Road Commission Actives at 12/31/2023

Attained Age as of 12/31/2023	Credited Service								Average Compensation*
	< 5	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 +	Total	
Under 25								0	N/A
25 - 29								0	N/A
30 - 34								0	N/A
35 - 39				1				1	\$86,785
40 - 44				2				2	\$69,454
45 - 49				1	2	1	1	5	\$81,745
50 - 54				2	3	2		7	\$71,228
55 - 59					5	1		6	\$68,347
60								0	N/A
61					1			1	\$58,831
62					1			1	\$68,592
63							2	2	\$108,325
64								0	N/A
65 +						1		1	\$11,858
Total	0	0	0	6	12	5	3	26	\$73,039

*Average Compensation is the average pay received during the year of the Valuation Date.

Other Measurements

Demographic Information by Group – Terminated Vested at 12/31/2023

Due Only Employee Contributions Refund

Attained Age as of 12/31/2023	General		Mental Health		Road Commission		Total	
	#	Dollars	#	Dollars	#	Dollars	#	Dollars
20 - 39	7	\$20,642	1	\$15,855	0	N/A	8	\$36,497
40 - 49	3	\$14,781	3	\$31,982	0	N/A	6	\$46,763
50 - 59	0	N/A	2	\$6,449	0	N/A	2	\$6,449
60 +	2	\$12,292	2	\$8,376	0	N/A	4	\$20,667
Total	12	\$47,714	8	\$62,661	0	N/A	20	\$110,376

Have a Vested Monthly Benefit Payable

Attained Age as of 12/31/2023	General		Mental Health		Road Commission		Total	
	#	Average Benefit	#	Average Benefit	#	Average Benefit	#	Average Benefit
20 - 39	3	\$899	4	\$1,115	0	N/A	7	\$1,022
40 - 49	20	\$1,262	10	\$1,048	0	N/A	30	\$1,191
50 - 59	41	\$1,205	21	\$1,117	9	\$1,140	71	\$1,171
60 +	2	\$661	2	\$1,030	0	N/A	4	\$845
Total	66	\$1,192	37	\$1,094	9	\$1,140	112	\$1,155

Other Measurements

Demographic Information by Group – Participants Receiving Benefits at 12/31/2023

Attained Age as of 12/31/2023	General		Mental Health		Road Commission		Total	
	#	Average Benefit	#	Average Benefit	#	Average Benefit	#	Average Benefit
<40	0	N/A	0	N/A	0	N/A	0	N/A
40 - 49	2	\$1,823	0	N/A	1	\$932	3	\$1,526
50 - 54	11	\$2,938	3	\$6,351	3	\$3,107	17	\$3,570
55 - 59	27	\$3,320	5	\$3,625	9	\$2,793	41	\$3,241
60 - 64	90	\$2,105	35	\$1,948	15	\$2,400	140	\$2,097
65 - 69	110	\$2,028	32	\$1,648	29	\$2,142	171	\$1,976
70 - 74	124	\$1,710	41	\$1,543	24	\$2,259	189	\$1,744
75 - 79	115	\$1,688	23	\$1,640	30	\$1,934	168	\$1,725
80 - 84	51	\$1,082	12	\$1,152	16	\$1,619	79	\$1,201
85 - 89	17	\$1,148	4	\$953	12	\$884	33	\$1,028
90 +	19	\$1,078	0	N/A	7	\$1,077	26	\$1,078
Total	566	\$1,836	155	\$1,785	146	\$1,985	867	\$1,852

Other Measurements

Plan Provisions by Group

Group	Code	Category	Eligibility	Multiplier	Maximum	Lump Sums in FAC	Years in FAC period	Closed to New Hires
Bailiff and Court Security Officers Assoc. Modified	66	G	Rule of 80, 60 & 8, 55 & 25	Graded	hired prior 1/1/08 75% - hired after 1/1/08 70%	N	3	7/1/2012
Bailiff and Court Security Officers Assoc. Original	67	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	7/1/2012
Board Members Modified	13	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Board Members Original	57	G	Rule of 80, 60 & 8, 55 & 25	2%	75.00%	N	3	1/1/2009
CANUE Non-Affiliated Modified	36	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
CANUE Non-Affiliated Original	37	G	Rule of 80, 60 & 8, 55 & 25	2%	75.00%	N	3	1/1/2009
Commissioners Modified	14	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Communication Officers POAM Modified	69	G	Rule of 80, 25 & Out, 60 & 8, 55 & 25	Graded	75.00%	Y	3	7/1/2011
Communication Officers POAM Original	68	G	Rule of 80, 25 & Out, 60 & 8, 55 & 25	2%	64.00%	Y	3	7/1/2011
Corr. Ofcrs. & Support Staff Modified	24	G	Rule of 80, 25 & out (Corr Off Only), 60 & 8, 55 & 25	Graded	75.00%	Y	3	10/21/2009
Corr. Ofcrs. & Support Staff Original	23	G	Rule of 80, 25 & out (Corr Off Only), 60 & 8, 55 & 25	2%	64.00%	Y	3	10/21/2009
Corrections Officers Supervisors Modified	25	G	Rule of 80, 25 & out (Corr Off Only), 60 & 8, 55 & 25	Graded	75.00%	Y	3	1/1/2009
Corrections Officers Supervisors Original	26	G	Rule of 80, 25 & out (Corr Off Only), 60 & 8, 55 & 25	2%	64.00%	Y	3	1/1/2009
District Court AFSCME Modified	38	G	Rule of 80, 60 & 8, 55 & 25	Graded	hired prior 7/1/06 75% - hired after 7/1/06 70%	N	3	8/19/2009
District Court AFSCME Original	39	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	8/19/2009
Elected Officials Modified	15	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Elected Officials Original	16	G	Rule of 80, 60 & 8, 55 & 25	2%	75.00%	N	3	1/1/2009
Friend of Court Supervisors Modified	32	G	Rule of 80, 60 & 8, 55 & 25	Graded	hired prior 1/1/07 75% - hired after 1/1/07 70%	N	3	7/1/2011
Friend of Court Supervisors Original	33	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	7/1/2011
Friend of the Court Modified	30	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	5/11/2011
Friend of the Court Original	31	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	5/11/2011
Human Resources Clerks and Specialists Modified	58	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Human Resources Clerks and Specialists Original	59	G	Rule of 80, 60 & 8, 55 & 25	2%	75.00%	N	3	1/1/2009

