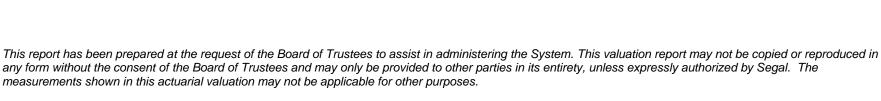
Employees' Retirement System of the County of Milwaukee

Actuarial Valuation and Review as of January 1, 2023

May 2023







May 31, 2022

Board of Trustees Employees' Retirement System of the County of Milwaukee 901 North 9th Street Milwaukee, Wisconsin 53233

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of January 1, 2023, of the Employees' Retirement System of the County of Milwaukee. This report summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and, as required by the Retirement Code, is the basis for the Actual Funding Contribution for fiscal year 2023 and the Budget Contribution for fiscal year 2024.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Retirement System. The census information and financial information on which our calculations were based was prepared by the Retirement Plan Services (RPS) office. That assistance is gratefully acknowledged.

The actuarial calculations were directed under the supervision of Matthew Strom and Geoff Bridges. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the System.

We look forward to reviewing this report and to answering any questions at an upcoming Board meeting.

Sincerely,

Matthew A. Strom, FSA, MAAA, EA Senior Vice President and Actuary

Geoff Bridges, FSA, MAAA, EA

Vice President and Consulting Actuary

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Section 1: Actuarial Valuation Summary

Purpose and Basis

This report is prepared by Segal to present a valuation of the Plan as of January 1, 2023. The valuation is performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The measurements shown in this actuarial valuation may not be applicable for other purposes. In particular, the measures herein are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations. 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; and changes in plan provisions or applicable law.

Certain disclosure information required by GASB Statements Nos. 67 and 68 as of December 31, 2022, for the System and the County is provided in *Section 4*.

The contribution requirements presented in this report are based on:

- The benefit provisions of the Pension Plan, as outlined in Chapter 201.24 of the County Code and administered by the Board;
- The characteristics of covered active members, inactive members, and retired members and beneficiaries as of January 1, 2023, provided by RPS;
- The unaudited assets of the Plan as of December 31, 2022, provided by RPS;
- Economic assumptions regarding future salary increases and investment earnings;
- · Other actuarial assumptions, regarding employee terminations, retirement, death, etc.; and
- The System's funding policy.

Valuation Highlights

- 1. Segal strongly recommends an actuarial funding method that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the unfunded actuarial accrued liability and the principal balance. The System's funding policy meets this standard.
- 2. Actual employer contributions made during the fiscal year ending December 31, 2022, were \$60,964,137. When combined with the employee contributions of \$13,273,863 and interest to the end of the year, the total contributions exceeded the actuarially determined contribution (referred to as the Actual Funding Contribution) for 2022 by \$4,509,336.
- 3. The results of this January 1, 2023, actuarial valuation are used to determine the Actual Funding Contribution for the fiscal year ending December 31, 2023, and the Budget Contribution for the fiscal year ending December 31, 2024. The Actual Funding Contribution for the year ending December 31, 2023 is \$72,936,500, an increase of \$442,922 from the Actual Funding Contribution for the year ending December 31, 2022. The amortization bases of the unfunded actuarial accrued liability are shown in Section 2, Exhibit F of this report.
- 4. The 2024 Budget Contribution, expected to be contributed in 2024, is \$77,705,000.
- 5. The funded ratio (the ratio of the actuarial value of assets to actuarial accrued liability) is 77.5%, compared to the prior year's funded ratio of 76.6%. This ratio is one measure of funding status, and its history is a measure of funding progress. Using the market value of assets, the funded ratio is 72.9%, compared to 85.6% as of the prior valuation date. These measurements are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the System's benefit obligation or the need for or the amount of future contributions.
- 6. The rate of return on the market value of assets was -9.30% for the January 1, 2022 to December 31, 2022 plan year. The return on the actuarial value of assets was 7.96% for the same period due to the recognition of prior years' investment gains and losses. This resulted in an actuarial gain when measured against the assumed rate of return of 7.50%. We advise the Board to continue to monitor actual and anticipated investment returns relative to the assumed long-term rate of return on investments.
- 7. The actuarial value of assets is 106.36% of the market value of assets. The investment experience in the past several years has only been partially recognized in the actuarial value of assets. As the deferred net loss is recognized in future years, the cost of the Plan is likely to increase unless the net gain is offset by future experience. The recognition of the deferred market loss of \$105,951,536 will also have an impact on the future funded ratio. If the net deferred gain were recognized immediately in the actuarial value of assets, the Actual Funding Contribution would increase by \$9,134,539 to \$82,071,039.
- 8. The unfunded actuarial accrued liability is \$514,061,625, which is a decrease of \$23,659,123 since the prior valuation.
- 9. The actuarial gain from investment experience is \$7,874,096.
- 10. The net experience loss from sources other than investment experience was approximately 0.07% of the actuarial accrued liability. Additional detail regarding this loss is shown in *Section 2, Exhibit C*.



- 11. This report constitutes an actuarial valuation for the purpose of determining the actuarially determined contribution under the Plan's funding policy and measuring the progress of that funding policy. The Net Pension Liability (NPL) and Pension Expense under Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68, for inclusion in the plan and employer's financial statements as of December 31, 2022, and December 31, 2023, is shown in *Section 4* of this report. The Actual Funding Contribution in this valuation is expected to be used as the actuarially determined contribution (ADC) for GASB financial reporting.
- 12. This actuarial report as of January 1, 2023, is based on financial and demographic data as of that date. Changes subsequent to that date are not reflected and will affect future actuarial costs of the Plan.

Summary of Key Valuation Results

		2023	2022
Actuarially determined	Actual Funding Contribution for fiscal 2023 (and 2022)	\$72,936,500	\$72,493,578
contributions:	Amount actually contributed for fiscal 2023 (and 2022)	TBD	74,238,000
	Budget Contribution for fiscal 2024 (and 2023)	\$77,705,000	\$72,128,000
Actuarial accrued	Retired participants and beneficiaries	\$1,857,775,008	\$1,854,929,167
liability for plan year	Inactive vested participants	90,920,480	89,429,529
beginning January 1:	Active participants	337,275,712	356,858,374
	Total	2,285,971,200	2,301,217,070
	Employer normal cost for plan year beginning January 1 (as of January 1)	18,410,957	17,857,874
Assets for plan year	Market value of assets (MVA)	\$1,665,958,039	\$1,970,367,505
beginning January 1:	Actuarial value of assets (AVA)	1,771,909,575	1,763,496,322
	Actuarial value of assets as a percentage of market value of assets	106.4%	89.50%
Funded status for plan	Unfunded actuarial accrued liability based on MVA	\$620,013,161	\$330,849,565
year beginning January 1:	Funded percentage on MVA basis	72.88%	85.62%
	Unfunded actuarial accrued liability based on AVA	\$514,061,625	\$537,720,748
	Funded percentage on AVA basis	77.51%	76.63%
	Remaining amortization period (average)	14	15
Key assumptions:	Interest rate for determining liability as of January 1	7.50%	7.50%
	Inflation rate	2.50%	2.50%
	 Interest rate for Budget Contribution for fiscal 2024 (and 2023) 	7.50%	7.50%
Demographic data for	Number of retired members and beneficiaries	7,819	7,829
plan year beginning	Number of vested former members	1,309	1,305
January 1:	Number of active members	3,215	3,325
	Total payroll	\$205,806,761	\$202,112,385
	Average pay	64,015	60,786

Important Information About Actuarial Valuations

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

To prepare a valuation, Segal relies on a number of input items. These include:

Plan of benefits	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Membership data	An actuarial valuation for a plan is based on data provided to the actuary by the System. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Assets	The valuation is based on the market value of assets as of the valuation date, as provided by the System. The System uses an "actuarial value of assets" that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
Actuarial assumptions	In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.
Modeling	Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Deterministic cost projections are based on a proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the direction of the supervising actuary.



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

- The actuarial valuation is prepared at the request of the System and Board of Trustees. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- Actuarial results in this report are not rounded, but that does not imply precision.
- If the System is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The System should look to its other advisors for expertise in these areas.

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

Section 2: Actuarial Valuation Results

A. Membership Data

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active members, inactive members, retired members and beneficiaries. This section presents a summary of significant statistical data on these participant groups.

As shown below, the ratio of non-active members to active members has been generally increasing. This increases the risks associated with the plan as the liabilities and costs are larger relative to the payroll of the active members in the plan.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A and B.

Member Population: 2014 – 2023

As of January 1	Active Members	Vested Terminated Members	Retired Members and Beneficiaries	Total Non- Actives	Ratio of Non-Actives to Actives
2014	3,911	1,411	7,940	9,351	2.39
2015	3,680	1,370	7,979	9,349	2.54
2016	3,619	1,387	7,991	9,378	2.59
2017	3,488	1,394	8,063	9,457	2.71
2018	3,502	1,371	8,037	9,408	2.69
2019	3,425	1,313	8,042	9,355	2.73
2020	3,561	1,293	8,001	9,294	2.61
2021	3,529	1,262	7,886	9,148	2.59
2022	3,325	1,305	7,829	9,134	2.75
2023	3,215	1,309	7,819	9,128	2.84

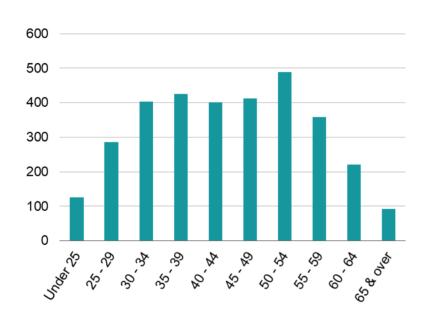
Active Members

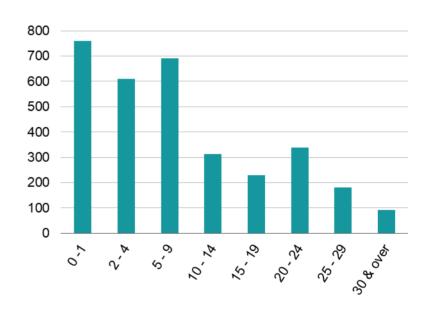
Plan costs are affected by the age, years of creditable service and payroll of active members. In this year's valuation, there are 3,215 active members with an average age of 44.4, average years of benefit service of 9.3, and average pay of \$64,015. The 3,325 active members in the prior valuation had an average age of 44.7, average benefit service of 9.6 years, and average pay of \$60,786.

Distribution of Active Members as of January 1, 2023

ACTIVES BY AGE

ACTIVES BY YEARS OF CREDITED SERVICE





Inactive Members

In this year's valuation, there are 1,309 inactive members with a vested right to a deferred or immediate benefit. Average monthly annuities for these members are \$707. For comparison, in the previous valuation, there were 1,305 inactive members with a vested right to a deferred or immediate benefit. Average monthly annuities for these members were \$703.

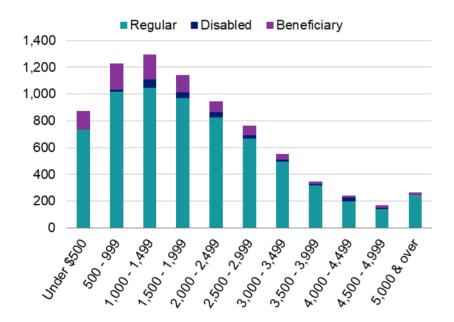
Retired Members and Beneficiaries

As of January 1, 2023, 6,905 retired members (including disability retirees) and 914 beneficiaries are receiving total monthly benefits of \$15,500,045. For comparison, in the previous valuation, there were 6,916 retired members and 913 beneficiaries receiving monthly benefits of \$15,342,878.

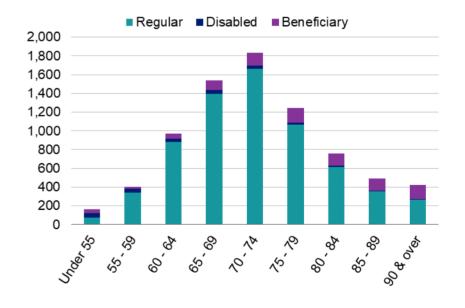
As of January 1, 2023, the average monthly benefit for retired members is \$2,030, compared to \$2,007 in the previous valuation. The average age for retired members is 72.7 in the current valuation, compared with 72.5 in the prior valuation.

Distribution of Pensioners as of January 1, 2023

PENSIONERS BY TYPE AND MONTHLY AMOUNT



PENSIONERS BY TYPE AND AGE



Historical Plan Population

2023

The chart below demonstrates the progression of the active population over the last ten years. The chart also shows the growth among the retired population over the same time period.

Membership Data Statistics: 2014 – 2023

Active Members Retired Members Average As of **Average Monthly Average Average** January 1 Age Service Count Age Amount Count 3,911 11.6 7,099 \$1,756 2014 46.0 70.6 2015 3,680 46.0 11.7 7,092 70.8 1,782 2016 3,619 7,077 1,829 45.7 11.4 71.0 2017 3,488 7,147 1,868 45.2 10.3 71.1 2018 3,502 45.0 10.3 7,128 71.3 1,893 2019 71.5 3,425 44.8 10.0 7,122 1,920 2020 3,561 44.3 9.4 7,088 71.8 1,949 2021 3,529 9.4 6,975 72.2 44.5 1,981 2022 3,325 44.7 9.6 6,916 72.5 2,007

9.3

6,905

2,030

72.7

3,215

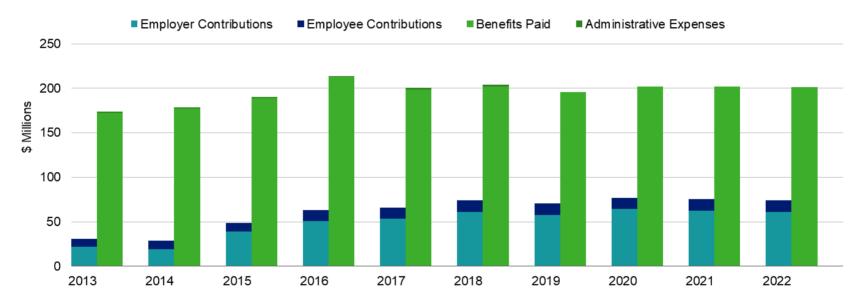
44.4

B. Financial Information

Retirement plan funding anticipates that, over the long term, both contributions and investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments. Retirement plan assets change as a result of the net impact of these income and expense components. The System's negative cash flow (approximately \$127 million in 2022) also affects expected investment returns.

Additional financial information, including a summary of these transactions for the valuation year, is presented in *Section 3, Exhibits C, D* and *E*.

