Lycoming County Employees' Retirement System

Actuarial Valuation

As of January 1, 2025
Contributions Applicable to the Plan/
Fiscal Year Ending December 31, 2025

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

May 21, 2025

Board of Trustees
Lycoming County Employees' Retirement System

Re: Actuarial Valuation Report - Lycoming County Employees' Retirement System

Dear Board,

This report details the annual actuarial valuation of the Employees' Retirement System as of January 1, 2025.

The valuation was performed to measure the plan's liability and funding levels and to determine the actuarially appropriate funding requirements for the plan year ending December 31, 2025. This report was prepared for use by the Board. Use of the results for other purposes may not be applicable and could produce significantly different results.

DATA AND ASSUMPTIONS

In preparing this report, we have relied on personnel, plan design and asset information supplied by the Board. In our opinion, the assumptions used in the valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated fund experience. Other sets of assumptions and methods could also be reasonable and could produce materially different results. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

DISCLOSURES AND LIMITATIONS

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such 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. Due to the limited scope of this report, we did not provide an analysis of these potential differences.

The funding percentages and unfunded accrued liability as measured based on the actuarial value of assets will differ from similar measures based on the market value of assets. These measures, as provided, are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of its liabilities.

In performing the analysis, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models to generate the costs. All internally developed models are reviewed as part of the process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

ACTUARIAL CERTIFICATION

The valuation has been conducted in accordance with all applicable laws and regulations, as well as generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board; specifically No. 4 for Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, No. 23 for Data Quality, No. 27 for Selection of Economic Assumptions for Measuring Pension Obligations, No. 35 for Selection of Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations, No. 44, Selection and Use of Asset Valuation Methods for Pension Valuations, and No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations.

In our opinion, the Minimum Required Contribution set forth in this report constitutes a reasonable actuarially determined contribution under Actuarial Standard of Practice No. 4.

The undersigned are familiar with the immediate and long-term aspects of pension valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on this report has any direct financial interest or indirect material interest in the Lycoming County, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Employees' Retirement System. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

Respectfully submitted,

Foster & Foster, Inc.

Paul M. Baugher

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SUMMARY

The regular annual actuarial valuation of the Lycoming County Employees' Retirement System, performed as of January 1, 2025, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year beginning December 31, 2025.

The contribution requirements, compared with those set forth in the January 1, 2024 actuarial report, are as follows:

Valuation Date	1/1/2025	1/1/2024
Applicable to Fiscal Year Beginning	12/31/2025	12/31/2024
Total Recommended Contribution	$3,468,805	$3,416,042
Member Contributions (Est.)	(2,826,458)	(2,751,079)
County Recommended Contribution	642,347	664,963

As you can see, the County Recommended Contribution shows a decrease from the January 1, 2024 actuarial valuation report. The decrease is mainly attributable to net favorable plan experience.

Plan experience was favorable overall on the basis of the plan's actuarial assumptions. Sources of favorable experience included an investment return of 7.66% (Actuarial Asset Basis) which exceeded the 7.00% assumption, higher than expected inactive mortality, and more turnover than expected. These gains were offset in part by a loss associated with more retirements than expected.

CHANGES SINCE PRIOR VALUATION

The valuation reflects no plan changes.

The valuation reflects no assumption or method changes

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	1/1/2025	1/1/2024
A. Participant Data		
Number Included		
Actives	519	520
Service Retirees	414	406
Beneficiaries	27	25
Disability Retirees	1	1
Terminated Vested	102	99
Total	1,063	1,051
Total Annual Payroll	$29,689,683	$29,081,175
Payroll Under Assumed Ret. Age	29,689,683	29,081,175
Annual Rate of Payments to:		
Service Retirees	9,082,464	$8,923,143
Beneficiaries	387,774	$367,319
Disability Retirees	13,730	$13,730
Terminated Vested	678,923	$616,163
B. Assets		
Actuarial Value	160,805,578	156,470,530
Market Value	162,324,410	149,974,796
C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	76,566,448	74,111,296
Disability Benefits	0	0
Death Benefits	1,126,452	1,111,945
Vested Benefits	10,605,639	10,422,764
Service Retirees	92,048,947	90,710,530
Beneficiaries	3,375,750	3,309,980
Disability Retirees	127,685	129,222
Terminated Vested	6,416,760	5,668,088
Total	190,267,681	185,463,825