Other Measurements

Plan Provisions by Group

Group	Code	Category	Eligibility	Multiplier	Maximum	Lump Sums in FAC	Years in FAC period	Closed to New Hires
Judges Modified	35	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Mental Health Chapter 10 Modified	17	MH	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	5	1/1/2016
Mental Health Chapter 10 Original	18	MH	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	5	1/1/2016
Mental Health Chapter 20 Modified	17	MH	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	Y	5	1/1/2016
Mental Health Chapter 20 Original	18	MH	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	Y	5	1/1/2016
Probate Clerical Modified	44	G	Rule of 80, 60 & 8, 55 & 25	Graded	hired prior 7/1/06 75% - hired after 7/1/06 70%	N	3	7/1/2011
Probate Court Juvenile Counselors Modified	46	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	12/16/2009
Probate Court Juvenile Counselors Original	47	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	12/16/2009
Prosecuting Attorneys Modified	42	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Prosecuting Attorneys Original	43	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	1/1/2009
Public Health Nurse Supervisors Modified	60	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Public Health Nurse Supervisors Original	61	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	1/1/2009
Public Health Nurses Modified	52	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/1/2009
Public Health Nurses Original	53	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	1/1/2009
Public Service Employees Modified	50	G	Rule of 80, 60 & 8, 55 & 25	Graded	hired prior 7/1/06 75% - hired after 7/1/06 70%	N	3	7/1/2009
Public Service Employees Original	51	G	Rule of 80, 60 & 8, 55 & 25	2%	64.00%	N	3	7/1/2009
Road Commission Modified	20	RC	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	Y	3	8/23/2011
Road Commission Original	19	RC	Rule of 80, 60 & 8, 55 & 25	2%	75.00%	Y	3	8/23/2011
Sheriff Deputies Modified	22	G	Rule of 80, 25 & out, 60 & 8, 55 & 25	Graded	75.00%	Y	3	No
Sheriff Deputies Original	21	G	Rule of 80, 25 & out, 60 & 8, 55 & 25	2%	64.00%	Y	3	No
Sheriff Deputies Supervisors Modified	27	G	Rule of 80, 25 & out, 60 & 8, 55 & 25	Graded	hired prior 1/1/07 75% - hired after 1/1/07 70%	Y	3	7/1/2011
Circuit Court Family Supervisors, Family & Probate Employees Modified	48	G	Rule of 80, 60 & 8, 55 & 25	Graded	75.00%	N	3	1/12009

Other Measurements

Low-Default-Risk Obligation Measure

For reports issues after February 15, 2023, the Plan's actuary is generally required to disclose liabilities under an alternative low-default-risk based discount rate. This LDROM liability measure represents the estimated asset value as of the measurement date the Plan would need in order to purchase a low-default-risk fixed income securities portfolio with durations that are reasonably consistent with the timing of benefits expected to be paid from the plan.

	December 31, 2023
LDROM Liability	\$417,020,158
Market Value of Assets	<u>\$266,367,600</u>
LDROM Funded Status	\$150,652,558

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

If Plan assets are invested to earn in excess of a fixed income portfolio, a shortfall on this basis may not necessarily mean the security of participant benefits is at risk. If the plan is fully funded, or nearly funded, on the LDROM measure, the plan sponsor may want to consider reducing investment risk in order to offer greater benefit security and lower contribution volatility. We did not perform an analysis of assumption or provision changes resulting from a potential shift in investment policy due to the limited scope of our engagement.

The above LDROM liability measure applies a single effective discount rate of 4.80%, which would produce approximately the same discounted cashflows as the FTSE Pension Discount Curve for December 31, 2023. All other data, assumptions, methods and provisions are the same as those detailed in this report.