Comparison of Contributions to Benefits and Expenses Paid For Years Ended December 31, 2013 – 2022



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

Determination of Actuarial Value of Assets for Year Ended December 31, 2022

1	Market value of assets, December 31, 2022				\$1,665,958,039
		Original	Percent	Unrecognized	
2	Calculation of unrecognized return	Amount **	Deferred	Amount***	
(a)	Year ended December 31, 2022*	-\$320,463,961	90%	-\$288,417,565	
(b)	Year ended December 31, 2021	174,424,625	80	139,539,704	
(c)	Year ended December 31, 2020	53,834,842	70	37,684,388	
(d)	Year ended December 31, 2019	124,974,770	60	74,984,862	
(e)	Year ended December 31, 2018	-170,935,242	50	-85,467,620	
(f)	Year ended December 31, 2017	121,516,124	40	48,606,448	
(g)	Year ended December 31, 2016	-23,448,242	30	-7,034,472	
(h)	Year ended December 31, 2015	-103,841,093	20	-20,768,218	
(i)	Year ended December 31, 2014	-50,790,631	10	-5,079,063	
(j)	Year ended December 31, 2013	118,316,429	0	0	
(k)	Total unrecognized return				-105,951,536
3	Actuarial value of assets as of December 31, 2022:	(1) - (2k)			<u>\$1,771,909,575</u>
4	Actuarial value as a percentage of market value:	(3) ÷ (1)			106.4%

^{*} Derivation of gain/(loss) for the year ending December 31, 2022 is shown on page 19

Assets were re-established at market value on January 1, 2013.

^{**}Total return minus expected return on a market value basis

^{***}Recognition at 10% per year over ten years

Both the actuarial value and market value of assets are representations of the Plan's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Plan's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

Actuarial Value of Assets vs. Market Value of Assets as of December 31, 2013 – 2022



C. Actuarial Experience

To calculate the actuarially determined contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single years' experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The net experience gain is \$6,182,479, which includes \$7,874,097 from investment gains and \$1,691,618 in losses from all other sources. The net experience variation from individual sources other than investments was 0.07% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

Actuarial Experience for Year Ended December 31, 2022

1	Net gain/(loss) from investments*	\$7,874,097
2	Net gain/(loss) from other experience	(\$1,691,618)
3	Net experience gain/(loss): 1 + 2	\$6,182,479

^{*} Details on next page.



Investment Experience

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the System's investment policy. The rate of return on the market value of assets was -9.30% for the year ended December 31, 2022.

For valuation purposes, the assumed rate of return on the actuarial value of assets is 7.50%. The actual rate of return on an actuarial basis for the 2022 plan year was 7.96%. Since the actual return for the year was greater than the assumed return, the Plan experienced an actuarial gain during the year ended December 31, 2022 with regard to its investments.

Investment Experience

		Year Ended December 31, 2022		Year E Decembe	Ended r 31, 2021
		Market Value Actuarial Value		Market Value	Actuarial Value
1	Investment income	-\$177,417,288	\$135,405,431	\$304,173,201	\$154,153,737
2	Average value of assets	1,907,288,979	1,700,417,796	1,729,981,008	1,673,129,289
3	Rate of return: 1 ÷ 2	-9.30%	7.96%	17.58%	9.21%
4	Assumed rate of return	7.50%	7.50%	7.50%	7.50%
5	Expected investment income: 2 x 4	143,046,673	127,531,335	129,748,576	125,484,697
6	Actuarial gain/(loss): 1 - 5	<u>-\$320,463,961</u>	<u>\$7,874,096</u>	<u>\$174,424,625</u>	<u>\$28,669,040</u>

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The table below shows the rate of return on an actuarial basis compared to the market value investment return for the last 19 years, including averages over select time periods.

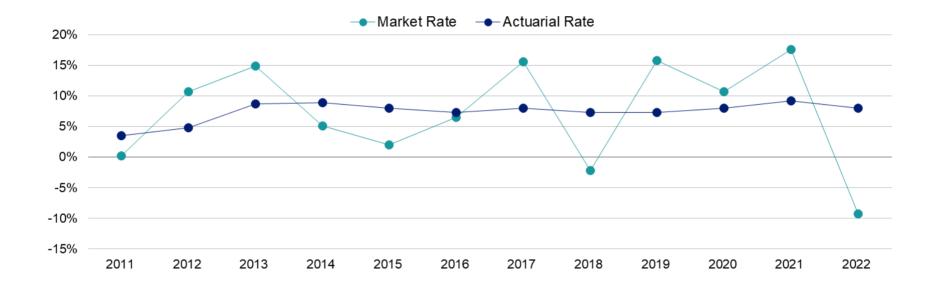
Investment Return – Actuarial Value vs. Market Value: 2004 – 2022

	Actuarial Value Investment Return		Market Value Investment Return			Actuarial Value Investment Return		Market Value Investment Return	
Year Ended Dec. 31	Amount	Percent	Amount	Percent	Year Ended Dec. 31	Amount	Percent	Amount	Percent
					2013	\$146,900,302	8.66%	\$253,385,088	14.93%
2004	\$106,051,092	7.67%	\$184,521,294	12.91%	2014	150,527,504	8.87	92,284,293	5.15
2005	142,925,632	10.45	123,206,736	8.25	2015	135,399,964	7.95	35,190,400	2.01
2006	174,981,665	12.48	202,170,056	13.41	2016	124,121,244	7.34	106,649,356	6.50
2007	193,083,715	13.05	98,642,968	6.12	2017	133,662,416	8.04	249,003,287	15.63
2008	53,668,265	3.03	-357,462,777	-22.44	2018	121,956,182	7.31	-38,060,799	-2.22
2009	74,459,006	3.87	313,462,671	20.19	2019	122,175,139	7.32	245,570,699	15.78
2010	104,127,935	5.51	203,770,758	11.60	2020	132,695,030	7.96	179,567,176	10.71
2011	64,214,736	3.47	\$4,039,718	0.22	2021	154,153,737	9.21	304,173,201	17.58
2012	84,397,065	4.79	178,833,104	10.74	2022	135,405,431	7.96	-177,417,288	-9.30
			Most	recent five-ye	ear average	return	5.97%		7.95%
			Most	Most recent ten-year average return			7.33%		8.06%
			Most recent fifteen-year average return			ge return	5.84%		6.73%

Note: Each year's yield is weighted by the average asset value in that year.

Subsection B described the actuarial asset smoothing method that gradually recognizes fluctuations in the market value rate of return. The goal of this is to stabilize the actuarial rate of return and to produce more level pension plan costs.

Market and Actuarial Rates of Return for Years Ended December 31, 2011 - 2022



Other Experience

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

- the extent of turnover among participants,
- retirement experience (earlier or later than projected),
- mortality (more or fewer deaths than projected),
- the number of disability retirements (more or fewer than projected), and
- salary increases (greater or smaller than projected).

The net loss from this other experience for the year ended December 31, 2022, amounted to \$1,691,618, which is 0.07% of the actuarial accrued liability.

Experience Gain/(Loss) Due to Demographics For Year Ended December 31, 2022

Net turnover	\$5,379,071
Retirement	-10,758,013
Mortality (more deaths than expected)	4,308,630
Disability retirements	-96,319
Salary increase for continuing actives	-3,322,961
Miscellaneous	<u>2,797,974</u>
Total	-\$1,691,618

D. Changes in the Actuarial Accrued Liability

The actuarial accrued liability as of January 1, 2023, is \$2,285,971,200, a decrease of \$15,245,870, or 0.7%, from the actuarial accrued liability as of the prior valuation date. The liability is expected to grow each year with normal cost and interest, and to decline due to benefit payments made. Additional fluctuations can occur due to actual experience that differs from expected (as discussed in the previous subsection).

Actuarial Assumptions

- No actuarial assumptions were changed in this valuation
- Details on actuarial assumptions and methods are in Section 5, Exhibit I.

Plan Provisions

- There were no plan provision changes is reflected in this valuation:
- A summary of plan provisions is in Section 5, Exhibit II.

E. Development of Unfunded Actuarial Accrued Liability

Development of Unfunded Actuarial Accrued Liability For Year Ended December 31, 2022

1	Unfunded actuarial accrued liability at beginning of year		\$537,720,748
2	Normal cost at beginning of year		17,857,874
3	Total contributions		-74,238,000
4	Interest		
	• For whole year on 1 + 2	\$41,668,397	
	For partial year on 3 (See Exhibit J)	<u>-2,764,915</u>	
	Total interest		38,903,482
5	Expected unfunded actuarial accrued liability		\$520,244,104
6	Changes due to:		
	Experience (gain)/loss	-6,182,479	
	Assumptions	0	
	Funding method	0	
	Plan provisions	<u>0</u>	
	Total changes		<u>-\$6,182,479</u>
7	Unfunded actuarial accrued liability at end of year		\$514,061,625

F. Amortization Schedule for Funding

The actuarially determined contribution is equal to the employer normal cost payment and a payment on the unfunded actuarial accrued liability (UAAL). Payments towards the UAAL are determined by amortizing sources of UAAL over various time periods, with amounts determined as a level percentage of payroll. The UAAL payment was reestablished on January 1, 2014 and amortized over 21 years. Future unanticipated increases in UAAL are amortized over closed 20-year periods. UAAL arising from contribution variances are amortized over closed 5-year periods. Amortization payments are assumed to increase by the payroll growth assumption of 1.75%, which reflects the payroll increase assumption of 3.5%, limited to reflect the anticipated increases in the County's tax base.

Actual Funding Contribution Amortization Schedule for 2023

Туре	Date Established	Initial Period	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
Reestablished UAAL	01/01/2015	21	\$448,982,279	\$40,538,434	13	\$387,002,581
Increase to UAAL	01/01/2016	20	49,830,707	4,533,338	13	43,277,786
Actuarial Loss	01/01/2017	20	26,129,846	2,332,609	14	23,409,897
MyChoice Contribution	01/01/2017	20	(2,918,641)	(260,547)	14	(2,614,828)
Actuarial Gain	01/01/2018	20	(3,290,263)	(288,229)	15	(3,026,147)
Change in Assumptions	01/01/2018	20	63,931,243	5,600,405	15	58,799,346
Actuarial Loss	01/01/2019	20	6,600,732	567,843	16	6,210,805
Contribution Variance	01/01/2019	5	(4,687,868)	(1,089,052)	1	(1,089,052)
Actuarial Gain	01/01/2020	20	(9,111,095)	(769,741)	17	(8,738,497)
Contribution Variance	01/01/2020	5	(3,246,621)	(746,465)	2	(1,440,852)
Change in Assumptions	01/01/2020	20	52,178,675	4,408,260	17	50,044,825
Actuarial Gain	01/01/2021	20	(5,769,471)	(479,044)	18	(5,626,512)
Contribution Variance	01/01/2021	5	(5,177,416)	(1,190,395)	3	(3,327,827)
Actuarial Gain	01/01/2022	20	(14,749,782)	(1,203,624)	19	(14,584,373)
Contribution Variance	01/01/2022	5	(4,280,697)	(984,221)	4	(3,543,712)
Actuarial Gain	01/01/2023	20	(6,182,479)	(495,831)	20	(6,182,479)
Contribution Variance	01/01/2023	5	(4,509,336)	(1,036,790)	5	(4,509,336)
Total				\$49,436,950		\$514,061,625

^{*} Level percentage, except contribution variances

Payments for the subsequent year Budget Contribution are determined by rolling forward the outstanding balance and payment amounts for existing amortization bases, and estimating the amounts of any new sources of UAAL.

Budget Contribution Amortization Schedule for 2024

Туре	Date Established	Initial Period	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
Reestablished UAAL	01/01/2015	21	\$448,982,279	\$41,247,857	12	372,448,958
Increase to UAAL	01/01/2016	20	49,830,707	4,612,672	12	41,650,281
Actuarial Loss	01/01/2017	20	26,129,846	2,373,429	13	22,658,085
MyChoice Contribution	01/01/2017	20	(2,918,641)	(265,106)	13	(2,530,852)
Actuarial Gain	01/01/2018	20	(3,290,263)	(293,272)	14	(2,943,262)
Change in Assumptions	01/01/2018	20	63,931,243	5,698,412	14	57,188,862
Actuarial Loss	01/01/2019	20	6,600,732	577,780	15	6,066,184
Actuarial Gain	01/01/2020	20	(9,111,095)	(783,212)	16	(8,566,412)
Contribution Variance	01/01/2020	5	(3,246,621)	(746,466)	1	(746,466)
Change in Assumptions	01/01/2020	20	52,178,675	4,485,405	16	49,059,307
Actuarial Gain	01/01/2021	20	(5,769,471)	(487,428)	17	(5,533,527)
Contribution Variance	01/01/2021	5	(5,177,416)	(1,190,395)	2	(2,297,739)
Actuarial Gain	01/01/2022	20	(14,749,782)	(1,224,688)	18	(14,384,305)
Contribution Variance	01/01/2022	5	(4,280,697)	(984,221)	3	(2,751,453)
Actuarial Gain	01/01/2023	20	(6,182,479)	(504,508)	19	(6,113,147)
Contribution Variance	01/01/2023	5	(4,509,336)	(1,036,789)	4	(3,732,987)
Actuarial Loss	01/01/2024	20	19,472,881	1,561,713	20	19,472,881
Contribution Variance	01/01/2024	5	808,500	185,891	5	808,500
Total				\$53,227,073		\$519,752,908

^{*} Level percentage, except contribution variances

For the 2023 Budget Contribution, a base for unexpected change in the unfunded actuarial accrued liability is added and amortized over 20 years. This loss is based on the amount of the deferred investment loss that will be recognized in the actuarial value of assets in the January 1, 2024 valuation. A base for a contribution variance for 2024 is added and amortized over 5 years. This variance is based on the difference between the County's anticipated contribution and the Actual Funding Contribution for 2023.



G. Gross Contribution Requirements

The actuarially determined contribution is equal to the employer normal cost payment and a payment on the unfunded actuarial accrued liability (as shown in *Section 2, Exhibit F*). The contribution requirements shown in this report are gross contribution amounts. It is our understanding that County staff will net out the amount of employee contributions that are collected to arrive at a net County contribution.

Gross Contribution Requirements

		Year Beginning January 1			
		2024	2023		
		Budget	Actual	Budget	
1	Total normal cost, adjusted to end of year	\$20,485,000	\$19,791,779	\$19,870,000	
2	Net annual amortizations, adjusted to end of year	57,220,000	53,144,721	52,258,000	
3	Expenses	0	0	0	
4	Total contribution: 1 + 2 + 3, not less than zero	77,705,000	72,936,500	\$72,128,000	

The Actual Funding Contribution and 2024 Budget Contribution are based on participant data as of January 1, 2023.

For the 2024 Budget Contribution, the Normal Cost for 2024 is assumed to be 3.5% higher than the 2023 Normal Cost.

The amounts shown above are gross contribution amounts. It is our understanding that the County staff will net out the amount of employee contributions that are collected to arrive at net employer contributions.

H. State Mandated Member Contributions

The following table develops the member contribution rates for 2024. Public Safety and General employees contribute 50% of the allocated cost of the 2023 actuarially determined contribution.