	1/1/2025	1/1/2024
C. Liabilities - (Continued)		
Present Value of Future Salaries	284,233,499	278,708,688
Present Value of Future Member Contributions	27,059,029	26,365,842
Normal Cost (Retirement)	2,932,774	2,849,929
Normal Cost (Disability)	0	0
Normal Cost (Death)	59,536	57,983
Normal Cost (Vesting)	718,155	708,376
Total Normal Cost	3,710,465	3,616,288
Present Value of Future Normal Costs	32,178,704	31,295,751
Accrued Liability (Retirement)	50,499,701	48,846,066
Accrued Liability (Disability)	0	0
Accrued Liability (Death)	645,332	643,317
Accrued Liability (Vesting)	4,974,802	4,860,871
Accrued Liability (Inactives)	101,969,142	99,817,820
Total Actuarial Accrued Liability	158,088,977	154,168,074
Unfunded Actuarial Accrued Liability (UAAL)	(2,716,601)	(2,302,456)
Funded Ratio (AVA / AL)	101.7%	101.5%

	1/1/2025	1/1/2024
D. Actuarial Present Value of Accrued Benefits		
Vested Accrued Benefits		
Inactives	101,969,142	99,817,820
Actives	12,163,234	11,615,731
Member Contributions	24,308,129	23,639,758
Total	138,440,505	135,073,309
Non-vested Accrued Benefits	1,601,601	1,430,351
Total Present Value Accrued Benefits	140,042,106	136,503,660
Funded Ratio (MVA / PVAB)	115.9%	109.9%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
Plan Experience	4,793,542	
Benefits Paid	(10,444,785)	
Interest	9,189,689	
Other	0	
Total	3,538,446	

Valuation Date	1/1/2025	1/1/2024
Applicable to Fiscal Year Ending	12/31/2025	12/31/2024
E. Pension Cost		
Normal Cost	$3,710,465	$3,616,288
Administrative Expenses	30,000	30,000
Payment Required to Amortize Unfunded Actuarial Accrued Liability / (Funding Adjustment) (as of 1/1/2025)	(271,660)	(230,246)
Total Recommended Contribution	3,468,805	3,416,042
Expected Member Contributions	(2,826,458)	(2,751,079)
Expected County Contribution	642,347	664,963
F. Past Contributions		
Plan Years Ending:	12/31/2024	
Total Recommended Contribution	3,404,608	
County	664,963	
Actual Contributions Made:		
Members (excluding buyback)	2,739,645	
County	400,000	
Total	3,139,645	
G. Net Actuarial (Gain)/Loss	(795,797)	

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

Year	Projected Unfunded Accrued Liability
2025	(2,716,601)

I. (i) 5 Year Comparison of Actual and Assumed Salary Increases

		Actual	Assumed
Year Ended	12/31/2024	5.36%	4.00%
Year Ended	12/31/2023	10.73%	4.00%

(ii) 5 Year Comparison of Investment Return on Actuarial Value

		Actual MVA	Actual AVA	Assumed
Year Ended	12/31/2024	13.48%	7.66%	7.00%
Year Ended	12/31/2023	13.33%	8.21%	7.00%
Year Ended	12/31/2022	-13.89%	6.80%	7.00%

DEVELOPMENT OF AMORTIZATION PAYMENT

(1)	Unfunded Actuarial Accrued Liability as of January 1, 2024	($2,302,456)
(2)	Sponsor Normal Cost developed as of January 1, 2024	865,209
(3)	Expected administrative expenses for the year ended December 31, 2024	30,000
(4)	Expected interest on (1), (2) and (3)	(99,557)
(5)	Sponsor contributions to the System during the year ended December 31, 2024	400,000
(6)	Expected interest on (5)	14,000
(7)	Expected Unfunded Actuarial Accrued Liability as of December 31, 2024 (1)+(2)+(3)+(4)-(5)-(6)	(1,920,804)
(8)	Change to UAAL due to Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(795,797)
(10)	Unfunded Actuarial Accrued Liability as of January 1, 2025	(2,716,601)

Type of Base	Date Established	Years Remaining	1/1/2025 Amount	Funding Adjustment
	1/1/2025	15	(2,716,601)	(271,660)