Member Contribution Rates

		Non-Contributors	Public Safety	General	All Members
_	ntion Results as of January 1, 2023				
1	Present value of future benefits			4000 775 155	MARK 053 133
	a) Active members *	-	\$88,867,620	\$362,752,482	\$451,620,102
	b) Participants with deferred benefits	90,920,480	-	-	90,920,480
	c) Retirees and beneficiaries	1,857,775,009	-	-	1,857,775,009
	d) Total	\$1,948,695,489	\$88,867,620	\$362,752,482	\$2,400,315,591
2	Present value of future normal cost	-	22,854,709	91,489,681	114,344,390
3	Actuarial accrued liability: 1 – 2	1,948,695,489	66,012,911	271,262,801	2,285,971,201
4	Actuarial value of assets	1,510,479,307	51,168,146	210,262,122	1,771,909,575
5	Funded percentage: 4 ÷ 3	77.5%	77.5%	77.5%	77.5%
6	Unfunded actuarial accrued liability: 3 - 4	438,216,182	14,844,765	61,000,679	514,061,626
7	Total normal cost for the plan year	-	\$3,356,529	\$15,054,428	\$18,410,957
Proje	cted Member Contribution for 2024				
1	Annual contribution for 2023				
	a) Normal cost with interest	-	3,608,269	16,183,510	19,791,779
	b) Net annual amortization payments **	45,303,667	1,534,682	6,306,372	53,144,721
	c) Expenses	-	-	-	-
	d) Total contribution: a + b + c , not less than zero	45,303,667	5,142,951	22,489,882	72,936,500
2	Member contribution (50% of 1d for Contributors)	-	2,571,476	11,244,941	13,816,417
3	Expected salaries in 2023	0	25,281,829	180,524,932	205,806,761
4	Member contribution rate: 2 ÷ 3 ÷ 1.075 ½	N/A	9.8%	6.0%	N/A

^{*} The actives in the Public Safety group include 337 members comprised of Represented Firefighters and Sheriffs and Non-Represented Firefighters and Sheriffs.

^{**} The net annual amortization payments for the contributors are prorated based on the contributors' actuarial accrued liability compared to total actuarial accrued liability of the retirement system.



I. Reconciliation of Budget Contribution Requirement

The chart below details the changes in the Budget Contribution requirement from the prior valuation to the current year's valuation.

Reconciliation of Budget Contribution Requirement From 2023 to 2024

		Amount	
1	2023 Budget Contribution		\$72,128,000
2	Increase/(decrease) during 2022 due to:		
	 a) Unanticipated liability loss/(gain) with interest / normal cost more (less) than projected 	-\$1,906,000	
	b) Asset experience different than expected	2,763,000	
	c) 2022 expenses other than assumed	0	
	d) 2022 contribution variance other than assumed	-49,000	
	e) Change due to assumption/method/plan changes	0	
	f) Total		\$808,000
3	2023 Actual Contribution (rounded): 1 + 2		\$72,936,000
4	Expected increase/(decrease) during 2023 due to:		
	a) Normal cost and existing amortization bases	\$2,890,000	
	b) Phase-in of deferred investment (gains) losses	1,679,000	
	c) Increase in expenses	0	
	d) Expected contribution variance for 2023	200,000	
	e) Full recognition of bases	0	
	f) Change due to assumption/method/plan changes	0	
	g) Total		\$4,769,000
5	2024 Budget Contribution: 3 + 4		\$77,705,000

J. Contribution for prior year and variance from the funding calculation contribution

Differences between the Actual Funding Contribution and the County's actual contributions with interest are amortized over five year periods using a level dollar basis. The following exhibit shows the calculation of the contribution variance for the 2022 plan year.

Calculation of Contribution Variance

		lte	e m		Amount	
1	Total Actual Funding Contribution, end-of-year basis, for 2022 plan year (from January 1, 2022 actuarial valuation report)					
2	Total employer contri	ibutions made:				
	Contribution Made	Fraction of a Year Invested	Contribution Amount	Interest to Year End**	End of Year Amount	
	Bi-weekly		\$0	\$0	\$0	
	06/30/2022*	50.7%	60,964,137	2,276,144	63,240,281	
	Total		\$60,964,137	\$2,276,144	\$63,240,281	
3	Total member contrib	outions made:				
	Contribution Made	Fraction of a Year Invested	Contribution Amount	Interest to Year End**	End of Year Amount	
	Bi-weekly	50.0%	\$13,273,863	\$488,771	\$13,762,634	
4	Variance from fundin	g calculation amount: 2+3-1			\$4,509,336	

^{*} Assumed employer contributions are made mid-year.

^{**} Interest to December 31, 2022 at 7.50% per annum

K. History of Employer Contributions

A history of the most recent years of contributions is shown below. Amounts contributed do not reflect interest.

History of Employer Contributions: 2008 – 2023

Fiscal Year Ended Dec. 31	Normal Cost with Interest	Net Amortization Payments	Expenses	Actuarially Determined Contribution	Amount Contributed	Percent Contributed
2008	\$21,012,737	\$32,050,873	N/A	\$53,063,610	\$34,981,095	65.92%
2009	21,395,539	8,959,996	N/A	30,355,535	60,123,920	198.07%
2010	20,736,844	6,813,146	N/A	27,549,990	32,969,145	119.67%
2011	19,480,089	7,327,948	N/A	26,808,037	31,589,401	117.84%
2012	14,488,711	10,386,482	N/A	24,875,193	27,451,148	110.36%
2013	16,105,425	12,164,620	N/A	28,270,045	30,952,781	109.49%
2014	15,235,436	14,329,489	N/A	29,564,925	29,057,000	98.28%
2015	16,999,506	39,300,143	\$1,554,175	57,853,824	48,405,459	83.67%
2016	17,381,870	44,459,669	1,225,857	63,067,396	63,769,182	101.11%
2017	16,405,955	47,838,754	1,554,742	65,799,451	65,991,000	100.29%
2018	17,105,095	52,640,182	1,677,304	71,422,581	72,194,000	101.08%
2019	17,024,645	52,974,997	0	69,999,642	70,533,656	100.76%
2020	18,657,660	55,930,743	0	74,588,403	76,901,000	103.10%
2021	18,912,234	55,123,191	0	74,035,425	75,504,000	101.98%
2022	19,197,215	53,296,363	0	72,493,578	74,238,000	102.41%
2023	19,791,779	53,144,721	0	72,936,500	TBD	TBD

L. Actuarial Balance Sheet

An overview of the Plan's funding is provided by an Actuarial Balance Sheet, which compares the total liabilities (current and future) to the total assets (current and future). The liabilities are calculated by determining the amount and timing of all future payments that will be made by the Plan for current participants. These payments are discounted at the valuation interest rate to the date of the valuation, thereby determining the present value of all benefits, referred to as the "liability" of the Plan.

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

Actuarial Balance Sheet

Valuation as of

	January 1, 2023	January 1, 2022
Liabilities		
Present value of benefits for retired participants	\$1,857,775,008	\$1,854,929,168
Present value of benefits for inactive former participants	90,920,480	89,429,529
Present value of benefits for active participants	<u>451,620,102</u>	467,802,470
Total liabilities	2,400,315,590	2,412,161,167
Assets		
Total valuation value of assets	\$1,771,909,575	\$1,763,496,322
Present value of future employer and employee contributions for:		
» Future Normal Costs	114,344,390	110,944,097
» Unfunded actuarial accrued liability	<u>514,061,625</u>	<u>537,720,748</u>
Total of current and future assets	<u>\$2,400,315,590</u>	<u>\$2,412,161,167</u>

M. Risk

The actuarial valuation results depend on a single set of assumptions; however, there is a risk that emerging results may differ significantly as actual experience proves to be different than projected from the current assumptions.

We have not been engaged to perform a detailed analysis of the potential range of the impact of risks relative to Milwaukee County's future financial condition, but have included a brief discussion of some of the risks that may affect the Plan. A more detailed assessment of the risks could provide a better understanding of the risks inherent in the Plan. This assessment may include scenario testing, sensitivity testing, stress testing, and stochastic modeling. Milwaukee County might consider including stochastic modeling in order to provide a more detailed risk assessment.

A detailed risk assessment could be important for Milwaukee County because:

- The negative cash flow position of the Plan as a percentage of assets could be exacerbated by relatively small deviations from assumed future experience.
- Retired and inactive participants account for more than half of the Plan's liabilities, limiting options for reducing plan liabilities in the event of adverse experience.
- Projected employer contribution amounts may increase to an unsustainable percentage of County budget under adverse stress testing conditions.
- The risks identified below show significant potential for variability.

The following risks could significantly affect the Plans' future condition:

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

The assets total approximately \$1.67 billion. If the actual market value return for the Plan Year were 1% different from the assumed (either higher or lower), the projected unfunded actuarial liability would change by about \$19.1 million.

If the prior year's investment performance resulted in a market value of assets that is 10% different from the current value, it would result in a change of \$167 million in the asset value. A 10% increase in assets would cause the unfunded liability (market value basis) to decrease from \$514 million to \$347 million. Likewise, a 10% decrease in the asset value, would cause the unfunded liability to increase from \$514 million to \$681 million.

The market value rate of return over the last ten years has ranged from a low of -9.3% to a high of 17.6%.

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

The actuarial valuation includes an expectation of future improvement in life expectancy. Emerging plan experience that does not match these expectations will result in either an increase or decrease in the actuarially determined contribution.

A 10% reduction in the assumed mortality rates results in an increase in the liabilities of roughly 3% for most plans. For Milwaukee County, a 3% liability increase would result in an increase in the actuarial funding contribution of \$6.5 million. The actuarial funding contribution would increase from \$72.9 million to \$79.4 million.

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

- Examples of this risk include:
- Actual retirements occurring earlier or later than assumed. The value of retirement plan benefits is sensitive to the rate of benefit accruals and any legacy early retirement subsidies that apply.
- More or less active participant turnover than assumed.
- Salary increases more or less than assumed.

Maturity Measures

The risk associated with a pension plan increases as it becomes more mature, meaning that the actives represent a smaller portion of the liabilities of the plan. When this happens, there is a greater risk that fluctuations in the experience of the non-active participants or of the assets of the plan can result in large swings in the contribution requirements.

- Currently the Plan has a non-active to active participant ratio of 2.8. For the prior year, benefits paid were \$127 million more than
 contributions received. As the Plan continues to mature, more cash will be needed from the investment portfolio to meet benefit
 payments.
- As of December 31, 2022, the retired life actuarial accrued liability represents 81% of the total actuarial accrued liability. In addition, the actuarial accrued liability for inactive vested participants represents 4% of the total. The higher the non-active actuarial accrued liability is as a percent of the total liability, the greater the risk of volatility in results.

Section 3: Supplemental Information

Exhibit A - Table of Plan Coverage

	As of Jan		
Category	2023	2022	Change From Prior Year
Active members in valuation:			
 Number 	3,215	3,325	-3.3%
Average age	44.4	44.8	-0.4
 Average years of benefit service 	9.3	9.6	-0.3
Total payroll	\$205,806,761	\$202,112,385	1.8%
Average pay	64,015	60,786	+5.3%
Total active vested members	1,816	1,918	-5.3%
Inactive members:			
 Number of terminated vested 	1,309	1,305	+0.3%
Average age	51.9	51.8	+0.1
Retired members:			
Number in pay status	6,663	6,667	-0.1%
Average age	73.0	72.7	+0.3
Average monthly benefit	\$2,020	\$1,997	+1.2%
Disability retirees:			
Number in pay status	242	249	-2.8%
Average age	66.0	65.5	+0.5
Average monthly benefit	\$2,323	\$2,273	+2.2%
Beneficiaries:			
Number in pay status	914	913	+0.1%
Average age	78.4	78.2	0.2
Average monthly benefit	\$1,618	\$1,601	+1.1%

Exhibit B – Reconciliation of Membership Data

	Active Members	Vested Terminated Members	Disability Retirees	Retired Members	Beneficiaries	Total
Number as of January 1, 2022	3,325	1,305	249	6,667	913	12,459
New participants	515	N/A	N/A	N/A	N/A	515
Terminations – with vested rights	(108)	108	-	-	-	-
Terminations – without vested rights	(192)	N/A	N/A	N/A	N/A	(192)
Retirements	(139)	(82)	N/A	221	N/A	-
New disabilities	(1)	(1)	2	N/A	N/A	-
Return to work / rehire	34	(11)	-	-	N/A	23
Died with beneficiary	(2)	-	(1)	(52)	55	-
Died without beneficiary	(1)	(5)	(8)	(183)	(58)	(255)
Lump sum cash-outs	(216)	(16)	-	-	-	(232)
Certain period expired	N/A	N/A	-	-	(7)	(7)
Data adjustments / Show-ups*	-	11	-	10	11	32
Number as of January 1, 2023	3,215	1,309	242	6,663	914	12,343

^{*}Includes records that were not valued in last year's valuation, but are valued this year

Exhibit C – Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended December 31, 2022			Ended r 31, 2021
Net assets at market value at the beginning of the year		\$1,970,367,505		\$1,792,916,838
Contribution income:				
Employer contributions	\$60,964,137		\$62,113,812	
Member contributions	13,273,863		13,390,188	
Less administrative expenses payable to the County	0		0	
Net contribution income		74,238,000		\$75,504,000
Net other income		\$0		\$0
Investment income:				
Net appreciation in fair value	-\$189,512,685		\$284,654,691	
Interest and dividends	7,177,435		7,280,980	
Securities lending income	113,696		85,413	
Other income	11,352,121		18,156,724	
Less securities lending rebates and fees, net	-36,339		-27,299	
Less administrative expenses payable by System	-4,302,473		-3,879,753	
Less investment expenses	<u>-2,209,043</u>		<u>-2,097,555</u>	
Net investment income		<u>-\$177,417,288</u>		<u>\$304,173,201</u>
Total income available for benefits		-\$103,179,288		\$379,677,201
Less benefit payments:				
Benefits paid to retirees and beneficiaries	-\$197,863,370		-\$199,326,814	
Refunds of contributions	<u>-3,366,808</u>		<u>-2,899,720</u>	
Net benefit payments		-\$201,230,178		-\$202,226,534
Change in reserve for future benefits		-\$304,409,466		\$177,450,667
Net assets at market value at the end of the year		\$1,665,958,039		\$1,970,367,505

Exhibit D – Summary Statement of Plan Assets

	December 31, 2022	December	31, 2021
Cash equivalents	\$27,7	707,041	\$66,053,830
Total accounts receivable	8,6	92,218	3,817,689
Other assets	37,8	366,111	44,125,976
Investments:			
Fixed Income	\$231,662,434	\$315,088,223	
• Domestic and international equities	617,916,618	765,832,253	
Private equity	297,651,582	319,281,062	
Diversifying strategies	362,772,756	360,756,892	
Real estate and REITs	<u>127,169,260</u>	<u>148,324,710</u>	
Total investments at market value	\$1,637,1	72,650	\$1,909,283,140
Total assets	\$1,711,4	38,020	\$2,023,280,635
Total liabilities	-45,4	79,981	-52,913,130
Net assets at market value	\$1,665,9	58,039	\$1,970,367,505
Net assets at actuarial value	\$1,771,9	09,575	\$1,763,496,322
	Domestic and International Equities Fixed Income Private Equity Diversifying Strategies Real Estate and REITs		10% 18% 38% 16%

Exhibit E – Development of the Fund Through December 31, 2022

	Year Ended Dec. 31	Employer Contributions	Member Contributions	Net Other Income ¹	Net Investment Return ²	Admin. Expenses³	Benefit Payments⁴	Market Value of Assets at Year-End	Actuarial Value of Assets at Year-End	Actuarial Value as a Percent of Market Value
	2007							\$1,665,511,165	\$1,627,287,632	97.70%
	2008	\$34,840,886	\$140,209	\$397,797,000	-\$357,462,777	-\$1,031,291	-\$144,184,222	1,595,610,970	1,968,518,479	123.37%
	2009	59,992,154	131,766	0	313,462,671	-1,312,156	-145,345,520	1,822,539,885	1,956,443,729	107.35%
_	2010	32,893,562	75,584	0	203,770,758	-1,310,356	-162,802,590	1,895,166,843	1,929,427,864	101.81%
	2011	28,275,594	3,313,807	0	4,039,718	-1,158,921	-187,530,154	1,742,106,887	1,836,542,926	105.42%
	2012	18,410,496	9,040,652	0	178,833,104	-1,187,236	-178,769,275	1,768,434,628	1,768,434,628	100.00%
	2013	21,998,256	8,954,525	0	253,385,088	-1,289,344	-172,248,723	1,879,234,430	1,772,749,644	94.33%
_	2014	19,005,395	10,051,605	0	92,984,293	-1,329,904	-177,366,124	1,822,579,695	1,773,638,120	97.31%
	2015	39,080,593	9,324,866	0	35,190,400	-1,204,226	-188,819,565	1,716,151,763	1,767,419,752	102.99%
_	2016	50,625,672	12,143,510	0	106,649,356	-1,225,857	-212,662,113	1,671,682,331	1,740,422,208	104.11%
	2017	53,660,695	12,330,305	0	249,003,287	-1,677,304	-198,590,749	1,786,408,565	1,739,807,571	97.39%
	2018	61,177,816	12,651,528	0	-38,060,799	-1,703,344	-202,163,452	1,618,310,314	1,731,726,301	107.01%
	2019	57,316,293	13,217,363	0	245,570,699	0	-195,786,444	1,738,628,225	1,728,648,652	99.43%
_	2020	64,558,405	12,342,595	0	179,567,176	0	-202,179,563	1,792,916,838	1,736,065,119	96.83%
	2021	62,113,812	13,390,188	0	304,173,201	0	-202,226,534	1,970,367,505	1,763,496,322	89.50%
	2022	60,964,137	13,273,863	0	-177,417,288	0	-201,230,178	1,665,958,039	1,771,909,575	106.36%

¹ Proceeds from Pension Obligation Bonds

² On a market basis, net of investment fees

³ Starting in 2019, admin expenses are being reported as zero because the County Board approved the termination of the reimbursement of the administrative costs by ERS to the County. Administrative expenses paid directly by ERS are treated as an offset to the Net Investment Return.

⁴ Includes withdrawal of membership accounts

Exhibit F – Definition of Pension Terms

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

Actuarial Accrued Liability for Actives:	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial Accrued Liability for Pensioners:	The single-sum value of lifetime benefits to existing pensioners. This sum takes into account life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial Cost Method:	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the actuarially determined contribution.
Actuarial Gain or Loss:	A measure of the difference between actual experience and expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge that may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield actuarial liabilities that are larger than projected. Actuarial gains will shorten the time required for funding the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.
Actuarially Equivalent:	Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV):	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is:
	Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)
	Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and
	Discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits:	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial Valuation:	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB, such as the Actuarially Determined Contribution (ADC) and the Net Pension Liability (NPL).
Actuarial Value of Assets (AVA):	The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.
Actuarially Determined:	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.
Actuarially Determined Contribution (ADC):	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Plan's funding policy. The ADC consists of the Employer Normal Cost and the Amortization Payment.
Amortization Method:	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization Payment:	The portion of the pension plan contribution, or ADC, that is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Assumptions or Actuarial	The estimates upon which the cost of the Fund is calculated, including:
Assumptions:	Investment return - the rate of investment yield that the Fund will earn over the long-term future;
	<u>Mortality rates</u> - the death rates of employees and pensioners; life expectancy is based on these rates;
	Retirement rates - the rate or probability of retirement at a given age;
	<u>Withdrawal rates</u> - the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement;
	Salary increase rates - the rates of salary increase due to inflation and productivity growth.
Closed Amortization Period:	A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Open Amortization Period.
Decrements:	Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal.
Defined Benefit Plan:	A retirement plan in which benefits are defined by a formula applied to the member's compensation and/or years of service.
Defined Contribution Plan:	A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
Employer Normal Cost:	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Experience Study:	A periodic review and analysis of the actual experience of the Fund that may lead to a revision of one or more Actuarial Assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.
Funded Ratio:	The ratio of the Actuarial Value of Assets (AVA) to the Actuarial Accrued Liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.

Section 4: GASB 67 and 68 Information

Exhibit 1 – Net Pension Liability

The components of the net pension liability at were as follows:

	January 1, 2023	January 1, 2022
Total Pension Liability	\$2,285,971,200	\$2,301,217,070
Plan Fiduciary Net Position	(1,665,958,039)	(1,970,367,505)
Net Pension Liability	\$620,013,161	\$330,849,565
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	72.9%	85.6%

The Net Pension Liability was measured as of December 31, 2022, and is determined based on the Total Pension Liability from the January 1, 2023, actuarial valuation.

Plan provisions. The plan provisions used in the measurement of the Net Pension Liability are the same as those used in the actuarial valuation as of January 1, 2023.

Actuarial assumptions. The Total Pension Liability was determined by an actuarial valuation as of January 1, 2023, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation 2.50%

Salary increases 3.50% to 6.21%, varying by age, including inflation and productivity

Investment rate of return 7.50%, net of pension plan investment expenses

Cost-of-living adjustments 2.00% of original benefit per year

Mortality

Pre-retirement: Males – RP-2006 Employee male, projected with generational projection using scale MP-2016.

Females – RP-2006 Employee female, projected with generational projection using scale MP-2016.

Healthy Retiree: Males – 102% of RP-2006 Healthy Annuitant male, projected with generational projection using scale MP-

2016.

Females – 107% of RP-2006 Healthy Annuitant female, projected with generational projection using scale

MP-2016.

Disabled Retiree: Males – 97% of RP-2006 Disabled male, projected with generational projection using scale MP-2016.

Females – 95% of RP-2006 Disabled female, projected with generational projection using scale MP-2016.

The actuarial assumptions used were based on the results of an experience study dated October 12, 2017. They are the same as the assumptions used in the January 1, 2023 funding actuarial valuation.

The long-term expected rate of return on pension plan investments is 7.50%. The long-term expected rate of return was determined using a method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Discount rate: The discount rate used to measure the Total Pension Liability was 7.50% as of December 31, 2022. The projection of cash flows used to determine the discount rate assumed plan member and employer contributions will be made at rates equal to those based on this January 1, 2023, Actuarial Valuation Report. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members as of December 31, 2022. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability as of December 31, 2022.

Sensitivity of the Net Pension Liability to changes in the discount rate: The following presents the Net Pension Liability, calculated using the discount rate of 7.50%, as well as what the Net Pension Liability would be if it were calculated using a discount rate that is one-percentage-point lower (6.50%) or one-percentage-point higher (8.50%) than the current rate:

	1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
Net Pension Liability as of December 31, 2022	\$884,507,903	\$620,013,161	\$430,364,644

Exhibit 2 – Schedules of Changes in Net Pension Liability

	Year Ending December 31, 2022	Year Ending December 31, 2021
Total Pension Liability		
Service cost	\$17,857,874	\$17,592,776
Interest	166,384,489	166,629,760
Change of benefit terms	0	0
Differences between expected and actual experience	1,741,945	13,970,444
Changes of assumptions	0	0
Benefit payments, including refunds of employee contributions	(201,230,178)	(202,226,534)
Net change in Total Pension Liability	(\$15,245,870)	(\$4,033,554)
Total Pension Liability – beginning	2,301,217,070	2,305,250,624
Total Pension Liability – ending (a)	<u>\$2,285,971,200</u>	<u>\$2,301,217,070</u>
Plan Fiduciary Net Position		
Contributions – employer	\$60,964,137	\$62,113,812
Contributions – employee	13,273,863	13,390,188
Net investment income	(173,114,815)	308,052,954
Benefit payments, including refunds of employee contributions	(201,230,178)	(202,226,534)
Administrative expense	(4,302,473)	(3,879,753)
Other	<u>0</u>	<u>0</u>
Net change in Plan Fiduciary Net Position	(304,409,466)	177,450,667
Plan Fiduciary Net Position – beginning	<u>1,970,367,505</u>	<u>1,792,916,838</u>
Plan Fiduciary Net Position – ending (b)	<u>\$1,665,958,039</u>	<u>\$1,970,367,505</u>
Net Pension Liability – ending (a) – (b)	<u>\$ 620,013,161</u>	<u>\$330,849,565</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	72.9%	85.6%
Covered employee payroll	\$202,112,385	\$204,754,607
Net Pension Liability as percentage of covered employee payroll	306.77%	161.6%

Exhibit 3 – Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

As shown in *Exhibit 2*, during the plan year that ended December 31, 2022, the changes in Net Pension Liability due to differences between expected and actual demographic experience is an increase of \$1,741,945. The average expected remaining service lives of all members is 2.3 years, determined as of January 1, 2022 (the beginning of the measurement period ending December 31, 2022). Therefore, of the \$1,741,945 demographic loss, \$757,367 is recognized in pension expense in the current year and \$984,578 is reflected as a deferred outflow of resources related to pensions.

Based on the assumed investment return of 7.50% for the year ending December 31, 2022, the expected net investment income for the year was \$143,046,673. As shown in *Exhibit 2*, the actual net investment income for the year was -\$173,114,815. The difference between actual and expected investment experience is an increase in Net Pension Liability of \$316,161,488, which is recognized over a 5-year period. Of this amount, \$63,232,296 is reflected in the current year and \$252,929,192 is reflected as a deferred outflow of resources related to pensions.

	Year Established	Original Balance	Original Amortization Period	Amortization Amount During 2022	Outstanding Balance at December 31, 2022
Outflows					
Investments	2018	\$167,716,897	5.0 years	\$33,543,379	\$0
Demographics	2020	1,993,825	2.4 years	332,305	0
Demographics	2021	13,970,444	2.4 years	5,821,018	2,328,408
Demographics	2022	1,741,945	2.3 years	757,367	984,578
Investments	2022	316,161,488	5.0 years	63,232,296	252,929,192
Total outflows				\$103,686,365	\$256,242,178
Inflows					
Investment	2019	128,095,497	5.0 years	\$25,619,099	\$25,619,099
Investment	2020	57,734,418	5.0 years	11,546,884	23,093,768
Investment	2021	178,304,378	5.0 years	35,660,876	106,982,628
Total inflows				\$72,826,859	\$155,695,495

Exhibit 3 – Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions (continued)

	December 31, 2022	December 31, 2021
Deferred Outflows of Resources (Outstanding Balances)		
Difference between expected and actual experience in the Total Pension Liability	\$3,312,986	\$8,481,731
Changes of assumptions	0	0
Net difference between projected and actual earnings on pension plan investments	97,233,697	N/A
Total Deferred Outflows of Resources	\$100,546,683	\$8,481,731
Deferred Inflows of Resources (Outstanding Balances)		
Difference between expected and actual experience in the Total Pension Liability	\$0	\$0
Changes of assumptions	0	0
Net difference between projected and actual earnings on pension plan investments	N/A	194,978,975
Total Deferred Inflows of Resources	\$0	\$194,978,975
Deferred outflows of resources and deferred inflows of resources related		
to pension will be recognized as follows:		
Year Ended December 31:		
2023	N/A	(\$33,130,157)
2024	(\$6,508,786)	(70,498,451)
2025	16,251,749	(47,207,760)
2026	27,571,422	(35,660,876)
2027	63,232,298	0
2028	0	0
Thereafter	0	0

Exhibit 4 – Pension Expense

Exhibit 4 below shows the individual components of collective pension expense, which totaled \$63,083,806 for the fiscal year that ended December 31, 2022.

Annual pension expense for the year can also be viewed as the change in Net Pension Liability, plus employer contributions for the year, less the change in outstanding balances of deferred outflows and deferred inflows of resources from the end of the prior fiscal year to end of the current fiscal year. The change in Net Pension Liability during the year was \$289,163,596 and employer contributions were \$60,964,137. The net value of deferred outflows and deferred inflows of resources as of the end of the current fiscal year is \$100,546,683 compared to the net value as of the end of the prior fiscal of -\$186,497,244 for a change of \$287,043,927. Therefore, the pension expense for the fiscal year that ended December 31, 2022, is \$289,163,596 + \$60,964,137 - \$287,043,927 or \$63,083,806.

	Fiscal Year Ending December 31, 2022	Fiscal Year Ending December 31, 2021
Components of pension expense		
Service Cost	\$17,857,874	\$17,592,776
Interest on the total pension liability	166,384,489	166,629,760
Projected earnings on plan investments	(143,046,673)	(129,748,576)
Contributions - member	(13,273,863)	(13,390,188)
Administrative expense	4,302,473	3,879,753
Current year recognition of:		
Changes of assumptions	0	6,805,915
Difference between expected and actual experience	6,910,690	4,529,523
Difference between projected and actual earnings on pension plan investments	24,948,816	(64,351,681)
Change of benefit terms	0	0
Total pension expense	\$63,083,806	(\$8,052,718)

Section 5: Actuarial Valuation Basis

Exhibit I – Actuarial Assumptions and Actuarial Cost Method

Rationale for Assumptions	The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the Actuarial Experience Study as of December 31, 2016 prepared by Conduent. Assumptions that changed from the prior valuation include retirement rates, termination rates, disability rates, mortality rates, salary increase rates and the net investment return assumption. Current data is reviewed in conjunction with each annual valuation. Based on professional judgment, no assumption changes are warranted at this time, beyond the assumption changes recommended by Conduent in the most recent Actuarial Experience Study.
Net Investment Return:	7.50%. The net investment return assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes, as well as the Plan's target asset allocation. The net investment return reduction phase-in to 7.50% was completed as of January 1, 2020.

Salary Increases:		Age	General Employees	Elected Officials	Deputy Sheriffs		
		20	10.5%	3.5%	11.5%		
		25	6.0	3.5	10.0		
		30	5.0	3.5	7.1		
		35	4.2	3.5	5.6		
		40	4.0	3.5	3.2		
		45	3.0	3.5	3.0		
		50	3.0	3.5	3.0		
		55	3.0	3.0	3.0		
		60	3.0	3.0	3.0		
Payroll Growth: Cost-of-Living Adjustments:	the System u	ses 1.75%. This ra	zing the unfunded actuate reflects the anticiparto retired employee	ated growth rate of	the County's reven	ues.	
		2.00% of original benefit per year to retired employees. Surviving beneficiary receives proportionate amount based on survivorship percentage. These increases are set in the plan provisions.					
Mortality Rates:	with generation	onal projection usir	<i>iaries</i> : For males, 102 ng scale MP-2016. Fo onal projection using s	or females, 107% o			
	using scale M		s, 97% of RP-2006 Dis ales, 95% of RP-2006				
		1P-2016. For fema	ales, RP-2006 Employ ales, RP-2006 Employ				
	The tables re	asonably reflect th	e mortality experience	e of the Plan as of t	he measurement da	te.	
			he mortality tables pas surement date and tho		t date reflects future	mortality	

Termination Rates before Retirement:

			Rate (%)	
	Withd			
Age	General Employees	Elected Officials	Deputy Sheriffs	Disability
20	25.0	4.0	18.6	0.00
25	25.0	4.0	18.6	0.04
30	10.1	4.0	8.6	0.05
35	7.2	4.0	5.7	0.07
40	6.0	4.0	3.0	0.17
45	5.7	4.0	3.0	0.21
50	5.7	4.0	2.0	0.21
55	3.0	4.0	1.0	0.21
60	0.0	0.0	0.0	0.21
65	0.0	0.0	0.0	0.21
65	0.0	0.0	0.0	0.21

Termination Rates before Retirement, continued:

Select rates for General Employees and Elected Officials are shown in the following table.