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1)	Unfunded Actuarial Accrued Liability (UAAL) as of January 1, 2024	($2,302,456)
(2)	Expected UAAL as of January 1, 2025	(1,920,804)
(3)	Summary of Actuarial (Gain)/Loss, by component:	
	Investment Return (Actuarial Asset Basis)	(1,011,165)
	Salary Increases	82,925
	Active Decrements	403,171
	Inactive Mortality	(690,723)
	Changes in Voluntary Member Contribution Rates	290,668
	New Entrants	43,797
	Other	85,530
	Change in UAAL due to (Gain)/Loss	(795,797)
	Change to UAAL due to Assumption Change	0
(4)	Actual UAAL as of January 1, 2025	($2,716,601)

RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

(1)	Contribution Determined as of January 1, 2024	$ 664,963
(2)	Summary of Contribution Impact by component:	
	Change in Normal Cost	94,177
	Change in Expected Member Contributions	(75,379)
	Change in Funding Adjustment	(41,414)
	Other	-
	Total Change in Contribution	(22,616)
(3)	Contribution Determined as of January 1, 2025	$642,347

FUNDING HISTORY

Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability	Funded Ratio	Recommended County Contribution
1/1/2013	N/A	N/A	82.7%	$2,270,134
1/1/2014	N/A	N/A	86.1%	$2,146,876
1/1/2015	N/A	N/A	91.5%	$2,139,753
1/1/2016	N/A	N/A	91.9%	$2,304,856
1/1/2017	N/A	N/A	94.0%	$2,190,157
1/1/2018	N/A	N/A	96.0%	$2,051,188
1/1/2019	N/A	N/A	94.2%	$2,059,528
1/1/2020	$125,433,976	$131,900,921	95.1%	$1,945,444
1/1/2021	$135,677,641	$136,419,929	99.5%	$1,592,238
1/1/2022	$147,627,822	$140,824,566	104.8%	$462,620
1/1/2023	$151,308,114	$146,215,943	103.5%	$636,778
1/1/2024	$156,470,530	$154,168,074	101.5%	$664,963
1/1/2025	$160,805,578	$158,088,977	101.7%	$642,347

PROJECTION OF BENEFIT PAYMENTS

Year	Payments for Current Actives	Payments for Current Inactives	Total Payments
2025	751,144	9,962,667	10,713,811
2026	1,034,906	9,473,065	10,507,971
2027	1,380,966	9,364,818	10,745,784
2028	1,752,351	9,182,694	10,935,045
2029	2,130,958	9,161,637	11,292,595
2030	2,574,344	9,042,426	11,616,770
2031	2,979,755	8,733,143	11,712,898
2032	3,431,199	8,476,329	11,907,528
2033	3,861,348	8,373,595	12,234,943
2034	4,371,298	8,240,357	12,611,655
2035	4,891,919	8,021,221	12,913,140
2036	5,435,905	7,671,962	13,107,867
2037	6,114,163	7,494,929	13,609,092
2038	6,641,421	7,127,313	13,768,734
2039	7,171,914	6,965,924	14,137,838
2040	7,755,381	6,817,521	14,572,902
2041	8,263,506	6,451,510	14,715,016
2042	8,750,567	5,994,573	14,745,140
2043	9,349,033	5,993,658	15,342,691
2044	9,831,446	5,638,235	15,469,681
2045	10,339,398	5,290,496	15,629,894
2046	10,878,162	5,118,589	15,996,751
2047	11,361,765	4,854,055	16,215,820
2048	11,795,034	4,582,343	16,377,377
2049	12,231,019	4,358,360	16,589,379
2050	12,637,540	3,771,482	16,409,022
2051	13,104,710	3,487,290	16,592,000
2052	13,582,646	3,115,599	16,698,245
2053	13,898,863	2,954,823	16,853,686
2054	14,173,038	2,768,487	16,941,525
2055	14,445,710	2,424,578	16,870,288
2056	14,681,796	2,304,830	16,986,626
2057	14,831,852	1,913,297	16,745,149
2058	14,965,239	1,711,273	16,676,512
2059	14,954,143	1,524,826	16,478,969
2060	14,990,752	1,354,096	16,344,848
2061	14,940,804	1,198,885	16,139,689
2062	14,780,602	1,058,731	15,839,333
2063	14,615,669	933,016	15,548,685
2064	14,397,034	821,002	15,218,036

ACTUARIAL ASSUMPTIONS AND METHODS

Interest Rate

7.00% per year compounded annually, net of investment related expenses. We will continue to monitor this assumption in light of actual experience and the long-term expected return by asset class.