		Selec	ct Period Term	nination Rates	(%)	
Age	General Employees Year 1	General Employees Year 2	General Employees Year 3	General Employees Year 4	General Employees Year 5	Elected Officials Under 5 Years
20	36.0	25.0	25.0	15.0	12.5	0.0
25	31.2	23.4	20.4	15.0	11.9	0.0
30	27.1	22.4	16.8	13.2	9.1	0.0
35	24.7	21.4	14.8	11.4	7.2	0.0
40	22.3	19.2	14.0	10.4	6.7	0.0
45	21.5	16.8	14.0	10.0	5.9	0.0
50	21.5	14.8	14.0	10.0	7.6	0.0
55	21.5	14.0	14.0	10.0	9.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0

The withdrawal rates are based on historical and current demographic data, adjusted to reflect estimated future experience and professional judgment. As part of the analysis, a comparison was made between the actual withdrawals and disability retirements by age based on the prior assumptions over the most recent experience study period.

etirement Rates:		Age	General Employees	General Employees Not	Elected Officials	Deputy
			Eligible for Backdrop	Eligible for Backdrop	Officials	Sheriffs
		45-49	10.0	0.0	0.0	15.0
		50	15.0	10.0	0.0	15.0
		51-54	15.0	10.0	0.0	30.0
		55	15.0	10.0	14.9	30.0
		56	15.0	10.0	14.9	30.0
		57	15.0	10.0	17.3	30.0
		58	15.0	10.0	15.3	30.0
		59	15.0	10.0	18.6	30.0
		60	15.0	10.0	14.6	50.0
		61	25.0	10.0	16.9	50.0
		62	25.0	25.0	21.3	50.0
		63	25.0	25.0	20.0	50.0
		64	25.0	25.0	18.2	50.0
		65	40.0	33.3	22.8	100.0
		66	40.0	33.3	16.9	100.0
		67	40.0	33.3	19.3	100.0
		68	40.0	33.3	25.7	100.0
		69	40.0	33.3	27.0	100.0
		70	100.0	100.0	100.0	100.0
	future the a	e experience and ctual retirement	d professional judgr	ical and current demog nent. As part of the and pjected retirements bas	alysis, a comparis	on was made between
irement Rates for Inactive	100%	of inactive ves	ted participants are	assumed to retire at th	ne participants' No	rmal Retirement Age.
sted Participants:	The r	etirement rates	for inactive vested	participants are based experience and profes	on historical and o	•

Backdrop Utilization:	75% of retirees are assumed to elect the Backdrop. Of the employees electing the Backdrop, 75% are assumed to take the maximum possible Backdrop, based on eligibility for an unreduced benefit. 25% are assumed to take half of the maximum period. If those assumptions produce a Backdrop date after April 1, 2013, the participant is assumed to take the Backdrop using an effective date of April 1, 2013.
Unknown Data for Participants:	Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.
Salary Adjustments	The County pays active members biweekly. 2022 had 26 biweekly payments, so salaries were not adjusted.
Percent Married:	80%, with beneficiaries the same age as the participant.
Percent Married with at Least One Dependent Child:	21.6% for General Employees, 43.2% for Deputy Sheriffs and Elected Officials. For participants who die prior to age 60, it is assumed the dependent child will remain a dependent until the member would have turned age 60.
Disability Type:	For represented employees, disabilities are assumed to be 50% Ordinary and 50% Accidental. For non-represented employees, disabilities are assumed to be Ordinary (100%).
Benefit Election:	All participants are assumed to elect the Straight Life Annuity form of payment.
Death Benefits:	All death benefits are assumed to be ordinary.
Actuarial Value of Assets:	Market value of assets less unrecognized returns. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a ten-year period. The Actuarial Value of Assets was set equal to the Market Value of Assets at January 1, 2013.
Actuarial Cost Method:	Entry Age Actuarial Cost Method. Entry Age is the age at date of employment or, if date is unknown, current age minus years of service. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis.
	The outstanding balance of the Unfunded Actuarial Accrued Liability as of January 1, 2015 is being amortized over a fixed 21 year period. Changes to the Unfunded Actuarial Accrued Liability arising from plan changes, assumption changes, and experience gains and losses are amortized as a level percentage of payroll over a 20-year period. For this purpose, the payroll growth assumption is limited to 1.75%.
	The variance between the actual contribution and the contribution requirement for a year is amortized over a five year period on a level dollar basis.

Exhibit II – Summary of Plan Provisions

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

Plan Year:	January 1 through December 31
Plan Status:	Ongoing
Membership:	Any person regularly employed by the County at an annual wage or salary, including any person employed by the State of Wisconsin, but receiving a portion of compensation from the County.
Vesting Service:	Service during a period of employment with the County or in any department of in any town, village, city or metropolitan sewerage commission in the County, which department has by consolidation or merger been absorbed by the County. Creditable service shall consist of prior service, military service, and membership service, as well as service credited for military service in Vietnam. Additional credit for periods of military service will be earned as follows: • Less than 5 years of service with the County: no military service granted.
	 Between 5 and 10 years of service with the County: up to 1 year of military service granted. Between 10 and 15 years of service with the County: up to 2 years of military service granted. Between 15 and 20 years of service with the County: up to 3 years of military service granted. 20 or more years of service with the County: up to 4 years of military service granted.
Benefit Service:	Same as vesting service except that service prior to becoming a participant does not count.
Compensation:	Compensation is the full rate of compensation payable to the member if working the full normal working time for the member's position. Compensation includes authorized overtime payments and the compensation rate assumed to have been received while the member is on an authorized leave of absence. In cases where compensation includes maintenance, the Pension Board shall fix the value of that part of compensation not payable in money.
	Compensation shall not exceed \$330,000 in 2022, as indexed for the cost of living.

Final Average Salary (FAS):	Final average salary means the average annual salary for the highest three consecutive years of			
	service.			
	Exceptions:			
	 For Deputy Sheriffs hired on or after January 1, 1982, excluding DA investigators and non- represented Deputy Sheriffs, the final average salary means the average annual salary for the highest five years of service. 			
	 For DA investigators and non-Deputy Sheriffs hired before July 1, 1995 and all Deputy Sheriffs hired before January 1, 1982, the final average salary is increased by 7.5% for each year worked after January 1, 2001 to a maximum of 25%. 			
Voluntary Employee Contribution:	 Up to 10% of earnings, provided that the employee was contributing on January 1, 1971. The benefit payable to a member at termination of employment includes any voluntary contribution balance, in addition to the amounts described below. 			
Mandatory Employee Contribution:	 Public Safety and General employees contribute 50% of the allocated cost of the actuarially determined contribution. 			
Rule of 75:	For eligible employees, unreduced retirement if age plus credited service exceeds 75.			
Normal Retirement Eligibility:	Elected Officials			
	 Age 60, or age 55 with 30 years of service 			
	 If hired before January 1, 2006, Rule of 75 is available 			
	Firefighters, Federated Nurses, and Machinists			
	 Age 60 with 5 years of service, or age 55 with 30 years of service 			
	 Rule of 75 for Firefighters hired before December 1, 1996, Nurses hired before January 1, 1997, and Machinists hired before January 1, 1994 			
	 For Federated Nurses hired after January 1, 2012, and for Machinists hired after January 1, 2010, age 64 or age 55 with 30 years of service 			
	Attorneys, Building Trades, non-represented employees, DC48, and TEAMCO			
	 Age 60, or age 55 with 30 years of service 			
	 Age 64 or age 55 with 30 years of service (for all hired after January 1, 2010 except DC48) 			
	 Age 64 or age 55 with 30 years of service (for DC48 hired after August 1, 2011) 			
	Age 64 (non-represented employees)			
	 Rule of 75 for Attorneys, Building Trades, and non-represented employees hired before January 1, 2006 			
	Rule of 75 for TEAMCO hired before January 1, 1994			
	o Rule of 75 for all DC48			

Normal Retirement Eligibility, continued:	Deputy Sheriffs
,, co	Age 57, or age 55 with 15 years of service
	 Rule of 75 for, non-represented Deputy Sheriffs, DA investigators, and Deputy Sheriffs
	hired before January 1, 1994.
Normal Retirement Amount:	Elected Officials
	 Hired before March 15, 2002: 2.5% of FAS per year of service prior to October 14, 2010 and 1.6% of FAS per years of service thereafter, not greater than 80%.
	 Hired on or after March 15, 2002: 2.0% of FAS per year of service prior to October 14, 2010 and 1.6% of FAS per years of service thereafter, not greater than 80%
	General Employees
	 2.0% of FAS per year of service, not greater than 80%
	 The rate is reduced to 1.6% of FAS per years of service as follows:
	 For non-represented employees, effective January 1, 2010
	 For Attorneys and TEAMCO, effective May 1, 2010
	 For Machinists, effective June 1, 2010
	For DC48, effective August 1, 2011
	 For Building Trades and Federated Nurses, effective January 1, 2012
	Deputy Sheriffs
	 For Deputy Sheriffs hired before July 1, 1995, DA investigators and non-represented Deputy Sheriffs, 2.5% of FAS per year of service, not greater than 80%
	 For Deputy Sheriffs hired on or after July 1, 1995, 2.0% of FAS per years of service, not greater than 80%
	• For all members, 1.6% of FAS per year of service after 80% of FAS has been reached
Early Retirement:	Age Requirement: 55
	Service Requirement: 15 years
	 Amount: Benefits reduced by 5/12 of 1% for each month by which payment of benefits precedes Normal Retirement Age
	 Early Retirement is not applicable for Deputy Sheriffs, DA investigators and non-represented Deputy Sheriffs (they are eligible for unreduced retirement at age 55 with 15 years of service)
Ordinary Disability:	Service Requirement: 15 years
•	Amount: benefits calculated as for normal retirement. Minimum benefit is 25% of FAS.

Accidental Disability	All employees are eligible			
	 If the employee has attained normal retirement age, normal retirement benefits apply 			
	 If the employee has not attained normal retirement age, the benefit is computed as the normal retirement benefits but not less than 60% of FAS 			
	Employees whose benefit is not less than 75% of FAS			
	 Elected Officials and non-represented employees hired before February 19, 1987 			
	 Attorneys hired on or after January 1, 1987 			
	 Building Trades hired before October 30, 1987 			
	 Federated Nurses hired before January 1, 1987 			
	 Machinists hired before May 18, 1988 			
	o DC48 hired before July 24, 1987			
	o TEAMCO hired before January 12, 1988			
	o Deputy Sheriffs			
	 DA investigators and non-represented Deputy Sheriffs hired before February 19, 1987 			
	 Benefits received prior to age 62 are recalculated after age 62 to include service from the date of disability to age 62 			
Ordinary Death Benefit:	Only applicable to Deputy Sheriffs not eligible for normal retirement			
	Only applicable if the cause of death was not an accident in active duty			
	Employee has completed 1 year of service			
	Surviving spouse or child shall be entitled to survivor benefits (see section on survivor benefits)			
Accidental Death Benefit:	Only applicable to Deputy Sheriffs when death occurs due to an accident in active duty			
	Benefit of 50% of FAS shall be paid			
	 To surviving spouse for life or until remarriage 			
	 If surviving spouse benefit is not payable, to children under age 18 			
	 If surviving spouse and child benefits are not payable, to dependent parent for life 			
	Benefit shall not be less than ordinary death benefit amount			
Lump Sum Death Benefit:	 If no other death benefit is payable, a lump sum of one half of FAS, not greater than \$2,000. 			
	Member must have 1 year of service			

Survivor Benefits:	Member dies prior to age 60 after completing 1 year of service			
	 Surviving spouse has at least one child and was married to the member at least 1 year prior to death 			
	Monthly benefit of 40% of final salary prior to age 60			
	Reduced by monthly survivor benefits paid by Social Security			
	At age 60, 50% of benefit based on actual FAS and service projected to age 60			
	 Additional benefit of 10% of final salary less social security benefits shall be paid to each eligible unmarried child under age 18. Age limit is 22 if unmarried child is a student. 			
Refund of Contributions:	Available at termination of employment			
Vesting:	Service Requirement: 5 years of service			
	Accrued benefit is at least \$10 per month			
	Amount: as per Normal Retirement Benefit			
	If member withdraws employee contributions, vested benefit does not apply			
Optional Forms of Benefits:	Options that pay a reduced benefit on an actuarially equivalent basis			
	 Option 1 – If member dies before benefits paid exceed the member's accumulated contributions at retirement, the balance is paid as a lump sum. 			
	 Option 2 – 50% Joint and Survivor Annuity. 			
	 Option 3 – 100% Joint and Survivor Annuity. 			
Cost of Living Adjustment (COLA):	2% of original benefit amount per year to retired employees. Surviving spouses get a proportionate increase based on survivorship percentage.			

Backdrop: Members that are not eligible Elected Officials, non-represented employees and Deputy Sheriffs hired on or after March 15, 2002 Machinists and TEAMCO hired on or after November 4, 2005 Attorneys hired on or after January 1, 2006 Federated Nurses hired on or after December 15, 2005 Firefighters hired on or after June 19, 2007 DC48 hired on or after February 1, 2007 Retiring members who satisfy eligibility criteria may elect to use a past retirement date Member must have been eligible to retire at Backdrop date Backdrop date must be at least 1 year prior to the date the member terminated employment Backdrop monthly benefit calculated using service and salary as of Backdrop date Member receives cash payment of payments from Backdrop date to retirement date, including interest On and after April 1, 2013, if the Backdrop date is after April 1, 2013 the Backdrop benefit will not reflect any service or salary for the period from April 1, 2013 to the Backdrop date. This provision does not apply to Elected Officials, Building Trades, Machinists, Federated Nurses

and Firefighters.

Section 6: Additional Summary Tables of Member Data

TABLE 1 – SUMMARY OF MEMBERSHIP DATA AS OF JANUARY 1, 2023

Active Participants

	General Employees	Deputy Sheriffs	Elected Officials	Total
Number of Participants	2,960	251	4	3,215
Average Annual Salaries*	\$63,776	\$71,368	\$113,997	\$64,015
Average Age	44.8	39.6	56.2	44.4
Average Benefit Service	9.0	12.3	11.7	9.3

^{*} The salaries shown in the table above represent a rate of pay increased by the salary assumption

Inactive Participants

	Number	Annual Annuities	Average Annuities	Average Age
Participants with Deferred Benefits	1,309	\$11,107,239	\$8,485	51.9
Retired Participants	6,663	161,511,915	\$24,240	73.0
Beneficiaries	914	17,741,497	\$19,452	78.4
Disability Retirees	242	6,747,125	\$27,881	66.0
Total	9,128	\$197,107,777	\$21,593	70.3

TABLE 2 – MEMBERSHIP STATISTICS (UNAUDITED)

Active Participants

Members as of January 1, 2022	3,325
Changes during the year:	
New enrollments	549
Vested terminations	(108)
Nonvested terminations	(192)
Retirements	(140)
Deaths in active service	(3)
Withdrawals	(216)
Data Adjustment	0
Members as of December 31, 2022	3,215

Retirements and Survivors

	Maximum Pension	Refund	100%	75%	50%	25%	5%	10-Yr	Survivors and Beneficiaries	Total
January 1, 2022	3,209	166	1,455	309	877	540	41	319	913	7,829
Changes during the year:										
Adjustments / Show-ups	9	-	-	(1)	1	1	-	-	1	39
Retirements	111	-	35	11	19	21	-	26	64	245
Benefits Expired	-	-	-	-	-	-	-	-	(7)	(12)
Pensioner Deaths	(112)	(13)	(56)	(3)	(47)	(6)	(1)	(6)	(57)	(329)
December 31, 2022	3,217	153	1,434	316	850	556	40	339	914	7,819

TABLE 3A – PARTICIPANTS IN ACTIVE SERVICE AS OF DECEMBER 31, 2022 BY AGE, YEARS OF CREDITABLE SERVICE, AND AVERAGE PAYROLL

All Employee Groups

(Compensation in cells with fewer than 20 records has been suppressed)

rears of Creditable Service										
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	125	124	1							
	\$49,809	\$49,777								
25 - 29	285	254	31							
	\$55,529	\$54,752	\$61,900							
30 - 34	403	306	91	6						
	\$57,729	\$55,529	\$63,611							
35 - 39	426	219	139	57	11					
	\$61,710	\$56,141	\$66,972	\$68,713						
40 - 44	401	165	103	57	49	26	1			
	\$67,267	\$60,289	\$73,796	\$71,764	\$71,178	\$67,710				
45 - 49	413	115	92	60	43	86	17			
	\$68,938	\$61,574	\$67,478	\$80,917	\$69,502	\$68,842				
50 - 54	489	123	85	50	44	103	76	8		
	\$67,813	\$58,983	\$66,589	\$68,903	\$70,970	\$70,601	\$77,237			
55 - 59	359	82	71	32	29	67	44	25	8	1
	\$67,898	\$62,097	\$73,945	\$67,786	\$76,072	\$64,137	\$66,111	\$70,484		
60 - 64	221	46	44	24	22	38	20	20	4	3
	\$67,493	\$60,187	\$67,668	\$67,660	\$63,717	\$66,510	\$75,352	\$71,060		
65 & over	93	14	23	9	14	12	8	9	2	2
	\$67,788		\$62,766							
Total	3,215	1,448	680	295	212	332	166	62	14	6
	\$64,015	\$56,884	\$67,957	\$71,721	\$69,915	\$67,882	\$74,855	\$74,025		

TABLE 3B – PARTICIPANTS IN ACTIVE SERVICE AS OF DECEMBER 31, 2022 BY AGE, YEARS OF CREDITABLE SERVICE, AND AVERAGE PAYROLL

General Employees

(Compensation in cells with fewer than 20 records has been suppressed)

Under 25	Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
25 - 29 239 214 25	Under 25	111	110	1							
\$53,637 \$53,003 \$59,064		\$47,999	\$47,946								
30 - 34 355 279 71 5 <	25 - 29	239	214	25							
\$56,427 \$54,619 \$61,713		\$53,637	\$53,003	\$59,064							
35 - 39 401 209 131 51 10	30 - 34	355	279	71	5						
\$61,148 \$55,412 \$66,838 \$68,400		\$56,427	\$54,619	\$61,713							
40 - 44 376 159 95 55 46 20 1 \$67,047 \$60,197 \$74,078 \$71,515 \$71,417 \$64,788 45 - 49 387 114 90 59 42 71 11 \$68,316 \$61,590 \$67,497 \$81,066 \$69,172 \$66,615 50 - 54 431 122 83 50 44 82 42 8 \$66,354 \$58,956 \$66,507 \$68,903 \$70,970 \$68,498 \$75,374 55 - 59 349 81 71 32 28 61 43 24 8 \$67,559 \$61,700 \$73,945 \$67,786 \$75,985 \$62,898 \$65,837 \$69,824 60 - 64 219 46 44 23 22 38 19 20 4 \$67,320 \$60,187 \$67,668 \$66,504 \$63,717 \$66,510	35 - 39	401	209	131	51	10					
\$67,047 \$60,197 \$74,078 \$71,515 \$71,417 \$64,788 45 - 49 387 114 90 59 42 71 11 \$68,316 \$61,590 \$67,497 \$81,066 \$69,172 \$66,615 50 - 54 431 122 83 50 44 82 42 8 \$50 - 54 \$58,956 \$66,507 \$68,903 \$70,970 \$68,498 \$75,374 55 - 59 349 81 71 32 28 61 43 24 8 \$575,599 \$61,700 \$73,945 \$67,786 \$75,985 \$62,898 \$65,837 \$69,824 60 - 64 219 46 44 23 22 38 19 20 4 \$67,320 \$60,187 \$67,668 \$66,504 \$63,717 \$66,510 \$71,060		\$61,148	\$55,412	\$66,838	\$68,400						
45 - 49 387 114 90 59 42 71 11 \$68,316 \$61,590 \$67,497 \$81,066 \$69,172 \$66,615 50 - 54 431 122 83 50 44 82 42 8 \$66,354 \$58,956 \$66,507 \$68,903 \$70,970 \$68,498 \$75,374 55 - 59 349 81 71 32 28 61 43 24 8 \$67,559 \$61,700 \$73,945 \$67,786 \$75,985 \$62,898 \$65,837 \$69,824 60 - 64 219 46 44 23 22 38 19 20 4 \$67,320 \$60,187 \$67,668 \$66,504 \$63,717 \$66,510 \$71,060	40 - 44	376	159	95	55	46	20	1			
\$68,316 \$61,590 \$67,497 \$81,066 \$69,172 \$66,615 50 - 54 431 122 83 50 44 82 42 8 \$66,354 \$58,956 \$66,507 \$68,903 \$70,970 \$68,498 \$75,374 55 - 59 349 81 71 32 28 61 43 24 8 \$67,559 \$61,700 \$73,945 \$67,786 \$75,985 \$62,898 \$65,837 \$69,824 60 - 64 219 46 44 23 22 38 19 20 4 \$67,320 \$60,187 \$67,668 \$66,504 \$63,717 \$66,510 \$71,060		\$67,047	\$60,197	\$74,078	\$71,515	\$71,417	\$64,788				
50 - 54 431 122 83 50 44 82 42 8 \$66,354 \$58,956 \$66,507 \$68,903 \$70,970 \$68,498 \$75,374 55 - 59 349 81 71 32 28 61 43 24 8 \$67,559 \$61,700 \$73,945 \$67,786 \$75,985 \$62,898 \$65,837 \$69,824 60 - 64 219 46 44 23 22 38 19 20 4 \$67,320 \$60,187 \$67,668 \$66,504 \$63,717 \$66,510 \$71,060	45 - 49	387	114	90	59	42	71	11			
\$66,354 \$58,956 \$66,507 \$68,903 \$70,970 \$68,498 \$75,374 55 - 59 349 81 71 32 28 61 43 24 8 \$67,559 \$61,700 \$73,945 \$67,786 \$75,985 \$62,898 \$65,837 \$69,824 60 - 64 219 46 44 23 22 38 19 20 4 \$67,320 \$60,187 \$67,668 \$66,504 \$63,717 \$66,510 \$71,060		\$68,316	\$61,590	\$67,497	\$81,066	\$69,172	\$66,615				
55 - 59 349 81 71 32 28 61 43 24 8 \$67,559 \$61,700 \$73,945 \$67,786 \$75,985 \$62,898 \$65,837 \$69,824 60 - 64 219 46 44 23 22 38 19 20 4 \$67,320 \$60,187 \$67,668 \$66,504 \$63,717 \$66,510 \$71,060	50 - 54	431	122	83	50	44	82	42	8		
\$67,559 \$61,700 \$73,945 \$67,786 \$75,985 \$62,898 \$65,837 \$69,824 60 - 64 219 46 44 23 22 38 19 20 4 \$67,320 \$60,187 \$67,668 \$66,504 \$63,717 \$66,510 \$71,060		\$66,354	\$58,956	\$66,507	\$68,903	\$70,970	\$68,498	\$75,374			
60 - 64 219 46 44 23 22 38 19 20 4 \$67,320 \$60,187 \$67,668 \$66,504 \$63,717 \$66,510 \$71,060	55 - 59	349	81	71	32	28	61	43	24	8	1
\$67,320 \$60,187 \$67,668 \$66,504 \$63,717 \$66,510 \$71,060		\$67,559	\$61,700	\$73,945	\$67,786	\$75,985	\$62,898	\$65,837	\$69,824		
	60 - 64	219	46	44	23	22	38	19	20	4	3
05.9 average 0.0 44 0.0 0.0 44 4.0 0.0 0.0 44		\$67,320	\$60,187	\$67,668	\$66,504	\$63,717	\$66,510		\$71,060		
65 & over 92 14 23 9 14 12 8 8 2	65 & over	92	14	23	9	14	12	8	8	2	2
\$67,070 \$62,766		\$67,070		\$62,766							
Total 2,960 1,348 634 284 206 284 124 60 14	Total	2,960	1,348	634	284	206	284	124	60	14	6
\$63,776 \$56,266 \$67,778 \$71,595 \$69,829 \$66,077 \$73,154 \$72,822		\$63,776	\$56,266	\$67,778	\$71,595	\$69,829	\$66,077	\$73,154	\$72,822		

TABLE 3C – PARTICIPANTS IN ACTIVE SERVICE AS OF DECEMBER 31, 2022 BY AGE, YEARS OF CREDITABLE SERVICE, AND AVERAGE PAYROLL

Deputy Sheriffs

(Compensation in cells with fewer than 20 records has been suppressed)

Tours of Groundario Convict											
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over	
Under 25	14	14									
25 - 29	46	40	6								
	\$65,358	\$64,104									
30 - 34	48	27	20	1							
	\$67,354	\$64,927	\$70,352								
35 - 39	24	9	8	6	1						
	\$68,108										
40 - 44	25	6	8	2	3	6					
	\$70,578										
45 - 49	26	1	2	1	1	15	6				
	\$78,203										
50 - 54	58	1	2			21	34				
	\$78,652					\$78,814	\$79,539				
55 - 59	9				1	6	1	1			
60 - 64	1						1				
65 & over											
Total	251	98	46	10	6	48	42	1			
	\$71,368	\$64,226	\$70,424			\$78,561	\$79,878				

TABLE 3D – PARTICIPANTS IN ACTIVE SERVICE AS OF DECEMBER 31, 2022 BY AGE, YEARS OF CREDITABLE SERVICE, AND AVERAGE PAYROLL

Elected Officials

(Compensation in cells with fewer than 20 records has been suppressed)

round of Groundable Convice											
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over	
Under 25											
25 - 29											
30 - 34											
35 - 39	1	1									
40 - 44											
45 - 49											
50 - 54											
55 - 59	1	1									
60 - 64	1			1							
65 & over	1							1			
Total	4	2		1				1			

TABLE 4 – ACTIVE AND DEFERRED VESTED MEMBERS OBTAINING RETIREMENT ELIGIBILITY OVER NEXT FIVE CALENDAR YEARS

Actives Reaching Retirement Eligibility

Year	General Employees	Elected Officials	Deputy Sheriffs	Total
Eligible at Valuation Date	505	2	11	518
2024	61	1	6	68
2025	84	-	12	96
2026	81	-	8	89
2027	78	-	16	94
2028	81	-	13	94
Total Over Next 5 Years	385	1	55	441
Grand Total Eligible	890	3	66	959

Deferred Vested Members Reaching Retirement Age

Year	Total
2023	67
2024	53
2025	46
2026	64
2027	64
Total Over Next 5 Years	294

TABLE 5 – RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2023

Number and Average Annual Benefits

Age Last Birthday	Number	Annual Benefit	Average Annual Benefit
Retired Participants			
Under 60	357	11,562,753	32,389
60 – 64	828	18,970,162	22,911
65 – 69	1,352	31,130,108	23,025
70 – 74	1,652	40,271,412	24,377
75 – 79	1,160	29,332,520	25,287
80 & over	1,314	30,244,960	23,017
Total	6,663	\$161,511,915	\$24,240
Beneficiaries			
Under 60	54	909,668	16,846
60 – 64	47	821,512	17,479
65 – 69	103	2,222,583	21,578
70 – 74	128	2,551,932	19,937
75 – 79	161	3,534,784	21,955
80 & over	421	7,701,018	18,292
Total	914	\$17,741,498	\$19,411
Disabled Participants			
Under 60	90	3,108,940	34,544
60 – 64	29	776,252	26,767
65 – 69	40	1,037,091	25,927
70 – 74	31	805,172	25,973
75 – 79	20	366,777	18,339
80 & over	32	652,893	20,403
Total	242	\$6,747,125	\$27,881
Grand Total	7,819	\$186,000,538	\$23,788

TABLE 6 – FIVE-YEAR HISTORY OF MEMBERSHIP DATA

Active Participants

Valuation as of January 1	Number of Active Participants	Percentage Change in Membership	Total Annual Payroll	Percentage Change in Payroll
2023	3,215	-3.31%	\$205,806,761	1.83%
2022	3,325	-5.78%	202,112,385	-1.29%
2021	3,529	-0.90%	204,754,607	2.19%
2020	3,561	3.97%	200,365,711	4.88%
2019	3,425	-2.20%	191,043,797	0.92%

Retired, Disabled, and Beneficiary Participants

Valuation as of January 1	Number on roll	Additions	Deletions	Percentage Change in Membership	Annual Annuities	Percentage Change in Annuities
2023	7,819	246	256	-0.13%	\$186,000,538	1.02%
2022	7,829	284	341	-0.72%	184,114,533	0.82%
2021	7,886	254	369	-1.44%	182,609,017	0.28%
2020	8,001	254	295	-0.51%	182,097,756	1.07%
2019	8,042	307	302	0.06%	180,165,695	1.71%

TABLE 7A – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2023 All Employees

(Compensation in cells with fewer than 20 records has been suppressed)

		Men		Women	Total	Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
19	4		1		5	
20	6		5		11	
21	4		8		12	
22	16		15		31	\$1,522,143
23	21	\$1,043,942	23	\$1,180,772	44	2,224,714
24	25	1,510,165	18		43	2,470,784
25	19		19		38	2,118,414
26	33	1,693,889	22	1,096,935	55	2,790,824
27	39	2,244,927	30	1,690,056	69	3,934,983
28	26	1,563,694	34	1,871,965	60	3,435,659
29	34	2,019,197	42	2,176,785	76	4,195,983
30	41	2,494,188	53	2,832,509	94	5,326,696
31	42	2,501,530	39	2,196,217	81	4,697,748
32	38	2,434,699	33	1,733,014	71	4,167,713
33	36	2,407,554	49	2,689,412	85	5,096,966
34	31	1,985,877	45	2,437,968	76	4,423,844
35	38	2,449,554	63	3,446,662	101	5,896,216
36	33	2,332,686	51	2,793,688	84	5,126,374
37	39	2,451,307	51	3,024,340	90	5,475,646
38	35	2,536,305	42	2,810,756	77	5,347,061
39	29	1,952,749	37	2,127,244	66	4,079,993

TABLE 7A – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2023 All Employees