Inflation

2.50%.

Salary Increases

4.0% per year.

Mortality Rate

Active Lives:
PubG-2010 Employee mortality, with generational improvements using projection scale MP-2019.

Inactive Lives:
PubG-2010 Healthy Retiree mortality, with generational improvements using projection scale MP-2019.

Beneficiaries:
PubG-2010 Survivor mortality, with generational improvements using projection scale MP-2019.

Disabled Lives:
PubG-2010 Disabled mortality, with generational improvements using projection scale MP-2019.

The mortality assumptions sufficiently accommodate anticipated future mortality improvements.

Retirement Rate

Age (BOY)	Rate
55-59	7%
60-61	8%
62-64	15%
65	34%
66-70	23%
71-79	21%
80	100%

Disability Rate

None.

Termination Rate

Less than 6 years of service: Table T-7 of the Actuary's Handbook multiplied by the percentages below.

Service	Percentage
0	300%
1	275%
2	250%
3	225%
4	200%
5	175%

Greater than 6 years of service:

Age	Rate
20	5.50%
25	5.37%
30	5.17%
35	4.84%
40	4.39%
45	3.90%
50	3.12%
55+	1.98%

Form of Payment

Service Retirement

70% of members are assumed to elect to annuitize their member contributions, and 30% are assumed to elect a refund of their member contributions.

Termination (Vested)

100% of members under age 30 are assumed to elect to receive a refund of their member contributions, thereby forfeiting their County Annuity. See table of sample rates below for members age 30 and over electing to receive a refund of their member contributions.

Age	Rate
30	100.0%
35	83.3%
40	66.7%
45	50.0%
50	33.3%
55	16.7%

Funding Method

Entry Age Normal.

Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.
The normal cost accrual rate equals:

> (i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by
>
> (ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.

In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.

The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future.

Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

Actuarial Asset Method	Investment gains and losses are smoothed over a 5-year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of the Market Value of Assets.
Funding Policy Amortization Method	If the actuarial accrued liability exceeds the actuarial value of plan assets, the unfunded actuarial accrued liability is amortized using layers established annually based on plan experience. The layers are amortized on a Level Dollar basis over the following periods: • Experience: 15 years. • Assumption / Method Changes: 15 years. • Active Benefit Changes: 20 years. • Retired Benefit Changes: 10 years. • Special Early Retirement Changes: 5 years. If the actuarial value of assets exceeds the actuarial accrued liability, 10% of this excess is used to reduce the plan's financial requirement.
Payroll Growth	None.
Administrative Expenses	$30,000 per year.

GLOSSARY

Accrued Benefit	The benefit earned as of a specific date based on the provisions of the plan and the member's age, service, and salary as of that date.
Actuarial Accrued Liability	The portion of the anticipated future benefits allocated to years prior to the valuation date determined according to the plan's Actuarial Cost Method.
Actuarial Value of Assets	The asset value used in the valuation to determine contribution requirements. It represents the plan's Market Value of Assets (see below), with adjustments according to the plan's Actuarial Asset Method. These adjustments produce a "smoothed" value that is likely to be less volatile from year to year than the Market Value of Assets.
Actuarial Assumptions	Assumptions regarding the occurrence of future events affecting plan costs. These assumptions include rates of investment earnings, changes in compensation, rates of mortality, withdrawal, disablement, and retirement as well as statistics related to marriage and family composition.
Actuarial Cost Method	A method of determining the portion of the cost of a plan to be allocated to each year; sometimes referred to as the "actuarial funding method." Each cost method allocates a certain portion of the actuarial present value of benefits between the Actuarial Accrued Liability and future normal costs to ensure the plan is adequately and systematically funded.
Actuarial Gain or Loss	The change in Unfunded Actuarial Accrued Liability resulting from experience different from Actuarial Assumptions. Gains decrease the Unfunded Actuarial Accrued Liability and losses increase the Unfunded Actuarial Accrued Liability.

Actuarial Present Value	The estimated amount of funds required as of a specified date to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payments between the specified date and the expected date of payment.
Amortization Payment	The portion of the plan contribution designated to pay interest and reduce the outstanding principal balance of Unfunded Actuarial Accrued Liability. If the amortization payment is less than the accrued interest on the Unfunded Actuarial Accrued Liability the outstanding principal balance will increase.
Decrements	Events which result in the termination of membership in the system such as retirement, disability, withdrawal, or death.
Funded Ratio	A measure of the ratio of the plan assets to liabilities of the system. Typically, the assets used in the measure are the Actuarial Value of Assets as determined by the asset valuation method. The Funded Ratio depends not only on the financial strength of the plan but also on the asset valuation method used to determine the assets and on the Actuarial Cost Method used to determine the liabilities.
Interest Rate	The assumed long-term rate of return on plan assets.
Market Value of Assets	The fair market value of plan assets as of the valuation date.
Normal Cost	The portion of the Actuarial Present Value of Benefits allocated to the current year determined according to the plan's Actuarial Cost Method.
Present Value of Benefits	The single sum value on the valuation date of all future benefits to be paid to current plan participants.
Projected Annual Payroll	The salary expected for the year after the valuation date, excluding members over the 100% assumed retirement age.

Projected Benefits	The benefits expected to be paid in the future based on the provisions of the plan and the Actuarial Assumptions. The projected values are based on anticipated future advancement in age and accrual of service as well as increases in salary paid to the participant.
Total Annual Payroll	The salary expected for the year after the valuation date.
Ultimate Cost	The total cost to the plan once the last benefit has been paid. The Ultimate Cost equals Benefit Payments Plus: Expenses Less: Investment Income The Ultimate Cost is independent of the Actuarial Cost Method selected.
Unfunded Actuarial Accrued Liability	The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.
Vested Benefit	Benefits members are entitled to regardless of employment status.

DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined under various assumption scenarios. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- <u>Investment Return</u>: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.

- <u>Salary Increases</u>: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.

- <u>Demographic Assumptions:</u> Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

- <u>Contribution Risk:</u> This risk results from the potential that actual employer contributions may deviate from actuarially determined contributions, which are determined in accordance with the Board's funding policy. The funding policy is intended to result in contribution requirements that if paid when due, will result in a reasonable expectation that assets will accumulate to be sufficient to pay plan benefits when due. Contribution deficits, particularly large deficits and those that occur repeatedly, increase future contribution requirements and put the plan at risk for not being able to pay plan benefits when due.

IMPACT OF PLAN MATURITY ON RISK

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature plans with a substantial inactive liability. Similarly, mature plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled “Plan Maturity Measures and Other Risk Metrics”. Highlights of this information are discussed below:

- The Support Ratio, determined as the ratio of active to inactive members, has increased from 89.4% on January 1, 2023 to 95.4% on January 1, 2025, indicating that the plan has experienced a significant growth in active population.

- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 64.5%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors will need to be made up for over a shorter time horizon than would be needed for a less mature plan.

- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has decreased from 103.5% on January 1, 2023 to 101.7% on January 1, 2025, due mainly to the shortfall in Actual Sponsor Contributions. If the contribution deficit continues, the funded ratio will continue to decrease even if all assumptions are met.

- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, stayed approximately the same from January 1, 2023 to January 1, 2025. The current Net Cash Flow Ratio of -4.5% indicates that contributions are not currently covering the plan's benefit payments and administrative expenses.

Low Default-Risk Obligation Measure

ASOP No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, was revised as of December 2021 to include a “low-default-risk obligation measure” (LDROM). This liability measure is consistent with the determination of the actuarial accrued liability shown on page 8 in terms of member data, plan provisions, and assumptions/methods, including the use of the Entry Age Normal Cost Method, except that the interest rate is tied to low-default-risk fixed income securities. The S&P Municipal Bond 20 Year High Grade Rate Index (daily rate closest to, but not later than, the measurement date) was selected to represent a current market rate of low risk but longer-term investments that could be included in a low-risk asset portfolio. The interest rate used in this valuation was 4.28% resulting in an LDROM of $218,301,017. The LDROM should not be considered the “correct” liability measurement; it simply shows a possible outcome if the Board elected to hold a very low risk asset portfolio. Given that plan benefits are paid over time through the combination of contributions and investment returns, prudent investments selected by the Board help to balance asset accumulation through these two sources.