(Compensation in cells with fewer than 20 records has been suppressed)

		Men		Women	Total	Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
40	19		43	\$2,513,558	62	\$3,950,476
41	38	\$2,766,914	39	2,163,107	77	4,930,021
42	40	2,989,970	47	3,242,093	87	6,232,064
43	40	2,583,705	54	3,788,463	94	6,372,168
44	43	3,253,611	47	2,891,155	90	6,144,766
45	38	2,757,828	35	2,134,872	73	4,892,700
46	54	4,463,727	46	2,909,145	100	7,372,872
47	51	3,964,399	44	2,772,351	95	6,736,750
48	22	1,633,860	46	2,682,539	68	4,316,399
49	54	3,758,960	47	3,081,090	101	6,840,050
50	47	3,273,237	50	3,142,615	97	6,415,852
51	53	3,833,415	48	3,271,086	101	7,104,501
52	58	4,158,283	44	2,888,672	102	7,046,955
53	30	2,153,528	53	3,238,954	83	5,392,482
54	36	2,749,068	43	2,533,032	79	5,282,100
55	38	3,210,795	47	3,174,176	85	6,384,971
56	44	2,984,440	35	2,088,291	79	5,072,731
57	31	2,202,865	48	2,784,109	79	4,986,974
58	30	2,161,623	27	1,783,102	57	3,944,725
59	23	1,650,283	22	1,341,146	45	2,991,429
60	21	1,411,771	26	1,529,206	47	2,940,976

TABLE 7A – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2023 All Employees

		Men		Women	Total	Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
61	36	\$2,570,575	30	\$1,989,503	66	\$4,560,078
62	16		19		35	2,709,265
63	11		22	1,181,635	33	1,977,779
64	12		15		27	1,889,328
65	9		14		23	1,486,000
66	11		8		19	
67	8		4		12	
68	3		6		9	
69	6		2		8	
70	3		1		4	
71	3		2		5	
72						
73			1		1	
74	1				1	
75						
76	1				1	
77						
78						
79						
80	1				1	
Total	1,520	\$104,440,031	1,695	\$101,366,730	3,215	\$205,806,761

TABLE 7B – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2023 All Employees

		Men		Women	Total	Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
0	140	\$7,069,115	181	\$8,146,023	321	\$15,215,137
1	133	7,971,386	192	10,048,201	325	18,019,587
2	102	6,735,363	103	5,704,067	205	12,439,431
3	93	5,537,707	135	7,376,803	228	12,914,510
4	94	6,034,003	114	6,432,849	208	12,466,852
5	81	5,806,724	98	6,581,230	179	12,387,954
6	80	5,262,450	90	5,412,444	170	10,674,894
7	64	4,429,233	90	5,824,562	154	10,253,795
8	47	3,547,383	76	4,676,118	123	8,223,500
9	48	4,133,842	54	3,324,814	102	7,458,656
10	47	3,438,610	39	2,407,883	86	5,846,493
11	52	3,755,506	31	2,094,961	83	5,850,467
12	29	2,331,385	26	1,896,548	55	4,227,932
13	24	1,636,231	13		37	2,503,931
14	28	2,090,112	29	2,131,550	57	4,221,661
15	34	2,483,232	29	1,864,732	63	4,347,964
16	16		21	\$1,789,250	37	\$3,148,626
17	29	\$1,922,056	39	2,370,803	68	4,292,859
18	22	1,561,107	23	1,397,255	45	2,958,362
19	15		19		34	2,356,540
20	30	2,313,436	10		40	2,892,908
21	34	2,540,948	23	1,426,370	57	3,967,318
22	39	2,838,900	43	2,551,306	82	5,390,206

TABLE 7B – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2023 All Employees

Service	Number	Men	Number	Women	Total	Total
		Compensation		Compensation	Number	Compensation
23	38	2,670,565	36	2,213,314	74	4,883,880
24	42	3,213,555	36	2,462,722	78	5,676,277
25	35	2,612,311	21	1,440,157	56	4,052,467
26	29	2,253,781	16		45	3,490,328
27	16		18		34	2,493,373
28	23	1,848,554	11		34	2,742,255
29	16		19		35	2,556,203
30	4		11		15	
31	8		8		16	
32	4		9		13	
33	6		10		16	
34	7		6		13	
35	4		4		8	
36	3		2		5	
37	1		3		4	
38	1		1		2	
39			2		2	
41			1		1	
42	1		1		2	
43	1		1		2	
46			1		1	
Total	1,520	\$104,440,031	1,695	\$101,366,730	3,215	\$205,806,761

TABLE 7C – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2023 General Employees

		Men		Women	Total	Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
18						
19	4		1		5	
20	6		5		11	
21	4		8		12	
22	14		14		28	\$1,328,501
23	17		23	\$1,180,772	40	1,984,132
24	18		16		34	1,873,758
25	11		18		29	1,520,747
26	25	\$1,241,401	22	1,096,935	47	2,338,336
27	28	1,517,271	29	1,625,145	57	3,142,416
28	18		31	1,664,064	49	2,667,013
29	24	1,361,474	42	2,176,785	66	3,538,259
30	34	2,016,959	53	2,832,509	87	4,849,468
31	32	1,821,147	38	2,131,166	70	3,952,314
32	26	1,639,577	32	1,668,092	58	3,307,669
33	28	1,848,075	48	2,624,620	76	4,472,695
34	26	1,661,973	45	2,437,968	71	4,099,940
35	33	2,107,166	62	3,373,159	95	5,480,325
36	26	1,795,021	50	2,723,342	76	4,518,363
37	38	2,377,678	50	2,959,835	88	5,337,513
38	32	2,313,174	41	2,746,862	73	5,060,037
39	25	1,694,268	36	2,064,528	61	3,758,796

TABLE 7C – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2023 General Employees

		Men		Women	Total	Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
40	16		41	\$2,355,398	57	\$3,590,930
41	34	\$2,490,539	38	2,091,839	72	4,582,378
42	37	2,769,403	47	3,242,093	84	6,011,496
43	36	2,309,256	53	3,717,098	89	6,026,354
44	37	2,826,431	47	2,891,155	84	5,717,586
45	36	2,599,069	34	2,056,374	70	4,655,443
46	44	3,667,321	45	2,831,543	89	6,498,863
47	48	3,727,780	42	2,616,062	90	6,343,842
48	20	1,471,962	46	2,682,539	66	4,154,500
49	46	3,145,985	46	2,993,792	92	6,139,777
50	37	2,463,331	47	2,906,679	84	5,370,010
51	40	2,808,572	47	3,200,466	87	6,009,038
52	48	3,404,676	43	2,810,173	91	6,214,849
53	20	1,351,963	52	3,152,552	72	4,504,515
54	33	2,513,572	40	2,308,111	73	4,821,683
55	36	3,054,395	47	3,174,176	83	6,228,571
56	42	2,819,601	34	2,009,793	76	4,829,393
57	30	2,124,366	48	2,784,109	78	4,908,475
58	29	2,067,395	27	1,783,102	56	3,850,498
59	23	1,650,283	22	1,341,146	45	2,991,429
60	21	1,411,771	26	1,529,206	47	2,940,976
61	35	2,492,077	30	1,989,503	65	4,481,579

TABLE 7C – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2023 General Employees

		Men		Women	Total	Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
62	15		19		34	\$2,615,037
63	11		22	\$1,181,635	33	1,977,779
64	12		15		27	1,889,328
65	8		14		22	1,352,100
66	11		8		19	
67	8		4		12	
68	3		6		9	
69	6		2		8	
70	3		1		4	
71	3		2		5	
72						
73			1		1	
74	1				1	
75						
76	1				1	
77						
78						
79						
80	1				1	
Total	1,300	\$88,615,267	1,660	\$98,822,032	2,960	\$187,437,299

TABLE 7D – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2023 General Employees

		Men		Women	Total	Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
0	137	\$6,880,180	180	\$8,081,231	317	\$14,961,411
1	117	6,973,481	190	9,919,827	307	16,893,309
2	86	5,694,357	101	5,570,002	187	11,264,358
3	69	3,974,130	131	7,116,543	200	11,090,673
4	83	5,283,836	114	6,432,849	197	11,716,684
5	64	4,735,817	95	6,382,073	159	11,117,890
6	66	4,304,034	88	5,279,381	154	9,583,415
7	53	3,660,522	87	5,605,515	140	9,266,036
8	44	3,333,838	75	4,605,498	119	7,939,336
9	43	3,709,756	54	3,324,814	97	7,034,571
10	43	3,151,318	38	2,334,379	81	5,485,697
11	49	3,538,855	31	2,094,961	80	5,633,816
12	29	2,331,385	25	1,810,040	54	4,141,425
13	19		13		32	2,150,173
14	26	1,938,085	29	2,131,550	55	4,069,635
15	34	2,483,232	29	1,864,732	63	4,347,964
16	15		21	1,789,250	36	3,075,739
17	26	1,723,646	39	2,370,803	65	4,094,449
18	21	1,482,532	23	1,397,255	44	2,879,787
19	14		19		33	2,273,218
20	27	2,095,297	10		37	2,674,768
21	31	2,317,833	23	1,426,370	54	3,744,203
22	33	2,369,168	41	2,393,868	74	4,763,036
23	28	1,881,853	32	1,915,003	60	3,796,856

TABLE 7D – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2023 General Employees

		Men	• • •	Women	Total	Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
24	30	\$2,254,541	33	\$2,219,324	63	\$4,473,865
25	24	1,728,961	20	1,372,233	44	3,101,194
26	13		14		27	2,049,309
27	14		17		31	2,257,840
28	14		11		25	2,002,118
29	11		17		28	2,016,597
30	4		11		15	
31	7		8		15	
32	4		9		13	
33	5		10		15	
34	6		6		12	
35	4		4		8	
36	3		2		5	
37	1		3		4	
38	1		1		2	
39			2		2	
40						
41			1		1	
42	1		1		2	
43	1		1		2	
44						
45						
46			1		1	
Total	1,300	\$88,615,267	1,660	\$98,822,032	2,960	\$187,437,299

TABLE 7E – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2023 Deputy Sheriffs

Age Number Compensation Number Compensation Number Compensation 22 2 1 3 23 4 4 24 7 2 9 25 8 1 9 26 8 1 12 27 11 1 12 28 8 3 11 29 10 10 30 7 11 31 10 1 11 32 12 1 13 33 8 1			Men		Women	Total	Total
23 4 4 24 7 2 9 25 8 1 9 26 8 8 27 11 1 12 28 8 3 11 12 29 10 10 10 29 11 10 7 30 7 10 11 11 11 11 11 13 13 13 13 13 13 13 11 14	Age	Number	Compensation	Number	Compensation	Number	Compensation
24 7 2 9 25 8 1 9 26 8 8 27 11 1 12 28 8 3 11 29 10 10 30 7 10 30 7 7 31 10 1 11 32 12 1 13 33 8 1 9 34 5 1 9 34 5 1 5 35 5 1 7 36	22	2		1		3	
25 8 1 9 26 8 8 27 11 1 12 28 8 3 11 29 10 10 30 7 7 31 10 1 11 32 12 1 13 33 8 1 13 33 8 1 9 34 5 1 9 35 5 1 6 36 6 1 7 37 1 1 7 38 3 <	23	4				4	
26 8 8 27 11 1 12 28 8 3 11 29 10 10 30 7 7 31 10 1 11 32 12 1 13 33 8 1 13 33 8 1 9 34 5 1 9 35 5 1 6 36 6 1 7 37 1 1 7 38 3 1 4 39	24	7		2		9	
27 11 1 12 28 8 3 11 29 10 10 30 7 7 31 10 1 11 32 12 1 13 33 8 1 13 34 5 1 9 34 5 1 9 35 5 1 6 36 6 1 7 37 1 1 2 38 3 1 4 39 4 1 5 40 <	25	8		1		9	
28 8 3 11 29 10 10 30 7 7 31 10 1 11 32 12 1 13 33 8 1 9 34 5 1 9 34 5 1 9 35 5 1 6 36 6 1 7 37 1 1 2 38 3 1 4 39 4 1 5 40 3 2 5 41 4 1	26	8				8	
29 10 10 30 7 7 31 10 1 11 32 12 1 13 33 8 1 9 34 5 1 9 35 5 1 6 36 6 1 7 37 1 1 2 38 3 1 4 39 4 1 5 40 3 2 5 41 4 1 5 42 3 3 1 5 41	27	11		1		12	
30 7 7 31 10 1 11 32 12 1 13 33 8 1 9 34 5 1 9 35 5 1 6 36 6 1 7 37 1 1 2 38 3 1 4 39 4 1 5 40 3 2 5 41 4 1 5 42 3 3 1 5	28	8		3		11	
31 10 1 11 32 12 1 13 33 8 1 9 34 5 5 35 5 1 6 36 6 1 7 37 1 1 2 38 3 1 4 39 4 1 5 40 3 2 5 41 4 1 5 42 3 3	29	10				10	
32 12 1 13 33 8 1 9 34 5 5 35 5 1 6 36 6 1 7 37 1 1 2 38 3 1 4 39 4 1 5 40 3 2 5 41 4 1 5 42 3 3	30	7				7	
33 8 1 9 34 5 5 35 5 1 6 36 6 1 7 37 1 1 2 38 3 1 4 39 4 1 5 40 3 2 5 41 4 1 5 42 3 3	31	10		1		11	
34 5 5 35 5 1 6 36 6 1 7 37 1 1 2 38 3 1 4 39 4 1 5 40 3 2 5 41 4 1 5 42 3 3	32	12		1		13	
35 5 1 6 36 6 1 7 37 1 1 2 38 3 1 4 39 4 1 5 40 3 2 5 41 4 1 5 42 3 3	33	8		1		9	
36 6 1 7 37 1 1 2 38 3 1 4 39 4 1 5 40 3 2 5 41 4 1 5 42 3 3	34	5				5	
37 1 1 2 38 3 1 4 39 4 1 5 40 3 2 5 41 4 1 5 42 3 3	35	5		1		6	
38 3 1 4 39 4 1 5 40 3 2 5 41 4 1 5 42 3 3	36	6		1		7	
39 4 1 5 40 3 2 5 41 4 1 5 42 3 3	37	1		1		2	
40 3 2 5 41 4 1 5 42 3 3	38	3		1		4	
41 4 1 5 42 3 3	39	4		1		5	
42 3 3	40	3		2		5	
	41	4		1		5	
43 4 1 5	42	3				3	
	43	4		1		5	

TABLE 7E – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2023 Deputy Sheriffs

		Men		Women	Total	Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
44	6				6	
45	2		1		3	
46	10		1		11	
47	3		2		5	
48	2				2	
49	8		1		9	
50	10		3		13	
51	13		1		14	
52	10		1		11	
53	10		1		11	
54	3		3		6	
55	2				2	
56	2		1		3	
57	1				1	
58						
59						
60						
61	1				1	
Grand Tota	l 216	\$15,368,775	35	\$2,544,698	251	\$17,913,473

TABLE 7F – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2023 Deputy Sheriffs

		Men		Women	Total	Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
0	3		1		4	
1	16		2		18	
2	16		2		18	
3	24	\$1,563,576	4		28	\$1,823,837
4	10				10	
5	17		3		20	1,270,064
6	14		2		16	
7	11		3		14	
8	3		1		4	
9	4				4	
10	4		1		5	
11	3				3	
12			1		1	
13	5				5	
14	2				2	
15						
16	1				1	
17	3				3	
18	1				1	
19	1				1	
20	3				3	
21	3				3	