It is important to note that the actuary has identified the risks above as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

PLAN MATURITY MEASURES AND OTHER RISK METRICS

	1/1/2025	1/1/2024	1/1/2023
SUPPORT RATIO			
Total Actives	519	520	465
Total Inactives	544	531	520
Actives / Inactives	95.4%	97.9%	89.4%
ASSET VOLATILITY RATIO			
Market Value of Assets (MVA)	162,324,410	149,974,796	138,890,984
Total Annual Payroll	29,689,683	29,081,175	23,520,669
MVA / Total Annual Payroll	546.7%	515.7%	590.5%
ACCRUED LIABILITY (AL) RATIO			
Inactive Accrued Liability	101,969,142	99,817,820	98,634,402
Total Accrued Liability	158,088,977	154,168,074	146,215,943
Inactive AL / Total AL	64.5%	64.7%	67.5%
FUNDED RATIO			
Actuarial Value of Assets (AVA)	160,805,578	156,470,530	151,308,114
Total Accrued Liability	158,088,977	154,168,074	146,215,943
AVA / Total Accrued Liability	101.7%	101.5%	103.5%
NET CASH FLOW RATIO			
Net Cash Flow [1]	(7,371,067)	(6,969,166)	(6,153,094)
Market Value of Assets (MVA)	162,324,410	149,974,796	138,890,984
Ratio	-4.5%	-4.6%	-4.4%

[1] Determined as total contributions minus benefit payments and administrative expenses.

ASSET INFORMATION

STATEMENT OF FIDUCIARY NET POSITION

	Market Value 12/31/2024
ASSETS	
Money Market	1,222,763
Cash and Cash Equivalents	0
Total Cash and Equivalents	1,222,763
Receivables:	
Accrued Income	108,215
Total Receivable	108,215
Investments:	
Debt Securities	0
Equity Securities	27,924,142
Corporate Bonds	3,066,259
U.S. Gov't and Agency Obligations	10,718,781
Bond Mutual Funds	59,022,729
Total Investments	100,731,911
Other Assets	60,261,521
Total Assets	162,324,410
LIABILITIES	
Total Liabilities	0
NET POSITION RESTRICTED FOR PENSIONS	162,324,410

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

		Year Ended 12/31/2024
ADDITIONS		
Contributions:		
Member	2,739,645	
Miscellaneous Member Revenue	24,250	
County	400,000	
County for Members	0	
Member Buybacks	0	
Total Contributions		3,163,895
Investment Income:		
Miscellaneous Income	437,276	
Net Realized Gain (Loss)	6,084,765	
Unrealized Gain (Loss)	11,278,181	
Net Increase in Fair Value of Investments	17,800,222	
Interest & Dividends	2,176,826	
Less Expenses [1]	(256,367)	
Net Investment Income		19,720,681
Other		0
Total Additions		22,884,576
DEDUCTIONS		
Distributions to Members:		
Benefit Payments	10,444,785	
Total Distributions		10,444,785
Administrative Expenses		90,177
Other		0
Total Deductions		10,534,962
Net Increase in Net Position		12,349,614
NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		149,974,796
Adjustment to beginning of year		0
End of the Year		162,324,410

[1] Expenses include investment advisory, custodial and performance monitoring fees

DEVELOPMENT OF ACTUARIAL ASSET VALUATION

	Actuarial Value of Assets
Actuarial Value of Assets	
Market Value of Assets, 1/1/2025	162,324,410
Total Deferred Investment Gains/(Losses)	1,518,832
Preliminary Actuarial Value of Assets, 1/1/2025	160,805,578
1/1/2025 Limited Actuarial Assets, Total	160,805,578

Development of Investment Gain/(Loss)

Market Value of Assets, 12/31/2023	149,974,796
Contributions	3,163,895
Benefit Payments	(10,444,785)
Administrative Expenses	(90,177)
Expected Investment Earnings	10,240,248
Actual Net Investment Earnings	19,720,681
2024 Actuarial Investment Gain/(Loss)	9,480,433

Deferred Investment Gains/(Losses)

Year Ended:	(Gain)/Loss	Percentage Deferred	Deferred (Gain)/Loss
12/31/2024	9,480,433	80%	7,584,346
12/31/2023	8,574,530	60%	5,144,718
12/31/2022	(34,423,115)	40%	(13,769,246)
12/31/2021	12,795,068	20%	2,559,014
12/31/2020	10,902,419	0%	0
Total Deferred Investment Gains/(Losses)			1,518,832

Approximate Rates of Return

Basis	Rate of Return
Actuarial Asset Rate of Return:	7.66%
Market Value of Assets Rate of Return:	13.48%

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS - ACTUARIAL ASSET BASIS

		Year Ended 12/31/2024
ADDITIONS		
Contributions:		
Member	2,739,645	
Miscellaneous Member Revenue	24,250	
County	400,000	
Total Contributions		3,163,895
Earnings from Investments		
Interest & Dividends	2,176,826	
Miscellaneous Income	437,276	
Net Realized Gain (Loss)	6,084,765	
Change in Actuarial Value	3,263,615	
Total Earnings and Investment Gains		11,962,482
DEDUCTIONS		
Administrative Expenses:		
Investment Related[1]	256,367	
Other	90,177	
Total Administrative Expenses		346,544
Distributions to Members:		
Benefit Payments	10,444,785	
Refunds	0	
Total Distributions		10,444,785
Change in Net Assets for the Year		4,335,048
Net Assets Beginning of the Year		156,470,530
Net Assets End of the Year		160,805,578
Excess Earnings Reserve		

[1] Investment Related expenses include investment advisory, custodial and performance monitoring fees.

STATISTICAL DATA

	1/1/2025	1/1/2024	1/1/2023
ACTIVE EMPLOYEES			
Number	519	520	465
Average Current Age	43.7	43.8	N/A
Average Age at Employment	35.4	35.5	N/A
Average Past Service	8.3	8.3	N/A
Average Annual Salary	$57,206	$55,925	N/A
SERVICE RETIREES			
Number	414	406	404
Average Current Age	70.7	70.7	N/A
Average Annual Benefit	$21,938	$21,978	N/A
BENEFICIARIES			
Number	27	25	24
Average Current Age	75.2	73.6	N/A
Average Annual Benefit	$14,362	$14,693	N/A
DISABILITY RETIREES			
Number	1	1	1
Average Current Age	62.7	61.7	N/A
Average Annual Benefit	$13,730	$13,730	N/A
TERMINATED VESTED			
Number	102	99	91
Average Current Age	47.9	48.8	N/A
Average Annual Benefit [1]	$6,858	$6,771	N/A

[1] Average Annual Benefit for Terminated Vested members reflects the benefit for members entitled to a future annual benefit from the plan.

AGE AND SERVICE DISTRIBUTION

ACTIVE EMPLOYEES

	PAST SERVICE											
AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	12	9	5	0	0	1	0	0	0	0	0	27
25 - 29	19	18	11	2	3	4	0	0	0	0	0	57
30 - 34	11	10	11	6	3	14	3	0	0	0	0	58
35 - 39	18	12	9	8	3	9	17	4	0	0	0	80
40 - 44	5	3	1	4	2	4	11	14	5	0	0	49
45 - 49	4	5	5	5	1	7	11	9	7	2	0	56
50 - 54	6	7	1	2	5	11	8	15	9	9	2	75
55 - 59	4	6	4	6	4	6	6	4	5	3	4	52
60 - 64	4	6	3	1	1	11	5	6	4	4	3	48
65+	0	3	2	1	0	6	0	3	1	1	0	17
Total	83	79	52	35	22	73	61	55	31	19	9	519

PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 1/1/2024	520
b. Terminations	
i. Vested (partial or full) with deferred benefits	(13)
ii. Non-vested or full lump sum distribution received	(55)
iii. Transferred service to other fund	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	(22)
f. Continuing participants	430
g. New entrants	89
h. Total active life participants in valuation	519

2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving Benefits	Receiving Death Benefits	Receiving Disability Benefits	Vested Deferred	Total
a. Number prior valuation	406	25	1	99	531
Retired	25	0	0	(3)	22
Vested Deferred	0	0	0	13	13
Death, With Survivor	(2)	2	0	0	0
Death, No Survivor	(17)	0	0	0	(17)
Disabled	0	0	0	0	0
Refund of Contributions	0	0	0	(7)	(7)
Rehires	0	0	0	0	0
Expired Annuities	0	0	0	0	0
Data Corrections	0	0	0	0	0
Hired/Termed in Same Year	2	0	0	0	2
b. Number current valuation	414	27	1	102	544

PLAN PROVISIONS

Membership

An employee enters the plan on the day he becomes a full-time employee of the County.

Credited Service

Years, months, and days of full-time service.