TABLE 7F – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2023 Deputy Sheriffs

		Men		Women	Total	Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
22	6		2		8	
23	10		4		14	
24	12		3		15	
25	11		1		12	
26	16		2		18	
27	2		1		3	
28	9				9	
29	5		2		7	
30						
31						
32						
33						
34	1				1	
Total	216	\$15,368,775	35	\$2,544,698	251	\$17,913,473

TABLE 7G – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2023 Elected Officials

		Men		Women	Total	Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
35						
36	1				1	
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						
54						
55						
56						

TABLE 7G – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2023 Elected Officials

		Men		Women	Total	Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
57						
58	1				1	
59						
60						
61						
62	1				1	
63						
64						
65	1				1	
Total	4				4	

TABLE 7H – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2023 Elected Officials

		Men		Women	Total	Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
0						
1						
2						
3						
4	1				1	
5						
6						
7						
8						
9	1				1	
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						

TABLE 7H – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2023 Elected Officials

		Men		Women	Total	Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
22						
23						
24						
25						
26						
27						
28						
29						
30						
31	1				1	
32						
33	1				1	
Total	4				4	

TABLE 7I – DETAILED TABULATIONS OF THE DATA

		Men		Women	Total	Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
20	1	\$4,427			1	\$4,427
21						
22			2	\$12,513	2	12,513
23						
24						
25						
26						
27			1	10,053	1	10,053
28						
29						
30	1	28,628			1	28,628
31	1	60,239			1	60,239
32						
33						
34	2	15,825	1	10,837	3	26,662
35						
36						
37						
38						
39	2	25,676	1	31,448	3	57,124
40	1	17,817	2	15,477	3	33,294
41			1	30,381	1	30,381
42	1	23,133	3	29,296	4	52,429
43	1	48,299	2	29,049	3	77,348

TABLE 7I – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women	Total	Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
44			1	\$17,861	1	\$17,861
45	1	39,124	1	6,863	2	45,988
46	2	83,529			2	83,529
47	2	59,783	2	66,195	4	125,978
48	3	73,069	1	52,278	4	125,347
49	4	82,344	2	38,848	6	121,192
50	5	233,010	3	101,090	8	334,100
51	8	352,845	7	229,285	15	582,130
52	9	384,886	11	345,170	20	730,056
53	22	855,183	7	262,422	29	1,117,605
54	10	323,631	17	485,046	27	808,677
55	23	939,562	25	557,427	48	1,496,989
56	22	869,973	31	814,667	53	1,684,640
57	31	1,003,596	41	1,219,990	72	2,223,586
58	25	1,023,011	49	1,353,888	74	2,376,899
59	43	1,430,612	70	1,883,072	113	3,313,684
60	54	1,462,615	73	1,595,669	127	3,058,284
61	70	1,623,644	100	2,014,181	170	3,637,825
62	55	1,355,108	129	2,678,714	184	4,033,822
63	82	2,136,865	130	2,546,438	212	4,683,303
64	86	2,430,802	125	2,723,890	211	5,154,692
65	91	2,154,764	182	4,133,891	273	6,288,655
66	124	3,024,399	165	3,368,471	289	6,392,869

TABLE 7I – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women	Total	Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
67	109	\$3,019,631	173	\$3,551,067	282	\$6,570,697
68	132	3,577,466	179	3,819,904	311	7,397,370
69	133	3,559,718	207	4,180,473	340	7,740,190
70	144	4,441,148	206	3,907,982	350	8,349,130
71	146	4,037,977	217	4,757,444	363	8,795,422
72	175	5,175,440	194	3,620,204	369	8,795,644
73	165	4,747,295	218	4,165,821	383	8,913,117
74	152	4,873,608	194	3,901,595	346	8,775,203
75	170	4,769,645	234	5,053,952	404	9,823,597
76	117	3,682,192	175	4,312,957	292	7,995,150
77	91	2,596,766	126	2,897,244	217	5,494,011
78	84	2,161,308	128	2,787,703	212	4,949,010
79	82	2,248,393	132	2,668,576	214	4,916,969
80	82	2,576,382	129	2,580,854	211	5,157,237
81	59	1,590,792	94	1,861,480	153	3,452,272
82	63	1,801,420	85	1,673,289	148	3,474,709
83	53	1,570,643	95	1,874,898	148	3,445,541
84	38	1,022,013	90	1,939,046	128	2,961,059
85	46	1,225,977	89	1,677,536	135	2,903,513
86	38	1,188,693	81	1,604,394	119	2,793,087
87	26	745,802	81	1,646,739	107	2,392,541
88	28	782,104	56	941,797	84	1,723,901
89	25	687,635	46	871,041	71	1,558,677

TABLE 7I – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women	Total	Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
90	33	849,494	56	1,106,583	89	1,956,077
91	24	647,522	50	1,061,835	74	1,709,357
92	12	346,722	65	1,018,526	77	1,365,248
93	17	287,699	43	638,708	60	926,407
94	7	178,892	41	599,857	48	778,750
95	8	285,523	26	463,989	34	749,511
96	4	112,478	20	227,078	24	339,557
97	4	80,731	17	263,460	21	344,191
98	5	167,931	10	153,484	15	321,415
99	2	51,735	7	72,565	9	124,300
100			7	79,042	7	79,042
101	2	46,940	3	30,173	5	77,113
102	1	8,666			1	8,666
103			1	12,045	1	12,045
Total	3,059	87,312,781	4,760	98,687,757	7,819	186,000,538

TABLE 7J – DETAILED TABULATIONS OF THE DATA

		Men		Women	Total	Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
49	1	\$21,835			1	\$21,835
50	4	182,736	3	101,090	7	283,826
51	2	118,413	1	33,564	3	151,977
52	5	223,790	7	219,291	12	443,081
53	12	503,715	6	223,089	18	726,803
54	6	207,865	11	382,624	17	590,490
55	18	759,949	21	483,867	39	1,243,817
56	21	854,291	25	644,219	46	1,498,511
57	29	934,814	34	1,011,269	63	1,946,082
58	21	841,445	35	939,103	56	1,780,548
59	37	1,305,085	58	1,570,698	95	2,875,783
60	50	1,333,516	67	1,438,813	117	2,772,329
61	68	1,595,033	86	1,781,663	154	3,376,696
62	53	1,294,898	113	2,382,695	166	3,677,593
63	76	1,984,497	119	2,330,073	195	4,314,571
64	81	2,320,013	115	2,508,960	196	4,828,973
65	83	2,000,335	159	3,667,527	242	5,667,862
66	114	2,803,085	153	3,130,560	267	5,933,645
67	102	2,892,574	145	2,869,473	247	5,762,048
68	122	3,392,589	160	3,272,903	282	6,665,492
69	126	3,386,412	188	3,714,648	314	7,101,061
70	135	4,202,683	188	3,498,044	323	7,700,727

TABLE 7J – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women	Total	Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
71	138	\$3,969,109	186	\$4,077,871	324	\$8,046,980
72	170	5,061,320	175	3,122,108	345	8,183,428
73	159	4,626,904	197	3,750,968	356	8,377,872
74	141	4,676,128	163	3,286,278	304	7,962,406
75	161	4,637,006	194	4,082,654	355	8,719,660
76	111	3,601,224	155	3,852,653	266	7,453,877
77	85	2,519,346	100	2,150,429	185	4,669,775
78	80	2,136,282	97	2,064,535	177	4,200,817
79	71	2,096,352	104	2,136,695	175	4,233,046
80	77	2,489,660	103	2,072,038	180	4,561,698
81	56	1,549,910	71	1,319,451	127	2,869,361
82	54	1,682,027	54	1,102,734	108	2,784,761
83	50	1,543,425	77	1,504,075	127	3,047,500
84	37	1,009,806	65	1,330,998	102	2,340,804
85	38	1,106,130	60	1,067,993	98	2,174,123
86	33	1,124,977	52	973,541	85	2,098,518
87	24	729,919	57	1,176,075	81	1,905,994
88	27	776,824	34	498,306	61	1,275,129
89	19	630,467	27	525,291	46	1,155,758
90	30	842,233	31	511,898	61	1,354,132
91	21	615,029	30	590,137	51	1,205,166
92	9	315,123	42	701,088	51	1,016,211
93	13	262,585	25	368,480	38	631,064

TABLE 7J – DETAILED TABULATIONS OF THE DATA (CONTINUED)

Age	Number	Men Annuities	Number	Women Annuities	Total Number	Total Annuities
94	6	\$171,543	22	\$354,625	28	\$526,167
95	8	285,523	12	182,603	20	468,125
96	3	76,406	9	114,034	12	190,441
97	3	73,360	10	151,796	13	225,156
98	5	167,931	6	95,345	11	263,276
99	2	51,735	4	33,927	6	85,662
100			4	33,269	4	33,269
101	1	37,103	3	30,173	4	67,276
102	1	8,666			1	8,666
103			1	12,045	1	12,045
Total	2,799	82,033,627	3,864	79,478,288	6,663	161,511,915

TABLE 7K – DETAILED TABULATIONS OF THE DATA

		Men		Women	Total	Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
42	1	\$23,133			1	\$23,133
43	1	48,299			1	48,299
44						
45	1	39,124			1	39,124
46	2	83,529			2	83,529
47	2	59,783	1	\$51,535	3	111,318
48	1	50,082	1	52,278	2	102,360
49	2	55,416			2	55,416
50	1	50,274			1	50,274
51	6	234,431	3	104,371	9	338,802
52	4	161,096	3	101,429	7	262,525
53	10	351,468	1	39,334	11	390,802
54	2	101,326	3	80,018	5	181,344
55	4	173,158	4	73,560	8	246,717
56	1	15,682	4	139,757	5	155,439
57	2	68,782	5	181,884	7	250,666
58	4	181,566	8	289,485	12	471,051
59	5	117,976	8	180,165	13	298,141
60	2	105,962	3	79,190	5	185,152
61	1	24,171	4	60,263	5	84,435
62			5	130,604	5	130,604
63	3	104,763	5	135,690	8	240,453

TABLE 7K – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women	Total	Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
64	5	\$110,789	1	\$24,820	6	\$135,609
65	6	130,510	8	235,680	14	366,189
66	6	156,482	3	51,780	9	208,263
67	3	66,069	3	82,677	6	148,746
68	4	90,709	2	35,238	6	125,947
69	4	151,868	1	36,079	5	187,947
70	5	193,742	1	14,842	6	208,584
71	3	38,444	6	182,752	9	221,196
72	1	37,094	3	64,291	4	101,384
73	3	97,338	3	45,701	6	143,039
74	3	81,654	3	49,315	6	130,969
75	1	36,122	3	56,210	4	92,332
76	1	26,820	1	10,729	2	37,549
77	4	44,585			4	44,585
78	1	7,680	4	62,970	5	70,650
79	2	59,906	3	61,756	5	121,662
80	2	51,679	3	38,214	5	89,893
81	1	18,289	3	81,801	4	100,090
82	1	23,125	2	42,929	3	66,054
83	1	19,467	1	22,703	2	42,170
84			1	15,969	1	15,969
85	2	40,022	2	42,947	4	82,970
86	1	29,795	1	11,374	2	41,169

TABLE 7K – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women	Total	Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
87			1	\$24,927	1	\$24,927
88			1	15,565	1	15,565
89	1	\$21,108			1	21,108
90			2	51,279	2	51,279
91			1	15,343	1	15,343
92			1	22,140	1	22,140
93			1	15,870	1	15,870
94			1	16,749	1	16,749
95			1	14,541	1	14,541
96						
97						
98						
99			1	17,057	1	17,057
Total	116	\$3,583,318	126	\$3,163,807	242	\$6,747,125

TABLE 7L – DETAILED TABULATIONS OF THE DATA

		Men		Women	Total	Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
20	1	\$4,427			1	\$4,427
21						
22			2	\$12,513	2	12,513
23						
24						
25						
26						
27			1	10,053	1	10,053
28						
29						
30	1	28,628			1	28,628
31	1	60,239			1	60,239
32						
33						
34	2	15,825	1	10,837	3	26,662
35						
36						
37						
38						
39	2	25,676	1	31,448	3	57,124
40	1	17,817	2	15,477	3	33,294
41			1	30,381	1	30,381
42			3	29,296	3	29,296
43			2	29,049	2	29,049

TABLE 7L – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women	Total	Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
44			1	\$17,861	1	\$7,861
45			1	6,863	1	6,863
46						
47			1	14,660	1	14,660
48	2	\$22,987			2	22,987
49	1	5,093	2	38,848	3	43,941
50						
51			3	91,350	3	91,350
52			1	24,451	1	24,451
53						
54	2	14,440	3	22,404	5	36,844
55	1	6,455			1	6,455
56			2	30,691	2	30,691
57			2	26,838	2	26,838
58			6	125,300	6	125,300
59	1	7,550	4	132,210	5	139,760
60	2	23,137	3	77,666	5	100,803
61	1	4,440	10	172,255	11	176,694
62	2	60,210	11	165,416	13	225,626
63	3	47,604	6	80,675	9	128,279
64			9	190,110	9	190,110
65	2	23,919	15	230,685	17	254,604
66	4	64,831	9	186,130	13	250,962

TABLE 7L – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women	Total	Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
67	4	\$60,987	25	\$598,916	29	\$659,904
68	6	94,168	17	511,764	23	605,931
69	3	21,437	18	429,746	21	451,183
70	4	44,724	17	395,096	21	439,820
71	5	30,425	25	496,822	30	527,246
72	4	77,027	16	433,805	20	510,832
73	3	23,053	18	369,152	21	392,205
74	8	115,826	28	566,002	36	681,828
75	8	96,517	37	915,088	45	1,011,605
76	5	54,148	19	449,575	24	503,724
77	2	32,835	26	746,816	28	779,651
78	3	17,346	27	660,198	30	677,544
79	9	92,136	25	470,125	34	562,261
80	3	35,044	23	470,602	26	505,646
81	2	22,593	20	460,228	22	482,821
82	8	96,269	29	527,625	37	623,894
83	2	7,751	17	348,119	19	355,870
84	1	12,207	24	592,079	25	604,286
85	6	79,825	27	566,595	33	646,420
86	4	33,921	28	619,479	32	653,400
87	2	15,883	23	445,736	25	461,619
88	1	5,280	21	427,927	22	433,207
89	5	36,060	19	345,751	24	381,811

TABLE 7L – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Benefits Payable to Members Receiving Benefits Distributed by Age as of January 1, 2023 Beneficiaries

		Men		Women	Total	Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
90	3	\$7,260	23	\$543,405	26	\$550,666
91	3	32,493	19	456,355	22	488,848
92	3	31,599	22	295,299	25	326,898
93	4	25,114	17	254,358	21	279,472
94	1	7,350	18	228,484	19	235,834
95			13	266,845	13	266,845
96	1	36,072	11	113,044	12	149,116
97	1	7,371	7	111,664	8	119,034
98			4	58,139	4	58,139
99			2	21,582	2	21,582
100			3	45,774	3	45,774
101	1	9,837			1	9,837
Total	144	\$1,695,836	770	\$16,045,662	914	\$17,741,497

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