Final Average Salary

Average compensation received for the highest 3 years in the employment of the County. In the event the member has less than 3 years of Credited Service, total compensation received divided by Credited Service.

Normal Retirement

Date

Earlier of age 55 and 20 years of Credited Service, and age 60 regardless of Credited Service.

Benefit

Sum of the County Annuity and Member Annuity.

County Annuity: Percentage of Final Average Salary times Credited Service. The percentage is outlined below.

Class	Percentage	Effective Date
1/100	1.000%	1/1/1950
1/80	1.250%	1/1/1968
1/70	1.429%	1/1/1983

Member Annuity: Annuitized member contribution with interest.

Form of Benefit

No Option: Member receives their County Annuity plus Member Annuity for life. Upon death, if the total payments received (not considering COLAs) are less than accumulated member contributions, the balance of accumulated member contributions shall be paid to a beneficiary.

Option One: Member receives their County Annuity plus Member Annuity for life. Upon death, if the total payments received (not considering COLAs) are less than accumulated member contributions plus present value of County Annuity, the balance of accumulated member contributions plus present value of County Annuity shall be paid to a beneficiary.

Option Two: Member receives their County Annuity plus Member Annuity for life with 100% of the amount at retirement continued to a beneficiary. Upon death, if the total payments received (not

	considering COLAs) are less than accumulated member contributions, the balance of accumulated member contributions shall be paid to a beneficiary. **Option Three**: Member receives their County Annuity plus Member Annuity for life with 50% of the amount at retirement continued to a beneficiary. Upon death, if the total payments received (not considering COLAs) are less than accumulated member contributions, the balance of accumulated member contributions shall be paid to a beneficiary. **Option Four**: Member receives a refund of their accumulated member contributions. The County Annuity is then paid in accordance with any of the previous options.
Early Retirement	
Date	**Voluntary**: 20 years of Credited Service regardless of age. **Involuntary**: 8 years of Credited Service regardless of age.
Benefit	Same as Normal Retirement, with an actuarial reduction applied to the County Annuity.
Form of Benefit	Same as Normal Retirement.
Disability Benefit	
Eligibility	5 years of Credited Service.
Benefit Amount	25% of Final Average Salary, which includes the Member Annuity.
Pre-Retirement Death Benefit	If a member dies after the earlier of age 60 or completion of 10 years of service, the beneficiary will receive a lump sum payment equal to the accumulated member contributions, plus the present value of the County Annuity at the time of death. Members may elect instead to have any death benefits paid to a designated beneficiary as a lifetime annuity. If a member dies and is not eligible for a monthly death benefit described above, the beneficiary will receive a refund of their accumulated member contributions.
Vesting (Termination)	
Vesting Service Requirement	5 years of Credited Service.

Non-Vested Benefit	Refund of Member Contributions.
Vested Benefit	Either the termination benefit, payable upon reaching age 60 (55 if more than 20 years of Credited Service), provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is calculated as for Normal Retirement.

Cost-of-Living Adjustment

Cost-of-living adjustments (COLAs) shall be reviewed at least once in every three years by the Retirement Board. Recent history of COLAs are as follows:

Effective Date	Percent Change in CPI	Effective Date	Percent Change in CPI
1/1/1998	80%	1/1/2012	80%
1/1/1999	80%	1/1/2013	80%
1/1/2000	80%	1/1/2014	80%
1/1/2001	80%	1/1/2015	80%
1/1/2002	80%	1/1/2016	No Increase
1/1/2003	80%	1/1/2017	No Increase
1/1/2004	**80%**	1/1/2018	Flat 2% Inc.
1/1/2005	80%	1/1/2019	Flat 2% Inc.
1/1/2006	**80%**	1/1/2020	Flat 2% Inc.
1/1/2007	80%	1/1/2021	Flat 2% Inc.
1/1/2008	80%	1/1/2022	Flat 2% Inc.
1/1/2009	80%	1/1/2023	Flat 2% Inc.
1/1/2010	No Increase	1/1/2024	No Increase
1/1/2011	80%	1/1/2025	No Increase

Contributions

Member

Pick-up Contributions: Mandatory 8% of pre-tax compensation.

Voluntary Contributions: Up to 10% of after-tax compensation.

Both Pick-up and Voluntary contributions receive annual interest at a rate specified by the Retirement Board. The rate is limited to between 4.0% and 5.5% per year.